

THE EFFECT OF WAITING TIME, ACCESSIBILITY, PERCEPTION OF RISK, FEELING BENEFIT ON THE INTENTION TO REUSE HALODOC APP

Firza Fahriza¹, Didit Darmawan²

¹ Faculty Of Economics, Sunan Giri University Surabaya, Jl. Brigjen Katamso II, Surabaya, Indonesia, firzafahriza35@gmail.com

² Faculty Of Economics, Sunan Giri University Surabaya, Jl. Brigjen Katamso II, Surabaya, Indonesia.

DOI : <https://doi.org/10.21107/pamator.v18i1.29414>

Manuscript received March 3rd 2025, Revised March 15th 2025, Published March 31st 2025

Abstract

Health services in Indonesia have undergone significant changes. Post-pandemic, health services have had to adjust to changes. Health systems around the world have faced unprecedented challenges as a result of the pandemic. The more advanced and rapid information technology and supported by the post-pandemic world that is our focus, further needs must be met with digital interaction, with the aim of making it easier for people to carry out various activities. The purpose of this study is to ascertain how patient attitude, perceived benefits, risk perception, waiting time, and accessibility affect the intention to re-use the Halodoc application. This study employs quantitative techniques. The population of this study were people who had used the Halodoc App. Researchers distributed 116 questionnaires with 103 responses. This study uses multiple linear regression analysis techniques. Based on the t test results, it shows that the value of waiting time, accessibility, perceived risk, perceived benefits have a significant effect on the intention to reuse the Halodoc App.

Keywords: Waiting Time, Accessibility, Perception of Risk, Feeling Benefit, Intention to Reuse

© Authors; This is an Open Access Research distributed under the term of the Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0) (<https://creativecommons.org/licenses/by-sa/4.0/>) which allows re-distribution and re-use of a licensed work on the conditions that the creator is appropriately credited and that any derivative work is made available under “the same, similar or a compatible license”.

INTRODUCTION

The phenomenon of health services in Indonesia has undergone significant changes. People in Indonesia have become more hesitant to visit health facilities due to concerns about coronavirus transmission. By issuing Presidential Decree Number 17 of 2023 on Determination of the End of COVID-19 Pandemic Status in Indonesia on Wednesday, June 21, 2023, the Indonesian government formally declared the COVID-19 pandemic to be finished. Health services must adapt to the changes following the pandemic. The COVID-19 pandemic has caused health systems around the world to face unprecedented challenges. (Laura et al., 2023). The COVID-19 pandemic has changed healthcare forever, driving a revolution in digital health technologies. Around the world, hundreds of thousand healthcare systems are considering a key question: how do we connect with our patients? Digital health has been used as a solution in many cases to continue the essential functions of the health system. The rapid advancement of information technology and with the post-pandemic world is our focus, further needs must be met with digital interaction, with the aim of making it easier for people to perform various activities

(D'Anza & Peter, 2022).

Service quality has many aspects, improving quality of service to retain users is very important and affects the intention to reuse the Halodoc App (Park et al., 2012). Halodoc (Park et al., 2012). The effect of service role on intention to use intention may motivate managers to allocate limited organizational resources. A good service role can increase service reuse intentions more more efficiently and effectively than increasing roles that are less influential (O'Cass & Carlson, 2012). less influential (O'Cass & Carlson, 2012). Developed countries, have successfully used electronic communication to access to health services, health education, direct care care, direct care, and home health monitoring, it can shorten waiting times, reduce costs, and improve indirect communication between patients and medical personnel regarding illness and health (Khatun et al, 2015).

Waiting time is considered as a determining factor for intention to reuse the Halodoc App. Patients are more likely to return and be satisfied if they don't have to wait a long time (Probst et al., 1997). Camacho et al. (2006), longer wait times led to lower patient satisfaction and a lower propensity to return. Dansky and Miles (1997) discovered that patients' intentions to reuse decreased as waiting times for doctor's appointments increased. Frequently cited reasons for this phenomenon include insufficient staffing, a lack of resources, high demand from illness, a lack of resources, high demand from seasonality, and needless visit to medical facilities. Strategies to reduce waiting times and increase reuse intentions reuse through improved accessibility communication between patients and the healthcare team through Halodoc's electronic health media service with secure web messaging could can improve provider productivity, and improve the quality of health care for reuse of the Halodoc App (Zhou, 2010; Rosen & Kwoh, 2007; Ralston et al, 2009; Harris, Haneuse, & Martin, 2009).

The accessibility of broadband internet services and the growing number of people who connect to the Internet through mobile devices opens up an unprecedented opportunity to to expand the services provided to remote patients. From 2005 to 2015, the accessibility of internet accessibility of adults increased from 64% to 84%. This is an increase from 74% of low-income adults and 78% of rural residents (Perrin & Duggan, 2015). Accessibility remains low for individuals with less than a high school diploma (66%) and people with less than a high school diploma (66%). high school (66%) and people 65 and older (58%) (Perrin and Duggan, 2015). Looking at the users who registered with the online consultation service compared to users who did not register, one will find some differences. These include older patients, those with lower income or education levels, and those with support from peers who use the internet (Fox & Duggan, 2013). Registered users of online consultation services who access more frequently will see their risk compared to patients who rarely use online consultation. The number of parents using health media services is very low, especially in developing countries. Small studies have been conducted to determine what influences this population to use online consultation services (Quaosar et al., 2018).

Perceived risk of using electronic communication technology and willingness to reuse the health App are still lacking, especially in public health institutions. People with low incomes, low education, racial and ethnic minorities, uninsured, low reading and writing skills, and not using English for language reading and writing skills, and not using English as their primary language have shown differences in language have shown

differences in their relationship with internet-based health communication (Roblin et al., 2009; Ancker et al., 2011; Yamin et al., 2011; Sarkar et al., 2011; Carroll et al., 2005; Sarkar et al., 2011; Goel et al., 2011). Patients with this vulnerability have faced more visible disparities and perceptions of risk related to their health. Lack of digital for reuse intentions threatens the health of this vulnerable group further (Jha et al., 2009; Chang et al., 2004; Hsu et al., 2005). In a 2018 empirical study, the authors of risk perception identified relationships between privacy risk, performance risk, legal concerns, and trust with the intention to use online Apps in the general population in China (Klaver et al., 2021).

According to Reardon and McCorckle (2002), these perceived benefits are limited to situations involving services where there are not many other information systems available. Convenience and other perceived benefit features are naturally associated with patient satisfaction and propensity to use the Halodoc app. Convenience, saving time and money, control, and avoiding social encounters are some of the benefits desired by individuals, according to marketing research, which supports this point of view (Zeithaml, 1988; Bolton & Drew, 1991; Dabholkar, 1996; Meuter et al., 2000). A high-quality health information website is one that is well-designed, has the potential to create favorable attitudes in users and foster perceived benefits toward the site, and contains information that is pertinent, easy to read, and effective at boosting health outcomes, health knowledge, and reuse intentions. reuse intentions, health knowledge and subsequent outcomes (Fennell et al, 2017).

After the pandemic, knowing how waiting time, perceived risk, patient attitude, and perceived benefits relate to the intention to reuse the Halodoc App can help users decide if it is still necessary. It can also give Halodoc App publishers important information to help them create marketing strategies that promote consumer reuse intentions. increase consumer reuse intentions. The authors will see how the effect of waiting time, risk perception, patient attitude, and perceived benefits on intention to use based on the background that has been given. benefits on patient intention to use the Halodoc Application.

RESEARCH METHODS

This study uses a quantitative methodology to determine how waiting time, accessibility, perceived risk, and advantages used relate to the intention to use the Halodoc app again. The author selected 103 respondents who satisfied the following criteria for the research sample: Have completed an online consultation using the Halodoc App and are at least 17 years old and residing in Surabaya. There are four independent variables and one dependent variable in this study, which employs the purposive sampling technique.

Operational Definitions and Research Indicators

Reuse intention

Studies on App services have researched and defined important factors for reuse intentions. (Rai et al, 2013). The impetus that arises in the self to reuse the Halodoc App. Lowry and Gaskin (2014) Indicators of intention to reuse (Y) use five main measurements, namely (1) content quality, (2) engagement, (3) privacy, (4) reliability, and (5) usability. These measurements are taken from previous research. A research

model was created to see how these quality measurements affect the desire for intention to reuse the Halodoc app.

Waiting Time

Camacho et al. (2006) found that an increase in waiting time resulted in reduced patient satisfaction and decreased willingness to reuse. Waiting time is the time taken by patients to get service. Indicators of Waiting Time (X.1) whether the patient's waiting time is shorter than expected or longer than expected. patients are shorter than expected or longer than expected when consulting through the Halodoc App (David, 1996). expected when consulting through the Halodoc App (David, 1996). During the research period, respondents were informed that the survey results would be used to improve the Halodoc App service and program, that the patient's name would not be disclosed to the App publisher. to the publisher of the App.

Accessibility

Usability includes accessibility, which is the extent to which a product may be used by everyone, regardless of ability or disability (Yu et al., 2015). Accessibility is formed for ease of reach from location, use, and media consultation as well as user comfort using the Halodoc App. Accessibility indicators (X.2) include: (1) demographics, (2) access, and (3) technology use, such as Internet connection type and location, and computer convenience (Susan et al., 2017).

Perception of Risk

When someone uses online app services, they may feel unsure, which is known as perceived risk (Deng et al., 2018). Perception of risk forms an individual's subjective assessment of the level of risk borne by the user. The risk perception indicator (X.3) is used to evaluate the impact of using internet-based brief treatment: about comfort and safety (Marasinghe, 2012).

Perceived benefits

Perceived advantages are the extent to which a person believes that utilizing a service, piece of technology, or engaging in a particular activity may arouse a particular level of interest (Ren et al., 2019). Perceived benefits form of user opinion in using the Halodoc App will produce something positive. Wolfenbarger and Gilly (2002) suggest three indicators of perceived benefits (X.5), namely trust, reliability, and reliability. perceived benefits (X.5), namely trust, reliability, and responsiveness.

RESULT AND DISCUSSION

This study utilizes all users who have consulted through the Halodoc application and are 17 years old and above as respondents. The sample was known to be 116 respondents, but there were only 103 respondents who met the respondent criteria. The majority of research respondents were female, with the number reaching 67 respondents and the remaining respondents were 36 male respondents. As shown by the 67 responses, the majority of them are between the ages of 26 and 30. Regarding employment position, the majority of participants—65 in total—were private employees. Regarding income level, 80 people, or the bulk of participants, made less than \$5 million.

The accuracy of the item questions that take into account each respondent's statement is assessed using the validity test. The adjusted item total correlation value, which is higher than 0.3, is used to decide which statement items are valid. Since the corrected item total correlation value is greater than the 0.3 limit, the research data indicates an adequate validity test, indicating that all of the variables used in this study have proven to be good, according to the evaluation of variable validity results.

The data that has been collected in the study will undergo a reliability test using the Cronbach Alpha method. The criterion used is that the data tested has a good level of reliability if the calculated alpha level is greater than the Cronbach alpha coefficient of 0,70. based on the results used, the research data shows an adequate level of reliability because the Cronbach alpha value exceeds the value of 0,70. this means that the questionnaire statements have a high level of reliability and are reliable.

The next stage involves the process of testing the normality of the data that has been collected in this study. The purpose of this normality test is to determine whether or not the regression model's independent and dependent variables have a normal distribution. The relevance of the normality testing stage is found in Figure 1, it can be seen that the data is spread with a certain diagonal pattern. the success of the normality testing stage provides a strong foundation for continuing further statistical analysis.

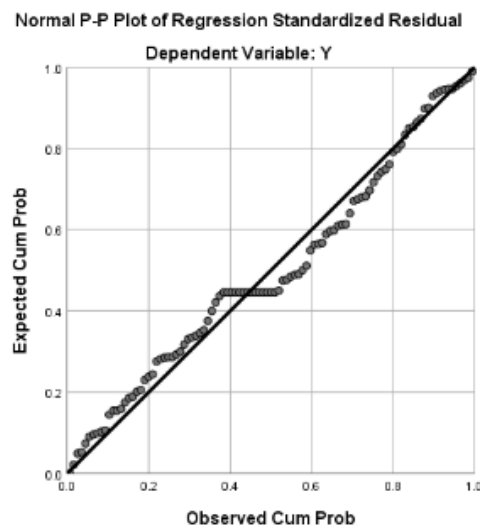


Figure 1. Normality Test

The next step Multicollinearity test is then carried out using the commonly used Variance Inflation Factor (VIF) and Tolerance values, where the VIF value must be less than 10 and the tolerance value must be greater than 0.1. The results of this test show that all research data are free from multicollinearity problems. The waiting time variable's VIF value is 2.522 and its tolerance value is 0.397. The accessibility variable's VIF value is 3.997 and its tolerance value is 0.250. Risk perception has a VIF rating of 4.217 and a tolerance value of 0.237. The VIF score for perceived benefits is 6.991, and its tolerance value is 0.143. Overall, there is no multicollinearity in this study because the tolerance value is higher and the VIF value is lower.

The next step is to run the heteroscedasticity test that has been collected in this study. The findings of the research in Figure 2 indicate that the dots are situated above and below

the 0 (zero) on the Y axis, and the distribution of these points lacks a discernible pattern. This does not occur heteroscedasticity in the regression equation model, so the regression model is feasible to use for the variables of waiting time, accessibility, perceived risk, perceived benefits to my intention.

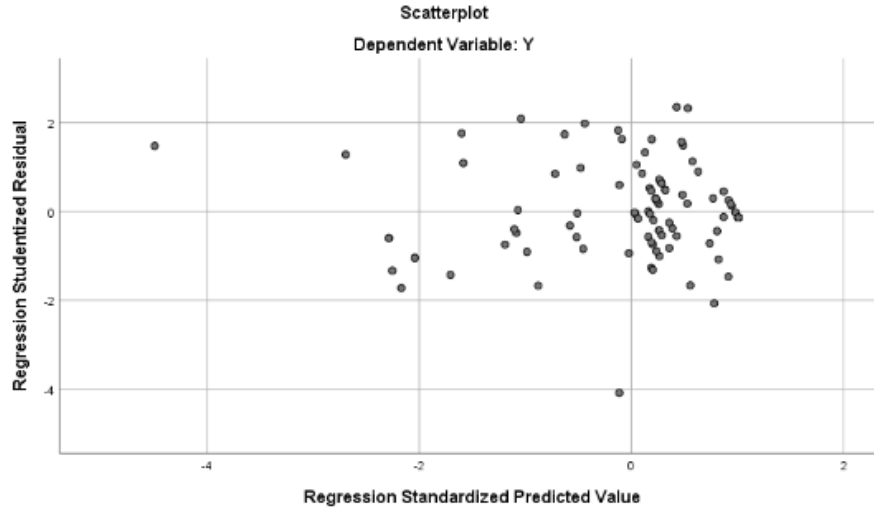


Figure 2. Heteroscedasticity Test

Significant test level of 0.05, the t test results indicate that waiting time, accessibility, perceived danger, and perceived advantages all have a partially significant impact on the intention to reuse variable.

Table 1: Partial Test

Model	t	Sig.	Description
Waiting Time (X1)	2.093	0.002	Accepted
Accessibility (X2)	3.479	0.001	Accepted
Risk Perseption (X3)	3.788	0.000	Accepted
Perceived Benefits (X4)	8.541	0.000	Accepted

Source: Author, 2024

The next step is to assess the overall significance of the research variables using a F test. If the F test is used to test the hypothesis and the result is significant ($F < 0.05$), then the independent factors will collectively have a significant impact on the dependent variable.

Table 2: F Test

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5530.463	5	1106.093	357.170	0.000 ^b
	Residual	300.392	97	3.097		
	Total	5830.854	102			

Source: Author, 2024

The variables of time, accessibility, perceived risk, and perceived advantages all significantly influence reuse intentions at the same time, according to the F test results in Table 2, which yielded a computed F value of 357,170 with a significance level of 0.000 or <0.05.

Table 3: Coefficient of Determination

Model	R	R Square	Adjusted R Square
1	0.974 ^a	0.948	0.946

Source: Author, 2024

The results of the coefficient of determination test are shown in Table 3, yielding an Adjusted R square value of 0.946. This suggests that waiting time, accessibility, perceived risk, and perceived benefits account for 94.8% of the variation in the intention to reuse variable, with variables not included in the model under study accounting for the remaining 5.2%.

Discussion

Effect of waiting time on intention to reuse the Halodoc App

The significance test shows that there is a significant influence between waiting time on reuse intention, in line with previous research conducted by Comancho et al. (2006). The rating of service providers is significantly influenced by waiting times. The author's initial hypothesis regarding the considerable impact of waiting time on intention to reuse the Halodoc App is accepted based on the multiple regression results of waiting time, which indicate a positive influence of waiting time on intention to reuse.

The Effect of Accessibility on Intention to Reuse the Halodoc App

The significance test shows that there is a significant influence between accessibility and intention to reuse, in line with previous research conducted by Quaosar et al. (2018). The intention of senior citizens to use online consultation services is significantly influenced by accessibility. Accessibility has a favorable impact on intention to use, according to the accessibility multiple regression results. In order for the author's second hypothesis that accessibility has a major impact on users' intentions to re-use the Halodoc App to be accepted.

The Effect of Perceived Risk on Intention to Reuse the Halodoc App

The significance test shows that there is a significant influence between perceived risk and intention to reuse, in line with previous research conducted by Goel et al (2011). Relevant to every analysis. Risk perception's multiple regression results indicate that risk perception has a favorable impact on intention to reuse, supporting the author's third hypothesis that risk perception has a significant impact on intention to reuse the Halodoc App.

Effect of perceived benefits on intention to reuse the Halodoc App

The significance test shows that there is a significant influence between perceived benefits and intention to reuse, in line with previous research conducted by Gleton et al. (2005). Reuse intentions are significantly correlated with perceived benefits. The author's fourth hypothesis which states that perceived benefits have a significant influence on intention to reuse the Halodoc Application is accepted because the multiple regression results of perceived benefits show that perceived benefits have a good influence on intention to reuse.

CONCLUSION

Several significant conclusions can be drawn from the analysis of the effects of waiting time, accessibility, perceived risk, and perceived benefits on the intention to reuse the Halodoc Application. Firstly, the intention to reuse the Halodoc Application is a significant and important role for the future; therefore, it is recommended that the Halodoc Application be able to provide additional options for consultation time in order to prevent impromptu time outs when the consultation occurs and has not been resolved, The Halodoc application is recommended to be updated regularly such as bugs, system services, so that it is not easy for errors to occur in the application and can easily get a doctor and a stable signal, and minimize poor response to applications or companies and can run simultaneously with other applications when used by users, so that consumers still have the intention to use the Halodoc application again. Stable, as well as minimizing bad responses to applications or companies and being able to run simultaneously with other applications when used by users, so that consumers still have the intention of using the Halodoc App again. App Halodoc is expected to be able to manage user review responses or criticisms in order to maintain a positive image of the company in digital applications. Companies in digital applications. By managing these reviews, it can reduce the negative impact of user responses, and the Halodoc App must keep up with the era of digitalization with AI that continues to follow medical science by updating the latest journals related to medical science and health.

BIBLIOGRAPHY

- Ancker, J. S., Y. Barrón, & M. L. Rockoff. (2011). Use of An Electronic Patient Portal Among Disadvantaged Populations. *Journal of General Internal Medicine*, 26(10), 1117-23.
- Bolton, R. N. & J. H. Drew. (1991). A Multistage Model of Customers Assessments of Service Quality and Value. *Journal of Consumer Research*, 17(4), 375-385.

- Camacho, F., R. Anderson, A. Safrit, A.S. Jones, & P. Hoffmann. (2006). The Relationship Between Patient's Perceived Waiting Time and Office- Based Practice Satisfaction. *North Carolina Medical Journal*, 67(6), 409-413.
- Carroll, A. E., F. P. Rivara, B. Ebel, F. J. Zimmerman, & D. A. Christakis. (2005). Household Computer and Internet Access: The Digital Divide In A Pediatric Clinic Population The Regenstrief Institute For Health Care , Indianapolis , IN. *Symposium is a Quarterly Journal Modern Foreign Lierature*, 17(5), 111-115.
- Chang, B. L., S. Bakken, & S. S. Brown. (2004). Bridging The Digital Divide: Reaching Vulnerable Populations. *Journal of the American Medical Informatics Association*, 11(6), 448-457.
- D'Anza, B., & J. P. Peter. (2022). Unlocking Value in a Post Pandemic World. *Population Health Management*, 25(1), 11-22.
- Dabholkar, P. A. (1996). Consumer Evaluation of New Technology Based Self-service Options: An Investigation of Alternative Models of Service Quality. *International Journal of Research in Marketing*, 13(1), 29-51.
- Dansky, K. H., & J. Miles. (1997). Patient Satisfaction With Ambulatory Healthcare Services: Waiting Time and Filling Time. *Hospital and Health Services Administration*, 42(2), 165-177.
- David, A. T., M.D, R.Y. Paul, P.h.D. R. Diana, M.D. Williams, L.A. Stephen, & M.D. (1996). Effects of Actual Waiting Time, Perceived Waiting Time, Information Delivery, and Expressive Quality on patient Satisfaction in the Emergency Department. *Administration/Original Contribution*. 28(6), 657-65.
- Deng, Z., Z. Hong, C. Ren, W. Zhang, & F. Xiang. (2018). What Predicts Patients' Adoption Intention Toward Mhealth Services in China: Empirical Study. *JMIR Mhealth Uhealth*, 6(8), 1-14.
- Fennell, K. M., D. A. Turnbull, N. Bidargaddi, J. L. McWha, M. Davies, & I. Olver. (2017). The Consumer-Driven Development and Acceptability Testing of A Website Designed to Connect Rural Cancer Patients and Their Families, Carers and Health Professionals with Appropriate Information and Psychosocial Support. *European Journal of Cancer Care*, 26 (5), 12533.
- Fox, S., & M. Duggan. (2013). Health Online. *Pew Internet & American Life Project*. 7(3), 17-25.
- Goel, M. S., T. L. Brown, & A. Williams. (2011). Disparities in enrollment and use of an electronic patient portal. *Journal of General Internal Medicine*, 26(10), 1112-6.
- Harris, L. T., S. J. Haneuse, & D. P. Martin. (2009). Diabetes quality of care and outpatient utilization with electronic patient-provider messaging. *Journal Diabetes Care*, 32(7), 1-5.
- Hsu, J., J. Huang, & J. Kinsman. (2012). Use of e-Health services between 1999 and 2002: a growing digital divide. *Journal of the American Medical Informatics Association*, 12(2), 164-171
- Jha, A. K., C. M. DesRoches, & A. E. Shields,. (2009). Evidence of an emerging digital divide among hospitals that care for the poor. *Journal Health Affairs (Project Hope)*, 28(6), 1160-70

- Khatun, F., A.E. Heywood, P.K. Ray, S.M. Hanifi, A. Bhuiya, & S.T. Liaw. (2015). Determinants of readiness to adopt m-Health in a rural community of Bangladesh. *International Journal Medical Informatics*, 84(10), 847–856.
- Klaver, N., J. V. D. Klundert, R. V. D. Broek, & M. Askari. (2021). Relationship Between Perceived Risks of Using mHealth Applications and the Intention to Use Them Among Older Adults in the Netherlands: Cross-sectional Study. *JMIR Mhealth Uhealth*, 9(8), 1-12.
- Laura, C., M. D. M. P. H. Myers, M. D. N. G. Kevin, P. M. P. H. Colleen, A. D. B. S. Kathleen, K. P. H. D. Patricia, X. L. M. D., & M. S. C. Vincent. (2023). Trends in Outpatient Visits and Hospital and Intensive Care Uunit Admissions of Adults With Covid-19 in an Integrated US Health Care System, March 2020to January 2022. *Journal of Applied Managerial Accounting*, 6(1), 2253269.
- Marasinghe, R. B., S. Edirippulige, & D. Kavanagh. (2012). Effect of Mobile Phone-Based Psychotherapy In Suicide Prevention: A Randomized Controlled Trial In Sri Lanka. *Journal Telemed Telecare*, 18(3), 151–155.
- Meuter, M. L., A. L. Ostrom, R. I. Roundtree, & M. J. Bitner. (2000). Self service Technologies: Understanding Customer Satisfaction with Technology-based Encounters. *Journal of Marketing*, 64(3), 50 - 64
- O’Cass, A., & J. Carlson. (2012). An Empirical Assessment of Consumers Evaluations of Web Site Service Quality: Conceptualizing And Testing A Formative Model. *Journal of Services Marketing*, 26(6), 419–434.
- Park, J., J. Lee, H. Lee, & D. Truex. (2012). Exploring The Impact of Communication Effectiveness on Service Quality, Trust and Relationship Commitment In IT Services. *International Journal of Information Management*, 32(5), 459–468.
- Perrin, A., & M. Duggan. (2015). As Internet Use Nears Saturation For Some Groups, a Look at Patterns of Adoption. *Pew Research Center. America*.
- Probst, J.C., D. L. Greenhouse, & A. W. Selassie. (1997). Patient and Physi-Cian Satisfaction With An Outpatient Care Visit. *The Journal of Family Practice*, 45(5), 418-425.
- Quaosar, G. M. A., H. Rakibul, & B.Yukun. (2018). Investigating Factors Affecting Elderly’s Intention to Use M-Health Services: An Empirical Study. *Journal Telemedicine and Health*, 24(4), 1-6.
- Rai, A., L. Chen, J. Pye, & A. Baird. (2013). Understanding Determinants of Consumer Mobile Health Usage Intentions, Assimilation, and Channel Preferences. *Journal of Medical Internet Research*, 15(8), 1-20.
- Ralston, J.D., I.B. Hirsch, J. Hoath, M. Mullen, & A. Cheadle. (2009). Web-based collaborative care for type 2 diabetes. *Journal Diabetes Care*, 32(2), 234–239.
- Reardon, J. & D. E. McCorckle. (2020). A Consumer Model for Channel Switching Behaviour. *International Journal of Retail and Distribution Management*, 30(4), 179-185.
- Ren, C., Z. Deng, Z. Hong, & W. Zhang. (2019). Health Information in The Digital Age: an Empirical Study of The Perceived Benefits and Costs of Seeking and Using

-
- Health Information From Online Sources. *Journal Health Information and Libraries*, 36(4), 153-167.
- Roblin, D. W., T. K. Houston, J. J. Allison, P. J. Joski, & E. R. Becker. (2009). Disparities In Use of A Personal Health Record In A Managed Care Organization. *Journal of the American Medical Informatics Association*, 16(5), 683-9.
- Rosen, P., & C. K. Kwok. (2007). Patient–Physician E-Mail: An Opportunity to Transform Pediatric Health Care Delivery. *Pediatrics*, 120(4), 701-6.
- Sarkar, U., A. J. Karter, & J. Y. Liu. (2011). Social Disparities In Internet Patient Portal Use In Diabetes: Evidence That The Digital Divide Extends Beyond Access. *Journal of the American Medical Informatics Association*, 18(3), 318-21.
- Wolfenbarger, M. & M. C. Gilly. (2002). comQ: Dimensionalising, Measuring and Predicting Quality of The E- tail Experience. Working Paper No. 02-100, Massachusetts Marketing Science Institute.
- Yamin, C. K., S. Emani, & D. H. Williams. (2012). The Digital Divide In Adoption And Use of A Personal Health Record. *Archives Internal Medicine*, 171(6), 568- 74.
- Yu, D. X., B. Parmanto, B. E. Dicianno, & G. Pramana. (2015). Accessibility of mHealth Self-Care Apps for Individuals with Spina Bifida. *Perspectives in Health Information Management*, 1(12), 26755902.
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality and Value: A Meansends Model Of and Synthesis Of Evidence. *Journal of Marketing*, 52(3), 2-22.
- Zhou, Y.Y., M. H. Kanter, J. J. Wang, & T. Garrido. (2010). Improved Quality At Kaiser Permanente Through E-Mail Between Physicians and Patients. *Health Affairs (Project Hope)*, 29(7), 1370-5.