

The Impact of The Power of Scientific Literature and Information Literature on Corona Virus Diseases (Covid-19) Prevention Awareness

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The Impact of The Power of Scientific Literature and Information Literature on Corona Virus Diseases (Covid-19) Prevention Awareness

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ABSTRACT (10PT)

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Scientific and information skills are forms of learning outcomes. Therefore, this study aims to examine the effect of these two variables on an individual basis in order to follow government recommendations regarding the prevention of COVID-19. This research uses a quantitative approach with a survey method. 80 people took part in this study, consisting of men and women between the ages of 20 and 50, spread over various cities and provinces in Indonesia. The data collection tool consisted of 30 questions to identify and assess the three variables. The data analysis was performed using a two-variable multiple linear regression test using the software SPSS 25. **Based on the data and the discussion, it was concluded that scientific and information literacy increased confidence in the prevention of COVID-19 by 79, 7% affect. The remaining 18.3% is influenced by other factors, such as health literacy. Because it can be said that the level of scientific and information literacy has quite a strong influence on the individual's self-confidence in following the government's recommendations for the prevention of COVID-19. Since science and information literacy are part of learning outcomes, governments should train teachers and other educational staff to have good science and information literacy skills so that they can teach these two variables to students in the future through the learning process.**

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1. Introduction

Educational In late 2019 and early 2020, the world was rocked by the emergence of a new disease caused by a type of virus that turned it into a pandemic. The disease virus is then called Corona, so after this it is called Corona Virus Diseases 2019 or COVID-19 or 2019-nCoV and it becomes a pandemic (Zheng, Ma, Zhang, dan Xie, 2020). Gao, Tian, dan Yang (2020) also mentioned that COVID-19 emerged in December 2019 and spread rapidly in several countries. The coronavirus has been known since the



1960s and infects 10-20% of adults (Suganthan, 2019). Currently, the disease has infected about 64 countries in the world (Hageman, 2020).

When it first appeared, COVID-19 was found in Wuhan City, Hubei Province, China (Zheng et al., 2020). From that area it was subsequently declared that it had spread to several countries, so that in January 2020 the WHO declared it an international emergency based on the level of case reporting in different countries (Velavan & Meyer, 2020). This disease is a very bad thing because it can spread very quickly. COVID-19 can be transmitted from person to person (Rothan & Byrareddy, 2020). Even in Italy reported daily in Italy between March 1 and March 11, 2020, consistently between 9% and 11% of active infected patients (Remuzzi & Remuzzi, 2020).

COVID-19 infects not only humans, but also animals (Velavan & Meyer, 2020). In humans, this disease affects the respiratory tract (Rothan & Byrareddy, 2020), the cardiovascular system, and even death (Zheng et al., 2020). General clinical signs of infected individuals will experience unproductive cough fever (dry cough) and respiratory failure (Hageman, 2020). Further (Rothan & Byrareddy, 2020) also reports that the most common symptoms in the onset of COVID-19 disease are fever, cough, and fatigue, while other symptoms include phlegm production, headache, hemorrhage, hemoptysis, diarrhea, dyspnea, and lymphopenia. acute respiratory distress, acute heart injury. Several recent studies suggest that people over 60 are at higher risk than children of contracting COVID-19 (Velavan & Meyer, 2020). This is reinforced by Hageman (2020) statement that COVID-19 is more likely to affect the elderly and children. This disease is considered one of the most terrible diseases. This is because the incubation period of the COVID-19 virus is relatively fast, being around 5.2 days and can lead to deaths ranging from 6 to 41 days with a median of 14 days (Rothan & Byrareddy, 2020). Other data also shows that as of February 2020, COVID-19 had infected 70,548 in China and 1,770 of them died (Gao et al., 2020). And until now, there is no vaccine or special drug to cure the disease (Rothan & Byrareddy, 2020).

Based on mass media reports and case reports, several heads of state or regions have formulated policies to take action to prevent the massive spread of COVID-19. Some of these policies include social distancing and physical distancing, which essentially avoid crowds. In addition, citizens are advised to use soap to wash their hands, spray disinfectants on the rooms, isolate already infected persons, etc. Even in some countries there is a lockdown policy for certain regions or regions, for example China, Italy, Spain, France, Ireland, El-Savador and several other countries (Kompas, March 22, 2020). suggested a warning policy for travel, avoiding contact with sick people and avoiding contact with certain types of animals. The above decisions and policies are also suggested by Rothan & Byrareddy (2020) that public services and facilities should provide decontamination reagents for routine hand washing. Physical contact with wet and contaminated objects should be considered in the fight against the virus, especially agents such as stool and urine samples that may serve as alternative routes of transmission. The above steps have also been carried out by China and the United States (Rothan & Byrareddy, 2020).

However, the implementation of policies by the government towards the citizens has succeeded in reducing the growth of cases (infected people), for example in China, the policy to reduce the spread of COVID-19 has succeeded up to 90% (Remuzzi & Remuzzi, 2020). In addition, Remuzzi & Remuzzi (2020) also mentioned that on March 8, 2020, the Italian government took extraordinary measures to limit the transmission of the virus, including restricting movement in certain areas to minimize the possibility of uninfected people coming into contact with the virus. come with infected people.

In Indonesia itself, when large-scale social restrictions (PSBB) and homeworking are introduced, it will apply to Jakarta and several other cities in Indonesia to prevent the spread of COVID-19 (Menpan.go.id, 2020). The government's call for large-scale social restrictions (PSBB) and homeworking has been warmly welcomed by most people by continuing to work from home and maintain social distancing, even though they were willing not to practice communal worship (prayer). because they followed the advice of the government and the Indonesian Council of Ulemas (Mudassir, 2020). In addition, calls to wash hands and use protective masks were also followed up by a number of people. Even with his knowledge, there have been cases of two people (students) in Makassar who isolated themselves from their families and the community for fear of spreading COVID-19 after a vacation on their campus (News Detik.com April 6,



2020), such as as well as the discourse of a containment policy to limit the spread of COVID-19 (Yunus & Rezki, 2020).

However, the efforts of the heads of state and local governments have not been fully successful. This is evidenced by several indications, most notably; the number of infected people continues to increase, for example people with certain policy areas; social distancing, still doing activities as usual. In addition, some people are (unknowingly) forced to follow government regulations, which makes the implementation of policies seem forced. It was even discovered that some people attacked the government by spreading hoaxes on social media etc. In addition, there were also positive deaths for COVID-19, but the family ignored the authorities' call to stay away from patients, so were they classified under the category of persons under supervision (ODP).

By referring to the description above, it is understood that there are two groups of people who follow the government's recommendations and policies to reduce the spread of COVID-19, namely those who follow and those who do not want to follow or use force. to follow. Why did this happen? What distinguishes these two groups? Referring to the description above, it can be seen that the causes, symptoms, treatment and prevention of COVID-19 are closely related to science. Even the policies or rules of the head of state are also connected with science. Therefore, the question arises whether scientific culture and information literacy influence a person's awareness of being involved in the prevention of COVID-19?

Based on the definition of scientific literacy as the ability to understand natural phenomena or events in everyday life. Yuliati (2017) argues that scientific literacy is knowledge related to various scientific concepts and processes necessary to personally draw conclusions, participate and for personal benefit or productivity. The definition of scientific culture according to Zuriyani (2011) is the ability to use scientific knowledge, identify problems and draw conclusions based on data related to natural phenomena or events through real activities. Moreover, scientific literacy can also be defined as the ability of a person to use scientific knowledge and skills to identify various problems and draw conclusions based on facts and data about changes due to human activities (Arohman et al., 2016).

Based on the definition of scientific culture above, it is clear that the COVID-19 phenomenon is one of the scientific phenomena that have become global. Various research data also emerged from experts (researchers). So why are there still groups of people who don't follow government advice or policies? According to Nofiana & Julianto, (2018), explaining that one of the reasons why a person is less concerned and less sensitive to various environmental developments and problems, for example related to natural phenomena or events (including COVID-19), is that the level of scientific culture is still low. For example, a person is scientifically educated if he can use science, skills and scientific values to interact with technology and the social environment, including developments in the economic aspect (Nofiana & Julianto, 2018). Wulandari & Wulandari (2016) also indicate that with good scientific literacy a person will have a high sense of responsibility both for himself and the environment, will try to participate in research and look for different solutions based on known scientific knowledge. . earlier. Do those who do not follow government recommendations and policies therefore mean that they are not literate in science? Is there a link between scientific culture and self-awareness to participate in the prevention of COVID-19?

The ability of scientific literacy as mentioned by Wulandari & Wulandari (2016) consists of three indicators, namely: 1) identifying scientific problems, namely the ability to: a) recognize different problems that can be the subject of scientific research, b) recognize and find different keywords of problems, c) recognize the characteristics of scientific activities; 2) explain scientific phenomena, namely the ability to: a) apply scientific knowledge to existing situations, b) make interpretations and predictions of a scientific event, c) identify a scientific explanation or prediction; 3) use scientific evidence, which is the ability to: a) use scientific data to draw a conclusion, b) identify different types of evidence and arguments from the conclusions obtained, and c) reflect on the social implications aspects of a scientific inference. If this capacity is associated with the COVID-19 phenomenon, those with scientific knowledge will be able to more easily recognize these problems, predict their scientific impact and actively participate in the prevention of the spread of COVID-19 through the recommendations and government policies on to follow.



Diseases caused by COVID-19 are not only a scientific phenomenon, but also known and understood by a person because of his information skills. According to Subekt, Taufiq, Susilo, Ibrohim, & Suwono (2017), information literacy is an ability to think at a high level that is useful in efforts to develop academic and personal skills. According to (Wahyuni, 2016), information literacy is the ability of a person to know and recognize, evaluate and use information that is appropriate and effective, both in the form of electronic, print and from various places, organizations and media. Therefore, the information skills of Batubara (2014) is a very important skill.

Information literacy allows a person to avoid fake and fake news or information or hoaxes (Gumgum et al., 2017). Based on the definition of information literacy as described above, it is clear that this ability is very important and can influence a person in making decisions. With a good level of information literacy, a person will be able to recognize and analyze information, whether the information is true or not and how to apply it. Therefore, people with a good level of information literacy can respond to various correct information related to, for example, COVID-19; the cause of the disease, the symptoms experienced by the infected person, the extent of its spread and the procedures to anticipate its spread, then they will decide for themselves (even for their families) what and how to do. In other words, people with a good level of information literacy have good awareness, including those associated with COVID-19.

Referring to the above description, it can be understood that theoretically people who are literate in the fields of science and information will be inclined and self-conscious to actively participate in the prevention of COVID-19. This awareness arises because he understands the problems that exist as a scientific phenomenon and related to human life and they get information from the mass media. According to (Sastrawinata, 2011), self-awareness is the ability to know and understand one's feelings and thoughts about something and use them in making decisions. According to (Dariyo, 2017), self-awareness in 2017 is the ability to understand, accept and use all your abilities for a better life in the future. Self-awareness can also be defined as a person's intelligence in terms of putting themselves in certain circumstances and situations, as well as their ability to accomplish what to do (Akbar et al., 2018).

Based on the definition, one can understand that self-awareness is something very important. Self-awareness is a form of intelligence in thinking, acting and acting that belongs to man, according to (Fluerentin, 2012) self-awareness includes affective abilities supported by cognitive and psychomotor abilities. The cognitive domain is related to the ability to understand the situation between oneself and his environment, while the psychomotor domain is related to the process of decision-making and action as a form of self-awareness (Putri et al., 2019) explains that self-awareness is one of the most important aspects of psychology. Understanding behavior and its social impact is important for a person.

As described above, self-awareness is a very important thing and plays a huge role in one's life. Autonomy is the internal capacity of an individual, but has an external impact, especially in social behavior, for example in terms of building social relationships and awareness of respect for rules. This is also supported by the research results of Maharani & Mustika (2016), according to which people with self-awareness will be more disciplined and follow the rules. Similarly, according to Putri, Tazkiyah, & Amelia (2019), the basic principles of the self-play a role in controlling and directing all abilities (including emotions) to build social relationships in the community. Therefore, people with a good knowledge of themselves, regarding COVID-19, will tend to more easily understand the social symptoms resulting from the impact of COVID-19 and to put themselves in the situation in an appropriate way. They will have a good conscience to follow and enforce various government policies and regulations without any compulsion.

With regard to the above description, which relates to the COVID-19 phenomenon, scientific literacy, information literacy and self-awareness may be related. Therefore, this study aims to see how the influence between scientific literacy, information literacy and self-awareness is influenced by following government recommendations to prevent the spread of COVID-19. So research is a very important thing as a foundation for the development of COVID-19 and other disease prevention programs in the future.

2. Method

This research uses a quantitative approach with a survey method. The research data was obtained via telephone networks and WhatsApp (WA), so that researchers and respondents did not meet. The sample consists of residents aged 20 to 50, a total of 80 people from different cities and provinces in Indonesia. Respondents include F1 (friends/relationships researchers) and F2 (people recommended by F1). The people interviewed in the study are thus a combination of already known and unknown people.

The instrument used in this study consists of questions of up to 30 items, formulated in such a way that they can be answered with "yes" or "no". Indeed, the respondents in this study did not distinguish between their level of education. All questions focused on examining scientific and information literacy, as well as respondents' self-awareness regarding COVID-19 prevention. Each "yes" answer is given a score of 1 and each "no" answer is given a score of 0. Therefore, each respondent is given a maximum score of 30 and a minimum score of 0.

As mentioned above, this study aims to investigate the effect of the variables science literacy (X1) and information literacy (X2) on self-awareness (Y) by actively participating in the prevention of COVID-19. Thus, the data analysis was performed using a double linear regression test of two variables followed by a T-test to see if the two variables (X1 and X2) had a partial or joint effect on the variable. simultaneously had an effect on the self-awareness variables (Y) then do the F-test.

3. Result and Discussion

A. Result

Based on the data obtained from the respondents using the developed tool, an analysis of the data is performed. The first data analysis was performed by categorizing each respondent's skill level according to the obtained scoring scale, namely into the categories "high", "medium" and "low". Based on this classification, the following data were obtained as in Table 1:

Table 1. Science Literacy, Information Literacy and Self Awareness in COVID-19 Prevention

Aspect	Score	Amount	Skor rata-rata	Presentase (%)	Category
Science Literacy	8-10	6	4,5	7,5	High
	4-7	38		47,5	Medium
	0-3	36		45	Low
	Total	80		100	
Information Literacy	8-10	16	5,2	29	High
	4-7	37		46,25	Medium
	0-3	27		33,75	Low
	Total	80		100	
Self-Awareness in COVID-19 Prevention	8-10	26	5,0	32,5	High
	4-7	23		28,75	Medium
	0-3	31		38,75	Low
	Total	80		100	

Table 1 above shows that the average scientific literacy score of the respondents was 4.5. This score indicates that respondents' scientific literacy generally falls into the middle category. This fact is also reinforced by the skill level in scientific literacy dominated by the middle category at 47.5%, followed by the low-skilled group (45%) and the gifted group up to 7.5%.

As for the information literacy variable, the average score for the variable is 5.2 (higher than scientific culture capacity), which corresponds to the moderate category. This fact is also reinforced



by the data on the percentage of categories, namely the highest category reached by the group with the middle category to 46.25%. This is followed by the low category group, namely 33.75% and the high category group with 29%.

In addition, Table 1 also shows that self-awareness in following government recommendations for the prevention of COVID-19 generally falls into the moderate category. This is indicated by the average speech self-reliance and the COVID-19 prevention score is 5.0 (average). However, if we see it in Table 1 above, we see that the group with the low category occupies the highest percentage at 38.75% and is followed by the high category up to 32.5%. The moderately conscious group was 28.75%.

- **Correlation between scientific literacy, information literacy and self-awareness in the prevention of COVID-19**

Based on the scores obtained by the interviewees during the study, which involved 80 people from different educational and socioeconomic backgrounds. In addition, the score is analyzed to determine the correlation between the variables. The results of data analysis using SPSS 25 software, the output model summary is shown in Table 2 below:

Table 2. Model overview, correlation between variables

Model Summary					
Model	R	R Square	Adjusted R Square	R	Std. Error of the Estimate
1	.893 ^a	.797	.792		1.159
a. Predictors: (Constant), Information Literacy (X2), Science Literacy (X1)					

Based on the above summary test pattern, it can be seen that the value of R squared is 0.797. This shows that science and information literacy affect self-awareness by 79.7% in the prevention of COVID-19. The remaining 18.3% is influenced by other factors. Because we can say that the level of scientific and information culture has enough influence on individual self-awareness by following the government recommendations for the prevention of COVID-19.

Table 3. Results of the ANOVA test (F-test) between variables

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	406.570	2	203.285	151.412	.000 ^b
Residual	103.380	77	1.343		
Total	509.950	79			
a. Dependent Variable: Awareness COVID-19					
b. Predictors: (Constant), Information Literacy (X2), Science Literacy (X1)					

Based on the above ANOVA output table, it can be seen that the sig. on the F-test is 0.000, which means <0.05. This means that the two variables scientific literacy and information literacy have a significant impact on individual self-awareness when following government recommendations for the prevention of COVID-19. If it is based on the value of F count and F table, then the obtained value of F count = 151,421, while for N = 80 F table is 3.11. So, F count > F table, the hypothesis is accepted that scientific culture and information literacy significantly influence individual self-awareness by following the government's recommendations for the prevention of COVID-19

Table 4. Results of the test of the coefficients (T-test) between the variables

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.052	.352		.149	.882
	Science Literacy (X1)	.975	.068	.839	14.387	.000
	Information Literacy (X2)	.113	.064	.103	1.766	.081

a. Dependent Variable: Awareness COVID-19

Based on the results of the above T-test, it can be seen that the sig. because the effect of the science culture on the prevention awareness of COVID-19 is 0.000. The value is <0.05 , which means that the ability of scientific literacy affects awareness to actively participate in the prevention of COVID-19. Regarding the sig value, for information literacy about COVID-19 prevention awareness is $0.081 > 0.05$, which means information literacy has no effect on prevention awareness of COVID-19. COVID-19.

B. Discussion

Based on the results of the data analysis, it can be concluded that the literacy, information literacy and awareness of respondents to participate in preventing the spread of COVID-19 are generally still in the moderate category with average scores from 4.5, 5.2 and 5.0. With the average score, this means that the capacity and awareness of respondents needs to be further improved. In addition, based on the average score, it makes sense that the government's calls and recommendations for the prevention of COVID-19 have not been fully understood and followed by the public.

Based on the view (Morin, 2011) that self-awareness is a person's ability to identify, process, store and make decisions about oneself. Meanwhile, according to (Maharani & Mustika, 2016), one's self-awareness can be derived from attitudes: attention, alertness/awareness, architecture, knowledge memory and self-knowledge. Essentially, self-awareness is an individual's ability to control themselves and position themselves in certain situations. So, in the current situation of the spread of the disease COVID-19, a person who is aware of themselves will be able to put themselves in a safe situation.

Information is obtained from the data in Table 1 that the mean self-awareness score, particularly related to the prevention of the spread of COVID-19, is in the middle category. This means that in general (the respondents) are attentive and that awareness of disease prevention is still relatively low. In this situation, of course, they indirectly risk being exposed to the COVID-19 virus, as they cannot position themselves in a safe situation with full knowledge of the facts. As noted by (Maharani & Mustika, 2016) that people with high self-awareness tend to be more disciplined. Because of those who seem to lack discipline in the COVID-19 prevention process, their level of self-awareness is also suspected to be relatively low.

Self-awareness is not the only thing; several factors influence it. Referring to the results of the correlation test as shown in Table 1 above (model summary test), it shows that science and information literacy influence self-awareness in the prevention of COVID-19 by 79.7%. Because we can say that the level of scientific and information culture has enough influence on individual self-awareness by following the government recommendations for the prevention of COVID-19. This result shows that awareness (personal decisions) to follow government recommendations related to COVID-19 prevention is influenced by their ability or knowledge of scientific phenomena (problems) related to the environment and their ability to analyze information. This result is in line with the view

of Nofiana dan Julianto (2018) that low scientific literacy is one of the reasons why a person is less concerned about the situations and problems occurring in their environment, especially the occurrence of the COVID-19 phenomenon. In addition, the results of this study are also reinforced by research (Suhartinah et al., 2019) showing that scientific literacy influences one's concern for the environment.

Referring to the definition of scientific culture, that is, the ability of a person to know, understand and use various scientific concepts and processes and make them the basis for making decisions based on scientific evidence, to participate to take and produce through human activities (Zuriyani, 2011), (Anjarsari, 2014), (Arohman et al., 2016) and (Yuliati, 2017), as well as the ability to solve problems in different contexts (Syofyan et al., 2019). In the educational context, science literacy is therefore a form of learning performance that encompasses three domains, namely cognitive, affective (attitude) and psychomotor (ability to act). In other words, scientific culture is the main goal of the educational process, especially science education. Therefore, efforts to increase scientific literacy need to acquire a large proportion of science teachers, especially in Indonesia, so that the awareness of each individual to respond to various environmental issues, including in this case COVID-19, increases.

In the educational (learning) process, improving scientific literacy can be done in various ways. Some of these resources, for example, through learning integrated with real problems of everyday life, such as science, technology and society (Subekt et al., 2017), through learning based on local excellence (Nofiana & Julianto, 2018), through the use of models Certain learning models, e.g. scientific learning (Asyhari, 2015), project based learning (Afriana et al., 2016), using the peer-supported learning model (Diana, 2016), by applying discovery learning (Nurhayati, 2018), through the development of teaching materials and/or teaching aids (Irmita & Atun, 2017) and (Fry, 2019), the development of scientific literacy assessment tools (Hasana, I., Saptasari, M., & Wulandari, 2017), (Zainab et al., 2017), developing learning based on scientific literacy (Azimi et al., 2017), using web-based learning (Cahyana et al., 2019), the development of learning models (Abidin, 2017), using a student-centred scientific literacy worksheet (Susanti et al., 2019). Moreover, the learning process aimed at improving scientific literacy can also be achieved through learning outside the classroom (Vrana, 2019). Thus, the teacher, as the main driving force, has a very important role in increasing the scientific culture of citizens.

Awareness of the occurrence of COVID-19 as a type of deadly infectious disease in early 2020 (Kannan et al., 2020) is also influenced by information literacy, i.e., the ability to: find, use and evaluate information and effectively decisions between information (Mulyadi, 2010), (Wahyuni, 2016), (Anwar et al., 2017) and (Subekt et al., 2017). This means that awareness of COVID-19 prevention is influenced by the amount of information a person receives, the source of the information (to be ready), the analysis of the truth of the information (true or false) and the ability to use it. Therefore, people who are still little aware of COVID-19 prevention are believed to have poor information literacy. This finding is reinforced by previous research that found an influence between information literacy and community preparedness for disasters (Marlyono, 2017).

In this digital age, where most information is accessed through virtual, and then in the context of education, information literacy can be associated with digital literacy or IT equipment (Welsh & Wright, 2010), (Çoklar et al., 2017), (Puspito, 2017) and (Yusup & Saepudin, 2017). For example, an increase in information literacy may also be associated with an increase in digital literacy. There are several ways to improve digital information literacy, namely; developing guidelines on information literacy (Wahyuni, 2016), integrating information literacy directly into the learning process (Yusup, M Pawit; Saepudin, 2017), through various training activities or 'special education' (Kurnianingsih et al., 2017), (Ceha et al., 2016) and (Rahmawati & Krisanjaya, 2019). Besides raising the level of public education in general, raising the level of education can also increase information literacy (Iannuzzi, 2000). Thus, it is clear that educational institutions have a strategic role in improving information literacy, especially in controlling fake news/hoaxes (Fernandes et al., 2019).

One of the interesting things about this study is that science and information literacy together influence respondents' awareness of their concern to prevent the spread of the disease COVID-19, as shown in Table 3. From Table 4 (T-Test) shows that the influence of the two, these variables are



different, scientific culture has more influence than information literacy. This shows that decisions about taking responsibility for the prevention of COVID-19 are driven more by scientific culture than by information literacy. It also shows that respondents do not really believe the information they are given because there is too much fake news or hoaxes going around (Andhika Akbarayansyah/detikcom, 2019), including information about the disease through various media. 19 preventions.

As the data in Table 2 shows, 79.7% of prevention against the spread of COVID-19 is influenced by scientific culture and information literacy. The remaining 18.3% is influenced by other factors such as health literacy (Hadisiwi & Suminar, 2017), (Hadisiwi & Suminar, 2017) (Reddy & Chui, 2019). A person's health literacy influences a person's decision-making to maintain his or her health (Wigfall & Tanner, 2018). Of course, since COVID-19 is closely related to health, health literacy is one of the factors associated with disease prevention awareness. It is argued (Garcia-Codina et al., 2016) that people with health knowledge will have the skills to stay healthy and maintain a better quality of life. Thus, people who lack health knowledge will tend to ignore or disregard their own health, such as those who ignore government recommendations on COVID-19 prevention.

Based on the results of this research, the general public should be sensitized to be more concerned with scientific issues in the environment by increasing scientific and information literacy. With increasing public awareness of existing scientific phenomena, including in this case COVID-19, several government recommendations to prevent this dangerous disease may be more effective and efficient. For this reason, the teacher, as the main engine of the teaching and learning process, must take these roles and responsibilities wisely. The government should train teachers and other education personnel to have good science and information literacy skills so that in the future they can teach these two variables to students as drivers of change and to new generations for the nation as teachers' students really determine results, (Abdillah & Prasetyono, 2019). On the other hand, the government should also design an educational curriculum based on the management of natural disasters, including infectious diseases, so that when the country experiences a disaster, the citizens are ready and can work with the government to overcome it.

4. Conclusion

The Based on the discussion described above, it can be concluded at the end of this study that science and information literacy influence self-awareness in the prevention of COVID-19 by 79.7%. The remaining 18.3% is influenced by other factors, such as health literacy. Because we can say that the level of scientific and information culture has enough influence on individual self-awareness by following the government recommendations for the prevention of COVID-19. Since scientific literacy and information literacy are among the learning outcomes, governments should train teachers and other educational personnel to have good science literacy and scientific literacy so that they can teach these two variables to students in the future as agents of change and new generation for the nation, because teachers really determine students' learning outcomes.

Thank you

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Author statement

The authors hereby declare that in writing and publishing the results of this study, the authors have no conflict of interest, so that the study results may be used as reference and for future research.



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