Global Scientific JOURNALS

GSJ: Volume 10, Issue 12, December 2022, Online: ISSN 2320-9186
www.globalscientificjournal.com

THE EFFECTIVENESS OF SOCIAL MEDIA IN IMPROVING THE BEHAVIOR OF HEALTH STUDENTS IN THE PREVENTION OF COVID-19

Roni Gunawan[1], Dian Maya Sari Siregar[2], Dedi Syaiful[3], Fahma Shufyani[4], Yeni Vera[5]

[1,2,3,4] *Institut Kesehatan Helvetia,* [5]*Sekolah Tinggi Ilmu Kesehatan Siti Hajar*
Co-Author : Roni Gunawan, roni.creation99@gmail.com

KeyWords
Social Media, Health Promotion, Students, Covid 19

ABSTRACT

The Corona Virues Disease 19 (COVID-19) pandemic had a major impact on public health in 2020. This outbreak has an impact on the development of the digitalization system in every aspect of life. Information that spreads widely on social media is very important to be accessed by all parties, including parties who are familiar with health information, namely health students. Health students with various majors have their own characteristics that in fact influence their behavior in preventing Covid 19. This study used a quasi-experimental design that analyzed the differences in knowledge, attitudes and actions in 4 groups of Health students who were given mentoring interventions through social media including Instagram, Whatsapp Groups, Facebook Groups and Twitter. The sample of this study amounted to 80 respoden. Data analysis using the Mann Whitney test and the Kruskall Wallis test. The results of the study showed that the use of social media has an effect on increasing the knowledge, attitudes and actions of respondents. The government through relevant ministries or agencies should utilize entertaining and accessible media to improve public health behavior

Introduction

The Corona Virues Disease 19 (COVID-19) pandemic is a disease that has had a major impact on public health in 2020. Not only health, this outbreak also caused most businesses to close and human life to be disrupted (Donthu,2020). COVID-19 is also business, disrupting world trade and movement (Haleem, 2020).

This outbreak has an impact on the development of the digitalization system in every aspect of life. According to Rahul (2020) this pandemic has caused a surge in the use of digital technology due to social distancing norms and national lockdowns. Organizations around the world are adjusting to new ways of working and living. Even though digitalization has emerged in line with the start of the Industrial Revolution 4.0, but this pandemic has forced digitalization to be developed.

The development of the digital era is in line with the development of social media. According to Hanson (2011) social media can help us send health messages intentionally, become a medium for educational messages, and allow information exchange to occur. According to Mehmet (2020), social media can be used as an alternative to get answers to daily questions, related to COVID-19.

Social media, which in fact is based on the internet, is quite diverse today, which is often used by the public, including Facebook, Instagram, Whatsapp, and Twitter. In general, social media that is developing today in principle does not only play a role as social media, but also acts as a media that becomes a new business model based on social media.

For example, Facebook, Mujahidah (2013) in his article explained that Facebook is not only social media but has become a media with various interests, such as buying and selling media, news publication media. Twitter is in principle a new model that is easy to find the latest news or what is happening, especially related to things that are popular (Zukhrufillah, 2018), even CNN (2017) mentions that twitter is actually no longer a social media but a news application. Likewise, Instagram, which is

considered as a social media for sharing photos, turned out to be an application used as a promotional medium.

However, the problem currently still does not exist in principle an application whose main purpose is health promotion media under the guise of social media, most of the motives are business (be it news applications, or sales promotions). In fact, if this media is developed, it will be one of the promotional strategies to overcome many health problems that are still large in Indonesia based on social media applications.

Social media that has existed in several studies has been able to improve public health behaviors, for example according to Gunawan (2020), Gunawan (2018) that the use of whatsapp media has been proven to improve health behaviors. According to Laksono (2011) social media (Facebook) is very effectively used as a medium for diffusion of information that goes beyond the territory of the country. Fardila Sari's research (2019) Instagram can be used as a health promotion medium to increase public knowledge and attitudes, especially in early detection of breast cancer.

Based on this, the development of social media applications that specifically and impliedly carry health promotion efforts under the guise of being social media becomes very strategic to develop. However, these efforts must be able to adopt existing models to make them easier to develop. This study aims to analyze the comparison of the use of various social media (Faceebook, Twitter, Instagram and Whatsapp) in improving health behaviors. This research is a preliminary research for the development of health promotion media based on social media applications

Literatur Review

Health Promotion Media

Health promotion media are all means or efforts to display the information message that the communicator wants to convey so that the target can increase his knowledge which is ultimately expected to change his behavior in a positive direction towards health. According to Susilowati (2016) In determining health promotion media, there are several principles that must be met.

Based on the theory of education that the easiest learning is to use media. Therefore, the use of media helps facilitate the delivery of messages in public health. Choose a promotional medium, which is the channel that will be used to convey the message to the target, which is based on the tastes of the target rather than the tastes of the program manager. If it is associated with tastes, almost most people are already literate with technology where mobile phones (HP) are mandatory goods for everyone, so the use of HP-based media is a selection of media that suits people's conditions

The selected medium should depend on the type of goals, the level of education, the aspects to be achieved, the methods used and the existing resources. In addition, the selected media must also have a broad impact, therefore it is necessary to determine the purpose of the media that will be the basis of media planning: Reach, frequency of weights, continuity and cost.

Develop messages in the media to be used that are tailored to the purpose of promotion. The media can be used as a key agent of change or as a means of supporting education and other clinical services. There are four media roles:

1. Media as educators
2. Media as supporters
3. Media as program promoters
4. Media as a complement

The cone of experience was first introduced by Edgar Dale in 1946, in his book Audiovisual Methods in Teaching, on audiovisual methods in teaching. Later, he revised it to a second printing in 1954 and another revision in 1969. Edgar Dale's cone of experience shows the experience gained in using the medium from the most concrete (at the very bottom) to the most abstract (at the very top).

Dale names the categories of experience as follows: (1) hands-on experience, intentional experience, (2) contrived experience, (3) dramatic participation, (4) demonstrations, (5) field trips, (6)exhibitions, (7) moving images, (8) radio recordings, still images (audio with visual images) (9) visual symbols, (10) verbal symbols. Dale claims that the classification is simple and quality (Dawson, 2004)

Social Media

According to Ruly, social media is a medium on the internet that allows users to present themselves as well as interact, cooperate, share, communicate with other users, and form social bonds virtually. Social media shifted health communication from one to many to include one to many and many simultaneously. While. Social media does not require its users to have an understanding of how their tools work or programming languages generate content and share it.

Although social media has been around since 2004, the widespread availability of devices that support mobile Internet use has reached people around the world. Social media users are similar to artists, creating, reworking and sharing content, rather than passively 'Eating' it. Social media may be new, but this manifestation is demonstrated through the idea of being introduced in the 1960s by Marshall McLuhan and members of the Toronto School of Communication group of scholars (De Kerkhove D, 1989).

The term social media broadly covers the spectrum of web-based communication tools and channels (Korda and Itani, 2013). First, there are 'social networking sites' where individuals can create private profiles (public or semi-public) and share with other user lists, examples of which include Facebook, Twitter, and LinkedIn (Laranjo, et al, 2015). Both are known as

'content sharing sites, e.g. YouTube, Instagram and Flickr. This site is usually used for assessment, discussion and sharing of videos and photos (Taylor, 2012).

There are several, and various other types of social media platforms, and examples include Wikis, Blogs, Weblogs, geolocation tools, Moblogs and so on (Taylor, 2012). In addition to the common types of social media, there are a number of health networking sites such as 'Tu Diabetes' and 'Patient Like Me'. In addition, there are social media sites designed primarily for behavior change interventions; examples are sites to promote smoking cessation and sites regarding physical activity (Cobb,et al and Vandelanotte, et al in Adewuyi and Adefemi, 2016).

According to a survey conducted by the Association of Indonesian Internet Service Providers (APJII) in 2017, almost half of the total internet users in Indonesia are people in the usis group of 19-34 years (49.52%). While the second group is the most in the age group of 35-54 years (29.55%), the age group of 13-18 years (16.68%) and users with the age of over 54 years (4.24%) where social media is the most frequently accessed content (katadata in Yulia (2018).

Method

This study uses a quasi-experimental design where measurements will be carried out on pre-test and post tests in 4 different groups (Facebook group, Whatsapp group, Instagram group, Twitter group) which received the same treatment, namely giving health promotion messages (text, images, videos) related to the prevention of Covid-19 variants in families using 4 different social media. Respondents in each group will be confirmed to have received messages based on their respective social media through the confirmation menu on each social media.

The sample in this study was health students in Medan City which consisted of 4 Study Programs, namely the Public Health Study Program, Pharmacy Study Program, Nursing Study Program and Physiotherapy Study Program. All students selected are students who are in the third semester of each study program will be grouped according to the social media intervention that will be used, where each group consists of 20 respondents. According to Gay, Mills and Airasian (2009: 133) for the study of experimental and comparative methods required a sample of 10-20 respondents for each group to be compared. With an estimated drop out of 20%, the sample size of each group is 20. So the size of the sample of this study was 80 respondents.

The data collection method was carried out by providing an online questionnaire to test respondents' behavior at the beginning before treatment, then 1 month after treatment, then 2 months after treatment.

Univariate stage data analysis data analysis will use frequency distribution, where a single data distribution of each variable and respondent characteristics will be presented frequency and percentage. Bivariate analysis was performed to analyze data before and after treatment in each intervention group. Data analysis using the Man Whitney test. Multivariate analysis was performed to analyze data on 4 intervention groups. Data analysis using the Kruskal Wallis test

Results and Discussion

Research Results

1. Knowledge Variables

The following are the analytical results using the Kruskall Wallis test, which is to test differences in independent data more than 2 times on knowledge variables,

Table 1. Average ranking of knowledge based on social media used

Variable	Department	N	Mean Rank
Pre Knowledge	*Intsagram*	20	37.53
	Whatsapp Group	20	49.28
	Facebook Group	20	30.83
	Twitter	20	44.38
	Total	80	
Knowledge Post Test 1	*Intsagram*	20	39.15
	Whatsapp Group	20	54.45
	Facebook Group	20	27.33
	Twitter	20	41.08
	Total	80	
Knowledge Post Test 2	*Intsagram*	20	39.15
	Whatsapp Group	20	54.45
	Facebook Group	20	27.33
	Twitter	20	41.08
	Total	80	

The above results show the Kruskall Wallis Output where the Mean Rank Value of the Knowledge variable is highest showing the average rating of each treatment. In the case above, for the Mean Rank The highest knowledge is respondents who use the *Whatsapp group* as much as 54.45 and it occurs after the intervention both in the first month and in the second month. Then the lowest mean rank of knowledge is respondents who use *facebook groups* as their promotional medium, and that happens after the treatment of the first month and the second month.

Whether these differences are all statistically meaningful overall, then this is where it can be tested with the Kruskall Wallis Test, which measures statistically whether the magnitude of the difference in average ratings is significant or not.

Table 2. Kruskall Wallis Test Results Knowledge Variables

	Pre Knowledge	Knowledge Post Test 1	Knowledge Post Test 2
Chi-Square	7.483	14.444	14.444
df	3	3	3
Asymp. Itself.	.058	.002	.002

The value of P Value is indicated by the **value of Asymp. Sig**. If the **value of P Value < the critical limit** of the study then the hypothesis decision is to **accept H1 and reject H0 or** that means **there is an influence** of the free variable on the bound variable.

1. In this case, the value of P Value in pre-knowledge is 0.058 where more than the critical limit of 0.05 which means rejecting H1 or there is no difference in knowledge in the four groups of respondents.
2. In this case, the value of P Value at 0.002 where less than the critical limit of 0.05 which means rejecting H0 or there is a difference in knowledge in the four groups of respondents after promotion through social media. So it can be concluded that there is an influence of social media in increasing respondents' knowledge
3. Then for the second post-measurement knowledge, a P Value value was obtained at an attitude of 0.002 where less than the critical limit of 0.05 which means rejecting H0 or there was a difference in knowledge in the four groups of respondents after promotion through social media. So it can be concluded that there is an influence of social media in increasing respondents' knowledge

2. Attitude Variables

The following are the analytical results using the Kruskall Wallis test, which is to test differences in independent data more than 2 times on attitude variables,

Table 3. Average ranking of respondents' attitudes based on the social media used

Variable	Department	N	Mean Rank
Pre Attitude	*Intsagram*	20	50.35
	Whatsapp Group	20	34.50
	Facebook Group	20	38.28
	Twitter	20	38.88
	Total	80	
Post Attitude Test 1	*Intsagram*	20	50.73
	Whatsapp Group	20	37.13
	Facebook Group	20	37.98
	Twitter	20	36.18
	Total	80	
Post Attitude Test 2	*Intsagram*	20	50.98
	Whatsapp Group	20	37.33
	Facebook Group	20	38.05
	Twitter	20	35.65
	Total	80	

The above results show the Kruskall Wallis Output where the Mean Rank Value is an attitude variable that shows the average rank of each treatment. In the case above, for the highest Mean Rank is the attitude of respondents in the group who use Instagram as a promotional medium after 2 months of treatment, namely 50.98, then respondents who use Instagram in a month of treatment are also classified as high reaching 50.73. The lowest Mean Rank value is the attitude before treatment in the group that will use whatsapp messenger. However, the lowest mean rank value is in the twitter user group after 2 months of treatment.

The difference as a whole is statistically meaningful after analysis using the Kruskall Wallis Test, which is to measure statistically whether the magnitude of the difference in average ratings is significant or not.

Table 4. Kruskall Wallis Test Results Attitude Variables

	Knowledge Attitude	Post Attitude Test 1	Post Attitude Test 2
Chi-Square	5.231	5.238	5.548

df	3	3	3
Asymp. Itself.	0.156	0.155	0.136

The value of P Value is indicated by the **value of Asymp. Sig**. If the **value of P Value < the critical limit** of the study then the hypothesis decision is to **accept H1 and reject H0 or** that means **there is an influence** of the free variable on the bound variable.

1. In this case, the value of P Value at pre-attitude is 0.156 where more than the critical limit is 0.05 which means rejecting H1 or there is no difference in attitude in the four groups of respondents.
2. Then after a month of treatment the value of P Value on the attitude of 0.155 where more than the critical limit of 0.05 which means rejecting H1 or there is no difference in attitude in the four groups of respondents. So it can be concluded that there is no influence of social media in improving respondents' attitudes
3. Then after two months of treatment the value of P Value at the attitude was 0.136 where more than the critical limit of 0.05 which means rejecting H1 or there was no difference in attitude in the four groups of respondents. So it can be concluded that there is no influence of social media in improving respondents' attitudes

3. Action Variables

The following are the results of analytics using the Kruskall Wallis test, which tests the difference in independent data more than 2 times on action variables,

Table 5 Average ranking of respondents' actions based on social media used

Variable	Department	N	Mean Rank
Pre Action	*Intsagram*	20	51.55
	Whatsapp Group	20	43.58
	Facebook Group	20	37.85
	Twitter	20	29.03
	Total	80	
Post Test Action 1	*Intsagram*	20	54.98
	Whatsapp Group	20	43.10
	Facebook Group	20	38.68
	Twitter	20	25.25
	Total	80	
Action Post Test 2	*Intsagram*	20	54.40
	Whatsapp Group	20	48.58
	Facebook Group	20	36.60
	Twitter	20	22.43
	Total	80	

The above results show the Kruskall Wallis Output where the Mean Rank Value of the action variable which shows the average rank of each treatment. In the case above, for the highest Mean Rank is the action of respondents in the group who use Instagram as a promotional medium after 1 month of treatment, namely 54.98, then respondents who use Instagram in 2 months of treatment are also classified as high reaching 54.40. The lowest Mean Rank value was the pre-treatment action in the group that used Twitter post 2 blan treatment with a mean rank of 22.43..

The difference will then be statistically tested overall using the Kruskall Wallis Test, which measures statistically whether or not the difference in average ratings is significant.

Table 6. Kruskall Wallis Test Results Action Variables

	Action Knowledge	Action Post Tes 1	Action Post Test 2
Chi-Square	10.125	16.977	22.570
df	3	3	3
Asymp. Itself.	.018	.001	.000

The value of P Value is indicated by the **value of Asymp. Sig**. If the **value of P Value < the critical limit** of the study then the hypothesis decision is to **accept H1 and reject H0 or** that means **there is an influence** of the free variable on the bound variable.

1. In this case, the value of P Value at pre-attitude is 0.018 where less than the critical limit of 0.05 which

means rejecting H0 or there is a difference in knowledge in the four groups of respondents.

2. Then after a month of treatment the value of P Value at an attitude of 0.001 where less than the critical limit of 0.05 which means rejecting H0 or there is a difference in Action in the four groups of respondents after promotion through social media. So it can be concluded that there is an influence of social media in increasing the actions of respondents
3. Then for the second post-measurement action, a P Value value was obtained at an attitude of 0.000 where less than the critical limit of 0.05 which means rejecting H0 or there was a difference in Action in the four groups of respondents after promotion through social media. So it can be concluded that there is an influence of social media in increasing the actions of respondents

Discussion

Analysis of Social Media Utilization of Knowledge Change

Statistically, the results obtained that the use of social media can increase the knowledge of respondents. The increase in knowledge also occurs in each measurement period starting from the first month to the last month. This is in line with research conducted by Dowshen, et al (2015) in the United States which showed that media-based health promotion in adolescents can increase knowledge about HIV & AIDS and raise awareness for voluntary testing of sexually transmitted diseases. Likewise, Nugroho's research (2014) proves that the provision of reproductive health topics/content through social media groups has an effect in increasing adolescent knowledge.

The results showed that the most effective increase in knowledge using whatsapp messenger social media, precisely whatsapp group or commonly called WA. The use of Wa can increase respondents' knowledge the most in respondents compared to other social media.

In-depth interviews of respondents who prefer to use WA media in accessing information suggest that the use of WA is faster to get information than others. Fast access to social media is one of the reasons for using social media. Whatsapp is a chat-based social media that can send text messages, pictures, voices, locations, and also videos to other people using gadgets quickly.

Chat-based WA has the advantage of ease of access, sending short messages through this media is more effective and cost effective than other counseling activities or social media. Short message delivery can be done at one time and includes broad community segmentation (Ekadinata & Widyandana, 2017). WhatsApp is suitable for replacing practical and timely sms for sending messages; superior to other chat applications, because it is simple and easy to understand, the WhatsApp application also saves memory, saves battery, and can save internet data. (Rahartri, 2019)

In-depth interviews conducted with respondents found that one of the reasons for using WA as an information medium is the clarity of the presentation of the message so that it is not too verbal. Although WA is chat-based, WA can send messages in various forms, namely images, videos, sounds, locations and others that are relevant (Okvireslian, 2021).

WA has a large selection of media in the delivery of messages so that we can adjust to the conditions of its audience. The majority of the messages conveyed in the intervention use video as the form of the message. The video media used is not only in the form of images but also gmbar and sound. The media is a good medium to use, because it involves more senses in the process of delivering the message (Apriyani et al., 2021). The results of Alini's research prove that health promotion about SADARI through audio-visual is more effective than using leaflets (Alini & Indrawati, 2018).

Analysis of Social Media Utilization of Attitude Change

Statistically, the results showed that the use of social media can improve respondents' attitudes. An increase in attitude also occurs at almost every measurement time from the first month to the last month.

This is in line with research (Istiani & Islamy, 2020) which formulates that social media has influenced social life in a social relations society and all forms of changes in the institution of social institutions in a society, which ultimately affects its social system, including attitudes and behavior patterns among groups. Likewise with the study (Prasetya et al., 2019) that smoking students who get social media interventions significantly increase their knowledge and attitudes towards the prevention of dental stains.

According to Listiani in (Sukesih et al., 2020) an attitude is a feeling of support or partiality or a feeling of not supporting or taking sides in the object. This feeling certainly arises because there is a stimulus received through social media. The results of the research also show that the social media that is classified as good at improving attitudes is Instagram.

In-depth interviews of respondents who use Instagram mentioned several reasons why they prefer to use Instagram in accessing health information over others are, the intensity factor of its more frequent use and its content which turns out to contain not only information but also is entertainment.

The results also show that Instagram is the most widely used media to access information, besides that Instagram media is also widely used by youth groups (Prihatiningsih, 2017). The group of teenagers is the group that uses Instagram the most, the use of Instagram.

This intensity is inseparable from the features on Instagram that allow a person to explore more freely, so that in that way teenagers tend to be able to show their existence. The teenager wants himself to be recognized for his existence. With them existing and actively using Instagram, they will feel that someone is paying attention and respecting them (Mahendra et al.,

2017), besides that also because there is an impulse from themselves to do something as a result of seeing a post on Instagram (Agianto et al., 2020).

The desire to be appreciated as well as the urge to act on posts are part of a person's feelings, meaning not only knowledge but one's feelings. Therefore, it is very relevant that the use of Instagram is more effective in increasing aspects of feelings or attitudes that come from within a person.

This is also driven by the features developed in Instagram, although it is not chat-based, but this media is an upload-based media equipped with various entertaining features. It also has substantial effects, awareness, attraction (Marliani et al., 2019).

Analysis of Social Media Utilization of Action Changes

The results of the study prove that the use of social media can increase the actions of respondents. Increased action also occurs at almost every measurement time from the first month to the last month.

This is in line with research (Nurfianti & Murtilita, 2015) which proves that social media affects individual perceptions so that it has an impact on effective breastfeeding behavior by mothers to their babies. Likewise, research (Alwafi et al., 2022) has proven that social media can influence the way food is consumed in populations in Saudi Arabia.

Social media has become a part of human life in communicating, so it is very common for choices for healthy actions to also be based on information obtained on social media. Therefore, the use of social media should be used to influence humans to live healthier lives, not only until social media is only used for business aspects, but social media must be used as a health promotion media that is used by all circles and becomes a reference for everyone in the world.

Conclusion

The p-value variable of knowledge of 0.0001 means that there is a difference in the average value of knowledge which shows that social media has an effect on increasing respondents' knowledge. The p-value variable attitude of 0.001 means that there is a difference in the average value of attitudes which indicates that social media has an effect on increasing respondents' attitudes. The p-value of the Action variable of 0.0001 means that there is a difference in the average value of the action which indicates that social media has an effect on the increase in respondents' actions. Campus as a *Center of Excellent* should have used and developed social media as a learning medium as well as a digital-based health promotion media

Acknowledgment

Ministry of Cultural Education, Research and Technology which has organized the 2022 National Research Grant program

Reference

[1] Dowshen, N. et al.(2015). IknowUshould2: Feasibility of a Youth-Driven Social Media Campaign to Promote STI and HIV Testing Among Adolescents in Philadelphia.AIDS Behav, 19(2), hal. 106–111. doi: 10.1007/s10461-014-0991-9. IknowUshould2.

[2] Adewuyi, Emmanuel Olorunkele dan Adefemi, Kazeem. Behavior Change Communication Using Social Media : A Review dalam The International Journal of Communication and Health 2016 No. 9

[3] CNN. 2017. https://www.cnnindonesia.com/teknologi/20170503174407-185-212027/bukan-lagi-media-sosial-kini-twitter-jadi-aplikasi-berita

[4] Dawson, Kara dan Ann Kovalchick.ed.2004. Education and technology: an encyclopedia, California: ABCCLIO, Inc.

[5] De Kerkhove D. McLuhan and the "Toronto School of Communication". Can J Comm. 1989; 14(4): 73–79

[6] Donthu, Naveen. Anders Gustafsson.2020. Effects of COVID-19 on business and research Journal of Business Research Volume 117, September 2020, Pages 284-289. https://doi.org/10.1016/j.jbusres.2020.06.008. Elsevier

[7] Dowshen, N. et al.(2015). IknowUshould2: Feasibility of a Youth-Driven Social Media Campaign to Promote STI and HIV Testing Among Adolescents in Philadelphia.AIDS Behav, 19(2), hal. 106–111. doi: 10.1007/s10461-014-0991-9. IknowUshould2.

[8] Fardila Sari ZA, Ayulia, Nengsih Purnama Sari, Nabila.2019. Health Promotion "Realize" Using Instagram on Non-Health Students of Andalas University. MKMI JOURNAL, Vol. 15 No. 3, September 2019

[9] Gay, LR, Geoffrey E. Mills and Peter Airasian. 2009. Educational Research, Competencies for Analysis and Application. New Jersey: Pearson Education, Inc

[10] Gunawan, Roni. Dian Maya Sari Siregar. Monographs. Utilization of Whatsapp Media in Health Promotion. ISBN. 978-623-7658-12-2 Helvetia.Medan

[11] Gunawan, Roni. MY Pratama, A Sulaiman, FP Gurning.2018. Increasing Of HIV/AIDS Prevention And Drugs Through Whatsapp Based Training And Assistance In Adolescents In Batang Kuis Deli Serdang District. International Journal of Scientific and Engineering Research 9(9):1005-1008

[12] Haleem, Abid. Mohd Javaid.2020. Effects of COVID-19 pandemic in daily life. Elsevier Public Health Emergency Collection. Curr Med Res Pract. 2020 March-April; 10(2): 78–79.
[13] Hanson et al.2011., "Use and Acceptance of Social Media among Health Educators. American Journal of Health Education, v42 n4 p197-204 Jul-Aug 2011
[14] http://link.springer.com/10.1007/978-3- 030-33698-1; Daniel Miller et al., eds., "Education and Young People," in How the World Changed Social Media (United Kingdom: UCL Press, 2016), 70–84.
[15] Irla. 2018. Optimization of Social Media Use In Social Marketing And Behavior Change Communication (A Literature Review Study Approach). HEARTY Journal of Public Health Vol.6 No.2 2018
[16] Korda, H., & Itani, Z. (2013). Harnessing Social Media for Health Promotion and Behavior Change. Health Promotion Practice, 14(1), 15-23. doi:10.1177/1524839911405850
[17] Laksono, Agung Dwi and Ratna Dwi Wulandari. Analysis of Potential Dissemination of Health Information through Social Networks; Case Study on the AIDS Care Network Forum. Health System Research Bulletin. Volume 14, Number 4, October 2011
[18] Laranjo, L., Arguel, A., Neves, A. L., Gallagher, A. M., Kaplan, R., Mortimer, N., & Lau, A. Y. (2015). The Influence of Social Networking Sites on Health Behavior Change: a systematic review and metaanalysis. Journal of the American Medical Informatics Association, 22(1), 243-256.
[19] Mehmet Kaya et al., eds.,2020. Putting Social Media and Networking Data in Practice for Education, Planning, Prediction and Recommendation (Singapore: Springer, 2020),
[20] Mujahidah.2013. Utilization of Social Networks (Facebook) as a Medium of Communication. Journal of Communication and Social Religion. Vol. XV, No. 1, June 2013
[21] Nugrohoi, C. V. (2014). The Effect of Providing Reproductive Health Materials Through Facebook Groups On Adolescent Knowledge.Journal of Promkes, 2(2), p. 2. 128–139.
[22] Rahul De, Neena Pandey, Abhipsa Pal.2020.Impact of digital surge during Covid-19 pandemic: A viewpoint on research and practice. Elsevier Public Health Emergency Collection. Int J Inf Manage. 2020 Dec; 55: 102171. Published online 2020 Jun 9. doi: 10.1016/j.ijinfomgt.2020.10217
[23] Ruly. Intercultural Communication in the Cyber Era. Jakarta. Prenata Media
[24] Susilowati, Dwi.2016. Health Promotion.Textbooks. Ministry of Health of the Republic of Indonesia.
[25] Taylor, H. (2012). Social Media for Social Change. Using the Internet to Tackle Intolerance. Institute for Strategic Dialogue, Retrieved on18 July, 2015from:http://tsforum. event123. no/UD/rehc2013/pop. Cfm
[26] Zukhrufillah, Irfani. 2018. Symptoms of Twitter Social Media As An Alternative Social Media . Al-I'lam; Journal of Islamic Communication and Broadcasting Vol. 1, No 2, March 2018, pp. 102-109

-