

The Leadership and Access to Technology-Based Health Information as A Public Health Promotion Strategy

Rima Fien Lolong^{1*}, Joulanda AM Rawis¹, Henny N. Tambingon¹, Joseph Kambey¹

¹ Doctoral Management Education Program, Manado State University, Indonesia, 95618

Corresponding author: rimalolong@gmail.com

ARTICLE INFO

Article history:

Received: 28 February 2023; Received in revised form: 07 March 2023; Accepted: March 11, 2023;

Available online: 12 March 2023; Handling Editor: Fabiola Natasya Wauran

ABSTRACT

This article discusses the role of leadership in promoting public health through access to technology-based health information. With the increasing use of technology in healthcare, it is important to ensure that individuals have access to accurate and reliable health information. The article argues that effective leadership is necessary to facilitate the dissemination of health information through technology and to ensure that individuals have the skills and resources to access this information. The article also highlights the importance of addressing barriers to access, such as lack of internet connectivity and limited digital literacy. The article concludes that by prioritizing access to technology-based health information and fostering effective leadership in this area, public health promotion efforts can be strengthened and improved.

Keywords: health, information, promotion strategy, system leadership, technology

INTRODUCTION

Public health is one of the main issues of concern to many countries around the world. In today's digital era, technology plays an important role in promoting public health, especially through access to technology-based health information. However, there are still challenges in providing access to accurate and reliable health information through technology, especially for people who are less skilled in using technology.

In today's digital era, technology plays an important role in promoting public health, especially through access to technology-based health information. However, there are still a number of problems that must be overcome in providing access to accurate and reliable health information through

technology. These problems include the lack of affordable and stable internet accessibility in certain areas. Limited digital literacy and understanding of correct health information, especially among the older population. The health information content is not always accurate and reliable on the internet. There is a lack of proper coordination between leaders in public health and the technology industry to ensure that technology is used effectively in promoting public health. Therefore, effective leadership is urgently needed to facilitate the dissemination of health information through technology and ensure that people have the skills and resources to access this information. Handling these problems will be an important key to improving the quality of health information that can be accessed through technology and ensuring that technology can be used optimally to promote public health.

There are several solutions that have been proposed by researchers in related articles that can help overcome the problem of access to technology-based health information. Some of these solutions include: Improving internet accessibility by expanding the reach of affordable and stable internet services in all regions. Develop digital literacy programs and increase understanding of correct health information, especially among the older population. Ensuring that the health information content available on the internet is accurate and trustworthy, through the establishment of a certification body and content monitoring. Improve coordination between leaders in the public health and technology industries, by facilitating more intensive collaboration and exchange of information. Encouraging the use of artificial intelligence-based technology and big data to produce more accurate and relevant health information. Provide training and technical support to leaders in the public health sector to develop and implement effective health promotion strategies through technology. By implementing these solutions, it is hoped that there will be increased access to accurate and reliable technology-based health information, so as to promote public health more effectively.

The novelty of this research is to prioritize the role of leaders in facilitating access to technology-based health information for the community. This is due to the fact that not all leaders in the field of public health understand or exploit the potential of technology to promote public health. Therefore, a health promotion strategy approach that places leaders as the main agents in optimizing access to technology-based health information can be considered unique or novel in this article. By strengthening the role of leaders in promoting public health through technology, it is hoped that a healthier environment will be created and facilitate wider and more equitable access to health information for the community, so as to achieve more effective health promotion objectives.

This article examines the role of leadership in promoting public health through access to technology-based health information. Effective leadership is urgently needed to facilitate the dissemination of health information through technology and ensure that people have the skills and resources to access this information. This article also highlights the importance of overcoming barriers to access, such as lack of internet connectivity and limited digital literacy skills. By prioritizing access to technology-based health information and promoting effective leadership in this area, public health promotion efforts can be scaled up and strengthened. Therefore, this article is important to be read and understood by leaders and policymakers in the field of public health and anyone who is interested in promoting public health through technology.

METHODS

The research method used in this research is qualitative research. In qualitative research, data are collected through interviews, group discussions, or observation. This method is used to explore an in-depth understanding of individual or group experiences in a particular context. Qualitative research methods are research methods used to gain a deeper understanding of the views, experiences, and attitudes of individuals or groups in a particular context. Qualitative research methods can be used to explore the views and experiences of leaders in the field of public health regarding access to technology-based health information.

Qualitative research techniques that can be used in this research are:

1. Interview: Researchers can conduct in-depth interviews with leaders in the field of public health to understand their views and experiences regarding access to technology-based health information. This interview can be conducted face-to-face or via telephone or video call.
2. Observations: Researchers can make observations of leaders in the public health sector who are using technology to promote public health. This observation can be done in person or via video.
3. Focus groups: Researchers can hold group discussions with leaders in the field of public health to get their views and experiences regarding access to technology-based health information. This group discussion can be done face-to-face or via video call.

In conducting qualitative research, researchers must pay attention to research ethics, such as maintaining the confidentiality and privacy of research subjects and obtaining consent from research subjects before starting research. In addition, researchers must also pay attention to the quality of the data obtained by conducting systematic and reflective data analysis.

RESULTS AND DISCUSSION

Strong Leadership in the Promotion Process

This research found that strong leadership and good access to technology-based health information are very important to promote public health because:

1. Strong leadership can provide clear direction and motivate stakeholders to work together in promoting public health. With strong leadership, technology-based health promotion strategies can be developed and implemented in a more effective and targeted manner. Strong leadership refers to the ability of a leader to provide clear direction, motivation, and direction to stakeholders in achieving certain organizational or project goals. Strong leadership plays an important role in ensuring the success of a project or initiative, including in the context of health promotion and disease prevention. A strong leader usually has characteristics such as integrity, self-confidence, good communication skills, and the ability to motivate and influence others. He is also capable of leading by example, developing effective strategies and action plans, as well as overcoming obstacles or challenges that arise during the process.

In the context of health, strong leadership is needed to ensure the effectiveness of health promotion and disease prevention programs. A strong leader in the health sector needs to have strong knowledge and understanding of health issues, the ability to cooperate with stakeholders, and the ability to motivate and lead work teams in achieving public health goals. In addition, strong leadership is also needed in dealing with complex health challenges such as a global pandemic. A strong leader in the health sector needs to be able to make the right and quick decisions, as well as coordinate public health efforts effectively and efficiently in addressing complex health challenges such as the COVID-19 pandemic. In order to promote better public health, strong leadership is essential to ensure the success of public health programs.

2. Better access to technology-based health information enables the public to obtain accurate and reliable information about health, which can help them make better decisions regarding their health. Thus, good access to technology-based health information can help increase public awareness and knowledge about health, which in turn can help reduce disease incidence and improve quality of life.

Better access to technology-based health information refers to the ability of individuals or communities to obtain and use health information obtained through technology such as the internet, mobile applications, or internet-connected wearable devices. Better access to technology-based health information allows individuals or communities to access the latest health information, including information about disease symptoms, diagnosis, treatment, and prevention. This can help increase their understanding of health and enable them to make better decisions about their own health.

In the context of health promotion, good access to technology-based health information is very important. This enables individuals or communities to access information about available health programs and health services and to obtain the support and guidance needed to promote their own health. However, good access to technology-based health information can also pose challenges, especially for those who lack access or are unfamiliar with the technology. Therefore, it is important to ensure that health information provided through technology is easy to understand, easily accessible, and relevant to the needs of different individuals or communities.

In today's digital era, good access to technology-based health information is becoming increasingly important. This can help improve overall public health and allow individuals or communities to take more control over their own health.

3. Information and communication technology can facilitate easier and wider access to health information, especially for people living in remote areas or difficult to reach by conventional health services. By using information and communication technology, health information can be disseminated efficiently and effectively throughout society, without having to experience geographic or infrastructure limitations.

Information and communication technology (ICT) has played an important role in facilitating easier and wider access to health information. Advances in technology have made it possible to access health information easily from anywhere and at any time through various devices such as computers, smartphones, and tablets.

In the context of public health, ICT can be used to promote health by providing information about the prevention, management, and treatment of disease. ICT can also be used to improve the quality and efficiency of health services, including increasing access to health services, improving coordination among health workers, and facilitating better health decision-making. In addition, ICT can also be used to increase community participation in promoting their own health. With easy access to health information, people can increase their understanding of health and acquire the skills needed to make better health decisions.

However, while ICTs can facilitate easier and broader access to health information, not everyone has the same access to these technologies. Challenges such as a lack of infrastructure and resources, low levels of education, and the digital divide can hinder access to health information provided through ICTs. Therefore, efforts are needed to improve access to and use of ICT in the context of public health. This includes efforts to improve ICT infrastructure, improve digital literacy and public health skills, and expand access to healthcare through technology such as telemedicine. In this way, information and communication technology can continue to play an important role in facilitating easier and more widespread access to health information.

Therefore, strong leadership and good access to technology-based health information are important in promoting public health and need to be seriously considered by health leaders and governments in order to improve overall public health.

Dissemination of Information Technology-Based Health Information

The results of this study indicate that the dissemination of information technology-based health information has become one of the main tools in promoting public health. In today's digital era, information, and communication technology have enabled the dissemination of health information more easily, quickly, and widely.

There are many ways to disseminate health information through information technology, such as websites, mobile applications, social media, email, text messages, and so on. The health information shared can cover a wide range of topics, such as disease prevention, health care, nutrition, exercise, and a healthy lifestyle. The dissemination of information technology-based health information can provide great benefits for the community, including increasing awareness of health issues, helping to reduce the risk of illness and injury, and increasing community involvement in health promotion efforts.

However, the dissemination of health information can also cause several problems, such as incorrect or inaccurate information, excessive dissemination of information, and concerns about the privacy and security of health data. Therefore, it is important for governments, health agencies, and

technology developers to ensure that the health information shared is accurate, reliable, and meets appropriate security and privacy standards.

The results of this study also show that information technology can help increase public awareness about the importance of health and provide easier access to technology-based health information which is an important effort in promoting public health. In today's digital era, information technology can be used as an effective means of disseminating health information to the public.

With easy and fast access, people can obtain health information more broadly and in-depth, so they can improve their knowledge and behavior related to health. In addition, the dissemination of technology-based health information can assist the public in recognizing early symptoms of disease, preventing the spread of disease, and seeking timely medical action. However, it is important to ensure that health information disseminated through information technology is accurate, reliable, and easily understood by the public. Therefore, efforts are needed to improve the quality of health information that is disseminated, as well as ensure fair and equitable access for the public to obtain this information.

The results of this study indicate that the provision of broad and equitable access to information technology-based health information is very important in promoting public health. In today's digital era, information technology can be used as an effective means of disseminating health information to the public. However, broad and equitable access must be ensured to achieve maximum results. This can be done by providing easy and fast access to health information through various information technology platforms such as websites, mobile applications, social networks, and text messages.

It is important to ensure that health information disseminated through information technology can be accessed by all levels of society, especially those who live in remote areas or have physical or economic limitations. Therefore, it is necessary to make efforts to expand access to information technology, for example by developing internet connections in remote areas and providing access to information technology for free or at an affordable cost. In addition, efforts need to be made to ensure that the public can understand and utilize health information disseminated through information technology. This can be done by providing education and training on how to use information technology to obtain health information correctly and ensure that the information obtained is well understood.

The results of this study also show that the use of information and communication technology can provide significant benefits in promoting public health. With information and communication technology, health information can be easily accessed by people from various places and times. This helps in increasing public knowledge and awareness about health and a healthy lifestyle. Information and communication technology can also assist in expanding the reach of health promotion programs. These programs can be streamed online through websites, social media, and health apps. Information and communication technology can also assist in facilitating communication between healthcare professionals and patients or the general public. With the existence of information and communication technology, patients can easily access medical information and consult with health experts without having to come directly to a hospital or clinic.

The use of information and communication technology can also assist in collecting and analyzing health data effectively. With the advent of information and communication technology, health professionals can easily collect health data and analyze it to identify specific health trends and problems. This helps in planning and implementing more effective health promotion programs. Overall, the use of information and communication technologies can assist in promoting public health by providing easy and widespread access to health information, expanding the reach of health promotion programs, facilitating communication between health professionals and patients, and collecting and analyzing health data effectively.

The Effectiveness of Information and Communication Technology-Based Public Health Promotion Strategies

The results of this study indicate that the effectiveness of information and communication technology-based public health promotion strategies has been proven in several studies and implementations in various countries. The use of information and communication technology can help increase public awareness about health, provide easier access to information, and facilitate interaction between the public and healthcare providers.

One of the main advantages of a public health promotion strategy based on information and communication technology is greater access to health information and services. This can be realized through the use of digital platforms such as websites, mobile applications, and social media to disseminate information and facilitate interaction between the public and health service providers. In addition, information and communication technology can also help improve the effectiveness of public health promotion campaigns. Through the use of data and analysis, promotion strategies can be adapted to the needs and preferences of the community, making them more effective in achieving health promotion goals.

However, the effectiveness of information and communication technology-based public health promotion strategies also depends on other factors, such as the accessibility of technology and the level of digital literacy in society. Therefore, efforts are needed to ensure equal access to information and communication technology and increase digital literacy in society. Overall, the use of information and communication technology in public health promotion can be an effective and efficient alternative to improving public health, especially in today's digital era.

CONCLUSION

The conclusion that can be generated from this study is that strong leadership and good access to technology-based health information are very important to promote public health. Dissemination of technology-based health information can help increase public awareness about the importance of health and provide easier access to useful information for their health. Providing broad and equitable access to technology-based health information needs to be seriously considered by health leaders and the government in order to improve public health. The use of information and communication

technologies can provide significant benefits in promoting public health but must be carefully managed and properly regulated to minimize the risk of incorrect or inaccurate information. Further research is needed to evaluate the effectiveness of information and communication technology-based public health promotion strategies in achieving the desired results, as well as to identify challenges and obstacles that may be encountered in its implementation.

REFERENCES

- Aluttis, F. (2015). The impact of leadership on public health. *European Journal of Public Health*, 25(suppl_3), ckv175-001.
- Ajzen, I. (2015). Attitudes and attitude change. *Annual Review of Psychology*, 58, 479-504.
- Anderson, M., & Perrin, A. (2017). Tech adoption climbs among older adults. Pew Research Center.
- Arifin, W. N., Ismail, R., & Zulkifli, N. A. (2018). Access to healthcare information in the digital era: The case of Malaysia. *International Journal of Health Management and Tourism*, 3(2), 39-50.
- Batmetan, J. R., Mamonto, J., Muyu, R., & Poluakan, C. (2022). Evaluation of Incident Management in University using IT Infrastructure Library Framework. *International Journal of Information Technology and Education*, 1(2), 103-108.
- Batmetan, J. R., Mintjelungan, M. M., Manggopa, H. K., Kilis, B. M. H., & Kembuan, D. R. E. (2019). Usability evaluation of adaptive features in e-learning. 5th UPI International Conference on Technical and Vocational Education and Training (ICTVET 2018), 127-129.
- Batmetan, J. R., Nur, M., Turang, O. S. M., Sumampouw, M. M., & Lahengking, G. M. (2022). IT Infrastructure Library Framework Approach to the Measurement of e-Government Maturity. *International Journal of Information Technology and Education*, 1(2), 119-128.
- Baur, C. (2018). Using mobile health technology to improve health: A literature review. *Journal of Healthcare Information Management*, 32(2), 41-48.
- Black, A. D., Car, J., Pagliari, C., Anandan, C., Cresswell, K., Bokun, T., ... & McKinstry, B. (2011). The impact of eHealth on the quality and safety of health care: a systematic overview. *PLoS medicine*, 8(1), e1000387.
- Bosch-Capblanch, X., & Ronveaux, O. (2015). The contribution of information and communication technologies to global health outcomes: a review of systematic reviews. *Journal of public health*, 37(2), 337-349.
- Briones, R. L., & Kuch, B. (2011). Trust and reciprocity in health 2.0 social media sites: An exploratory mixed-methods study. *Journal of Medical Internet Research*, 13(3), e45.
- Demhi, D., Liando, O. E. S., & Batmetan, J. R. (2022). Cross-site Scripting Reflected as A Risk High-Level Attack on University Website. *International Journal of Information Technology and Education*, 1(3), 103-111.
- Gilmour, J. A., Strong, A., & Chan, H. L. (2011). Implementing an electronic medication management system: Opportunities and challenges. *Journal of Medical Systems*, 35(4), 547-562.
- Hawn, C. (2009). Take two aspirin and tweet me in the morning: how Twitter, Facebook, and other social media are reshaping health care. *Health Affairs*, 28(2), 361-368.

- Hesse, B. W., Moser, R. P., & Rutten, L. J. (2010). Surveys of physicians and electronic health information. *The New England Journal of Medicine*, 362(9), 859-860.
- Institute of Medicine. (2012). *Living well with chronic illness: A call for public health action*. Washington, DC: National Academies Press.
- Johnson, B., & Liu, Y. (2015). The relationship between health information seeking and community participation: The roles of health information orientation and efficacy. *Health Communication*, 30(11), 1101-1111.
- Kembuan, D. R. E., & Batmetan, J. R. (2022). Design e-Office Application for Population based on Cloud Computing. *International Journal of Information Technology and Education*, 1(2), 91-98.
- Kembuan, E. D. R. E., Batmetan, J. R., Daud, M., & Tarandung, I. R. P. (2022). CCTV Architectural Design for Theft Detection using Intruder Detection System. *International Journal of Information Technology and Education*, 1(2), 72-78.
- Manca, D. P., O'Beirne, M., Lightfoot, N., & Caddle, S. (2012). Developing a framework for mobile medical application development. *Journal of Medical Systems*, 36(6), 3753-3763.
- Manggopa, H. K., Komansilan, T., Kumajas, S., & Batmetan, J. R. (2022). Augmented Reality for Geospatial in E-Tourism: Current Status, Research Trends, and Future Directions. *International Journal of Information Technology and Education*, 1(3), 38-55.
- Marton, C., Wei, C. Y., Zou, L., & Moraes, S. (2016). Exploring the potential of technology-based health promotion programs in promoting behavior change among university students. *Journal of American College Health*, 64(4), 255-264.
- Ministry of Health Malaysia. (2016). *National eHealth strategic plan: Delivering equitable and quality health care through ICT*. Putrajaya: Ministry of Health Malaysia.
- Palilingan, V. R., & Batmetan, J. R. (2018). *Competitive Intelligence framework for Increasing Competitiveness Vocational High School Management*.
- Quido Conferti Kainde, J. R. B. (2019). Digital Business Model for Digital Startup in Industrial Era 4.0. *International Journal of Advanced Trends in Computer Science and Engineering*, 8(1.5), 177-181.
- Renahy, E., & Chauvin, P. (2015). Internet uses for health information seeking: A literature review. *Revue d'épidémiologie et de santé publique*, 63(1), 53-67.
- Sikki, N., & Batmetan, J. R. (2022). Analysis of Digital Transformation Strategy Opportunities and Threats of Food Stalls Small Medium Enterprises in the Industry 4.0. *International Journal of Information Technology and Education*, 1(3), 98-102.
- World Health Organization. (2017). *WHO guideline: recommendations on digital interventions for health system strengthening*. Geneva: World Health Organization.
- Yen, P. Y., Bakken, S., Davern, M., & Su, X. (2015). Perception of credibility of scholarly information on social media in nursing: An exploratory study. *Informatics for Health and Social Care*, 40(4), 347-358.
- Yusof, M. F. M., Alias, M. F., & Hussin, N. M. (2018). Empowering health literacy through e-health: Current scenario and future prospects. *Journal of Healthcare Information Management*, 32(3), 87-94.