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Receiving COVID-19 Messages on Social Media to the People of Semarang City

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Abstract

During the COVID-19 pandemic, social media has become one of the ways to convey information quickly with internet technology. Of the many uses of social media in obtaining information about COVID-19. Of course, not all are accurate. There are many hoaxes or fake news, while on the other hand, the news happened according to the facts. Confirmed cases found in Semarang City were 88,014 cases with a death toll of 4,460 people. This study aims to find out how to receive information about COVID-19 on social media in the community of Semarang City. This study uses an analytic observational study with a cross-sectional design conducted in June-July 2021. The research sample is Semarang residents who have social media with an age range of 15-65 years. The results showed that 68% of respondents believed in information related to COVID-19 on social media. 80% can distinguish hoaxes from true information related to COVID-19 from social media. 71% of respondents confirmed the truth of the news obtained about COV-ID-19 from Social media. Some respondents believe in the information on social media WhatsApp, Instagram, Facebook, Youtube, Twitter, and Telegram. So growing digital literacy skills are expected to help the government overcome the issue of corona hoaxes and vaccines that are still emerging. The improved critical way of thinking is expected to be the countermeasure.

Introduction

Social media has become one of the ways to convey information quickly with internet technology. The use of social media has been shown to increase significantly in the case of natural disasters and crises (Gottlieb & Dyer, 2020). This rapid deployment overcomes traditional media barriers to stakeholders, including communities, healthcare systems, and healthcare providers (HCPs) to assist in making important decisions. Formal websites, scientific journals, and e-mail have infirmity, which is slow communication to share knowledge quickly. As a result, social media channels are becoming the most common source about COVID-19 for scientists and the public (Gupta et al., 2020).

One of the news discussed by the public was the COVID-19 pandemic hitting the world, including Indonesia. The National Disaster Management Agency (BNPB) reported that

the total cases of COVID-19, as of October 5, 2021, reached 4,221,610 confirmed people, and 142,338 people died (Gugus Tugas COVID-19, 2021). Central Java was a province that ranks third at the national level, with a total of 482,444 confirmed cases (Provinsi JawaTengah, 2021). The city of Semarang was in first place, with the largest in Central Java Province. According to the Semarang City Health Office, confirmed cases found in Semarang City until October 5, 2021, amounted to 88,014 cases with a death toll of 4,460 people (Semarang, 2020).

Social media can also be a threat in responding to the COVID-19 pandemic. Easy access brings inaccuracies and conspiracies. They can be repeated and propagated through social media. There is no way to prevent the spread of the global COVID-19 pandemic, but verified information is the most effective prevention against public panic and misinformation (Lancet, 2020). Since the onset

of the pandemic, a large amount of information about viruses, diseases, risks of infection, and precautions, produced and disseminated. Not only is the need for information increasing, but also the availability of the information itself. Lack of knowledge about this new virus, threats to health, and other areas of society (e.g., the economy) result in many pieces of information constantly changing and sometimes contradictory (Zarocostas, 2020). Kouzy et al. investigated the extent to which unverifiable misinformation or information about the COVID-19 pandemic spread on Twitter by analyzing 673 English-language tweets. The results show that misinformation accounts for 24.8% (153 of 617) of all serious tweets (i.e., not humor-related posts) (Kouzy et al., 2020). As a result, the particular challenge of distinguishing reliable health information from misinformation and misinformation, which can be defined as "written material that is false, unreliable, or not scientifically validated regardless of its intentional authorship" has increased considerably. (Shams et al., 2021).

Based on research conducted by Song et al., the level of individual trust in Health Information shared on social media is: 51.5% of Americans, 76.9% of Koreans, and 81.4% of Hong Kong residents reported using SNS for health information, while 66 .2% American, 94.6% Korean (Song et al., 2016). The COVID-19 infodemic is full of claims of fake news, conspiracy theories, and pseudoscientific therapies, regarding the diagnosis, treatment, prevention, origin, and spread of the virus. Fake news spread on social media can endanger public health (Naeem et al., 2021). In this case, social media has great potential to influence public opinion and perception. Finally, perhaps the worst impact of social media is its potential to spread misinformation, worry, and overblown, which can cause fear, stress, depression, and anxiety in people with or without an underlying psychiatric illness (González-Padilla & Tortolero-Blanco, 2020). The purpose of this study is to find out how to receive information on COVID-19 on social media in the community in Semarang City so that stakeholders involved in dealing with COVID-19 must provide clear and easy-tounderstand information for the public.

Method

This study used an analytical observational study with a cross-sectional design. The research took place in Semarang City, which was the most COVID-19 sufferers in Central Java. Based on a survey conducted by Marketeers, Semarang City residents have a percentage of 32.49% accessing the internet every day, and their involvement in social media is 50.14%. This research took time in June-July 2021. The population in this study was all residents of the city of Semarang. The research sample was Semarang residents who have social media with an age range of 15-65 years. The sample calculation used the minimum sample formula for quantitative research, namely the Taro Yamane formula because the population is known. So with this calculation, a sample of 100 people is obtained.

The sampling method is accidental sampling by removing respondents who are not actively using social media as an exclusion criterion. Data collection was carried out by direct interviews, while still adhering to health protocols, to respondents using a questionnaire. The instrument used is a questionnaire that has been tested and is valid and reliable, with a value of 0.789. The questionnaire contains open and closed questions that are used to obtain information related to sociodemography, respondents' activities in using social media, COVID-19 information accessed by respondents, respondents' acceptance of messages related to COVID-19, respondent's level of trust in COVID-19 information on social media.

Respondent's activities in using social media include when accessing social media, duration of reading messages related to COVID-19 on social media, types of social media owned, and types of social media that are often used. Information on COVID-19 accessed and the social media most preferred by respondents. Respondent's acceptance of COVID-19 information on social media was assessed using eight closed-ended questions. Each question has several answer options consisting of yes and no answers. The answer yes is given a value of 1, while not given a value of 0. In this study the acceptance of messages assessed included the activity of respondents

in seeking information, respondents could understand information, respondents paid attention to information, respondents trusted information, respondents were able to distinguish hoax news correctly, respondents confirmed the truth information, respondents are motivated to follow information related to COVID-19 on social media.

The level of trust of respondents by giving closed questions to respondents. Each question has five answer options consisting of very sure, sure, less sure, not sure, and very unsure. Very sure answers were given a score of 4, sure were given a score of 3, less sure were given a score of 2, unsure were given a score of 1, and very unsure were given a score of 0. In this study, the level of confidence assessed included the level of trust in the types of social media such as WhatsApp, Instagram, Facebook, Twitter, Youtube, and Telegram. The data then goes through the coding process, recapitulation, tabulation, and statistical analysis. Statistical analysis used is univariate and bivariate analysis, with the help of the SPSS Version 24 application program. Univariate analysis displays the frequency distribution in tabulated form. Each presentation on the question is categorized according to Koentjaningrat (2008) into; none (0%), some (1-25%), almost half (26-49%), half (50%), more than half (51-75%), almost all (76-99%), and entirely (100%).

Result and Discussion

Based on Table 1, the characteristics of respondents in this study include age, gender, marital status, education level, and occupation. The respondents' age in this study ranged from 15-65 years. The results showed that half of the respondents were 50 (50%) aged 26-35. Of the 100 respondents studied, more than half namely 63 people (63%), were female. Almost half of the respondents 46 people (46%), have a Bachelor's degree, while a small proportion of respondents have a junior high school education, as many as two people (2%). Most of the respondents' jobs are as private employees, namely 23 people (23%).

Table.1 Respondents Characteristic

Characteristic	Frequency	%		
Age				
15-25 years	36	36		
26-35 years	50	50		
36-45 years	12	12		
46-65 years	2	2		
Gender				
Female	63	63		
Male	37	37		
Education Level				
Junior High	2	2		
Senior High	19	19		
Diploma	10	10		
Graduate	46	46		
Post Graduate	23	23		
Occupation				
Not yet/	20	20		
Unemployment				
Private Worker	23	23		
Entrepreneur	7	7		
State Worker	19	19		
Teacher/Lecturer	16	16		
Freelance	4	4		
Others	11	11		

Source: Primary Data, 2021

The results of this study are per the characteristics of a survey conducted by the Association of Indonesian Internet Service Providers (APJII) in 2018. The highest number of internet users in the 15-19 year age range reached 91%, 20-24 years old at 88.5%, 25-24 years old at 82.7%, and age 30-34 years by 76.5% (APJII, 2019). It is in line with the age of the majority of respondents in this study, namely in the age range of 15-25 years and 26-35 years. The age difference is a significant predictor of a person's acceptance of health.

Based on Table 2, the activities of respondents in using social media in this study are more than half (52%) of respondents access social media for 4-6 hours per day, where as many as 18 people (48.6%) are male respondents while 34 people (54%) female respondents. The duration of respondents in reading information about COVID-19 on social media was at most < 10 minutes, namely 37 people (37%), while

respondents who read information about COVID-19 for > 1 hour were 11 people (11%). There are various types of social media owned by respondents, all respondents have WhatsApp application accounts, 96% Instagram, 69% Facebook, 69% Youtube, 58% Telegram, and 44% Twitter, while the applications that respondents have the least are Tik Tok and Line respectively. -by 1% each. The most frequently used social media by respondents is WhatsApp at 98%, while the least used by respondents are Line and Tik Tok each at 1%.

Table. 2 Respondents' Activities in Using Social Media

No	Respondents' Activities in Socmed	Frequency	%
1	Time to access socmed		
	per day		
	< 3 hours	30	30
	4-6 hours	52	52
	7-12 hours	12	12
	13-16 hours	5	5
2	Duration of reading		
	Covid messages		
	<10 minutes	37	37
	10-15 minutes	35	35
	15-30 minutes	9	9
	30 minutes -1 hour	8	8
	>1 hour	11	11
3	Owned Social Media		
	WhatsApp	100	100
	Instagram	96	96
	Facebook	69	69
	Youtube	69	69
	Telegram	58	58
	Twitter	44	44
	Tik tok	1	1
	Line	1	1
4	Frequently used social		
	media		
	WhatsApp	98	98
	Instagram	80	80
	Facebook	38	38
	Youtube	42	42
	Telegram	19	19
	Twitter	26	26
	Tik tok	1	1
	Line	1	1

Source: Primary Data, 2021

Gender differences in respondents

make different activities in using social media. Women (54%) spend more time accessing social media for 4-6 hours per day compared to men. Women access Instagram more often, as much as 46%, compared to 24.3% of men who access Whatsapp. The respondents in this study are mostly female. In a study by Gani et al., women tend to have slightly higher levels of specific health literacy about corona than men (62.9% vs. 57.6%) (De Gani et al., 2022).

Table.3 Respondents accessed COVID-19 information on social media

COVID Information	Frequency	%
Types of Information often		
accessed on social media		
Poster of Leaflet	57	57
Health Information Video	70	70
Broadcasted Messages	36	36
Twitter thread	14	14
Most popular social media		
WhatsApp	17	17
Instagram	43	43
Facebook	8	8
Youtube	19	19
Twitter	13	13

Source: Primary Data, 2021

Based on Table.3 Information COVID-19 accessed by Respondents on Social Media, more than half of respondents (70%) most frequently access videos or health information on social media. The results of another study showed that analysis of TikTok videos revealed a similar distribution of videos related to the pandemic that could encourage/ inhibit COVID-19 immunization (Basch et al., 2021), and similar results were obtained for YouTube (Hernández-García et al., 2021). The most preferred social media by respondents in accessing information about COVID-19 in this study is Instagram at 43%, where the proportion of women who access Instagram is 46% more than men at 40%.

Based on Bloom's Taxonomy, educational objectives are divided into three important domains, including the Cognitive Domain, Affective Domain, and Psychomotor Domain. Based on this division, Bloom and Krathwol classify acceptance (Receiving/Attending) into the category of Affective Domain. The

definition of acceptance itself is the willingness to be aware of a phenomenon in its environment which includes passively accepting problems, situations, symptoms, values, and beliefs. Acceptance can also be interpreted as sensitivity in receiving stimuli or simulations from outside. (Bloom, 1956) This study uses an instrument in the form of a questionnaire with eight kinds of

Table. 4 Acceptance of Respondents on Messages related to COVID-19

Questions	Yes	%	No	%
Do you get any information regarding COVID-19 from social media?	92	92	8	8
Are you actively looking for information related to COVID-19 on social media?	66	66	34	34
Are you able to understand information related to COVID-19 on social media?	87	87	13	13
Are you paying attention to information related to COVID-19 on social media?	89	89	11	11
Do you trust information regarding COVID-19 on social media?	68	68	32	32
Can you distinguish Hoax news from true news regarding COVID-19 from social media?	80	80	20	20
Do you confirm the truth of the news you get about COVID-19 from Social media?	71	71	29	29
Can you be motivated to follow COVID-19 related information on social media?	60	60	20	20

Source: Primary Data, 2021

Acceptance of Respondents in Receiving Messages related to COVID-19 is to ask about what respondents have obtained and done regarding information about COVID-19 from social media. More than half of respondents (66%) actively seek COVID-19 information on social media. Almost all respondents (87%) can understand information about COVID-19 read on social media. Nearly all respondents (89%) pay attention to COVID-19 information on social media. More than half (68%) of respondents trust COVID-19 information on social media. Most respondents (80%) can distinguish hoaxes from true news related to COVID-19 from social media. More than half (71%) of respondents confirmed the truth of the news obtained about COVID-19 from Social media. More than half (60%) are motivated to follow information related to COVID-19 on social media.

Online social media tracking program TalkWalker TM (New York City, NY, USA) reports that COVID-19 information was referenced on social media 40.2 million times from May 12, 2020, to May 18, 2020, resulting in a decreased signal-to-noise ratio which could

cause people to it becomes difficult to identify related factual information (Gottlieb & Dyer, 2020). Hoax news is undeniably the cause of many people who still ignore the importance of preventing COVID-19. Two important things that are considered capable of making a person ward off and anticipate coronavirus hoaxes are cognitive and critical. Knowledge must be translated into actionable behavior change messages, presented in a way that is understood by and accessible to all individuals in all sections of all societies. (Tangcharoensathien et al., 2020).

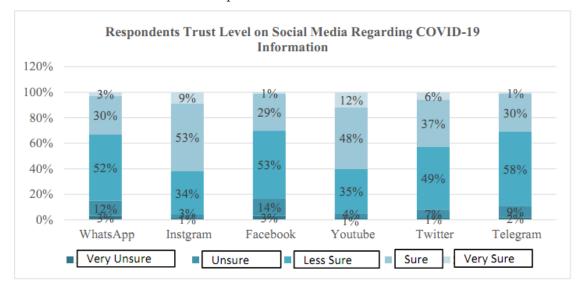
In this study, respondents have expanded their thinking horizons by actively seeking information about COVID-19 and activating critical thinking power by confirming hoax news obtained on social media by searching for COVID-19 information on official government websites, accompanied by seeking references from trusted sources. In connection with this and the increasing importance of health information on online media, it should be remembered that accessing valid and reliable health information on the internet is a big challenge, especially for people with low health

literacy (Lachlan et al., 2021). Previous research has shown that people with lower health literacy are less likely to trust health professionals (Peterson et al., 2020).

Governments should reach out to key communities to ensure their concerns and information needs are understood, tailoring suggestions and messages to address the audience they represent (Tangcharoensathien et al., 2020). The government, through the Ministry of Health, has made efforts to overcome content containing hoax news about the COVID-19 vaccine during the pandemic. Another effort was made by the COVID-19 Task Force through the covid.19.go.id page to launch a confirmation service for news related to COVID-19 by adding the "Hoax Buster" column on the website.

An illustration of the respondents'

level of trust in social media regarding COVID-19 information, more than half (52%) of respondents are less sure of COVID-19 information circulating on the WhatsApp application. More than half (53%) of respondents believe in COVID-19 information circulating on the Instagram application. More than half (53%) of respondents are less sure of the COVID-19 information circulating on the Facebook application. Almost half (48%) of respondents believe in the COVID-19 information circulating on the Youtube application. Nearly half (49%) of respondents are less sure of the COVID-19 information circulating on the Twitter application. More than half (58%) of respondents are less sure of the COVID-19 information circulating on the Telegram application.



Graphic. 1 Respondents Trust Level on Social Media Regarding COVID-19 Information

In the context of the COVID-19 pandemic, health information-seeking behavior also plays an important role. In general, it describes the active and directed behavior carried out by an individual to find information about health problems (Zimmerman & Shaw, 2020). Along with the sources of information used, trust in these different sources and their consequences must also be considered. When information is inconsistent, trust tends to decrease. (Ipsen et al., 2020). Some respondents believe in information on social media, 30% believe in WhatsApp, 53% believe in Instagram, 29% believe in Facebook, 48% in Youtube, 37%

on Twitter, and 30% in Telegram. In general, the highest level of trust is on Youtube, which is 48%. Female respondents have a higher trust level in COVID-19 information on Youtube, which is 54% compared to men. Social media can allow celebrities and virtual influencers (both medical and non-medical) to have a significant influence on the spread of information due to the number of their followers, regardless of the accuracy of their information. It can lead to the rapid spread of misinformation and significant potential harm. One study found that doctors were unable to reliably assess the quality of online resources using their gestalt (Thoma et

al., 2017)

A previous study found that people with lower health literacy were more likely to distrust information from specialists and dentists and report more negative perceptions of their healthcare experience. They are also more likely to choose health information from social media, blogs, or celebrity web pages (Chen et al., 2016). Most of the respondents in this study were unsure about the COVID-19 information on social media because the information disseminated through social media was hoax information, the source was unclear, and the news was inaccurate. They also look for the truth of the information through the internet (search engines) and ask directly to reliable sources. It is due to their experience. Namely that much of the information they receive is doubtful. Therefore, health literacy can help people to access, navigate and understand information about COVID-19, distinguish between reliable and misinformation, and empower people to make health decisions based on that information (Okan et al., 2020).

Conclusion

Based on the results of research carried out, most of the respondents actively seek information about COVID-19 on social media. They can distinguish hoax news from true news on social media by confirming hoax news obtained on social media by seeking information on official websites from the government, along with looking for references from reliable sources. Most of the respondents are less sure about COVID-19 information on social media. It is because the information disseminated through social media is hoax information, the source is unclear, and the news is inaccurate.

So it is hoped that social media can build a positive image in dealing with COVID-19 information through more constructive reports in disseminating information on COVID-19 prevention. The Semarang City Government is expected to be able to utilize and develop accurate and comprehensive information facilities to meet the information needs of the local community, as well as provide education to the public not to easily believe in hoax news related to COVID-19. For social media users,

you should not easily believe or even spread information obtained on social media without knowing the truth. For the public, it is better not to be immediately provoked by information in any media because it could be information that can affect trust in someone.

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