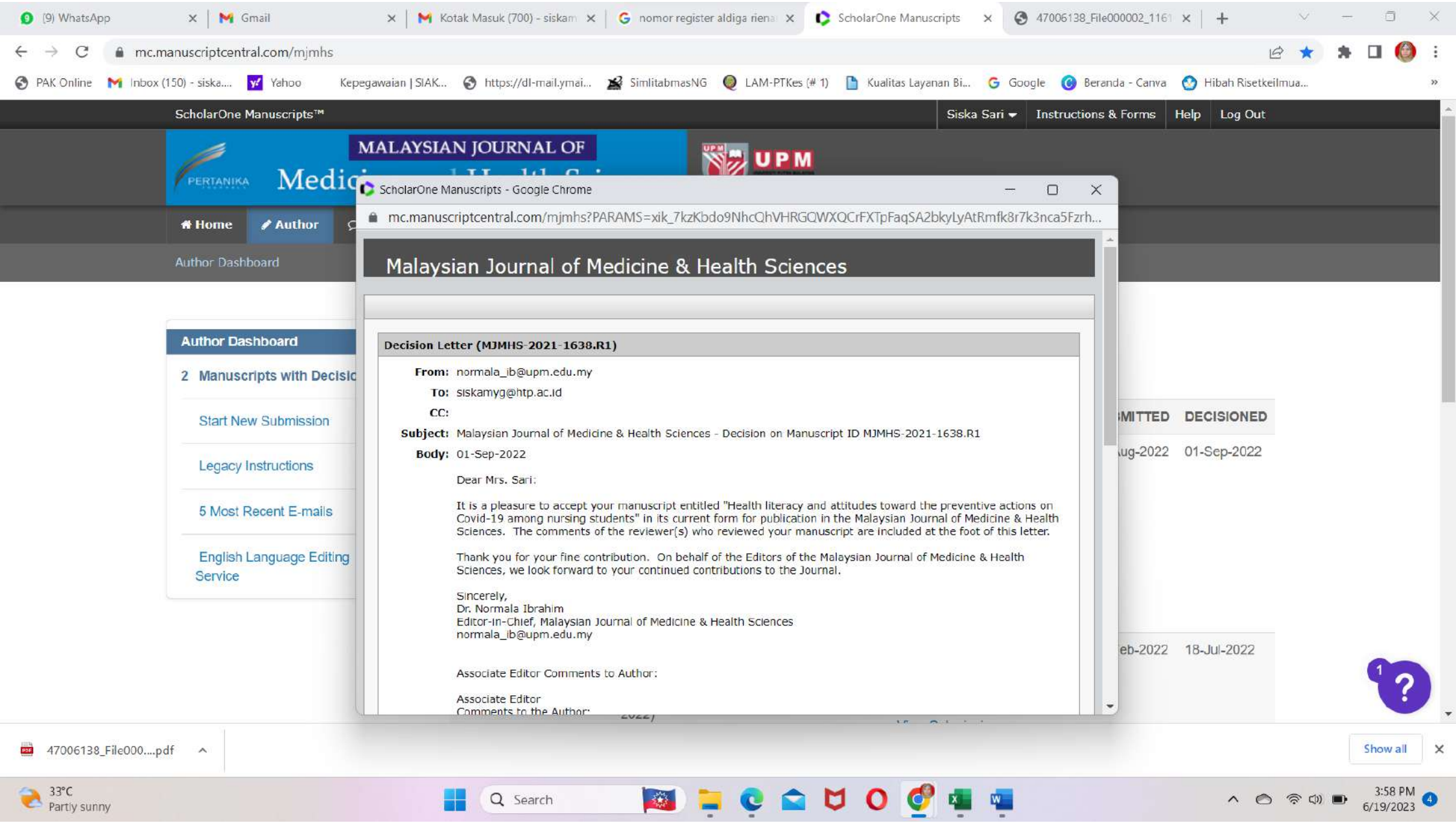
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Subject: Malaysian Journal of Medicine & Health Sciences - Decision on Manuscript ID MJMHS-2021-1638.R1
Body: 01-Sep-2022
Dear Mrs. Sari:
It is a pleasure to accept your manuscript entitled "Health literacy and attitudes toward the preventive actions on Covid-19 among nursing students" in its current form for publication in the Malaysian Journal of Medicine & Health Sciences. The comments of the reviewer(s) who reviewed your manuscript are included at the foot of this letter.
Thank you for your fine contribution. On behalf of the Editors of the Malaysian Journal of Medicine & Health Sciences, we look forward to your continued contributions to the Journal.
Sincerely,
Dr. Normala Ibrahim
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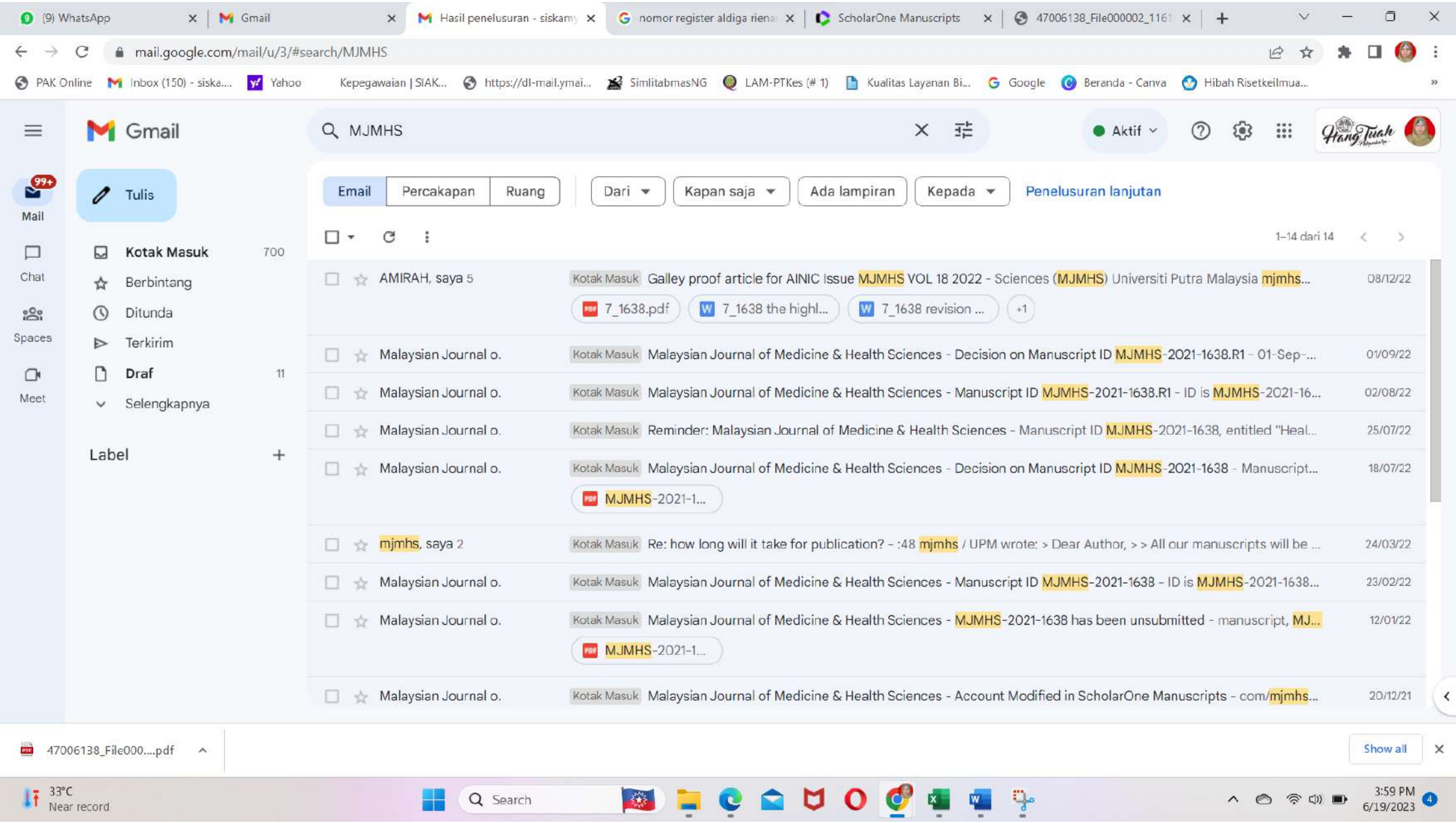
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Health literacy and attitudes toward the preventive actions on Covid-19 among nursing students

Journal:	*Malaysian Journal of Medicine & Health Sciences*
Manuscript ID	MJMHS-2021-1638.R1
Manuscript Type:	Supp: AINiC
Keywords:	health literacy, attitudes, nursing students, covid-19 prevention

ABSTRACT

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Keywords: COVID-19, health literacy, nursing students, preventive act

INTRODUCTION

The new variant of coronavirus SARS-CoV-2 has shocked people all over the world. The virus is popular with the term COVID-9 disease. It was first detected in the last quarter of 2019 in Wuhan, China quickly spread to all continents. Dispersion and Case Fatality Rates (CFR) is relatively high, making WHO declare it a global emergency on January 30, 2020, and should alert authorities (1).

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The Province of Riau released the COVID-19 case, with one confirmed positive and 0 died, on March 20, 2020. The case increased in the first week of April 2020, with five confirmed positive and 0 died. Worst, during this period, the authority reported a significant escalation, with 1,765 people under monitoring (ODP) and 87 people under patients in surveillance statuses (PDP). The data assures us that the increase of COVID-19 cases was significant in the city of Pekanbaru in less than a month (3).

Considering the escalation, the Indonesian Ministry of Education and Culture issued a circular dated March 17 of 2020 instructing learning from home and implementing social distancing. In addition, the Ministry of Health provided information on how to prevent COVID-19 which should be obeyed by all Indonesian people (4).

The COVID-19 spread has been a severe concern for the Indonesian Ministry of Health, especially for the medical team handling the case. A high CFR, including medical personnel caring for the patients (5), was subject to a lack of protection facilities when providing medical treatment. Nursing students, the future generation of Indonesian nurses, should understand and carry out the circular issued by the Ministry of Health regarding the COVID-19 prevention provisions. In other words, the students ideally have ample knowledge of health literacy.

Health literacy can be defined as the ability to get, comprehend as well as use essential health and service information, and the ability to utilize such knowledge to improve his health (6). Further, it is also an effort in lifelong learning that can be applied in education (7). A previous study found that education level correlates with health literacy (8). Students with medical backgrounds had better literacy on COVID-19 transmission, even though they still had poor compliance toward preventing the disease (9). However, nursing students, and future health professionals did not comply with health protocols. They are expected to guard and run health protocols properly. Therefore, this research aimed to analyze the

correlation between health literacy rate among student and their views about the preventive act of COVID-19 spread.

MATERIALS AND METHODS

This was correlational research that aimed to analyze the relationship between students health literacy and attitudes toward preventing the action of COVID-19 transmission among nursing students. Amount 294 nursing students took part in this research whose come from 5 nursing institutions in Pekanbaru City, Riau Province, Indonesia, They were chosen by accidental sampling. The number was obtained using the Slovin formula with a confidence level of 95%. They inform consent and the instrument was involved in a google form which is shared with the respondent. The variables in this study were health literacy and attitudes as the independent variables and preventive action of COVID-19 as the dependent variable.

To collect data, the researchers constructed a set of questionnaires referring to COVID-19 protocols issued by the Indonesian government in 2020. The instruments have been validity and reliability examination to 20 students and the result show the r-result between (0.540- 0.865) and the Cronbach alpha was 0.670 The respondents should answer the questions independently. Bivariate analysis data was used in the chi-square test. Before signing the informed consent, the explanation letter of the study was performed. Ethical research was maintained while conducting the study. The university's ethical committee granted the ethical approval for this study with the certificate number 0113/KEPK/STIKes-HTP/IV/2020.

RESULTS

Data collection was taken by the distribution of google forms to students from five health colleges in Pekanbaru city of Indonesia, from April 28 to May 22 of 2020. In analyzing data, the researchers used univariate and bivariate analysis.

Table I shows the demographics of respondents. Female and male respondents were 249 (84.7%) and 45 (15.3%), respectively, meanwhile, the educational level showed most respondents were from the Bachelor of Nursing Program, with 231 respondents (78.6%), the rest from the Professional Nursing Program, with 63 (21.4%).

Table II summarizes nursing students' health knowledge, attitudes, and COVID-19 prevention practices. It shows that the percentage of respondents with poor and good literacy levels were 127 (43.2%) and 167 (56.8%), respectively. The percentage of respondents with a positive attitude was 194 respondents (66%), and the negative attitude was 100 respondents (34%). Furthermore, the percentage of respondents with a good level of preventive action on COVID-19 was 168 respondents (57.1) %, and the poor level was 126 respondents (42.9%)

Table III shows the bivariate analysis of health literacy and attitudes on preventive action against COVID-19 among nursing students. In conclusion, this research found no relationship between health literacy and preventive action against COVID-19 among nursing students (p-value = 0.325). Meanwhile, there was a correlation between attitudes and preventive action against COVID-19 among nursing students (p-value = 0.001).

DISCUSSION

The results showed no correlation between health literacy and preventive action against COVID-19 (p-value 0.325). This research's findings are opposed to Sorensen's 2019 study stating that good health literacy will encourage the act of good health. The students with good health literacy levels did not fully guarantee good preventive action against COVID-19. This study found that 68.02% of nursing students obtained updates of COVID-19 via social media. In the early pandemic of COVID-19, social media became the key source of updates for the public to obtain news about the spread of COVID-19. There was misleading information shared on the platforms. The information received by nursing students discouraged them from doing preventive actions against COVID-19 spread. This result was in line with Victor's claim that one factor influencing people to take action is information received from the mass media (10). The quality of information sources is also one of the students' skills to strengthen their abilities in implementing health literacy (11).

Students with little health literacy, on the other hand, implemented good preventive acts on COVID-19. This study found that the students continued to take preventive actions on COVID-19 due to anxiety about the impacts and death rate of COVID-19 that they obtained from the news. Lai asserted that the highest cause of death from COVID-19 is septic shock due to respiratory diseases and non-respiratory diseases because of complications of acute respiratory distress

syndrome (ARDS) and Covid-19 (12). The high transmission of the virus causes the high case fatality rate (CFR) of COVID-19. Transmission can occur through physical contact, respiratory droplets, and body fluids (12) & (13).

This study also found that poor health literacy aligns with Sukys, Jcesnaitiere & Ossowsky's study. There is a lack of health literacy among young adult university students. Gender had a role in perceived health information challenges, with male students reporting considerably lower health literacy scores. The high health literacy competence is associated with health education subjects studied by students considering that these students have higher access and understanding of health information in the health information domain. (14).

Meanwhile, nursing students' health literacy skills are essential to improve their health behavior as a foundation to provide nursing care to patients. Khaleghi et al's study described that health literacy was related to students' health and quality of life. Health literacy significantly correlates with overall quality of life, and physical and psychological dimensions. It is critical to focus on improving people's QOL by enhancing their health literacy because boosting their educational performance leads to a higher quality of life. (15).

According to Rueda, health-promoting lifestyle practices are strongly associated with health literacy. Most health science students should enhance their skills in health literacy. There is a correlation between health literacy and health behavior where the focus of the higher education curriculum must be increased and support the implementation of health literacy (16).

The study results also found that student attitudes were related to the preventive act on COVID-19 with a p-value of 0.001 (<0.05). This result is relevant to the study of Sukaesih et al.; that the public's attitude toward preventing COVID-19 was in a good category. The students generally have a positive attitude, with 57.8% having good preventive actions (17). A good attitude will encourage someone to take specific actions. The study showed that a positive attitude resulted in good preventive actions against COVID-19. It is defined that attitude is a person's readiness to do something (18). The students' good attitude referred to a readiness to take good preventive actions against COVID-19. Students believed that a proactive approach to preventing the spread of COVID-19 was necessary.

From their responses, overall, students constantly use masks if they are out of the house, implement social distancing, carry hand sanitizer, and reduce their outdoor activities. The student's actions follow the recommendations of the Indonesian government, suggesting the acceleration of individual prevention (19). It is suggested that regular cleaning hands using soap and running water, alternatively using antiseptic fluids. Physical distancing from other people by at least 1.5 meters, avoiding direct contact with many people, and always doing clean and healthy life behavior is recommended.

CONCLUSION

The present study showed that the students' health literacy rate did not correlate with the preventive action against COVID-19. Meanwhile, the students' attitudes correlate with the preventive act on COVID-19.

REFERENCES

1. Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, et al. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). Int J Surg. 2020;76(February):71–6.

2. Riau Province Government. The Riau Province Task Force of COVID-19. Riau Province's Respond to COVID-19. accessed on http://corona.riau.go.id

3. The Task Force of COVID-19. Updates of COVID-19 on April 5, 2020. accessed on http://covid19.go.id

4. Indonesian Ministry of Health. Guidelines for Preparedness for Novel Coronavirus Infections (2019-nCov). Directorate General of Disease Prevention and Control. 2020;0–74.

5. Indonesian Ministry of Health. COVID-19 Prevention and Management Handbook. 2020.

6. Sørensen K. Defining health literacy: Exploring differences and commonalities. International Handbook Research, practice, and policy across the lifespan. 2019. 5–20 p.

7. World Health Organization. Health Literacy. Ilona Kickbusch, Jürgen M. Pelikan FA& ADT, editor. Denmark: WHO Regional Office for Europe; 2013.

8. Shaojie Li, MD; Guanghui Cui, BSc; Atipatsa Chiwanda Kaminga, PhD; Sixiang Cheng, PhD; Huilan Xu, PhD. Association between health literacy, eHealth literacy, and COVID-19-related health behaviors among Chinese College students: Cross-sectional online study. Journal of Medical Internet Research. 2021;23(5);1-13

9. Supriyati, Anggraeny, D.K., Carissa, T.M., Sheila, A.P., Qisthi, S.A., Rianti, M., Roshan, T. Preparing new normal: the health literacy assessment on the COVID-19. BKM Journal of Community Medicine and Public Health. 2021;37(1);27-32

10. Victor TH. Public Health Promotion. Ed.1. Yayasan Kita Menulis;2020.

11. Mahmoudi H, Taheri. Relation between information literacy and health literacy of students in the Ferdowsi University of Mashaad. Journal HI.2015;2(2);31-41

12. Lai CC, Shih TP, Ko WC, Tang HJ, Hsueh PR. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. Int J Antimicrob Agents. 2020;55(3):105924.

13. Khan M, Kazmi S, Bashir A, Siddique N. COVID-19 infection: origin,

transmission, and characteristics of human coronaviruses. J Adv Res. 2020;

14. Sukys S, Jcesnaitiere V, Ossowsky ZM. Students' health literacy? evidence from a cross-sectional study applying HLS-EU-Q. Hindawi BRI.2017;2017.article is8516843 (9 pages). http://doi.org/10/1155/2017/8516843

15. Khaleghi M, Shohari AF, Peyman N. The relationship between health literacy and health-related quality of life in students. JHEHP. 2019;7(1);66-73

16. Rueda BM et. all. Assessing health science students' health literacy and its association with health behaviors. HSC. 2020;28(6);2134-2139

17. Sukesih, Usman, Budi S, Sari DNA. Knowledge and attitudes of health students about prevention COVID-19 in Indonesia. JKIB. 2020;11(2);258-264

18. Notoatmodjo SA. Health Promotion. Jakarta:Rineka Cipta; 2012.

19. Indonesian Ministry of Health. Guidelines of Prevention and Controlling of Corona Diseases (COVID-19). Subdirectorate of Emerging Infectious Diseases. Directorate of Health Surveilllance and Quarantine. Directorate General of Disesase Prevention an Controlling. 2020

Table I. Demographics of Respondents (n=294)

Demographics	Frequency	Percentage
Gender		
Female	249	84.7
Male	45	15.3
Educational Level		
Bachelor of Nurse	231	78.6
Professional Nurse	63	21.4

Table II. The Level of Health Literacy, Attitudes, and Preventive Actions of COVID-19 Spread \ (n=294)

Variables	Frequency	Percentage
Health Literacy Level		
Poor	127	43.2
Good	167	56.8
Attitude Level		
Positive	194	66
Negative	100	34
Preventive Action Level		
Poor	126	42.9
Good	168	57.1

Table III. Bivariate Analysis on Health Literacy and Attitudes on Preventive Act on COVID-19 Spread

	Preventive Actions on COVID-19				P-value
	Poor		Good		
	F	%	F	%	
Health Literacy Level					
Poor	59	46.5	68	53.5	0.325
Good	67	43.2	100	56.8	
Attitudes					0.001
Positive	57	34.1	110	65.9	
Negative	68	54.4	57	45.6	

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syndrome (ARDS) and Covid-19 (12). The high transmission of the virus causes the high case fatality rate (CFR) of COVID-19. Transmission can occur through physical contact, respiratory droplets, and body fluids (12) & (13).

This study also found that poor health literacy aligns with Sukys, Jcesnaitiere & Ossowsky's study. There is a lack of health literacy among young adult university students. Gender had a role in perceived health information challenges, with male students reporting considerably lower health literacy scores. The high health literacy competence is associated with health education subjects studied by students considering that these students have higher access and understanding of health information in the health information domain. (14).

Meanwhile, nursing students' health literacy skills are essential to improve their health behavior as a foundation to provide nursing care to patients. Khaleghi et al's study described that health literacy was related to students' health and quality of life. Health literacy significantly correlates with overall quality of life, and physical and psychological dimensions. It is critical to focus on improving people's QOL by enhancing their health literacy because boosting their educational performance leads to a higher quality of life. (15).

According to Rueda, health-promoting lifestyle practices are strongly associated with health literacy. Most health science students should enhance their skills in health literacy. There is a correlation between health literacy and health behavior where the focus of the higher education curriculum must be increased and support the implementation of health literacy (16).

The study results also found that student attitudes were related to the preventive act on COVID-19 with a p-value of 0.001 (<0.05). This result is relevant to the study of Sukaesih et al.; that the public's attitude toward preventing COVID-19 was in a good category. The students generally have a positive attitude, with 57.8% having good preventive actions (17). A good attitude will encourage someone to take specific actions. The study showed that a positive attitude resulted in good preventive actions against COVID-19. It is defined that attitude is a person's readiness to do something (18). The students' good attitude referred to a readiness to take good preventive actions against COVID-19. Students believed that a proactive approach to preventing the spread of COVID-19 was necessary.

From their responses, overall, students constantly use masks if they are out of the house, implement social distancing, carry hand sanitizer, and reduce their outdoor activities. The student's actions follow the recommendations of the Indonesian government, suggesting the acceleration of individual prevention (19). It is suggested that regular cleaning hands using soap and running water, alternatively using antiseptic fluids. Physical distancing from other people by at least 1.5 meters, avoiding direct contact with many people, and always doing clean and healthy life behavior is recommended.

CONCLUSION

The present study showed that the students' health literacy rate did not correlate with the preventive action against COVID-19. Meanwhile, the students' attitudes correlate with the preventive act on COVID-19.

REFERENCES

1. Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, et al. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). Int J Surg. 2020;76(February):71–6.

2. Riau Province Government. The Riau Province Task Force of COVID-19. Riau Province's Respond to COVID-19. accessed on http://corona.riau.go.id

3. The Task Force of COVID-19. Updates of COVID-19 on April 5, 2020. accessed on http://covid19.go.id

4. Indonesian Ministry of Health. Guidelines for Preparedness for Novel Coronavirus Infections (2019-nCov). Directorate General of Disease Prevention and Control. 2020;0–74.

5. Indonesian Ministry of Health. COVID-19 Prevention and Management Handbook. 2020.

6. Sørensen K. Defining health literacy: Exploring differences and commonalities. International Handbook Research, practice, and policy across the lifespan. 2019. 5–20 p.

7. World Health Organization. Health Literacy. Ilona Kickbusch, Jürgen M. Pelikan FA& ADT, editor. Denmark: WHO Regional Office for Europe; 2013.

8. Shaojie Li, MD; Guanghui Cui, BSc; Atipatsa Chiwanda Kaminga, PhD; Sixiang Cheng, PhD; Huilan Xu, PhD. Association between health literacy, eHealth literacy, and COVID-19-related health behaviors among Chinese College students: Cross-sectional online study. Journal of Medical Internet Research. 2021;23(5);1-13

9. Supriyati, Anggraeny, D.K., Carissa, T.M., Sheila, A.P., Qisthi, S.A., Rianti, M., Roshan, T. Preparing new normal: the health literacy assessment on the COVID-19. BKM Journal of Community Medicine and Public Health. 2021;37(1);27-32

10. Victor TH. Public Health Promotion. Ed.1. Yayasan Kita Menulis;2020.

11. Mahmoudi H, Taheri. Relation between information literacy and health literacy of students in the Ferdowsi University of Mashaad. Journal HI.2015;2(2);31-41

12. Lai CC, Shih TP, Ko WC, Tang HJ, Hsueh PR. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. Int J Antimicrob Agents. 2020;55(3):105924.

13. Khan M, Kazmi S, Bashir A, Siddique N. COVID-19 infection: origin,

transmission, and characteristics of human coronaviruses. J Adv Res. 2020;

14. Sukys S, Jcesnaitiere V, Ossowsky ZM. Students' health literacy? evidence from a cross-sectional study applying HLS-EU-Q. Hindawi BRI.2017;2017.article is8516843 (9 pages). http://doi.org/10/1155/2017/8516843

15. Khaleghi M, Shohari AF, Peyman N. The relationship between health literacy and health-related quality of life in students. JHEHP. 2019;7(1);66-73

16. Rueda BM et. all. Assessing health science students' health literacy and its association with health behaviors. HSC. 2020;28(6);2134-2139

17. Sukesih, Usman, Budi S, Sari DNA. Knowledge and attitudes of health students about prevention COVID-19 in Indonesia. JKIB. 2020;11(2);258-264

18. Notoatmodjo SA. Health Promotion. Jakarta:Rineka Cipta; 2012.

19. Indonesian Ministry of Health. Guidelines of Prevention and Controlling of Corona Diseases (COVID-19). Subdirectorate of Emerging Infectious Diseases. Directorate of Health Surveilllance and Quarantine. Directorate General of Disesase Prevention an Controlling. 2020

Table I. Demographics of Respondents (n=294)

Demographics	Frequency	Percentage
Gender		
Female	249	84.7
Male	45	15.3
Educational Level		
Bachelor of Nurse	231	78.6
Professional Nurse	63	21.4

Table II. The Level of Health Literacy, Attitudes, and Preventive Actions of COVID-19 Spread \ (n=294)

Variables	Frequency	Percentage
Health Literacy Level		
Poor	127	43.2
Good	167	56.8
Attitude Level		
Positive	194	66
Negative	100	34
Preventive Action Level		
Poor	126	42.9
Good	168	57.1

Table III. Bivariate Analysis on Health Literacy and Attitudes on Preventive Act on COVID-19 Spread

	Preventive Actions on COVID-19				P-value
	Poor		Good		
	F	%	F	%	
Health Literacy Level					
Poor	59	46.5	68	53.5	0.325
Good	67	43.2	100	56.8	
Attitudes					0.001
Positive	57	34.1	110	65.9	
Negative	68	54.4	57	45.6	