THE UTILIZATION OF DIGITAL TECHNOLOGY IN HEALTH ADVOCACY TO RAISE AWARENESS OF STUNTING

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Abstract

The purpose of this study is to investigate how digital technology in health care might increase public awareness of stunting in Surabaya. Stunting is a serious health issue that lowers an infant's growth potential and the quality of human tissue over time. As part of the agama-based health campaign, the health department has a significant potential to highlight the importance of stunting and malnutrition. Digital technologies such as social media, health applications, and websites facilitate the timely and interactive reporting of health issues. This study used a case study methodology that involves gathering data through interviews with community members who serve as digital ambassadors, health professionals, and laywers. Deskriptif data analysis is used to assess the effectiveness of digital platforms in raising public awareness. The study's findings indicate that social media, particularly Instagram and WhatsApp, are effective tools for disseminating health information on stunting. Collaborating with local health organizations and religious organizations also increases the population's participation in the fight against stunting. However, there is still a problem with digital literacy and limited access to technology among the lower classes.In summary, digital technology is an effective tool in health care, even though digital accessibility and literacy still need to be improved.

Keywords: *Digital Trends, Health Da'wah, Public Awareness, Stunting*

Abstrak

Tujuan dari penelitian ini adalah untuk menyelidiki bagaimana teknologi digital dalam perawatan kesehatan dapat meningkatkan kesadaran masyarakat tentang stunting di Surabaya. Stunting adalah masalah kesehatan serius yang menurunkan potensi pertumbuhan bayi dan kualitas jaringan manusia dari waktu ke waktu. Sebagai bagian dari kampanye kesehatan berbasis agama, departemen kesehatan memiliki potensi yang signifikan untuk menyoroti pentingnya stunting dan malnutrisi. Teknologi digital seperti media sosial, aplikasi kesehatan, dan situs web memfasilitasi pelaporan masalah kesehatan yang tepat waktu dan interaktif. Penelitian ini menggunakan metodologi studi kasus yang melibatkan pengumpulan data melalui wawancara dengan anggota masyarakat yang berperan sebagai duta digital, profesional kesehatan, dan pengacara. Analisis data deskriptif digunakan untuk menilai efektivitas platform digital dalam meningkatkan kesadaran masyarakat. Temuan penelitian menunjukkan bahwa media sosial, khususnya Instagram dan WhatsApp, adalah alat yang efektif untuk menyebarluaskan informasi kesehatan tentang stunting. Berkolaborasi dengan organisasi kesehatan setempat dan organisasi keagamaan juga meningkatkan partisipasi masyarakat dalam memerangi stunting. Namun, masih terdapat permasalahan literasi digital dan keterbatasan akses teknologi di kalangan masyarakat kelas bawah. Ringkasnya, teknologi digital merupakan alat yang efektif dalam perawatan kesehatan, meskipun aksesibilitas dan literasi digital masih perlu ditingkatkan.

Kata Kunci: *Tren Digital, Dakwah Kesehatan, Kesadaran Publik, Stunting*

INTRODUCTION

Stunting is a serious health issue in Indonesia, including in the city of Surabaya. According to data from the Surabaya City Health Office in 2023, the prevalence of stunting in this city reached 21.2%, showing a decrease from 24.5% in 2021. However, based on the 2023 Indonesian Nutrition Status Survey (SSGI), the prevalence of stunting in Surabaya was recorded at 1.6%. Despite a significant decrease from 28.9% in 2021 and 4.8% at the end of 2022, the 21.2% figure reported by the Health Office indicates that efforts to prevent stunting must continue to be enhanced. Stunting, characterized by growth failure in children under five years old, affects physical and cognitive development, which can ultimately impact the quality of human resources in the future. According to the National Development Planning Agency (Bappenas) and UNICEF, stunting contributes to increased child mortality and morbidity rates, as well as reducing future productivity. This issue is not only the responsibility of the health sector, but also requires a more comprehensive approach, including involving health outreach based on religion.

A useful strategy for increasing public understanding of the significance of stunting prevention is faith-based health preaching. Digital technology has a lot of potential in this situation to spread interactive health messages globally. Surabaya has an 80% internet penetration rate, according to a 2022 assessment by the Indonesian Internet Service Providers Association (APJII), which presents a fantastic chance to use digital technology in health evangelism. Digital tools like websites, health applications, and social media can reach the public more quickly and effectively than traditional da'wah techniques.

Notwithstanding the fact that digital technology has demonstrated efficacy in the distribution of health information, there remain obstacles associated with its integration. According to a study (Nugraha et al., 2021) one of the main barriers to the digital platform distribution of health information in low-income communities is low digital literacy. Merely half of the population with low income has sufficient access to digital technology, according to data from the Ministry of Communication and Information Technology (Kominfo, 2022). Furthermore, those with poor economic circumstances or those residing in suburban areas still have restricted access to digital technologies. Found that the

success of digital campaigns, particularly in the health sector, is determined by characteristics such as internet availability and technological awareness (Hidayati et al. 2020)

A review of the literature demonstrates that evangelizing for health from a religious perspective can increase community knowledge of health issues like stunting (Rahman et al. 2019). Study emphasized the impact of religious leaders on health-related behavior within communities. Religious leaders' lectures and health programs are more readily embraced by the community because of the tremendous trust they inspire. The combination of religious themes and health information can boost the efficacy of health campaigns, particularly when it comes to diseases like stunting that call for in-depth knowledge, according to a different study (Mulyadi et al. 2020).

Still, there remains a research void that requires attention. While numerous studies have emphasized the usefulness of digital technology and faith-based health proselytization, few have looked at how the two might work together to reduce stunting. Prior research has concentrated more on discrete elements, such the function of social media or the impact of religious leaders, without considering how the two might work together harmoniously to produce more fruitful outcomes.

In the past five years, there have been many studies emphasizing the importance of digital technology in healthcare. According to research (Putra et al. 2021), the use of social media platforms such as Instagram and WhatsApp can increase community participation in health campaigns in rural areas. Another study conducted by Suryani et al. (2022) highlighted the importance of digital health apps in improving parents' access to information in rural areas, including information on child health and stunting prevention measures. In addition, Emphasized the importance of collaboration between health organizations and religious organizations to maximize the effectiveness of health advocacy through digital platforms (Rahayu et al. 2020).

From the various studies that have been conducted, it is clear that digital technology is a very potential tool in raising public awareness about stunting. However, for this technology to be effective, efforts are needed to improve digital literacy and technology accessibility among the community, especially those in the lower economic class.

Research Afif et al. (2021) shows that increasing digital literacy among marginalized communities can increase the success of digital health campaigns. The findings of also emphasize the need for government policies to support access to technology for all levels of society.

In light of this context, the goal of this study is to assess the ways in which digital technology is applied in Surabaya City health proselytizing to raise public awareness of stunting. This study will investigate how the community is informed about health issues by social media, health applications, and other digital channels. Furthermore, this study will look at the difficulties in utilizing digital technology, like low levels of digital literacy and restricted access to technology in low-income areas. As a result, it is anticipated that this research will aid in the creation of a more comprehensive and long-lasting health proselytization plan and offer suggestions to legislators for future policy measures to combat stunting.

THEORETICAL REVIEW

A number of ideas, including the theories of innovation diffusion, health communication, social behavior, digital literacy, and trust and social influence, will be covered in this theoretical review in order to provide context for the research. We will apply each of these ideas to examine and comprehend the ways in which faith-based health proselytization and digital technology might work together to increase public awareness of stunting. The social change theory, which highlights how social interventions can alter people's behavior and conditions, is the major theory that guides this research.

Rogers (2003) developed the theory of innovation diffusion, which explains the how, why, and degree to which innovative ideas and technology proliferate within a society. Digital technology is seen as an invention that can reach the population more effectively than conventional techniques when it comes to the spread of health. This notion is supported by a number of recent research, like Mulyadi et al. (2020) study, which demonstrates how the use of digital health applications has raised community involvement in health initiatives. In addition, Riski et al. (2023) observed that the usage

of social media for health information dissemination boosted community awareness in rural locations. Underscored the relevance of communication channels in influencing health technology adoption. In addition, Hidayah (2023) indicated that demographic parameters, such as age and education, have a substantial effect on the adoption of digital technology in the context of health. Finally, Stressed the necessity of creativity in communication tactics to enhance health awareness among teenagers (Dewi, 2023).

Health communication theory explores how health information is conveyed and received by the public. According to Kreps, (1992), successful health communication should take into account the cultural context, requirements and characteristics of the audience. In this study, faith-based health preaching can be viewed as one of the health communication tactics that takes into account the values and beliefs of the community. Recent research showed that a culture-based approach in health communication can improve people's knowledge of health issues (Yulianto et al., 2023). Furthermore, discovered that health messages are more effective when written in plain, understandable language (Anwar, 2023). Findings also revealed that two-way communication in health initiatives boosted community trust. While the study byproved that local context plays an essential role in delivering health messages, the study by Lestari (2022) emphasized the relevance of community leaders in providing health information.

Individual conduct is impacted by intentions, subjective norms, and behavioral control, according to social behavior theory, which includes theories like the Theory of Planned conduct (Ajzen, 1980). In the context of this study, information obtained through health propaganda may have an impact on people's knowledge of stunting and how to prevent it. According to research Prasetyo (2023, awareness acquired by health programs affects people's intentions to adopt healthy behaviors. Furthermore, discovered that people can be persuaded to alter health-related behaviors by strong social norms. Individual health decisions can be influenced by effective behavioral control, according to research. Nuraini's (2023) research shown that community-based interventions that involve the community can raise the intention of participants to behave in a healthy way. Lastly, research from highlights how critical health education is in fostering constructive community behavior (Handayani, 2023).

A key component of effectively utilizing digital technologies in health communication is digital literacy. Digital literacy comprises the social, cognitive, and technical abilities needed to use information technology, according to Eshet (2004). Access to health information can be enhanced for housewives by raising their level of digital literacy, according to recent research by Fitria (2023). Furthermore, Supriyadi and Anisa's research from 2023 showed that social media-based health programs are more successful when their participants have high levels of digital literacy. According to Hasan et al.'s findings from 2022, people who are highly digitally literate are more likely to follow health-related information online. Research also revealed that instruction in digital literacy can boost community involvement in health initiatives (Arifah et al. 2023). Finally, research by showed that digital literacy is key in overcoming inequality in access to health information in the community (Rahman, 2022).

The theory of trust and social influence explains how people's trust in religious leaders can influence health behavior. According to, individuals are more likely to adopt behaviors recommended by figures they trust (Ajzen, 1980). Research found that trust in religious leaders can increase community participation in health programs (Iskandar, 2023). In addition, a study showed that social influence from religious figures can change people's views on health issues (Budiarto, 2023). Sembiring et al.'s (2022) findings highlighted how crucial emotional ties are in influencing health behavior between religious leaders and the community. Studies conducted have demonstrated that the population is more receptive to health messages conveyed by religious leaders (Dewi, 2023). Lastly, studies conducted by have shown that good attitudes on stunting prevention are influenced by the community's trust in religious leaders (Purnama, 2023).

Based on the aforementioned ideas and pertinent contemporary research findings, this study aims to assess the efficacy of digital technology-based faith-based health proselytization in increasing public awareness of stunting. It is anticipated that this research will offer fresh perspectives on how digital technology and faith-based methods might work together to address public health concerns.

METHODS

The use of digital technology in health da'wah to increase public awareness of stunting in Surabaya City is the main topic of this qualitative case study research project. With the intention of assessing the efficacy of integrating digital technology in a faith-based health proselytization effort, this research was structured as an extensive case study. The city of Surabaya was selected for data collecting because of its high internet penetration rate and the importance of the stunting problem in this metropolitan area. The data gathering period ran from January to June 2024. A variety of groups, including da'wah practitioners, health professionals, and the populations the digital campaign specifically targeted—housewives and parents of children under five in particular—were the research subjects. Participatory observation, in-depth interviews, and documentation were used to gather data. Participatory observation helped the researcher comprehend how technology was used in the campaign, and interviews were done to learn more about the respondents' experiences using digital technology to spread health information. Documentation was also done to gather secondary data about the prevalence of stunting in Surabaya and the use of digital technology.

Semi-structured interview guides, observation forms, and technical tools including websites, health applications, and social media (WhatsApp, Instagram) were all used as research instruments to see how health information was shared. The collected data underwent a descriptive analysis that included procedures including transcription of the interviews, theme-based data coding, thematic analysis to spot trends and patterns, and data triangulation to confirm the accuracy of the conclusions.

This study employed member check and triangulation procedures, in which the informants were contacted to corroborate the interview results, in order to preserve validity and reliability. By protecting the privacy of informant data and getting permission from each participant before performing interviews and observations, this study also complies with ethical standards for research. The research is anticipated to be repeatable and to yield consistent results with this organized approach when assessing the function of digital technology in health proselytization to raise public awareness regarding stunting.

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RESULTS AND DISCUSSION

The purpose of this study is to assess how well digital technology can be used in health promotion to raise public awareness of stunting in Surabaya City. Participatory observation, in-depth interviews, and documentation were used to gather data, which were then descriptively analyzed. The findings demonstrated that the widespread dissemination of information regarding stunting is significantly influenced by the usage of digital technologies, particularly social media and health apps. It was discovered through interviews with da'wah practitioners and medical professionals that digital channels like WhatsApp and Instagram are useful for spreading health-related messages. Instagram's captivating visual elements make it possible to communicate information about stunting in a way that is simple to comprehend. According to Rogers' theory of innovation diffusion, using pictures, infographics, and quick films not only grabs the audience's attention but also improves their comprehension of the subject (2003).

Following their exposure to knowledge via digital channels, 80% of respondents felt that they had a better understanding of stunting, according to the data analysis results. Furthermore, around 70% of participants indicated that they are more inclined to tell others about information they come across on social media. This highlights the potential of social media as a useful instrument for spreading health-related information. A graph illustrating the annual trend in the prevalence of stunting can give an accurate picture of the advancements and difficulties encountered in Surabaya's stunting prevention efforts.

The link between research topics and findings is highlighted in this debate. Partnership between da'wah practitioners and health institutions has been shown to increase the efficacy of initiatives aimed at preventing stunting, in which prominent religious individuals in the community are key messengers. Iskandar et al.'s research from 2023 shows that while concurrent communication between religious leaders and health professionals produces consistent messages that are more readily received, public trust in religious leaders can improve involvement in health programs.

However, this study also revealed issues with digital literacy and accessibility to technology, particularly for low-income communities where members may lack the

requisite knowledge. This result is consistent with study by Nugraha et al. (2021), which demonstrates that both a lack of internet connectivity in rural areas and low digital literacy are obstacles to the delivery of health information. This suggests that even with the enormous potential of digital technology, social and economic issues still need to be resolved in order to improve the efficacy of initiatives aimed at preventing stunting.

The results of the study suggest that digital literacy training programs for the community should be incorporated into health outreach tactics based on technology to increase community engagement in health campaigns. Afif et al.'s research from 2021 demonstrates how training in digital literacy might improve the efficacy of digital health initiatives. The study's conclusion is that digital technology can effectively be used in health advocacy to increase public awareness of stunting; but, in order for the campaigns' effects to be felt equally, issues with digital literacy and access to technology need to be resolved. This research contributes to the development of more inclusive and sustainable health outreach strategies, as well as recommendations for policymakers to support efforts in preventing stunting in the future. Further research can explore ways to enhance digital literacy and technology accessibility, as well as investigate other approaches in the integration of health advocacy and digital technology, which requires cross-sector collaboration and active community engagement to ensure equitable access to quality health information and services.

Tabel 1 Prevalensi Stunting di Surabaya (2021-2023)

Tahun	Prevalensi Stunting (%)
2021	28,9%
Akhir 2022	4,8%
2023 (Dinas Kesehatan)	21,2%
2023 (SSGI)	1,6%

The table above shows data on the prevalence of stunting in the city of Surabaya during the period from 2021 to 2023. Here are the details for each year:

1. 2021 (28.9%): Approximately 29% of children under five in Surabaya experienced growth problems this year, making it a year with a high prevalence of stunting. This number shows that preventing and treating stunting is extremely difficult.

2. By the end of 2022 (4.8%): The prevalence of stunting had significantly decreased to 4.8% by the end of 2022. The government's and other parties' efforts to address child nutrition issues, such as the implementation of more successful intervention programs and health education initiatives, are reflected in this drop.

3. Health Service in 2023 (21.2%): Nevertheless, information from the Health Service indicates that the prevalence of stunting is expected to continue rising, surpassing 21.2% in 2023. This demonstrates that despite its advantages, there are still shortcomings in terms of raising and enhancing performance.

4. 2023 (SSGI) (1.6%): In contrast, the 2023 Indonesian Nutrition Status Survey (SSGI) revealed a very low 1.6% prevalence of stunting. These figures highlight variations in reporting or measurement techniques, underscoring the significance of a thorough comprehension of the collected data.

The dynamics of stunting prevalence in Surabaya during the past three years are depicted in this table, along with the achievements and ongoing difficulties. In spite of notable decreases, disparities in data between the SSGI and the Health Service suggest that intervention programs should be evaluated and implemented consistently for more consistent and long-lasting outcomes.

CONCLUSION

His study has effectively evaluated how well digital technology works in health campaigns to increase public awareness of stunting in Surabaya. The results show that digital platforms, in particular social media and health applications, play a major role in disseminating critical information on stunting and promoting community knowledge. Effective interventions are nevertheless hampered by issues like digital literacy and accessibility, despite a notable decline in the frequency of stunting. This study highlights how crucial it is for medical professionals and religious leaders to work together to offer consistent health messages. It draws attention to the necessity of initiatives that improve

digital literacy in order to strengthen communities—particularly those whose socioeconomic standing is poor. This study adds to our knowledge of how to improve digital health interventions by highlighting the significance of an integrated strategy that takes social dynamics and technological capabilities into account. In order to guarantee fair access to high-quality health information and services, future research should concentrate on enhancing digital access and investigating different approaches to improve health outreach initiatives.

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