

The Effectiveness of Social Media in Increasing Health Awareness Among Users of Telmed FKUB's Social Media Application

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ABSTRACT

Although there are certain benefits to using social media for health communication, the accuracy and dependability of the information shared must be managed. This study's major goal was to assess how effective online health initiatives run on Telmed FKUB's social media were at increasing users' awareness of their own health. This research uses quantitative methods with analytical descriptive design, using a survey to gather data. A link to the survey was posted on Instagram and YouTube accounts of the Telmed FKUB. The target population of the study consists of all TelMed FKUB followers on those social media. The effectiveness of health promotion through social media can be seen from several indicators: level of awareness, level of participation, increase in knowledge, change in behavior, and content quality. The survey results showed that four out of five indicators are good enough and one indicator shows good results, so it can be concluded that the effectiveness of Telmed FKUB social media in raising user health awareness is good enough.

Keywords: social media, health awareness, Telmed FKUB

1. INTRODUCTION

The rapid development of information and communication technology has brought about significant changes in the way people interact and access information. Social media has fundamentally revolutionized the way individuals communicate on almost any topic, including health, and how marketers reach their audiences to promote products and services. healthy and unhealthy behavior [1].

Social media platforms have become powerful tools for sharing information and interacting with a wide variety of audiences. Telmed FKUB is a social media application intended to facilitate communication and information sharing between medical students at the University of Brawijaya Medical School and Telmed FKUB users. The potential of social media to promote health and education can be harnessed to increase health awareness and potentially influence positive health behaviors among Telmed FKUB users.

Although the use of social media for health communication has some advantages, the quality and reliability of the information exchanged must be controlled. The main objective of this study was to evaluate the role of online health campaigns conducted through Telmed FKUB's social media to raise health awareness among the users. The aim is to assess how successful campaigns are in disseminating health-related knowledge and influencing user attitudes and behaviors.

2. SOCIAL MEDIA AS A HEALTH PROMOTION TOOL

2.1. Social Media

Social media is defined in a variety of ways. Some definitions place particular emphasis on the technological elements that set social networks apart from more traditional technologies. As demonstrated by Kaplan and Haenlein [2], social media is an example of an application based on the Internet and web 2.0 technologies. Other definitions differentiate social media from traditional media by emphasizing its communication capabilities. McGowan et al., for instance, defined social media as an online environment where individuals may contribute material and primarily consume content provided by others [3]. The difference between social media and conventional media, they add, is that content on the former is "made for the user" [3].

The use of social media is growing steadily on a global scale [4]. 46% of internet users globally, according to Global Web Index, acquire their news from social networking sites. In contrast, 40% of users visit websites to see the news [5].

Social media platforms can be categorized in a variety of ways, but six are the most common ones. They consist of social bookmarking, social news, media sharing, microblogging, and online discussion forums. [6] Social media platforms come in many different forms, such as blogs, Facebook, Twitter, YouTube, Instagram, LinkedIn, and others. YouTube and Instagram are among the most popular social media apps with a huge number of users besides Facebook, Twitter and WeChat. YouTube has 2.51 billion users as of January 2023, whereas Instagram has 2 billion users [7].

Compared to other social networking sites, YouTube and Instagram offer many different features. They offer various advantages. By emphasizing visual content like photos and short videos, Instagram has an edge over competing apps. This makes it an ideal platform for sharing beautiful visual content, showcasing products, and telling visual stories. Instagram gives users the ability to interact with each other to foster deeper emotional connections. The hashtag feature on Instagram also allows users to search and locate topics that they are interested in [8].

2.2. Social Media for Health Purposes

When used to spread health information, social media provides a number of advantages over other media. First, among the various channels, social media is thought to be the quickest at disseminating alerts and updates regarding disease outbreaks [9]. Second, social media makes it possible to use a variety of channels to engage the public. For instance, social media posts can point people to other online resources for more health information by incorporating hyperlinks [9]. Healthcare organizations can also publish YouTube videos and podcast audios on a variety of social media channels to distribute health information [10]. Thirdly, social media can offer stakeholders a venue for communication during disease outbreaks. Local agencies and journalists may be able to quickly access information on illness outbreaks from official government social media accounts [11].

Ellis et al. [12] examined how social media platforms are used to track illness. They advocate the use of social media programs to supplement existing disease surveillance systems, as their literature review demonstrated the effectiveness of social media platforms on speed, accuracy and cost. Several studies have also examined the contribution of social media platforms to health promotion, reinforcing the relevance of public health messages, and determining the points to be gained from these. Health social media campaign. One of them is a study conducted by Collinson et al. [13].

According to studies on social media campaigns and healthy behaviors, social media marketing can induce beneficial behavioral changes in people and even prevent bad behavioral changes. The spread of the pandemic can be slowed down by the use of social media platforms [14].

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2.3. TelMed FKUB

In line with the 2012 National Health System, easy access to health information services that are tailored to people's needs can raise awareness of the importance of health that ultimately shapes healthy habits and lifestyles that grow and thrive in community life. Based on this, the ability to master information and communications technology to improve the quality of health services has become crucial for Indonesian doctors to master, and this is laid down in the Standards of Indonesia Doctors Competence Area 4.

In response to these conditions, the *Unit Pengembangan Pengabdian Masyarakat* of the Medical Faculty Brawijaya University, in collaboration with the Team of Family Doctors of FKUB, initiated a program of health services called the TelMed FKUB program. The expected outcome of this activity is to provide adequate health information to the public about the health problems that are being raised and to provide experience to FKUB medical students in using information and communication technology as a public health promotion.

In the beginning, the FKUB TelMed program provided health consultation services by telephone and alternative services such as written consultation through WhatsApp messenger media. (WA). In its development, TelMed FKUB is committed to continuing to provide health consulting services to the public in various ways, including through social media. The use of social media is considered important, as the topic of health turns out to be quite a popular topic among netizens who use social media [10]. It then became a consideration to make social media a means of health information services, in the form of health promotion.

3. METHOD

This research uses quantitative methods with analytical descriptive design, using a survey to gather data. A link to the survey was posted on the Telmed FKUB's social media accounts including Instagram and YouTube. The target population of the study consists of all TelMed FKUB followers on those social media. Measurement of the questionnaire using a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). After validity and rehabilitation tests, the link of the questionnaire was then uploaded to Instagram and YouTube for three weeks, and also distributed randomly through direct messages to 110 respondents. Received responses are then processed using descriptive statistical analysis. Summary statistics are reported as frequency and percentages.

4. RESULT

4.1 Respondent Characteristics

The survey was sent to a total of 8.716 people, which is the total number of followers of the Telmed FKUB's social media accounts, and 30 people responded to the survey. Of the 30 respondents, most were between the ages of 17-25 and the majority were women. The level of education is evenly distributed among those with a university degree or S1, but the majority of participants were high school students (Table 1).

Characteristics	Description	Number	Presentation
Gender	Male	9	30
	Female	21	70
Age (years)	≤ 11	0	0
	12-16	9	30
	17-25	14	46.7
	26-35	2	6.9
	36-45	0	0
	46-55	4	13.3
	56-65	1	3.4
	> 65	0	0
Educational	SD	0	0
Level	SMP	8	26.7
	SMA	5	16.7
	\$1	15	30
	52	2	6.7
	\$3	0	0
Profession	Student	11	37.9
	University	10	34.5
	Student		
	Household	3	10.3
	mother		
	State	2	6.9
	officials		
	Employee	1	3.4
	Private	2	6.9

Table 1. Respondent Characteristics

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4.2 Social Media Usage

All of the 30 respondents reported that they used social media, with 21 (70%) using only Instagram, 2 (6.7%) used You Tube only and 9 (30%) used both. Most of them (70%) followed the Telmed Fkub account after the pandemic was over (Table 2).

Tabel 2. Social Media Usage

Characteristics	Description	Number	Presentation
Type of social	Instagram	21	70
media Telmed	YouTube	2	6.7
followed	instagram & YouTube	9	30
Whento follow the telmed sosmed	Before the Covid pandem ic	4	13.3
account	Duringthe Covid pandemic	5	16.7
	After the covid pandem ic	21	70

4.3 The Effectiveness of The Telmed FKUB's Sosmed

The effectiveness of health promotion through social media can be seen from several aspects: level of awareness, level of participation, increase in knowledge, change in behavior, and content quality. Based on the frequency value obtained on each scale, another calculation is done based on its score to obtain the average value of each indicator, which is divided into a range of values: not good (30-53), less good (54-77), good enough (78-101), good (102-125), very good (126-150).

The first indicator, a level of awareness, measures the extent to which social media users are aware of the usefulness of health information delivered (Table 3). The average value of this indicator is 120, which indicates that the role of Telmed FkUB's in raising health awareness is good.

Indicator 1 : Level of A wareness										
Likert Scale	Question 1		Question 2		Question 3		Question 4			
	F	%	F	%	F	%	F	%		
Very agree	15	50	16	53.3	13	43.3	13	43.3		
Agree	11	36.7	9	30	10	33.3	12	40		
Neutral	4	13.3	5	16.7	7	23.3	5	16.7		
Disagree	0	0	0	0	0	0	0	0		
Disagreed	0	0	0	0	0	0	0	0		
Total	30	100	30	100	30	100	30	100		

Table 3. 1st Indicator: Level of Awareness

The second indicator, level of interaction, measures how many users interact with educational content through likes, comments or shares (Table 4). The average value of the second indicator is 90, which means the participation rate among the users is good enough.

Indicator 2 : Level of Interaction								
Likert	Que	stion 1	Que	stion 2	Question 3			
Scale	F	%	F	%	F	%		
Very	9	30	5	16.7	3	10		
agree								
Agree	8	26.7	5	16.7	8	26.7		
Neutral	10	33.3	6	20	11	36.7		
Disagree	3	10	6	20	5	16.7		
Disagreed	0	0	8	26.7	3	10		
Total	30	100	30	100	30	100		

Table 4. 2nd Indicator: Level of Interaction

The third indicator, knowledge enhancement, measures whether users gain new knowledge about health issues after exposure to educational content (Table 5). The average value of the third indicator is 90. It means health education through Telmed FKUB's social media is quite good in improving health knowledge.

Table 5. 3rd Indicator: Knowledge Enhancement

Indicator 3 : Knowledge Enhancement									
Likert	Question 1		Que	stion 2	Question 3				
Scale	F	%	F	%	F	%			
Very agree	12	40	12	40	18	60			
Agree	9	30	14	46.7	8	26.7			
Neutral	9	30	4	13.3	4	13.3			
Disagree	0	0	0	0	0	0			
Disagreed	0	0	0	0	0	0			
Total	30	100	30	100	30	100			

The fourth indicator, behavior change assesses whether there is a positive change in user health behavior (Table 6). The average value of the second indicator is 150 which means the improvement in behavior change is very good.

	Indicator 4 : Behavior Change										
Likert	Question		Question		Question		Question		Question		
Scale	1		2		3		4		5		
	F	%	F	%	F	%	F	%	F	%	
Very	8	26.	3	10	8	26.	11	36.	11	36.	
agree		7				7		7		7	
Agree	12	40	12	40	11	36.	13	43.	12	40	
						7		3			
Neutral	10	33.	13	43.	11	36.	6	20	7	23.	
		3		3		7				3	
Disagree	0	0	2	6.7	0	0	0	0	0	0	
Disagreed	0	0	0	0	0	0	0	0	0	0	
Total	30	100	30	100	30	100	30	100	30	100	

 Table 6. 4th Indicator: Behavior Change

The fifth indicator (Table 7), content quality assesses the quality of education delivered by Telmed's social media whether it matches the wishes and needs of its users. The average value of this indicator is 90 which means the quality of the Telmed social media content is good enough.

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Table 7. 5th Indicator: Content Quality

Indicator 5 : Content Quality								
Likert	Question 1		Que	stion 2	Question 3			
Scale	F	%	F	F %		%		
Very	17	56.7	10	43.3	13	43.3		
agree	17	50.7	13	45.5	13	43.3		
Agree	8	26.7	12	40	11	36.7		
Neutral	5	16.7	5	16.7	6	20		
Disagree	0	0	0	0	0	0		
Disagreed	0	0	0	0	0	0		
Total	30	100	30	100	30	100		

5. DISCUSSION

The characteristics of respondents based on the samples obtained describe that Instagram and YouTube users Telmed FKUB majority aged 17-25 years, which according to the age category of DepKes 2009 is late adolescence. It's in line with January 2023 data, 32% of Indonesians who use Instagram and YouTube are between 18 and 24 [15].

The majority of both social media users are women (70%), while according to Indonesian statistics for the month of August 2022, 51.7% of Instagram users in Indonesia were women, while by June 2023, about 61% of YouTube users were men [16].

Awareness levels measure the extent to which social media users are aware of the influence of Telmed's socmed in delivering health information that is useful to understand, prevent, and address health problems in everyday life, thus affecting health awareness. The results show that the level of health awareness among telmed users is good. This may be related to the educational level of the majority of users, who are mostly undergraduate students, because according to Ozlem Orsal's research, people with higher levels of education are also associated with better health literacy, which keeps them better informed about how to take care their health and lead them to gain better health awareness [17].

The level of interaction is the second indicator which measures how many users interact with educational content through likes, comments or shares. It has an average value of 90, which means the participation rate among the users is good enough. This may be related to the advantage of Instagram and YouTube apps that focus on visual content, so the information delivered is more visually appealing [18], and also have available features to interact with other users.

Knowledge enhancement as the third indicator assessing whether the health education content of Telmed Fkub provides new or additional information about previously unknown health issues. It also evaluated the accuracy of health information transmitted through the social media Telmed Fkub, and assesses the extent to which the health education contents of Telmed Fkub help to understand the importance of healthy lifestyles or certain preventive measures. This indicator measures the level of user confidence in the accuracy of health information transmitted through Social media Telmed Fkub. The mean of the third index is 90. It means health education through Telmed FKUB's social media, is quite good at improving health knowledge.

The average value of behavior change as the fourth indicator is 150. It means the improvement in behavior change is very good. There is evidence that gains in knowledge and skills are positively linked to behavioral changes, but behavior change itself is a dynamic process. It involves multiple factors and is influenced by various social, psychological, and environmental [19].

The content quality indicator has an average value of 90. It means the level of user confidence in the accuracy of the health information presented is pretty good, and the ease of content to understand is also good enough.

6. CONCLUSION

Based on the survey results, it can be concluded that the quality of content presented by the Instagram and YouTube channels of Telmed FKUB is quite good, and the level of interaction also fairly good. Health information which delivered can enhance knowledge well, thereby potentially generating good health awareness, and ultimately has the potential to change positive health behavior of its users.

REFERENCES

- Cappella J. N., Kim H. S., Albarracín D., Selection and transmission processes for information in the emerging media environment: Psychological motives and message characteristics, Media Psychology, 2014, 18, 396–424.
- [2] Kaplan A, Haenlein M. Users of the world, unite! The challenges and opportunities of social media. Bus Horizons. 2010 Jan;53(1):59–68. doi: 10.1016/j.bushor.2009.09.003.
- [3] McGowan BS, Wasko M, Vartabedian BS, Miller RS, Freiherr DD, Abdolrasulnia M. Understanding the factors that influence the adoption and meaningful use of social media by physicians to share medical information. J Med Internet Res. 2012;14(5):e117. doi: 10.2196/jmir.2138. http://www.jmir.org/2012/5/e117/
- [4] Boyd DM, Ellison NB. Social network sites: Definition, history, and scholarship. J Comp Med Commun 2008;13:210-230.
- [5] U. M. Martin, U. Thapa, and H. Aguinis, "Punishing the good? How to minimize an unfair CSR-washing label," *Bus Horiz*, vol. 67, no. 2, pp. 199–207, Mar. 2024, doi: 10.1016/j.bushor.2023.12.002.
- [6] Dollarhide Maya, "Social Media: Definition, Importance, Top Websites & Apps," Accessed: Jun. 12, 2024. [Online]. Available: https://www.investopedia.com/terms/s/social-media.asp#citation-14
- [7] S. Kemp, "Digital 2023: Global Overview Report," DataReportal. Accessed: Jun. 12, 2024. [Online]. Available: https://datareportal.com/reports/digital-2023-global-overview-report
- [8] Jason Riddle, All Too Easy: Spreading Information Through Social Media, The Arkansas Journal of Social Change and Public Service, Volume 12, Fall 2022-Spring 2023
- [9] Jin Y, Austin L, Vijaykumar S, Jun H, Nowak G. Communicating about infectious disease threats: insights from public health information officers. Public Relations Rev. 2019 Mar;45(1):167–177. doi: 10.1016/j.pubrev.2018.12.003. doi: 10.1016/j.pubrev.2018.12.003.
- [10] Harrison D, Wilding J, Bowman A, Fuller A, Nicholls SG, Pound CM, Reszel J, Sampson M. Using YouTube to disseminate effective vaccination pain treatment for babies. PLoS One. 2016;11(10):e0164123. doi:10.1371/journal.pone.0164123. http://dx.plos.org/10.1371/journal.pone.0164123.
- [11] McInnes C, Hornmoen H. Add Twitter and Stir: the use of Twitter by public authorities in Norway and UK during the 2014-15 Ebola outbreak. Observatorio. 2018;12(2):23–46. doi: 10.15847/obsOBS12220181173. doi: 10.15847/obsobs12220181173.
- [12] Ellis LA, Collin P, Davenport TA, Hurley PJ, Burns JM, Hickie IB. Young men, mental health, and technology: implications for service design and delivery in the digital age. J Med Internet Res 2012 Nov 22;14(6):e160
- [13] Collinson S, Khan K, Heffernan JM. The Effects of Media Reports on Disease Spread and Important Public Health Measurements. PLoS One 2015 Nov 3;10(11):e0141423
- [14] Misra A, Sharma A, Shukla J. Stability analysis and optimal control of an epidemic model with awareness programs by media. Biosystems 2015 Dec;138:53-62
- [15] S. Hoe, "Social Media Statistics for Indonesia [Updated 2024]," Meltwater. Accessed: Jun. 12, 2024. [Online]. Available: https://www.meltwater.com/en/blog/social-media-statistics-indonesia
- [16] W. Hanadian Nurhayati, "Indonesia: share of Instagram users by gender 2023 | Statista." Accessed: Jun. 12, 2024. [Online]. Available: https://www.statista.com/statistics/997033/share-of-instagram-users-by-gender-indonesia/
- [17] Özlem Örsal, Pinar Duru, Özgül Örsal, Kazım Tırpan, Abdullah Çulhacı, Analysis of the relationship among health awareness and health literacy, patient satisfaction levels with primary care in patients admitting to primary care health centers, Patient Education and Counseling, Volume 102, Issue 2,2019, Pages 376-382, ISSN 0738-3991,<u>https://doi.org/10.1016/j.pec.2018.09.006.(https://www.sciencedirect.com/science/article/pii/S073839911830 6967)</u>

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- [18] A. Gupta, "Instagram vs YouTube—Which Is Better for Your Business?," Jumpstart Magazine. Accessed: Jun. 12, 2024. [Online]. Available: https://www.jumpstartmag.com/instagram-vs-youtube-which-is-better-for-your-business/
- [19] M. Gupta, "Behavior Change Over Knowledge Gain," INDEGENE. Accessed: Jun. 12, 2024. [Online]. Available: https://www.indegene.com/what-we-think/reports/behavior-change-over-knowledge-gain

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