

ADOPTION OF TELEMEDIC SERVICES IN MATERNAL AND CHILD HEALTH SERVICES

Mega Silvia Natalia^{1,b)} and Riska Faraswati^{2,a)}

^{1,2}Midwifery Education Profession Study Program, Institute of Health Science Hafshawaty Genggong Street of Educational Area Haf-Sha Islamic Boarding School Zainul Hasan Genggong - Probolinggo, Indonesia

^{a)}Corresponding author:

riskafaraswati.RF@gmail.com,

^{b)}nataliamega12@gmail.com

ABSTRACT

Maximum utilization of communication information technology in health services for maternal and children or recognized as telemedicine, is a friction in the model of providing midwifery care due to demands of the Covid-19 pandemic situation. There was obstacles in its use. The purpose of the study was to determine whether the factors of performance expectancy, effort expectancy, social influences, and facilitating conditions influenced behavioral intention to adopt telemedical system in the field of maternal and child health services by midwives through the Unified Theory of Acceptance and Use of Technology (UTAUT). This a qualitative study used a survey method on 117 midwives in Probolinggo districts with simple random sampling as a sampling technique. Midwives were asked to fill out a questionnaire based on the four main constructs in UTAUT. Data were analyzed using multiples regression. The results of statistical test showed that only the effort expectancy variable had a positive relationship on the behavioral intention to adoption telemedicine system by midwife towards the provision of telemedicine health services (p value $0.001 < 0.05$).

Keywords: telemedicine; maternal child health service

INTRODUCTION

The COVID-19 pandemic gave considerable impact and pressure on health services around the world. One of them was disruption to non-covid health services. Many preventive and curative services for chronic diseases such as cardiovascular, diabetes, hypertension, cancer, and other diseases had been delayed (Muin, 2021). According to UNICEF in the child immunization service, there were disruptions in distribution of basic childhood immunization services in several countries, especially on Southeast Asian and Mediterranean regions during the pandemic. 472,000 Indonesian children

in 2019 and 797,000 children in 2020, did not receive the first dose of DPT vaccine (UNICEF, 2021). Ikatan BIDan Indonesia (IBI) data in 2020 showed a decline in ANC visits during the pandemic (Nurjasm, 2020). Decrease in visits to both first and third level health services (Aeni, 2021; Allan, 2021; Nurrizka et al., 2021). The wider impact of a decrease in maternal visits to health services and delays in child vaccination include increased morbidity-mortality and new health problems that should be prevented (Takemoto et al., 2020; Murthy et al., 2021).

The Covid-19 pandemic situation forced government and health professionals to maximize health services by expanding the coverage of long-distance health services.

In this way, it was hoped the community will still be able to access services, while maintaining physical distance that wasn't needed to prevent the transmission of Covid-19. Based on KMK RI No. HK./Menkes/413/2020 concerning Guidelines for the Prevention and Control of Covid-19, providing of information and all forms of health services would be carried out by utilizing communication information technology or what we call telemedicine (KepMenKes RI, 2020). Telemedicine uses telecommunications technology as a tool to provide health care to populations with limited access to care (Sirintrapun & Lopez, 2018). Use of telemedicine in the health sector proved was able help increase reach of health services during Ebola virus pandemic in Africa (Kayyali et al., 2017) including sufficient to provide satisfaction with easy access to patients and can minimize health care costs, especially costs for accommodation (Kichloo et al., 2020; Evers et al., 2022). According to WHO, the goals of telemedicine was: (1) aiming to support clinical care, (2) being a solution to distance and geographical problems in health services, (3) innovation using new information technology, and (4) improving the quality of life and health. public health (WHO, 2010). Thus, patients and health care providers required to be more proficient, comfortable, and skilled in telemedicine services compared to face-to-face.

Communication technology was use in health services, and become a challenge for medical personnel considering that a detailed physical examination and history taking are important elements in service (Gajarawala & Pelkowski, 2021; Alpert et al., 2022). Other limitations were patient records and histories which can lead to misdiagnosis, unsupervised drug

prescribing or overlapping therapy administration, license, and reimbursement (Hassan et al., 2020; Haleem et al., 2021; Haris et al., 2021). With the use of communication technologies, midwives were required to change the practice model that demands security, reliability, but effective.

Some of obstacles used interactive telemedical services include: some people as part of clinical routines, providing digital technology for underdeveloped communities who are still under development, providing digital system education, internet constraints, information technology devices (Ariyanti & Kautsarina, 2017; Bokolo, 2021).

In terms of digital literacy and culture "it is more convenient to meet face-to-face than long- distance communication". Use of telemedicine had shown great progress but there was still little research in this area given the many barriers that exist; e.g. adoption, financing, adoption, use by health care providers, etc. Adoption utilization of information technology – communication were influenced by behavioral intention (Yuliana et al., 2020; Valentine et al., 2022).

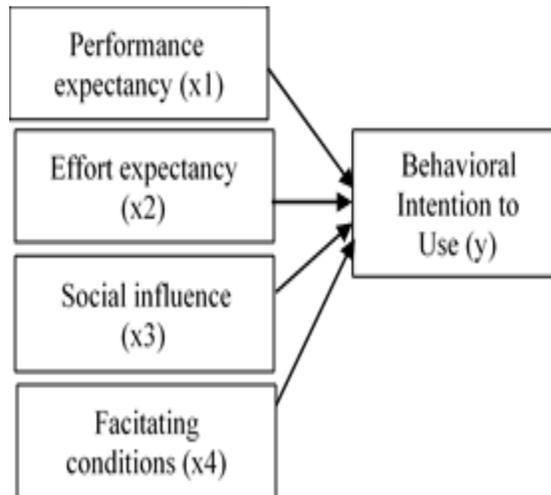
Therefore, this study aimed to determine the factors that influence adoption of telemedical services in the field of maternal and child health services by midwives through Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT model would provide an overview of factors that influence the acceptance and use of information technology, which were assessed, including: 1) performance expectancy (x1), 2) business expectancy (x2), 3) social influences (x3), and 4) facilitation conditions (x4).

METHOD

This is an explanatory research that explains causal relationship between variabels through hypothesis testing. The method used survey method with UTAUT model, which was a research model built to analyze the factors that influence acceptance and use of technology by midwives in district Probolinggo. In this study, the population size is 170 of midwives. Based on sample calculation which would be taken by simple random

sampling with a known value of N, total respondents in this study were 117 midwives. Questionnaire was a research instrument with a Likert scale (strongly agree, agree, disagree, disagree, strongly disagree). All questions declared valid ($p < 0.05$) and reliable. The data is analyzed by multiple linear regression. Regression analysis is estimating and / or predicting relationship between variabel one dependent variable and many independent variables.

FIGURE 1. Unified Theory of Acceptance and Usage of Technology model



RESULT AND DISCUSSION

Based on univariate analysis (table 1) it was known that the majority of respondents were 30 years old (45.3%); most of education respondents were D3 midwifery (41.9%); and majority of respondents used WhatsApp application to communicate in the social media area (94.9%); 53.0% of midwives have not used platforms or applications as part of improving communication technology to support their profession who originated from midwives with range age 30 -39 years.

TABLE 1. Frequency distribution of research subjects

| Subyek | f | % |
|---|-----|------|
| Usia | | |
| 20-29 | 21 | 17.9 |
| 30-39 | 53 | 45.3 |
| 40-49 | 24 | 20.5 |
| >=50 | 19 | 16.2 |
| Pendidikan | | |
| D3 Bidan | 49 | 41.9 |
| D4 Bidan | 23 | 19.7 |
| Sarjana Bidan | 3 | 2.6 |
| Profesi Bidan | 42 | 35.9 |
| Aplikasi untuk menunjang tugas profesi | | |
| Tanpa aplikasi | 62 | 53.0 |
| Bidanku | 24 | 20.5 |
| Info Bidan | 28 | 23.9 |
| Bidan Sehati | 2 | 1.7 |
| Lainnya | 1 | 0.9 |
| Medsos | | |
| WhatsApp | 111 | 94.9 |
| FaceBook | 1 | 0.9 |
| Instagram | 5 | 4.3 |

Research data (table 1) showed that age and education are proven to affect a person's acceptance and use of technology. Information systems used are constantly evolving, older people tend to perceive a high risk of adopting technology and information technology capabilities. In addition, older users tend to have relatively higher traditional/custom barriers compared to the younger generation because older users are generally more

familiar with manual/conventional services than virtual services (Abbasi et al., 2015). It could be concluded that constraints experienced by older users cause a decrease in older interest in using information systems. For those who had been experienced in using health information systems, it will be easier to adapt to various forms of information systems used, both information systems with modern conditions and simple facilities.

TABLE 2. Linearity assumption and multicollinearity assumption table

| Variable | Behavioral Intention to Use* (y) | | | Tolerance | VIF |
|----------|----------------------------------|-------|-------|-----------|-------|
| | df | F | Sig. | | |
| x1 | 3.92 | 0.003 | 0.955 | 0.599 | 1.668 |
| x2 | 3.08 | 4.615 | 0.012 | 0.611 | 1.637 |
| x3 | 3.08 | 0.603 | 0.549 | 0.487 | 2.053 |
| x4 | 3.92 | 2.922 | 0.090 | 0.535 | 1.869 |

Linearity Assumption

Examination linier relationship between dependent and independent variables were carried out to fullfill the assumption of linier relationship between variables. Data on table 2 can be assumed endogenous variables have a significant linear relationship with exogenous variables, then it was fulfills multiple regression assumption.

Normality Assumption

Normality assumption test aims to test whether in the regression model the residual variables are normally distributed or not, it can be seen through a probability plot. Residuals are declared normal if the probability points spread around the diagonal line (picture 2). Kolmogorov-Smirnov test results obtained p-value $0.000 > 0.05$, which means data considered normal and fulfill the assumption of normality.

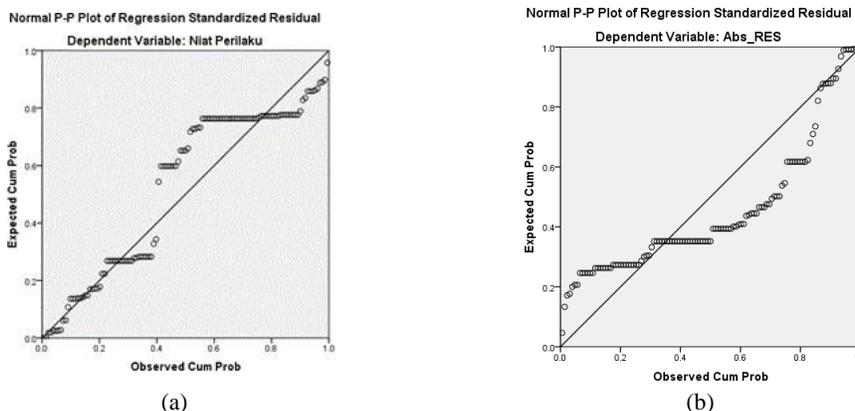


FIGURE 2. Normal test chart (a) Heteroscedasticity Assumption (b)

Multicollinearity Assumption

A Multicollinearity test did to find correlation between independent variables in regression model analysis that could affect the results of statistical tests (Ismail, 2018). Multicollinearity result test on research data showed tolerance value > 0.10 and VIF value < 10.00 so it could be concluded that there isn't multicollinearity in the regression model. (table 2).

Heteroscedasticity Assumption

Heteroscedasticity assumption had been used to determine whether the residual has a homogeneous variance or not. Heteroscedasticity assumption result test can be seen through a scatter plot. Criteria test was state that if the residual points are randomly distributed, it could be stated that the residuals have a homogeneous variance, there are no symptoms of heteroscedasticity (picture 3).

Multiple Linear Regression Analysis

The F test was utilized to test whether or not the independent variables impact the dependent variable at the same time. Result showed of Fvalue = 3.398 with significance value $0.012 < 0.05$ (table 2). This implies that together performance expectancy, effort expectancy, social influence, and facitating conditions have an important impact on midwives behavioral intentions to use telemedicine as part of maternal and child health services.

Based on table 2, R2 showed simultaneously (together) between performance expectancy (x1), effort expectancy (x2), social influence (x3), and facitating conditions (x4) on midwives behavioral intentions to use (y) telemedicine only 0.108 or 10.8%. 89.2% influenced by other variables not examined. Although the R2 value is not high, it does not mean that the research results are wrong because the focus of the

research results is guided by the significance of the relationship between variables. R squared value will increase if

the number of variables is add (Narimawati et al., 2020).

TABLE 3. Regression estimation results

| Model | B (Unstandardized Coefficients) | Beta | r (correlation coefficient) | T _{hitung} | Sig. |
|------------|---------------------------------|--------|-----------------------------|---------------------|-------|
| (Constant) | 2.803 | | | 3.209 | 0.002 |
| x1 | 0.010 | 0.007 | 0.064 | 0.059 | 0.953 |
| x2 | 0.374 | 0.388 | 0.248 | 3.394 | 0.001 |
| x3 | 0.106 | 0.094 | 0.001 | 0.733 | 0.465 |
| x4 | -0.245 | -0.191 | -0.061 | -1.566 | 0.120 |
| R2 | | 0.108 | | | |
| F | | 3.398 | | | |
| Sig. | | 0.012 | | | |

Significance test of partial performance expectancy on midwives behavioral intentions to use telemedicine was Tvalue = 0.059 with a probability of 0.953 > significance level ($\alpha = 0.05$). This means that there was no significant influence of partial performance expectancy on midwives behavioral intentions to use telemedicine. Setyorini & Meiranto (2021) research result found that performance expectancy and several other variables did not contribute to behavioral intentions to use a system.

Pvalue of effort expectancy is $0.001 < \alpha = 0.05$, it means that effort expectancy variable had a positive effect on midwives behavioral intentions to use telemedicine. Faith generated that the easy use of a technology can reduce the user's effort in carrying out activities (Kasilingam, 2020).

Significance test of partial to social influence variabel got Pvalue $0.465 > \alpha = 0.05$, which means there was no significant influence of partial social influence on midwives behavioral intentions to use telemedicine. It might be social influence based on orders or requests (Beldad & Hegner, 2018). Social factors are considered unimportant in the stages of developing an application. Often applications are made from the point of

view of the developer who tends to think technically.

Significance test of partial facitating conditions on midwives behavioral intentions to use telemedicine obtained Tvalue = -1,566 with a probability of 0.120 > $\alpha = 0.05$. This means that there was no significant influence of partial facitating conditions on midwives behavioral intentions to use telemedicine.

From statistical tests series to 4 UTAUT construct variables, only effort expectancy variable had a significant effect on midwives behavioral intentions to use telemedicine. Abbasi, Tarhini and Hassouna(2015), writings it is stated that the use and utilization of technology other than social influence, facilitation, or self-efficacy: there are individual, support, demographic and situational factors (age, education level, type of organization, academic position, volunteerism and use experience) are likely to moderate the individual acceptance behavior towards technology. Another important condition that facilitates the adoption of health information systems by health workers is policy (Thomas et al., 2020).

Another research wrote that problematic internet use partly because: age, education level, demographic information, and communication technology literacy (Liang

Yu et al., 2018). Even if gender and age recently did not seem to have a big role; the experience of using a technology is a moderating effect in some of the hypothesized relationships and this is a plausible implication (Palau-Saumell et al., 2019). The digital era has changed the electronic era to be more personal. The digital age allows significant growth of various groups with different views, beliefs, values, interests, and fetishism which is manifested in the existence of social media that allows people to convey ideas.

Infrastructure support such as computer systems was not the most important thing. Information technology tools complete each other, the most important of which is behavioral intention. Existing modern or simple information systems, would still be operated by users because of strong behavioral intentions (Dwivedi et al., 2019). Attitudes towards technology are influenced by perceived usefulness, enjoyment gained, awareness, perceived risk, and desire to innovate. However, the intention to use directly is only influenced by trust, personal innovation, and attitude. On the other hand, the lack of expertise to use digital media as a tool to access social media is only one of the reasons that make the elderly reluctant to access this technology.

Many previous literature had been stated that person's attitude will determine their technology acceptance, including beliefs and intentions. Attitudes are more or less permanent feelings, thoughts, and tendencies of a person regarding certain aspects of his environment. Attitude was an evaluative bias towards a stimulus or object that has an impact on how a person deals with that object.

CONCLUSION

This study wanted to look at the variables that influence midwives behavioral intention to use communication

technology for maternal-child health services. Variable is the main variable in the UTAUT research model. Statistical tests showed that only effort expectancy variable has a positive effect on midwives behavioral intention to use telemedicine system in health service, with a significance value of $0.001 > (0.05)$. Performance expectations, social influence, and facilitation conditions variables wasn't have significant effect on dependent variable of behavioral intentions using the telemedicine system, with $\text{Sig.} > \alpha 0.05$. The application of the telemedical system and the use of communication technology developments in maternal and child health services needed to consider other variables such as knowledge of technology use, support from the government or stakeholders, strong motivation to change preferences, infrastructure support.

REFERENCES

- Abbasi, M. S., Tarhini, A., & Hassouna, M. (2015). Social , Organizational , Demography and Individual's Technology Acceptance Behavior : a Conceptual Model. *European Scientific Journal*, 11(9), 48–76. <https://core.ac.uk/download/pdf/236413175.pdf>
- Aeni, N. (2021). Pandemi COVID-19: Dampak Kesehatan, Ekonomi, & Sosial. *Jurnal Litbang: Media Informasi Penelitian, Pengembangan Dan IPTEK*, 17(1), 17–34. <https://doi.org/10.33658/jl.v17i1.249>
- Allan. (2021). *Selama Pandemi, Pelayanan di Puskesmas Menurun*. Rri.Co.Id. <https://rri.co.id/humaniora/kesehatan/998829/selama-pandemi->

- pelayanan-di-puskemas-menurun
<https://doi.org/10.1007/s10796-017-9774-y>
- Alpert, J. M., Taylor, G., Hampton, C. N., Paige, S., Markham, M. J., & Bylund, C. L. (2022). Clinicians' Perceptions of the Benefits and Challenges of Teleoncology as Experienced Through the COVID-19 Pandemic: Qualitative Study. *JMIR Cancer*, 8(1), 1–10. <https://doi.org/10.2196/34895>
- Ariyanti, S., & Kautsarina, K. (2017). Kajian Tekno-Ekonomi pada Telehealth di Indonesia. *Buletin Pos Dan Telekomunikasi*, 15(1), 43. <https://doi.org/10.17933/bpostel.2017.150104>
- Beldad, A. D., & Hegner, S. M. (2018). Expanding the Technology Acceptance Model with the Inclusion of Trust, Social Influence, and Health Valuation to Determine the Predictors of German Users' Willingness to Continue using a Fitness App: A Structural Equation Modeling Approach. *Internation Journal of Human-Computer Interaction*, 34(9), 882–893. <https://doi.org/10.1080/10447318.2017.1403220>
- Bokolo, A. J. (2021). Exploring the adoption of telemedicine and virtual software for care of outpatients during and after COVID-19 pandemic. *Irish Journal of Medical Science*, 190(1), 1–10. <https://doi.org/10.1007/s11845-020-02299-z>
- Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a Revised Theoretical Model. *Information Systems Frontiers*, 21(3), 719–734.
- Evers, E. C., Fritz, S. A., Colditz, G. A., & Burnham, J. P. (2022). Perceptions of Telemedicine and Costs Incurred by a Visit to a General Infectious Diseases Clinic: A Survey. *Open Forum Infectious Diseases*, 9(3), 1–9. <https://doi.org/10.1093/ofid/ofab661>
- Gajarawala, S. N., & Pelkowski, J. N. (2021). Telehealth Benefits and Barriers. *The Journal for Nurse Practitioners*, 17, 218–221. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7577680/pdf/main.pdf>
- Haleem, A., Javaid, M., Singh, R. P., & Suman, R. (2021). Telemedicine for healthcare: Capabilities, features, barriers, and applications. *Sensors International*, 2(June), 100117. <https://doi.org/10.1016/j.sintl.2021.100117>
- Haris, F., Irawati, K., & Rahman, F. F. (2021). Adaptation of telemedicine amidst COVID-19 towards Indonesian physicians: benefits, limitations, and burdens. *Bali Medical Journal*, 10(3Special issue), 1289–1293. <https://doi.org/10.15562/bmj.v10i3.2900>
- Hassan, A., Mari, Z., Gatto, E., Cardozo, A., Youn, J., Okubadejo, N., Bajwa, J. A., Shalash, A., Shinsuke, F., Aldaajani, Z., Esther C, & International Telemedicine Study Group. (2020). Global Survey on Telemedicine Utilization for Movement Disorders During the COVID-19 Pandemic. *Movement Disorders*, 35(10), 1701–1711. <https://doi.org/10.1002/mds.28284>

- Ismail, F. (2018). *Teknik2 Statistik dalam Bisnis dan Ekonomi 2* (I). Prenada Media.
- Kasilingam, D. L. (2020). Understanding the attitude and intention to use smartphone chatbots for shopping. *Technology in Society*, 62, 101280. <https://doi.org/https://doi.org/10.1016/j.techsoc.2020.101280>
- Kayyali, R., Peletidi, A., Ismail, M., Hashim, Z., Bandeira, P., & Bonnah, J. (2017). Awareness and Use of mHealth Apps: A Study from England. *Pharmacy*, 5(2), 33. <https://doi.org/10.3390/pharmacy5020033>
- KepMenKes RI. (2020). Keputusan Menteri Kesehatan Republik Indonesia Nomor HK.01.07/MenKes/413/2020 Tentang Pedoman Pencegahan dan Pengendalian Corona VirusDisease 2019 (Covid-19). In *MenKes/413/2020* (Vol. 2019, p. 207). https://infeksiemerging.kemkes.go.id/download/KMK_No._H.K.01.07-MENKES-413-2020_ttg_Pedoman_Pencegahan_dan_Pengendalian_COVID-19.pdf
- Kichloo, A., Albosta, M., Dettloff, K., Wani, F., El-Amir, Z., Singh, J., Aljadah, M., Chakinala, R. C., Kanugula, A. K., Solanki, S., & Chugh, S. (2020). Telemedicine, the current COVID-19 pandemic and the future: a narrative review and perspectives moving forward in the USA. *Family Medicine and Community Health*, 8(3), 1–9. <https://doi.org/10.1136/fmch-2020-000530>
- Liang Yu, Recker, M., Chen, S., Zhao, N., & Yang, Q. (2018). The Moderating Effect of Geographic Area on the Relationship Between Age, Gender, and Information and Communication Technology Literacy and Problematic Internet Use. *Cyberpsychology, Behavior, and Social Networking*, 21(6). <https://doi.org/10.1089/cyber.2017.0503>
- Muin, H. (2021). Dampak Covid-19 terhadap Pelayanan Rumah Sakit. In S. Yusuf & Usman (Eds.), *OPTIMISME MENGHADAPI TANTANGAN PANDEMI COVID-19: Gagasan dan Pemikiran Dosen Fakultas Ilmu Kesehatan Universitas Muhammadiyah Parepare* (I, p. 98). PT Nasya Expanding Management.
- Murthy, B. P., Zell, E., Kirtland, K., Jones-Jack, N., Harris, L. T., Sprague, C., Schultz, J., Le, Q., Bramer, C. A., Kuramoto, S., Cheng, I., Woinarowicz, M., Robison, S., McHugh, A., Schauer, S., & Gibbs-Scharf, L. (2021). Impact of the COVID-19 Pandemic on Administration of Selected Routine Childhood and Adolescent Vaccinations — 10 U.S. Jurisdictions, March-September 2020. *MMWR Recommendations and Reports*, 70(23), 840–845. <https://doi.org/10.15585/mmwr.mm7023a2>
- Narimawati, U., Sarwono, J., Munandar, D., & Winanti, M. (2020). *Metode Penelitian dalam Implementasi Ragam Analisis: untuk Penulisan Skripsi, Tesis, dan Disertasi* (I). Penerbit Andi.
- Nurjasmi, E. (2020). *Situasi pelayanan kebidanan pada masa pandemi COVID-19 dan Memasuki era New-Normal*.

- [https://www.ibi.or.id/media/Materi Webinar IBI - USAID Jalin Covid19/Seri 5 - 10Juni 2020/PDF 1 Emi 10 Juni USAID Jalin SITUASI PELAYANAN KB PADA MASA PANDEMI COVID-19 %26 ERA NEW NORMAL - compressed.pdf](https://www.ibi.or.id/media/Materi%20Webinar%20IBI%20-%20USAID%20Jalin%20Covid19/Seri%205%20-%2010%20Juni%202020/PDF%201%20Emi%2010%20Juni%20USAID%20Jalin%20SITUASI%20PELAYANAN%20KB%20PADA%20MASA%20PANDEMI%20COVID-19%20%26%20ERA%20NEW%20NORMAL%20-%20compressed.pdf)
- Nurritzka, R. H., Nurdiantami, Y., & Makkiyah, F. A. (2021). Akses Ibu Hamil Terhadap Pelayanan Kesehatan di Masa Pandemi Covid-19. *Jurnal Kebijakan Kesehatan Indonesia*, *10*(2), 94–99. <https://doi.org/https://doi.org/10.22146/jkki.62752>
- Palau-Saumell, R., Forgas-Coll, S., Sánchez-García, J., & Robres, E. (2019). User Acceptance of Mobile Apps for Restaurants: An Expanded and Extended UTAUT-2. *Sustainability*, *11*(4). <https://doi.org/10.3390/su11041210>
- Setyorini, A., & Meiranto, W. (2021). Analisis Faktor-Faktor yang Memengaruhi Penerimaan dan Penggunaan Sistem Informasi Manajemen Daerah (SIMDA) dengan Menggunakan Model UTAUT 2. *Diponegoro Journal of Accounting*, *10*(1), 1–15.
- Sirintrapun, S. J., & Lopez, A. M. (2018). *Telemedicine in Cancer Care*. American Society of Clinical Oncology Educational Book. https://doi.org/10.1200/EDBK_200141
- Takemoto, M. L. S., Menezes, M. O., Andreucci, C. B., Knobel, R., Sousa, L. A. R., Katz, L., Fonseca, E. B., Magalhães, C. G., Oliveira, W. K., Rezende-Filho, J., Melo, A. S. O., & Amorim, M. M. R. (2020). Maternal mortality and COVID-19. *Journal of Maternal-Fetal and Neonatal Medicine*, *0*(0), 1–7. <https://doi.org/10.1080/14767058.2020.1786056>
- Thomas, S., Sagan, A., Larkin, J., Cylus, J., Figueras, J., & Karanikolos, M. (2020). Strengthening health systems resilience, Key concepts and strategies. European Observatory of Health Systems and Policies. *Who*, *33*. <https://apps.who.int/iris/bitstream/handle/10665/332441/Policy-brief-36-1997-8073-eng.pdf>
- UNICEF. (2021). *COVID-19 pandemic leads to major backsliding on childhood vaccinations, new WHO, UNICEF data shows*. <https://www.unicef.org/press-releases/covid-19-pandemic-leads-major-backsliding-childhood-vaccinations-new-who-unicef-data>
- Valentine, M., Bonochdita, V., Rampengan, S. H., Nelwan, J. E., Manampiring, A. E., & Rombot, D. V. (2022). *Faktor-faktor yang mempengaruhi keputusan adopsi aplikasi hermina mobile pada pasien rawat jalan poli eksekutif di Rumah Sakit Hermina Manado*. *13*(1), 11–18. <https://doi.org/10.15562/ism.v13i1.1288>
- WHO. (2010). *Telemedicine: Opportunities and Developments in Member States: Report on the Second Global Survey on eHealth 2009* (Global Observatory for eHealth Series, Volume 2). In *Healthcare Informatics Research* (Vol. 18, Issue 2). <https://doi.org/10.4258/hir.2012.18.2.153>

Yuliana, A., Siti Astuti, E., & Wulida Afrianty, T. (2020). Pengaruh Ekspektasi Usaha Terhadap Hedonic Motivation, Habit dan Niat Perilaku Penggunaan Aplikasi Transportasi

Online (Studi Pada Pelanggan Gojek Indonesia Di Kota Malang). *Profit*, *14*(2), 82–91.
<https://doi.org/10.21776/ub.profit.2020.014.02.10>