Literacy and Attitude toward Covid-19 and Its Vaccination among 8th-Grade Students in Sub-Districts of Gunungkidul with Different Time of Occurrence of The First Case

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Abstract: Literacy and attitudes in dealing with the Covid-19 pandemic are urgently needed and must be improved to reduce Covid-19 cases. However, exploration of literacy and student attitudes related to Covid-19 and its vaccination is still rare. This study aimed to obtain an overview of literacy and attitudes related to Covid-19 and its vaccination among 8th-grade students in Ponjong Sub-District where the first case of Covid-19 occurred first among other sub-districts in Gunungkidul, and Girisubo Sub-District where the first case of Covid-19 occurred last. This type of research was descriptive research with a quantitative approach using the survey method. The data analysis technique used was inferential statistic. The results showed that in Ponjong Sub-District, 61.00% of students had a high literacy level related to Covid-19, 37.00% moderate, and 2.00% low. Meanwhile, 61.00% of students in Girisubo Sub-District had a high literacy level, 30.00% moderate, and 9.00% low. On the aspect of attitude, 87.00% of the students in Ponjong Sub-District were at a good level, 7.00% were moderate, and 6.00% were poor. Meanwhile, 89.00% of students in Girisubo Sub-District were at a good level, 6.00% were moderate, and 5.00% were poor. Based on Mann-Whitney U-test (p= 0.314), there was no significant difference in student literacy and attitudes related to Covid-19 and its vaccination between 8th-grade students in Ponjong and Girisubo Sub-Districts with different time of occurrence of the first case.

Keywords: Attitude; Covid-19; Gunungkidul District; Literacy; Vaccination.

Introduction

In early 2020, Indonesia received information regarding cases of Coronavirus disease 2019 (Covid-19). Initially, this case was found in China and then spread to 199 countries, including Indonesia (Handayani et al., 2020). Covid-19 is a disease caused by SARS-CoV-2 in 2019 (Isbaniah & Susanto, 2020). Coronavirus is an RNA virus that has a size about 120-160 nm and belongs to the betacoronavirus genus (Susilo et al., 2020). Indonesia reported its first case on March 2, 2020 (Handayani et al., 2020). As a result, Indonesia was experiencing severe difficulties in the economy, tourism, and even education. Due to Covid-

19, the government had to stop the face-to-face learning process in schools.

Gunungkidul is one of the districts where there were positive cases of Covid-19 at the beginning of time, which is three weeks from the first case in Indonesia. The first case of Covid-19 in Gunungkidul occurred in Ponjong Sub-District. It was on March 25, 2020. This information was officially shared through the Gunungkidul District government's social media account. Since then, the addition of Covid-19 patients in Gunungkidul has continued to increase. Based on data from the social media accounts of the Covid-19 handling task force in Gunungkidul, the first case of Covid-19 in Girisubo Sub-District was the latest among

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other sub-districts in Gunungkidul. It occurred on November 23, 2020.

Covid-19 cases can continue to increase due to a lack of knowledge and bad attitudes in dealing with them. Covid-19 literacy is related to attitudes that students must know and pay close attention to. Covid-19 literacy is characterized as the understanding of Covid-19 as well as informed decisions based upon this understanding (Archila et al., 2021). Covid-19 literacy and its vaccination are related to understanding both of them. This knowledge must also be practiced daily to face the Covid-19 pandemic successfully. This Covid-19 and its vaccination literacy can increase students' knowledge about Covid-19, attitudes in dealing with Covid-19, avoid hoax news, and reduce the spread of Covid-19 (Mayasari et al., 2021).

Junior high school students are teenage students who are mostly found in Gunungkidul. Based on data from the Ministry of Education, Culture, Research, and Technology, the number of junior high school students in Gunungkidul District in 2020 was 874. Meanwhile, the number of high school students was 229. Psychologically, teenage students tend to like to socialize, have activities outside the home, and have a high curiosity about something (Sugiman, 2016).

Grade 8 in Ponjong and Girisubo Sub-Districts has more students than other classes. Moreover, students in grade 8 just received material about the respiratory system. This material presented sub-materials about respiratory system diseases and sub-materials about maintaining respiratory health. This topic is related to the spread of the Covid-19 virus, which attacks the respiratory system. Based on this reason, the researcher wanted to know the literacy and attitudes related to Covid-19 among 8th-grade students in Ponjong and Girisubo Sub-Districts, Gunungkidul with different time of occurrence of the first case.

Method

This descriptive study using a quantitative approach was carried out from January to September 2021. The respondents involved were 249 8th-grade students from Ponjong and Girisubo Sub-Districts, Gunungkidul. Calculation of the number of samples was based on the Slovin formula (n = N/(1+N(e)2). The total population in this study was 571 respondents, so the percentage of error tolerance used was 10% (0.1). The calculation result (85,1) was rounded up to achieve conformity. The number of samples was then adjusted again to 249 respondents. This was done to better test results. According to Arikunto's opinion (2006), if the number of subjects is large or more than 100, 10%-18% or 20%-25% or more of the population can be taken.

The data was collected by distributing online questionnaires with Google Form. The instrument used was modified from Fauzi et al. (2020) and the addition of items related to the Covid-19 vaccination. This instrument contained questions about the demographic of the respondent, Covid-19 information source, time to obtain Covid-19 information, literacy related to Covid-19 and its vaccination, and attitude related to Covid-19 and its vaccination. The instruments that have been compiled were then validated using expert judgment.

The frequency of information source profile data was calculated using percentages. Time profile data for Covid-19 information, literacy related to Covid-19 and its vaccination, and attitudes related to Covid-19 and its vaccination were converted into 0 and 1 scores. The correct response got one score, and the wrong answer got 0 score. Time profile for obtaining Covid-19 information, literacy related to Covid-19 and its vaccination, and attitudes related to Covid-19 and its vaccination were presented in the contingency table. The Mann-Whitney U-test was used to see if there was a significant difference between literacy and attitude of 8th-grade students related to Covid-19 and its vaccination in the Ponjong and Girisubo Sub-Districts.

Result and Discussion

Demographic Characteristics of The Respondents

The demographic information asked in the questionnaire consisted of 6 items: name, class, age, gender, school name, and school address. The demographics of the respondents that stand out were the age and gender of the respondents. In this study, there were four age groups of the respondents: 13 years, 14 years, 15 years, and 16 years. Table 1 shows the summary of respondents in this study based on age. Table 2 shows the summary of respondents based on gender.

Table 1. The distribution of respondents based on age

Age	Number of Respondents	Percentage (%)
13 years old	38	15.26
14 years old	158	63.45
15 years old	47	18.88
16 years old	6	2.41

Table 2. The distribution of respondents based on gender

Age	Number of Respondents	Percentage (%)
Male student	122	49.00
Female student	127	51.00

From the distribution of the number of respondents based on age, it was known that the majority of respondents were 14 years old, which was 158 students (63.45%). The minority of respondents were 16 years old, which was only six students (2.41%).

Many respondents entered the stage of development and growth in their mid-teens. According to Wulandari (2014), the growth and development of teenagers from the age of 11-20 years are divided into three stages: early teenager (11-14 years), a middle teenager (14-17 years), and late teenager (17-20 years). Based on gender, most respondents were female, with a percentage of 51.00% (127 people).

Covid-19 Information Source

The first item related to the source of information on Covid-19 asked about the first source of information about Covid-19. The item provided six answer choices for respondents: family, friend or neighbor, health worker, television, internet, and teacher. The data can be seen in Table 3.

Table 3. The frequency distribution of information sources related to covid-19 for the first time among 8th-grade students in ponjong and girisubo sub-districts, gunungkidul

Information Sources	Number of Respondents	Percentage (%)
Family	13	5.22
Friend/neighbor	6	2.41
Health worker	8	3.21
Television	150	60.24
Internet	70	28.11
Teacher	2	0.80

Based on Table 3, most of the first Covid-19 information sources for 8th-grade students in the Ponjong and Girisubo Sub-Districts came from television, with 60.24% (150 students). This was because much news about Covid-19 was broadcasted on television. According to Mustafa (2021), television had become a very close medium to the community, especially when there were rules to stay at home. In addition, the characteristics of the region also affect this result. The distance between residents' houses in the Ponjong and Girisubo Sub-Districts, which were mostly far away. And the limited internet signal was also the reason why many students received information about Covid-19 for the first time from television. This was also in line with the opinion of Yunus and Zakaria (2021) that television was the most widely accessed source of information by the public in obtaining information about Covid-19. The same result was found in Italy. The most frequently reported source of knowledge about Covid-19 was television, followed by Facebook, Whatsapp, and Instagram. Contrast from the media, the school appears to be the last learned option for forgathering knowledge about Covid-19 (Souli & Dilucca, 2020).

In the next item related to the source of Covid-19 information, the respondents were asked about the most trusted source of Covid-19 information that can provide accurate information. The question had four answer choices: health worker, television, internet, and teacher. The data collected is presented in Table 4.

Table 4. The frequency distribution of reliable covid-19 information sources providing accurate information for 8th-grade students in ponjong and girisubo sub-districts, gunungkidul

Information Sources	Number of Respondents	Percentage (%)
Health worker	161	64.66
Television	56	22.49
Internet	31	12.45
Teacher	1	0.40

Table 4 shows that the majority (72.66%) of grade 8 students in Ponjong and Girisubo Sub-Districts, Gunungkidul, preferred a health worker as a source of Covid-19 information which was believed to be able to provide accurate information. This was because health workers were at the forefront of dealing with Covid-19. The amount of knowledge and experience possessed by health workers can assist in providing accurate information about Covid-19. According to Karno and Sulaiman (2021), the government cooperated with health workers in preventing Covid-19 to provide correct and easy-to-understand information for the public.

Time to Obtain Covid-19 Information

In this section, respondents were asked about the first time they received information about Covid-19. As shown in Table 5, most grade 8 students in Ponjong and Girusibo Sub-Districts, Gunungkidul District, already knew about Covid-19 before the Covid-19 case entered Indonesia (70.70%). The news about Covid-19 in Wuhan, China, which resulted in many casualties, caused high curiosity in public. This curiosity has lead people to act in search of information.

Table 5. Time to obtain covid-19 information for grade 8 students in ponjong and girisubo sub-district, gunungkidul

Item	Sub-District		Total n (%)	P-value
	Ponjong n (%)	Girisubo n (%)		
Did you know Covid-19 before Covid-19 was declared to have entered Indonesia? Indonesia				0.671
Yes	84 (33.70%)	92 (36.90%)	176 (70.70%)	
No	37 (14.90%)	36 (14.50%)	73 (29.30%)	

Sulaeman and Supriadi (2020) stated that the troubling and paralyzing conditions in many of these sectors require attention and curiosity to deal with them. Based on Chi-Square analysis, there was no significant relationship between when grade 8 students received information and the sub-district's difference (P 0.671>0.05). This was because the rapid spread of

Covid-19 cases makes information about Covid-19 available to everyone quickly. Before Covid-19 entered Indonesia, many media reported its existence of Covid-19. The increasing media coverage of Covid-19 has encouraged the high distribution of information about Covid-19 (Aji et al., 2021).

Literacy Related to Covid-19 and Its Vaccination

The literacy section related to Covid-19 and Its Vaccination consisted of 16 question items that respondents must answer. The data obtained are presented in Table 6.

Based on the Table 6, the results of the literacy measurement related to Covid-19 and its vaccination for 8th-grade students in Ponjong and Girisubo Sub-Districts, which consisted of 16 question items, showed that most 8th graders understood that Covid-19 disrupted the human respiratory system (93.60%) and could stimulate the production of mucus in the respiratory system (81.10%). According to Artayasa (2020), coronavirus is a virus that attacks the respiratory system. Most of them also knew the media for the spread of Covid-19 (91.20%), symptoms that could appear due to Covid-19 (83.50%), and Covid-19 sufferers did not always show symptoms (69.10%). According to Levani et al. (2021), the symptoms of each person suffering from Covid-19 vary depending on the severity of the patient: some have a fever, fatigue, dry cough, shortness of breath, chest pain, headache, and some are asymptomatic. The same thing was also shown by students in the Philippines. Most students knew that the Covid-19 could spread through touching, sneezing, kissing, and food. They were aware that the primary symptom of the Covid-19 infection is fever (Baloran, 2020).

Most of them knew about mandatory isolation for Covid-19 sufferers (88.40%). Isolation helped reduce or prevent the transmission of Covid-19. Self-isolation was carried out by staying at home if the body was unwell or with mild symptoms such as cough, flu, or fever (Artayasa, 2020). Most of the students also knew the time recommended by the government for self-isolation (81.10%). Then, almost all students in Ponjong and Girisubo Sub-Districts understood how to protect themselves from contracting Covid-19 (95.60%), how to prevent transmission through touch (73.90%), and contact with body fluids related to the respiratory system (82.30%).

However, regarding the sample used for the rapid antigen test, most of the students still did not understand it (74.70%). Meanwhile, most of the students knew about the speed with which the rapid antigen and PCR test results were obtained (72.30%). A rapid antigen test with PCR is a method that can be used to detect the presence of the coronavirus in humans. Rapid antigen and PCR tests can use specimens from the nasopharynx and the time to find out the rapid antigen test results is about 15-30 minutes, while PCR is about 3-4 hours or more (Yanti et al., 2020).

Related to the Covid-19 vaccination, most students knew the benefits of the vaccine (93.20%) and the effect of the vaccine on the body system (88.40%). However, regarding people who are not recommended to receive the vaccine, more students did not know about it (50.60%). This could be because junior high school students in Gunungkidul (until this research data was collected) had not been required to vaccinate. This causes their knowledge regarding people who should receive the vaccine and those who have not been recommended to receive the vaccine to be limited. Based on the analysis using the Chi-square test, it was known that there was no significant relationship between literacy about Covid-19 and sub-districts' difference ($p > 0.05$).

Table 6. Literacy related to covid-19 and its vaccination for grade 8 students in ponjong and girisubo sub-districts, gunungkidul (All P-values using Chi-square analysis)

Item	Sub-District		Total n (%)	P- value
	Ponjong n (%)	Girisubo n (%)		
1. Relationship between Covid-19 and respiratory disease				0.090
Correct answer	117 (47.00%)	116 (46.60%)	233 (93.60%)	
Incorrect answer	4 (1.60%)	12 (4.80%)	16 (6.40%)	
2. The effects of Covid-19 on the respiratory organs				0.448
Correct answer	101 (40.60%)	101 (40.60%)	202 (81.10%)	
Incorrect answer	20 (8.00%)	27 (10.80%)	47 (18.90%)	
3. Covid-19 transmission medium				0.890
Correct answer	110 (44.20%)	117 (47.00%)	227 (91.20%)	
Incorrect answer	11 (4.40%)	11 (4.40%)	22 (8.80%)	
4. Symptoms of being infected with Covid-19				0.844
Correct answer	100 (40.20%)	108 (43.40%)	208 (83.50%)	
Incorrect answer	21 (8.40%)	20 (8.00%)	41 (16.50%)	
5. There must be symptoms shown by Covid-19 sufferers				0.423
Correct answer	87 (34.90%)	85 (34.10%)	172 (69.10%)	
Incorrect answer	34 (13.70%)	43 (17.30%)	77 (30.90%)	
6. Mandatory isolation for Covid-19 sufferers				0.815

Item	Sub-District		Total n (%)	P- value
	Ponjong n (%)	Girisubo n (%)		
Correct answer	108 (43.40%)	112 (45.00%)	220 (88.40%)	
Incorrect answer	13 (5.20%)	16 (6.40%)	29 (11.60%)	
7. Time of isolation for patients with Covid-19				0.448
Correct answer	101 (40.60%)	101 (40.60%)	202 (81.10%)	
Incorrect answer	20 (8,00%)	27 (10.80%)	47 (18.90%)	
8. How to prevent the transmission of Covid-19				1.000
Correct answer	116 (46.60%)	122 (49.00%)	238 (95.60%)	
Incorrect answer	5 (2.00%)	6 (2.40%)	11 (4.40%)	
9. Covid-19 transmission through body touch				0.980
Correct answer	90 (36.10%)	94 (37.80%)	184 (73.90%)	
Incorrect answer	31 (12.40%)	34 (13.70%)	65 (26.10%)	
10. Covid-19 transmission through body fluids				0.089
Correct answer	94 (37.80%)	111 (44.60%)	205 (82.30%)	
Incorrect answer	27 (10,80%)	17 (6.80%)	44 (17.70%)	
11. Sample for Covid-19 rapid antigen test				0.537
Correct answer	28 (11.20%)	35 (14.10%)	63 (25.30%)	
Incorrect answer	93 (37.30%)	93 (37.30%)	186 (74.70%)	
12. Speed of obtaining PCR and antigen test results				0.770
Correct answer	89 (35.70%)	91 (36.50%)	180 (72.30%)	
Incorrect answer	32 (12.90%)	37 (14.90%)	69 (27.70%)	
13. Accuracy of PCR and antigen test results				0.484
Correct answer	84 (33.70%)	95 (38.20%)	179 (71.90%)	
Incorrect answer	37 (14.90%)	33 (13.30%)	70 (28.10%)	
14. Covid-19 vaccination benefits				0.059
Correct answer	117 (47.00%)	115 (46.20%)	232 (93.20%)	
Incorrect answer	4 (1.60%)	13 (5.20%)	17 (6.80%)	
15. The effect of vaccination on the body system				0.156
Correct answer	111 (44.60%)	109 (43.80%)	220 (88.40%)	
Incorrect answer	10 (4.00%)	19 (7.60%)	29 (11.60%)	
16. People who are not recommended to get vaccinated against Covid-19				0.112
Incorrect answer	53 (21.30%)	70 (28.10%)	123 (49.40%)	
Correct answer	68 (27.30%)	58 (23.30%)	126 (50.60%)	

Attitude Related to Covid-19 and Its Vaccination

Table 7. Attitudes related to covid-19 and its vaccination for grade 8 students in ponjong and girisubo sub-districts, gunungkidul (All P-values using Chi-square analysis)

Item	Sub-District		Total n (%)	P-value
	Ponjong n (%)	Girisubo n (%)		
1. Prevention of the spread of Covid-19				0.844
Correct attitude	116 (46.60%)	121 (48.60%)	237 (95.20%)	
Incorrect attitude	5 (2.00%)	7 (2.80%)	12 (4.80%)	
2. Wash hands before touching face				0.012
Correct attitude	96 (38.60%)	117 (47.00%)	213 (85.50%)	
Incorrect attitude	25 (1000%)	11 (4.40%)	36 (14.50%)	
3. Insulting Covid-19 sufferers				0.349
Correct attitude	95 (38.20%)	94 (37.80%)	189 (75.90%)	
Incorrect attitude	26 (10.40%)	34 (13.70%)	60 (24.10%)	
4. Self-isolation after traveling out of town				0.904
Correct attitude	113 (45.40%)	118 (47.40%)	231 (92.80%)	
Incorrect attitude	8 (3.20%)	10 (4.00%)	18 (7.20%)	
5. Use masks properly				0.917
Correct attitude	114 (45.80%)	122 (49.00%)	236 (94.80%)	
Incorrect attitude	7 (2.80%)	6 (2.40%)	13 (5.20%)	
6. Behavior after getting vaccinated				0.708
Correct attitude	97 (39.00%)	106 (42.60%)	203 (81.50%)	
Incorrect attitude	24 (9.60%)	22 (8.80%)	46 (18.50%)	
7. Do a PCR or rapid antigen test before a long trip				0.589
Correct attitude	100 (40.20%)	110 (44.20%)	210 (84.30%)	
Incorrect attitude	21 (8.40%)	18 (7.20%)	39 (15.70%)	

Items related to measuring attitudes in this study consisted of 7 items. The data on student attitudes related to Covid-19 and its vaccination are presented in Table 7.

Based on the data above, we can see that for each of the items asked, most of the 8th-grade students in Ponjong and Girisubo Sub-Districts, Gunungkidul, had a good attitude regarding Covid-19 and its vaccination. Knowledge is needed in dealing with the Covid-19 pandemic, but a good attitude is also very much needed. This attitude will affect the spread of the virus. According to Kartikawati (2021) that scientific or non-scientific attitudes will circulate among the public. This unscientific non-scientific attitude has a high potential for the spread of Covid-19. Meanwhile, according to Wulandari (2014), a positive attitude will help reduce the risk of the spread and transmission of Covid-19.

Based on the analysis results, it was known that all P-values > 0.05, so it could be concluded that attitudes related to Covid-19 and its vaccination do not have a significant relationship with sub-districts' differences. This was because the Covid-19 pandemic requires everyone to have a good attitude in dealing with the Covid-19 pandemic. The government's appeal to maintain health protocols creates a good attitude for the entire community to prevent the transmission of Covid-19 (Putra, 2021).

Literacy and Attitude Level related to Covid-19 and Its Vaccination
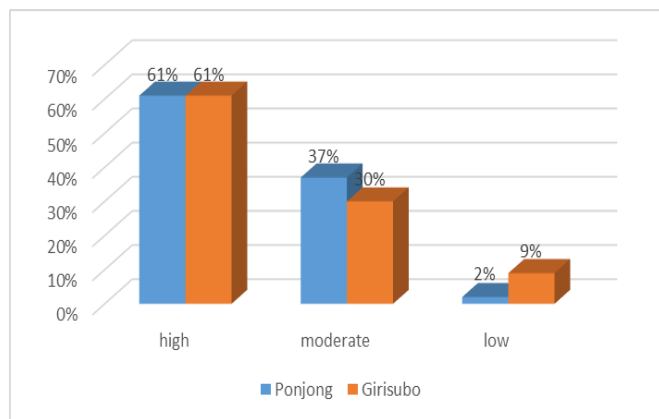
Figure 1. Literacy level related to covid-19 and its vaccination among grade 8 students in ponjong and girisubo sub-districts, gunungkidul

Based on Figure 1, most students from grade 8 in Ponjong and Girisubo Sub-Districts had a high literacy level (61.00%). The same thing was shown by students in one junior high school in Banten Province, with the majority of students (57.00%) having literacy related to Covid-19 and its vaccination at a good level (Yulistiani & Dinaryanti, 2022). Likewise, Wahyuni (2022) found in a high school in North Sumatra that 97.7% of students had a good understanding of Covid-19. For vocational

students in one of the schools in Jakarta, the majority of students also had good knowledge regarding Covid-19 (65.5%) (Hutagaol & Wulandari, 2021). The same result was shown from the analysis of student understanding in India regarding Covid-19 (Singh et al., 2020). Meanwhile, Parmitasari (2021) evaluated the literacy of covid-19 in university students in Semarang and found that the literacy rate of female students was higher than that of men.

However, some reshearcher claimed otherwise. Romayati et al. (2021) analyzed the understanding of students at one junior high school in East Lampung District about Covid-19. Based on the study, it was found that the majority of students had poor knowledge regarding Covid-19 (54.20%). Likewise, it was found by Farich et al. (2021) that the majority of junior high school students in Lampung Province had poor knowledge regarding Covid-19 prevention (73.0%). Hermawati (2021) also found that in one of the vocational high schools in Yogyakarta Province, only 36.2% of students had good knowledge regarding Covid-19. Only 41.67% of students at one of the vocational high schools in North Sumatra Province had a good level of knowledge related to Covid-19 (Damanik & Hastuti, 2021). Less encouraging results were also obtained from the research of Sukesih et al. (2020), which analyzes the understanding of health students in Indonesia about the prevention of Covid-19. From these results, it was known that only 51.35% of students have good knowledge.

Not only for high school students, but the measurement of covid-19 literacy was also carried out on university students as was done by Archila et al. (2021). Meanwhile, Costantini (2021) assessed Covid-19 vaccine literacy of family members who work and also care for their older parents, as they are at risk of Covid-19 and also risk transmitting Covid-19 to the parents they care for and potentially influencing their parents' vaccine uptake. Biasio et al. (2021) measured Covid-19 vaccine literacy among Italian adults and showed that their mean functional score was = 2.92, while the interactive-critical score was = 3.27, out of a maximum of 4. Correa-Rodríguez at al (2021) evaluated the Covid-19 vaccine literacy in a population of patients with systemic autoimmune diseases The mean vaccine literacy functional and interactive-critical scores were 2.59 ± 0.74 and 3.07 ± 0.60, respectively.

The majority of students literacy in Ponjong and Girisubo Sub-Districts regarding Covid-19 and its vaccination at a good level could be caused by the accuracy of selecting information sources related to Covid-19. Accuracy and ability in choosing information sources and trusting information sources regarding Covid-19 and its vaccination can increase literacy levels related to Covid-19 and its vaccination. In accordance with the opinion of Yunus and Zakaria (2021) that the

accuracy of the source of information can increase confidence and trust in the source of information, which leads to the level of knowledge. Besides that, this high level of student literacy related to Covid-19 was in accordance with student learning outcomes at school. Student learning outcomes, both in Ponjong and Girisubo Sub-Districts, had high average scores for respiratory system materials. In the respiratory system chapter, students learned the types of breathing, breathing mechanisms, and respiratory diseases. Based on the interview with teachers, it was also known that when delivering the material on breathing, the teacher linked it to Covid-19, especially as an example of diseases in the respiratory system. According to Pratiwi et al. (2019), in 21st-century learning, good literacy is needed to improve forward-thinking for students and improve learning outcomes.
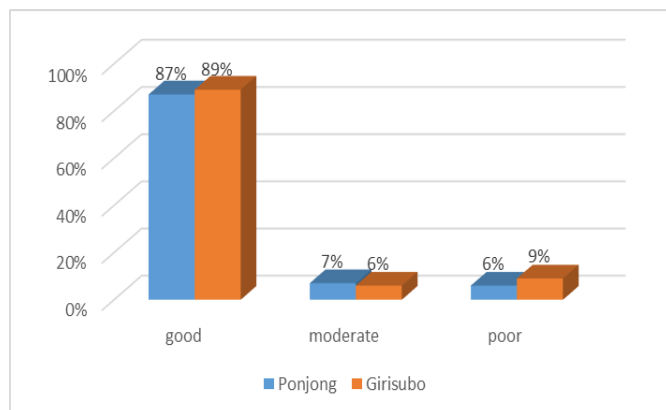
Figure 2. Attitude level related to covid-19 and its vaccination among grade 8 students in ponjong and girisubo sub-districts, gunungkidul district

From Figure 2, it can be seen that the majority of 8th-grade students in Ponjong Sub--District (87%) and Girisubo (89%), Gunungkidul, also had a good attitude level regarding Covid-19 and its vaccination. This may be due to their high literacy level about Covid-19 and its vaccination. It was in accordance with the opinion of Sukesih et al. (2020) that high knowledge can encourage good attitudes. This result is good because even though the respondents were students at the basic education level, they already have a good attitude regarding Covid-19 and its vaccination. This result was also in line with the research of Biasio et al. (2021), which measured the attitudes of Italian adults towards the Covid-19 vaccine. Observed attitudes Covid-19 vaccines were mostly positive with affirmative responses between about 80% and 90% for all questions, except one question where 66% of respondents replied positively.

However, research by Farich et al. (2021) revealed something different. Most students at one junior high school in Lampung Province had a poor attitude toward preventing Covid-19 (87.3%). Similarly, the

research of Sukesih et al. (2020) showed that only 46.39% of health students in Indonesia had a good attitude regarding Covid-19 prevention.

Furthermore, an analysis was also carried out on whether there were differences in literacy and attitudes related to Covid-19 and its vaccination in 8th-grade students in Ponjong and Girisubo Sub-Districts. Ponjong Sub-District was the sub-district with the first cases of Covid-19 occurring in Gunungkidul. Meanwhile, Girisubo Sub-District was the sub-district with the latest first Covid-19 case in Gunungkidul. This analysis was carried out using the Mann-Whitney U-Test, as shown in Table 3.

Table 3. Mann-Whitney U-Test Output

	Literacy_and Attitude
Mann-Whitney U	7174.000
Wilcoxon W	14555.000
Z	-1.007
Asymp. Sig. (2-tailed)	.314

a. Grouping Variable: Sub-District

From the analysis results, it was known that there were no significant differences in literacy and attitudes related to Covid-19 and its vaccination in grade 8 students in Ponjong and Girisubo Sub-Districts, Gunungkidul District. Although there was a difference in the time of the first case of Covid-19 in the two sub-districts, there was no difference in students' knowledge and attitudes regarding Covid-19 and its vaccination. This result could be due to conditions related to the Covid-19 case that continues to threaten to encourage all residents, including students, wherever they are, to be careful. The Covid-19 case every day was increasing and growing anxiety. So it could encourage curiosity about Covid-19. Public knowledge related to Covid-19 was an important aspect that everyone must know, such as the causes of Covid-19, ways of transmission and prevention, symptoms, and characteristics of the virus (Purnamasari & Raharyani, 2020). In addition, the right attitude will appear during the Covid-19 pandemic along with the literacy possessed. Thus, the difference in the time of the occurrence of the first Covid-19 case does not cause differences in students' literacy or attitudes towards it.

Conclusion

Related to literacy about Covid-19 and its vaccination, 61.00% of students in Ponjong Sub-District had a high literacy level, 37.00% moderate, and 2.00% low. Meanwhile, 61.00% of students in Girisubo Sub-District had a high literacy level, 30.00% moderate, and 9.00% low. On the aspect of attitude, 87.00% of the students in Ponjong Sub-District were at a good level,

7.00% were moderate, and 6.00% were poor. Meanwhile, 89.00% of students in Girisubo Sub-District were at a good level, 6.00% were moderate, and 5.00% were poor. Based on Mann-Whitney U-test (p= 0.314), there was no significant difference in student literacy and attitudes related to Covid-19 and its vaccination between 8th-grade students in Ponjong and Girisubo Sub-Districts, with different time of occurrence of the Covid-19 first case.

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