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Revisiting the Trust of Online Services Middle Age M-Health Users in Indonesia

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Abstract

The purpose of this research is to test the effects of social support and online trust behavior on the adherence in 212 middle-aged m-Health users in Indonesia. The data was obtained incidentally by distributing questionnaires to middle-aged m-Health users in Indonesia. The measuring instruments used are social support, online trust behavior, and the Health Care Climate Questionnaire (HCCQ). The survey method is analyzed using Structural Equation Modeling (SEM) with the Linear Structural Relations (LISREL) program version 8.7. The results show a direct effect between social support and the adherence of middle-aged m-Health users, a direct effect of online trust behavior on the adherence of middle-aged m-Health users, and an indirect effect of social support on adherence mediated by online trust behavior in middle-aged m-Health users. The discussion of the results is described in the article.

Keywords: Social Support; Online Trust Behavior; Adherence; M Health; Middle Age In Indonesia.

Introduction

Social support plays a significant role in promoting adherence. Extensive research has been conducted on the relationship between social support and adherence, yielding the following findings: social support acts as a predictor variable (Criswell, Weber, Xu, Carter, 2010); perceived availability of support is strongly associated with health (Gurung, Gurung, Sarason, 2001); providing information through social support enhances health understanding, both physically and psychologically (Wolf, Gazmararian, Baker, 2005); social support influences adherence and reduces loneliness in patients with heart failure (Löfvenmark, Mattiasson, Biling, Edner, 2009). While social support is traditionally obtained from family, friends, or significant others, it can also be provided through online platforms. Studies on middle aged patients have indicated that social support can be effectively provided through information and communication technology (ICT) (Czaja et. al., 2018).

The internet serves as the main platform for individuals to access health and medical information (Fox & Jones, 2009). Meanwhile, trust in online health services is crucial in overcoming uncertainty and perceived risks (McKnight & Chervany, 2001). When individuals trust online health information and perceive its quality, they are more likely to seek such information again.

One form of service that can be accessed and trusted by the public is m-Health. M-Health, or mobile health, is a popular term used to describe the combination of information and health technology (Boudreaux et al., 2014). By the end of 2010, more than 200 million m-Health applications had been downloaded, and approximately 70% of the world's citizens expressed interest in accessing at least one m-Health application (Silalahi et al., 2018).

The realization of the importance of health has led to an increased need for seeking health information through the internet. Over the past decade, the internet has significantly transformed the lifestyles of many individuals, who now rely on it to access health-related information. With the widespread use of mobile phones, the delivery of remote health information through mobile devices, such as mHealth, has become increasingly popular (Anglada-Martinez, Riu-Viladoms, Conde, Illamola, Momblona, Jane, 2015).

In Indonesia, digital health services have experienced significant growth, resulting in an increase in the number of users. According to a survey conducted by Deloitte Indonesia, approximately 84.4 percent of digital health service users expressed satisfaction with the provided services. This satisfaction is attributed to the practicality, convenience, low cost, and the wide range of features available to users (Ulya, 2019).

M-Health, as a platform that provides health services, has been extensively researched and utilized as an intervention (Anglada-Martinez et al., 2015; Gagnon et al., 2016; Kamal et al., 2015; Sari & Besral, 2020). The research results indicate a positive relationship between m-Health and adherence. In this study, patients who received m-Health as an intervention were already familiar with their doctors and knowledgeable about the treatment procedures. Consequently, these patients demonstrated a willingness to comply with the treatment, leading to increased adherence.

The research exploring the relationship between m-Health and trust has been relatively limited. In general, individuals who use m-Health are not familiar with the medical personnel or doctors who will be treating them, nor are they aware of their competence. Therefore, trust becomes a crucial factor when using m-Health. Previous research has yielded the following results regarding online trust and adherence: online trust acts as a mediator variable for online privacy (Lee, Tan, Siah, 2017), trust increases access to healthcare (Thiede, 2005), online health-seeking behavior enhances adherence (Tustin, Crowcroft, Gesink, Johnson, Keeln, Lachapelle, 2018), and trust in health information promotes adherence (Hether, M). These findings from previous research emphasize the significance of trust for users of health application services (m-Health) in supporting their online health information searches.

The research results regarding trust on online platforms indicate that users' trust can be established by transferring trust from offline healthcare services to unfamiliar m-Health services. Despite the significant role of trust in the adoption of m-Health, there has been limited previous research investigating the development of trust in m-Health services (Akter et al., 2012; Guo et al., 2016). Furthermore, since m-Health services are derived from traditional services but in a new mobile context, users' perceptions of m-Health can be influenced by their experiences with traditional offline services, particularly trust. Research on the transfer of trust from the offline context to mobile channels remains unexplored in the field of healthcare, especially in relation to trust research on the use of m-Health among the middle-aged population.

Research conducted in Indonesia regarding trust in the use of m-Health has yielded insignificant results. According to Petriella (2019), 61.2% of internet users in Indonesia opt not to use m-Health due to a lack of trust. Concerns related to the security of personal data, accuracy of diagnoses, and legal protection for users contribute to this lack of trust. Insufficient trust in health applications, particularly regarding the privacy of patient data, miscommunication between doctors and patients, and the presence of inexperienced doctors, is a significant factor. Additionally, government regulations concerning technology in the health sector are still not fully established (Rofiah, 2019).

Based on the information above, the researchers propose several hypotheses: (1) Does social support have a direct effect on adherence to medical advice among middle-aged adults using m-Health? (2) Does online trust behavior have a direct effect on the adherence of middle-aged m-Health users? (3) Does online trust behavior mediate the indirect effect of social support on adherence to medical advice among middle-aged m-Health users?

Research Method

This research adopts a quantitative approach utilizing survey methods to investigate the influence of social support on adherence behavior, with online trust behavior as a mediator. Social support is treated as the independent variable, online trust behavior as the mediator variable, and adherence as the dependent variable. The measurement instrument employed to assess social support is the social support scale developed by Zimet et al. (1988). This scale gauges the perceived support received from three sources, namely 1) family, 2) friends, and 3) other significant sources. It comprises 12 items. The measuring tool for online trust behavior was compiled by McKnight and Chervany (2001) and consists of three components: (1) Integrity, with four indicators, encompassing: trusting beliefs, trusting intention, perceived vendor, and intent to share information; (2) Benevolence, featuring two indicators: intent to follow and perceived site quality. (3) Competence, featuring three indicators: intent to purchase, structural assurance, and perceived web risk.

The total number of items in this scale is 44. Additionally, adherence is measured using the Health Care Climate Questionnaire (HCCQ) developed by William et al. (1996). This questionnaire comprises 15 items distributed across three dimensions: 1) autonomy, 2) competence, and 3) relatedness.

The data analysis in this research utilizes the Structural Equation Modeling (SEM) technique, specifically employing the LISREL software version 87. The type of data collected is in the form of interval scale data, and the correlation analysis is performed using Pearson's Product Moment correlation coefficient within the LISREL software. The measuring instruments employed in the study have been established as valid and reliable, as indicated in Table 1 and Table 2 of the research.

Respondents obtained with incidental sampling techniques with inclusion criteria are as follows (1) m-Health male and female users (45-60 years old), (2) high school education, (3) downloading m health applications as active users, (4) consulting with doctors through m-Health regarding their health conditions, (5) are general patients, are not participating in long-term treatment and do not have concomitant diseases. Data is obtained by distributing questionnaires through (1) google form links on online social media platforms such as WhatsApp groups, twitter, and health observer communities; (2) directly contacting middle adult individuals who use health applications in various associations, institutions and institutions by asking questions either directly and through online media using g-form.

Table 1
The reliability scores of the research scale (based on Pearson's calculation results)

Research Scale	Reliability Score (*Alpha Cronbach*)	Interpretation
Adherence	.890	Reliable
Social Support	.800	Reliable
Online Trust Behavior	.941	Highly reliable

Table 2
Validity Test

Research Scale	Validity Test Result (Range)	Explanation
Adherence, 15 items	0,379 – 0,708	There are 2 invalid items, (item 4 and 14). Therefore, the number of valid items is 13.
Social support, 12 items	0,341 – 0,506	There is 1 invalid item, which is item 8. Therefore, the number of valid items is 11.
Online trust	0,408 – 0,770	There are 4 invalid items, they are item 3, 25, 28, and 36.

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Research Scale	Validity Test Result (Range)	Explanation
behavior		Therefore, the number of valid items is 35.

Table 3
Direct effect of the independent variable on the dependent variable

No	Pengaruh Langsung	Path coefficient	Error Standar	Calculated Valuet x Calculated t_{tabel}	R^2	Conclusion
1	Social support → *Adherence*	0,086	0,037	2,32 > 1,97		significant
2	*Online trust behaviour* → *Adherence*	0,61	0,069	8,88 > 1,97	0,48	significant
3	Social support → *Online trust behavior*	0,052	0,035	1,48 < 1,97	0.15	insignificant

Results & Discussion

Data from this study was obtained from 212 participants from various cities/districts in Indonesia. The results of testing the theoretical model of social support for adherence, mediated by online trust behavior, are shown in Figure 1.

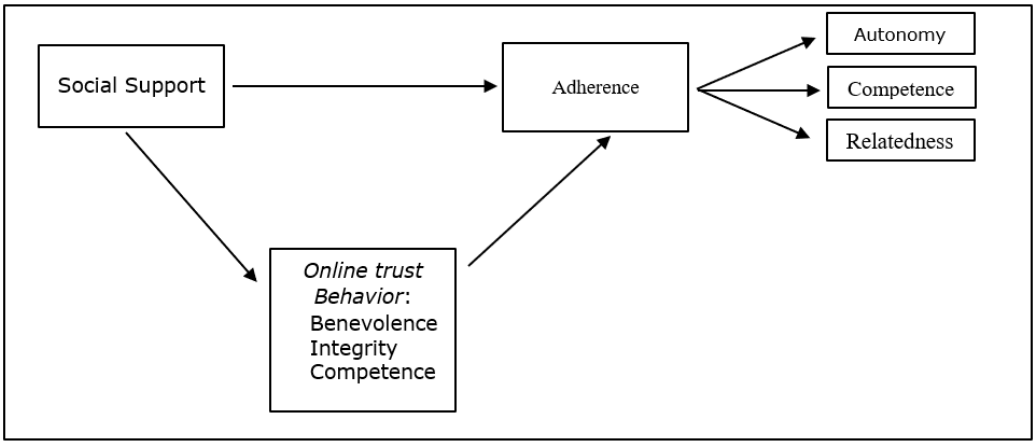

Figure 1. Theoretical model of social support on adherence mediated by online trust behavior of m-Health users in middle-aged Indonesians

Although trust is widely regarded as an important prerequisite for the implementation of any electronic service (Beldad et al., 2010), there are potential risks associated with health decisions (Y. Li et al., 2018). Trusts play a more significant role in the context of online healthcare. Therefore, trust is important in helping individuals overcome the perception of uncertainty and risk (McKnight & Chervany, 2001). Furthermore, the behavior of seeking health information on the internet from the perspective of Self-Determination theory through the fulfillment of autonomy, competence, and interrelationship, as well as the perspective of social support theory is still not widely explored. In this case, the trust in digital health services is identified as one of the main constructions of this study. The results of Litman et al. (2019) research explain m-Health as a technology showing positive results.

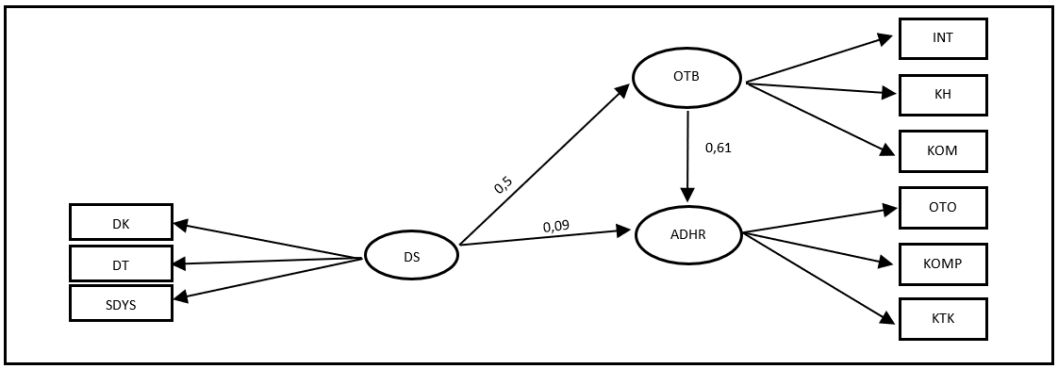

Figure 2. Statistical model of social support variables, adherence, online trust behavior

The need for autonomy refers to the desire to act according to one's own interests and choices (Williams et al., 2002). In the context of patient engagement, autonomous strategies involve effective listening and interaction with sources of support from people in their social circle. When it comes to mobile applications, considering the psychological needs of users can provide opportunities for intrinsic motivation and encourage the use of health applications.

H1. There is a direct effect of social support on adherence behavior

The interaction between the individual and their treating doctor is an important element in the formation of the care climate. The created care climate plays a role in managing certain behaviors. Specifically, this is relevant in the context of the m-Health application because individuals involved in healthcare activities require a commitment to determine their own preferences. Individuals who engage in activities that fulfill psychological needs, such as autonomy, competence, and relatedness, are more likely to continue their activities and achieve better performance (Soni, Jain, Jajodia, 2021).

Adherence to the treatment regimen is crucial for maintaining or improving health status. The respondents participating in this study mentioned several factors that can support adherence behavior, including access to consulting services, comprehensive features, and reliable information. These factors contribute to the respondents' ability to align their behavior with medical advice and adhere to the prescribed regimen.

According to Self-Determination Theory, autonomous motivation is predicted by autonomy support or perceived support from others to make decisions related to certain health behaviors. The role of health care providers in supporting respondents' autonomous motivation is the health care climate between doctors and patients.

Social support, as identified by Zimet et al. (1988), is a significant source that can help maintain adherence to a treatment regimen. In the context of m-Health services, health care providers can also play a role in providing support for adherence to the prescribed regimen. Respondents' feedback regarding the m-Health service indicates that certain features facilitate the acquisition of health information and enable discussions about the treatment regimen with their doctors. By receiving support from doctors and others, patients' motivation for adherence can increase. It is predicted that adherence will improve when patients actively engage in planning their treatment in collaboration with their doctors, as suggested by Kennedy et al. (2004).

Previous research has consistently demonstrated that adherence can be influenced not only by health care providers but also by members of an individual's social network. While health services play a crucial role in ensuring proper treatment, friends and family can have a significant impact on supporting adherence in daily life. Several studies conducted by researchers such as Amico et al. (2018), Holmes, Hughes, Morrison (2014), Karimy et al. (2018), and Miller & DiMatteo (2013) have explored the relationship between social support and adherence, yielding consistent findings.

This research has revealed a significant impact of social support on adherence behavior, indicating that increased social support received by respondents (patients) leads to a higher level of adherence behavior. Furthermore, the perceptions of respondents (patients) regarding the relationship between themselves and health care providers (e.g., as measured by the HCCQ item: "I feel that my doctor cares about me personally") emerged as an important factor in promoting adherence to the treatment regimen. The study findings also indicate that health care providers can cultivate autonomous motivation in patients by demonstrating an understanding of their choices

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and encouraging behaviors that align with their values. The perceived support for autonomy among respondents (patients) predicts autonomous motivation, which, in turn, predicts adherence to the regimen.

Individuals utilize online health services to acquire health information, which in turn can establish trust in the competence of these services. Relevant and informative health content can contribute to a better understanding of health issues, including their potential causes and appropriate management strategies (Morahan-Martin, 2004). Consequently, individuals are more inclined to perceive a website as trustworthy and reliable, particularly when the information provided is of high quality (Sillence et al., 2006).

H2. There is a direct effect of online trust behavior on adherence behavior

The utilization of m-Health applications accessible via the internet presents itself as an option for accessing health services. By using m-Health, individuals can enhance their self-care awareness, enabling them to actively participate in their treatment and reduce healthcare expenses. However, it is important to acknowledge that the use of these health applications is not without risk factors, including financial and psychological risks. The perceived risks experienced by individuals have certain consequences, and if these consequences are perceived as minimal, the perceived threat of loss decreases, thereby strengthening the intention to use the application (Erdil, 2015).

Information obtained from online services can serve as influential recommendations that shape individuals' behaviors in a certain manner (Schiffman & Kanuk, 2010). Furthermore, research has shown that user trust in a website is closely tied to the popularity of the website. A well-regarded and reputable website tends to enhance user's trust.

Li & Wang (2018) contend that trust is commonly recognized as a crucial requirement for the successful implementation of any electronic service, particularly when it comes to the potential risks associated with health decisions (Li et al., 2018). Trust plays an even more significant role in the realm of online healthcare. Within the context of online services, trust becomes a crucial factor as it assists individuals in overcoming the perception of uncertainty and risk (McKnight et al., 2002).

In the online context, users of health applications, particularly middle-aged adults, are confronted with the task of making judgments regarding trust in the system they are connected to, such as interactions with doctors. In such situations, respondents may be susceptible to manipulated beliefs and potentially face adverse consequences, both economically and psychologically. This vulnerability arises from the disclosure of personal or financial information on unfamiliar websites or through interactions with strangers whose intentions have not been verified.

When interacting with online health services, respondents' behavior is voluntary and driven by intrinsic motivation. This is influenced by how the respondent's intrinsic needs can impact their trust in online health services. The Internet plays a significant role in providing healthcare services as it offers not only informational support but also emotional support. Access to online resources can guide respondents in making informed decisions and taking appropriate actions, which in turn can affect adherence to recommended behaviors (Guadagno, Muscanell, Rice, Roberts, 2013). As a result, respondents are willingly providing personal information related to their health.

From the perspective of Self-Determination Theory, trust in online health services is established when the service is able to fulfill the individual's basic psychological needs, leading to various positive outcomes such as well-being (Williams et al., 1998). The intention of m-Health users, such as the intention to seek health information, can be sustained through trust, which keeps them engaged and connected with online health services.

This research found a significant relationship between online trust behavior and adherence behavior among middle-aged m-Health users. This implies that the level of trust that respondents have in online health services is notably high. Respondents perceived that online health service providers could be trusted, through components: 1) competence, that is, online service providers are resourceful and knowledgeable. In this situation, respondent believes that online health service providers are very capable of completing tasks, so that respondents will be more willing to disclose their information to health service providers, 2) benevolence, respondents feel the extent to which the health service provider has the intention of being positive and kind to the concerns of respondents, 3) integrity, referring to honesty, keeping promises and reliability.

Patient trust in health services, coupled with the belief in the reliability and accuracy of conveyed health information, contributes to a satisfying experience during interactions with the website. This, in turn, can enhance the patient's intrinsic motivation to regulate their behavior and willingly adhere to medical advice (Williams et al., 2006). In particular, McKnight and Chervany (2001) emphasize the criticality of trust in online services, especially those pertaining to healthcare.

The findings of this study align with the research conducted by Guo et al. (2016) and Handayani et al. (2020), which suggest that user trust in websites can be fostered through the transfer of trust from offline healthcare services to online health services.

This research confirms that online trust behavior directly influences the adherence behavior of middle-aged m-Health users. Patients who utilize m-Health services exhibit trust in this online platform, perceiving the information provided by their doctors as fulfilling their psychological needs. This fulfillment is facilitated through the patient's relationship with the doctor, fostering a sense of care and respect for the patient's decisions regarding their health. These study findings align with previous research by Guadagno et al. (2013) and Williams et al. (1998), highlighting that the care environment established significantly impacts the fulfillment of patients' psychological needs, subsequently predicting adherence.

Patient's trust in health services, as well as the belief that the health information delivered is reliable and accurate, provides a satisfying experience when interacting with the website. In turn, it strengthens the patient's intrinsic motivation to manage their behavior by showing willingness to voluntarily follow medical advice (Williams et al., 2006).

This research proves that online trust behavior has a direct influence on the adherence behavior of middle-aged m-Health users. M-health user patients show trust in this online health service, so that the information conveyed by the doctor is perceived as reliable. This also fulfills psychological needs through the patient's relationship with the doctor, making the patient feel cared for and respected in their decisions regarding health.

Web-based health services provide individuals with health information and necessary support, making them feel confident in obtaining relevant and useful information to address health-related issues.

H3. There is an indirect effect of social support on adherence behavior mediated by online trust behavior

Social support is believed to be a tool or support to improve someone's health. Good social support will create a good environment. A good environment will provide a sense of comfort that makes individuals feel loved and cared for. Social support in the form of providing information, will make individuals believe that they are cared for, loved, and appreciated (Zimet et al., 1988).

Health information that can be accessed through the internet can play a crucial role in determining motivation. For instance, the skill of using the internet plays an important role in the use of health services both in terms of accessing and comprehending information (von Wagner, Stepoe, Wolf, Wardle, 2009). Application features that are tailored to health needs, provide various choices, which benefit users.

M-Health users access the service for various treatments and often share positive reviews with fellow users (Handayani et al., 2020). Consequently, in an online setting, health care services can serve as sources of support needed by individuals and have the potential to influence their health behavior (Oeldorf-Hirsch et al., 2019). Understanding the motivation of m-Health users to maintain their well-being plays a crucial role in predicting adherence to health-related behaviors. Intrinsic motivation, in particular, plays a significant role in managing health behavior, as it requires a deep commitment from m-Health users. Furthermore, intrinsic motivation plays a vital role in motivating users to actively engage with the app.

The influence of social support on adherence behavior in various studies has shown consistent results. Social support in the form of accurate information, and the role of treatment can strengthen the motivation to comply (Amico et al., 2018; Karimy et al., 2018). Trust in online health information is an important factor because it helps individuals overcome the perception of uncertainty. This is the basis for researchers to hypothesize that there is an indirect influence of social support on adherence behavior mediated by online trust behavior.

This study did not find evidence supporting the notion of an indirect influence of social support on adherence behavior, mediated by online trust behavior. The findings suggest that although social support is considered a variable that can provide support, its impact on adherence behavior may not be significant. The test results, with a Zsobel value of 1.465 and $P = 0.143 > 0.05$, indicate that social support does not have a significant influence on adherence behavior. Consequently, online trust behavior is not a mediating variable between social support and adherence behavior among middle-aged m-Health users. The lack of a significant relationship between social support and adherence behavior, mediated by online trust behavior, implies that health information obtained from digital health services is not perceived as part of a support system by the respondents. As a

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result, the respondents exhibit a low level of trust in health information accessible through the internet or digital health services.

Conclusions

Adherence behavior will increase if the patient feels free to choose to participate in treatment of their own will. The chat column provided on the m-Health service can be used by patients to consult about their concerns. This aligns with the main goal of m-Health, which is to improve health outcomes through active self-management and involvement in health care (Kemenkes, 2016). The results showed that social support increased adherence in middle aged adult m-Health users, as well as online trust behavior can increase the adherence of middle aged adult m-Health users. These results explain the positive experience of using this health application reinforces the user's intention to use m-Health. The perception of the ease in using this application has an impact on patient's belief in using online health services. However, the results of the indirect influence of social support on adherence with online trust behavior as a mediator give insignificant results. Health information that can be accessed through health applications is not perceived as a source of support when needed, resulting in respondents' lack of willingness to interact with digital health services.

References

Akter, S., Ray, P., & D'Ambra, J. (2012). Continuance of mHealth services at the bottom of the pyramid: the roles of service quality and trust. *University of Wollongong Research Online*, 1–19. https://ro.uow.edu.au/commpapers/2906

Amico, K. R., Mugavero, M., Krousel-Wood, M. A., Bosworth, H. B., & Merlin, J. S. (2018). Advantages to Using Social-Behavioral Models of Medication Adherence in Research and Practice. *Journal of General Internal Medicine*, *33*(2), 207–215. https://doi.org/10.1007/s11606-017-4197-5

Anglada-Martinez, H., Riu-Viladoms, G., Martin-Conde, M., Rovira-Illamola, M., Sotoca-Momblona, J. M., & Codina-Jane, C. (2015). Does mHealth increase adherence to medication? Results of a systematic review. *International Journal of Clinical Practice*, *69*(1), 9–32. https://doi.org/10.1111/ijcp.12582

Beldad, A., de Jong, M., & Steehouder, M. (2010). How shall I trust the faceless and the intangible? A literature review on the antecedents of online trust. *Computers in Human Behavior*, *26*(5), 857–869. https://doi.org/10.1016/j.chb.2010.03.013

Berscheid, E., & Pamela, R. (2005). *The Psychology of Interpersonal Relationship*. Pearson.

Boudreaux, E. D., Waring, M. E., Hayes, R. B., Sadasivam, R. S., Mullen, S., & Pagoto, S. (2014). Evaluating and selecting mobile health apps: strategies for healthcare providers and healthcare organizations. *Translational Behavioral Medicine*, *4*(4), 363–371. https://doi.org/10.1007/s13142-014-0293-9

Criswell, T. J., Weber, C. A., Xu, Y., & Carter, B. L. (2010). Effect of Self-Efficacy and Social Support on Adherence to Antihypertensive Drugs. *Pharmacotherapy*, *30*(5), 432–441. https://doi.org/10.1592/phco.30.5.432

Czaja, S. J., Boot, W. R., Charness, N., Rogers, W. A., & Sharit, J. (2018). Improving Social Support for Older Adults Through Technology: Findings From the PRISM Randomized Controlled Trial. *The Gerontologist*, *58*(3), 467–477. https://doi.org/10.1093/geront/gnw249

Erdil, T. S. (2015). Effects of Customer Brand Perceptions on Store Image and Purchase Intention: An Application in Apparel Clothing. *Procedia - Social and Behavioral Sciences*, *207*, 196–205. https://doi.org/10.1016/j.sbspro.2015.10.088

Gagnon, M.-P., Ngangue, P., Payne-Gagnon, J., & Desmartis, M. (2016). m-Health adoption by healthcare professionals: a systematic review. *Journal of the American Medical Informatics Association*, *23*(1), 212–220. https://doi.org/10.1093/jamia/ocv052

Gordon, H. S., & Rosenthal, G. E. (1995). Impact of marital status on outcomes in hospitalized patients. Evidence from an academic medical center. *Archives of Internal Medicine*, *155*(22), 2465–2471.

Guadagno, R. E., Muscanell, N. L., Rice, L. M., & Roberts, N. (2013). Social influence online: The impact of social validation and likability on compliance. *Psychology of Popular Media Culture*, *2*(1), 51–60. https://doi.org/10.1037/a0030592

Guo, X., Zhang, X., & Sun, Y. (2016). The privacy–personalization paradox in mHealth services acceptance of different age groups. *Electronic Commerce Research and Applications*, *16*, 55–65. https://doi.org/10.1016/j.elerap.2015.11.001

Gurung, R. A. R., Sarason, B. R., & Sarason, I. G. (2001). Predicting Relationship Quality and Emotional Reactions to Stress from Significant-Other-Concept Clarity. *Personality and Social Psychology Bulletin*, *27*(10), 1267–1276. https://doi.org/10.1177/01461672012710003

Handayani, P. W., Gelshirani, N. B., Azzahro, F., Pinem, A. A., & Hidayanto, A. N. (2020). The influence of argument quality, source credibility, and health consciousness on satisfaction, use intention, and loyalty on mobile health application use. *Informatics in Medicine Unlocked*, *20*, 100429. https://doi.org/10.1016/j.imu.2020.100429

Harrison McKnight, D., Choudhury, V., & Kacmar, C. (2002). The impact of initial consumer trust on intentions to transact with a web site: a trust building model. *The Journal of Strategic Information Systems*, *11*(3–4), 297–323. https://doi.org/10.1016/S0963-8687(02)00020-3

Hether, H. J., Murphy, S. T., & Valente, T. W. (2014). It's Better to Give Than to Receive: The Role of Social Support, Trust, and Participation on Health-Related Social Networking Sites. *Journal of Health Communication*, *19*(12), 1424–1439. https://doi.org/10.1080/10810730.2014.894596

Holmes, E. A. F., Hughes, D. A., & Morrison, V. L. (2014). Predicting Adherence to Medications Using Health Psychology Theories: A Systematic Review of 20 Years of Empirical Research. *Value in Health*, *17*(8), 863–876. https://doi.org/10.1016/j.jval.2014.08.2671

Kamal, A. K., Shaikh, Q., Pasha, O., Azam, I., Islam, M., Memon, A. A., Rehman, H., Akram, M. A., Affan, M., Nazir, S., Aziz, S., Jan, M., Andani, A., Muqeet, A., Ahmed, B., & Khoja, S. (2015). A randomized controlled behavioral intervention trial to improve medication adherence in adult stroke patients with prescription tailored Short Messaging Service (SMS)-SMS4Stroke study. *BMC Neurology*, *15*(1), 212. https://doi.org/10.1186/s12883-015-0471-5

Karimy, M., Koohestani, H. R., & Araban, M. (2018). The association between attitude, self-efficacy, and social support and adherence to diabetes self-care behavior. *Diabetology & Metabolic Syndrome*, *10*(1), 86. https://doi.org/10.1186/s13098-018-0386-6

Kemenkes. (2016). Sistem Informasi Puskesmas (SIP). *Buletin Jendela Data Dan Informasi Kesehatan*, *1*, 22–29. https://doi.org/ISSN 2088-270X

Kennedy, S., Goggin, K., & Nollen, N. (2004). Adherence to HIV Medications: Utility of the Theory of Self-Determination. *Cognitive Therapy and Research*, *28*(5), 611–628. https://doi.org/10.1023/B:COTR.0000045568.95219.e2

Lee, W. Y., Tan, C.-S., & Siah, P. C. (2017). The Role of Online Privacy Concern as a Mediator between Internet Self-Efficacy and Online Technical Protection Privacy Behavior. *Sains Humanika*, *9*(3–2). https://doi.org/10.11113/sh.v9n3-2.1271

Li, X., Hess, T. J., & Valacich, J. S. (2008). Why do we trust new technology? A study of initial trust formation with organizational information systems. *The Journal of Strategic Information Systems*, *17*(1), 39–71. https://doi.org/10.1016/j.jsis.2008.01.001

Li, Y., & Wang, X. (2018). Seeking Health Information on Social Media. *Journal of Organizational and End User Computing*, *30*(1), 1–22. https://doi.org/10.4018/JOEUC.2018010101

Li, Y., Wang, X., Lin, X., & Hajli, M. (2018). Seeking and sharing health information on social media: A net valence model and cross-cultural comparison. *Technological Forecasting and Social Change*, *126*, 28–40. https://doi.org/10.1016/j.techfore.2016.07.021

Lieberman, A. (1992). The Meaning of Scholarly Activity and the Building of Community. *Educational Researcher*, *21*(6), 5–12. https://doi.org/10.3102/0013189X021006005

Löfvenmark, C., Mattiasson, A.-C., Billing, E., & Edner, M. (2009). Perceived Loneliness and Social Support in Patients with Chronic Heart Failure. *European Journal of Cardiovascular Nursing*, *8*(4), 251–258. https://doi.org/10.1016/j.ejcnurse.2009.05.001

McKnight, D. H., & Chervany, N. L. (2001). What Trust Means in E-Commerce Customer Relationships: An Interdisciplinary Conceptual Typology. *International Journal of Electronic Commerce*, *6*(2), 35–59. https://doi.org/10.1080/10864415.2001.11044235

Miller, T., & DiMatteo, R. (2013). Importance of family/social support and impact on adherence to diabetic therapy. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, 421. https://doi.org/10.2147/DMSO.S36368

Morahan-Martin, J. M. (2004). How Internet Users Find, Evaluate, and Use Online Health Information: A Cross-Cultural Review. *CyberPsychology & Behavior*, *7*(5), 497–510. https://doi.org/10.1089/cpb.2004.7.497

Oeldorf-Hirsch, A., High, A. C., & Christensen, J. L. (2019). Count Your Calories and Share Them: Health Benefits of Sharing mHealth Information on Social Networking Sites. *Health Communication*, *34*(10), 1130–1140. https://doi.org/10.1080/10410236.2018.1465791

 DOI: https://doi.org/10.29313/mimbar.v39i1.2367

Petriella, Y. (2019, August 19). *Penggunaan Aplikasi Kesehatan di Indonesia Baru 10% dari Total Penduduk*. Bisnis.Com. https://ekonomi.bisnis.com/read/20190819/12/1138279/penggunaan-aplikasi-kesehatan-di-indonesia-baru-10-dari-total-penduduk

Rofiah, E. H. (2019, August 19). *Indonesia Butuh Regulasi Penggunaan Aplikasi Kesehatan Berbasis Digital*. Merdeka.Com. https://www.merdeka.com/uang/indonesia-butuh-regulasi-penggunaan-aplikasi-kesehatan-berbasis-digital.html

Sarafino, E. P., & Smith, T. W. (2011). *Health psychology: Biopsychosocial interactions (7th ed.)*. John Wiley & Sons.

Sari, N. I., & Besral, B. (2020). Penggunaan mHealth Mampu Memperbaiki Perilaku Kesehatan Pasien Penyakit Tidak Menular. *Jurnal Biostatistik, Kependudukan, Dan Informatika Kesehatan*, *1*(1), 57. https://doi.org/10.51181/bikfokes.v1i1.4090

Schiffman, L. G., & Kanuk, L. L. (2010). *Consumer Behavior* (10th ed.). Prentice Hall.

Silalahi, R. V., Hartono, N., & Tumpak, M. A. (2018). Profile and preferences users of doctors consultation application in Indonesia. *IOP Conference Series: Earth and Environmental Science*, *195*(1). https://doi.org/10.1088/1755-1315/195/1/012069

Soni, M., Jain, K., & Jajodia, I. (2021). Mobile health (mHealth) application loyalty in young consumers. *Young Consumers*, *22*(3), 429–455. https://doi.org/10.1108/YC-10-2020-1236

Thiede, M. (2005). Information and access to health care: is there a role for trust? *Social Science & Medicine*, *61*(7), 1452–1462. https://doi.org/10.1016/j.socscimed.2004.11.076

Tustin, J. L., Crowcroft, N. S., Gesink, D., Johnson, I., Keelan, J., & Lachapelle, B. (2018). User-Driven Comments on a Facebook Advertisement Recruiting Canadian Parents in a Study on Immunization: Content Analysis. *JMIR Public Health and Surveillance*, *4*(3), e10090. https://doi.org/10.2196/10090

Ulya, F. N. (2019, August 19). *Survei: 84,4 Persen Masyarakat Puas dengan Layanan Kesehatan Digital*. Kompas.Com. https://money.kompas.com/read/2019/08/19/134000926/survei--84-4-persen-masyarakat-puas-dengan-layanan-kesehatan-digital?page=all

von Wagner, C., Steptoe, A., Wolf, M. S., & Wardle, J. (2009). Health Literacy and Health Actions: A Review and a Framework From Health Psychology. *Health Education & Behavior*, *36*(5), 860–877. https://doi.org/10.1177/1090198108322819

Williams, G. C., McGregor, H. A., Sharp, D., Levesque, C., Kouides, R. W., Ryan, R. M., & Deci, E. L. (2006). Testing a self-determination theory intervention for motivating tobacco cessation: Supporting autonomy and competence in a clinical trial. *Health Psychology*, *25*(1), 91–101. https://doi.org/10.1037/0278-6133.25.1.91

Williams, G. C., Rodin, G. C., Ryan, R. M., Grolnick, W. S., & Deci, E. L. (1998). Autonomous regulation and long-term medication adherence in adult outpatients. *Health Psychology*, *17*(3), 269–276. https://doi.org/10.1037/0278-6133.17.3.269

Williams, G. G., Gagné, M., Ryan, R. M., & Deci, E. L. (2002). Facilitating autonomous motivation for smoking cessation. *Health Psychology*, *21*(1), 40–50. https://doi.org/10.1037/0278-6133.21.1.40

Wolf, M. S., Gazmararian, J. A., & Baker, D. W. (2005). Health Literacy and Functional Health Status Among Older Adults. *Archives of Internal Medicine*, *165*(17), 1946. https://doi.org/10.1001/archinte.165.17.1946

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *52*(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2