

Digital Health Literacy Around Halal Covid-19 Vaccines

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Abstract

There are various debates regarding the halal Covid-19 vaccine controversy from various parties on social media, which greatly affects the success rate of handling Covid-19. Good digital literacy for the public should be carried out so that it does not cause polemics and public opinion that hinders the handling of Covid-19. Discussions about the process and planning of administering vaccines occur with different grasping powers, thinking abilities and knowledge. With the increasingly massive use of communication technology in the form of the internet and social media, these differences in knowledge and perceptions can be well bridged through halal certainty and the vaccine process which is explained well through social media. The specific purpose of this research is to get an overview of the digital health literacy skills that exist in the community for information on halal Covid-19 vaccines by distributing online questionnaires to the public. Data were collected during February 2021 to May 2021 using a snowball sampling approach. From this discussion, it is clear that in general, people in Indonesia have good digital literacy skills related to information about the halal Covid-19 vaccine that is spread in online media.

Keywords: *Digital health literacy, Halal vaccines, Covid-19*



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INTRODUCTION

Many countries have learned about the process of handling Covid-19 in recent times, there are many factors why so far the spread and transmission of Covid-19 is difficult to overcome and control (Wang & Chen, 2022). In addition to structural factors such as the lack of health facilities, another crucial factor is the existence of opposition or resistance from the community regarding the handling of Covid-19 related to literacy in the community (Nhamo et al., 2021). In the context of the implementation of the vaccination program, the survey results from the Ministry of Religion of the Republic of Indonesia in December 2020 stated that out of a total of 2,610 respondents spread across 34 provinces of Indonesia, 57.66% of respondents refused to vaccinate because of religious factors with various reasons. (Sefriani & Mahardika, 2022).

So far, the debate around the relationship between Islam and Covid-19 revolves around three important questions, namely; what and how is Islam's view of the Covid-19 pandemic? Does the Covid-19 pandemic have any room for truth in Islam? Does the Covid-19 response agenda have a strong foundation in Islam, both in the form of policies such as social distancing and medical policies such as vaccination? (Mir, Rathinam & Gul, 2022).

Seeing this, literacy will be an important factor in handling the Covid-19 outbreak in the community. Basically, the discourse on the existence of infectious diseases—such as Covid-19—is not a new theme in Islam (Bukhari, Isa & Nee, 2021). It has existed for a long time and was

mentioned, even long before the emergence of the Covid-19 situation. There are many explanations related to the outbreak of infectious diseases of the country's Covid-19, in the form of religious texts from the Qur'an and hadiths as well as explanations from historical sources such as the incidence of infectious epidemics in the past (Aziz, Niazi & Ghani, 2022). While at the same time provided the countermeasures when in a situation of dealing with a virus or epidemic (Covid-19). Thus, if there is an assumption that the mitigation of Covid-19 is against Islam that is the weakest opinion that has no basis at all (Ascarya, 2022).

Vaccine hesitancy is increasing, partly due to the spread of misinformation about the use of the covid-19 vaccine through social media platforms (Mahmud, Reza & Ahmed, 2021). This situation triggers anxiety from various parties so that people are still afraid to use the vaccine (Fuchs, 2021). This condition can indicate that the level of public doubt is still high, reinforced by slanted news about the Covid-19 vaccine. Many social media platforms share vaccination information as well as handling and preventing Covid-19, supported by more reliable and accurate sources of information so that people can receive the Covid-19 vaccination program (Mahmud, Reza & Ahmed). Mir, Rathinam and Gul (2021) stated that digital literacy is the most popular media for today's society. This paper tries to provide an initial picture of how digital health literacy plays an important role in the issue of handling Covid-19 and halal vaccines.

Handling the Pandemic in Islam

Discussion of epidemics like Covid-19 can be traced in a number of verses of the Quran, to be precise Surah Al-Baqarah [2:249]; Surah Hud [11:61-68]; Surah Al-Anbiya' [21:83]. The three letters above contain an explanation of the outbreak of infectious diseases that occurred in the past (Okonkwo, 2021). Surah Hud [11:61-68], briefly tells about the Thamud violation of the agreement made with Prophet Saleh that led to punishment from Allah. During three days, before the punishment was sent down on the fourth day, their faces changed three times in a row. On the first day, the Thamud's face was yellow, experts interpreted this condition as pale. Then Thamud's face turned red, meaning they were experiencing a more acute physical condition, fever. On the third day, his face turns black again. This condition describes a very critical physical existence, which the medical community calls *haemorrhagica*. Regarding the clarity of the type of virus that affected the Thamud, there was debate and differences of opinion. Some experts call the virus that infects the Thamuds a type of *typhus exanthematicus* (spotted typhus), some others call it anthrax virus, some medical experts classify it as a type of pestilence virus, known by the popular name *pestis haemorrhagica*. According to some epidemiologists, the last type of virus name is classified as the most rational, because based on medical studies, the Pestilence virus can be transmitted and spread widely through camels (Nurhidayati & Rofiq, 2021).

The Islamic explanation for the existence of infectious diseases, Islam through its broad and universal teaching tools quite firmly and clearly also provides an explanation of how to take countermeasures when in a situation of dealing with a virus or epidemic (Covid-19). (Aziz, Niazi & Ghani, 2022). In this context, the Islamic perspective is more likely to talk about handling epidemics at the macro level, simply providing confirmation of the argument that efforts to mitigate pandemics or epidemics have a very strong and firm theological basis, both textually and

historically. Thus, if there is an assumption that the mitigation of Covid-19 is contrary to Islam, this is the weakest opinion that has no basis at all (Wardi & Trinanda, 2022).

Digital Health Literacy

In the world of health, the development of information obtained digitally is happening so fast. This makes it easier for us to get health literacy to learn and share with others digitally as well. According to Yuce et al. (2022), digital health literacy is the ability to search, find, understand and interpret health information from electronic sources and apply the knowledge gained to overcome or solve health problems. Literacy skills are needed so that someone can become smarter, more creative and innovative (Palumbo, Nicola & Adinolfi, 2022). In its development, literacy is increasingly of various types because it is proven to be able to help people in selecting and understanding information. One type is health literacy, a relatively new term in health promotion.

According to Yuce et al. (2022), health literacy is a combined term to describe various outcomes of health education and communication activities. According to him, the main focus of health literacy is promoting health and preventive measures through health education. Efforts to promote this health can be done through education, mobilization, and advocacy. Based on recent research, misinformation and low health literacy skills are the main obstacles to health. Therefore, public health literacy needs to be improved, especially in the current COVID-19 pandemic situation where hoaxes about COVID-19 are rife and easily accessible by anyone. Therefore, health literacy is very urgent to be controlled by the community.

Halal Covid-19 Vaccines

Vaccination has historically been used in 2009 with the meningitis vaccine for prospective pilgrims for Hajj and Umrah. The meningitis vaccine was a Belgian product imported by the Indonesian Ministry of Health at that time which in its production process came into contact with materials contaminated with pigs.. (Sholeh & Helmi, 2021). The use of vaccines is allowed only for Hajj and Umrah pilgrims due to urgent needs and is a temporary permit until a halal vaccine is found. Based on the study surrounding the vaccination, the halal vaccination as a prevention of the controversial COVID-19 continues to grow and roll and has an impact and impression in the community that the vaccination is a political step that still needs to be tested for its validity both medically, scientifically and others. Some groups believe that vaccinations are lawful because they have certain interests, while other groups who have conducted clinical trials of medical tests state that the vaccination is worthy of being halal, clean, hygienic, and worthy of being legal as a halal vaccine. MUI fatwa which said vaccination was halal. means that the debate about halal and haram vaccinations has been completed, but the public certainly cannot accept it without reason because the public has their own logic, the public has their own culture (Sholeh & Helmi, 2021). The government's move by cooperating with the Indonesian Ulema Council as an Indonesian religious institution by making vaccinations legal is the right step and action in the midst of the majority of Indonesian Moslem.

RESEARCH METHOD

This paper is one of a series of studies on COVID-19 vaccine effectiveness, acceptance, and drivers of vaccination decision: A global survey of 20 countries by Marzo et al (2022). This paper

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were specifically discuss about halal vaccines in Indonesia. This is an online survey conducted using Google form. Data were collected during February 2021 to May 2021 using a snowball sampling approach. The questionnaires were distributed using personal contacts either by emails, web-based applications such as WhatsApp, Line and Telegram and social media such as Facebook, LinkedIn Twitter and Instagram. Participants aged 18 years old or older were invited. Participants were reminded to respond only once and a unique identifier was created for each user. The participants' confidentiality and privacy were ensured to minimize potential bias caused by self-reported data. All respondents were informed that the participations were voluntary and written consent was implied before the filling of the questionnaires. An Excel format was used to analyze the raw data.

FINDINGS AND DISCUSSION

A. Socio-demographics

Table 1 shows the characteristics of the respondents as a whole (N= 410). The results showed that most respondents were female, 253 people (61.71%), 18-25 years and 26-35 years, 152 people (37.07%) and 139 people (33.9%), respectively. Most research respondents living in rural areas were 317 (77.32%) and 394 Muslim (96.1%). Full-time workers dominated the respondents' employment status, 209 people (50.98%), and had an average monthly household expenditure of IDR 4,800,000-24,000,000, 137 (33.42%) with 267 people (65.12%) positioned themselves in a moderate social status. Most respondents, 270 people (65.85%) had Indonesia's Universal health insurance.

Table 1 Respondents Sociodemographic (N=410)

Variable	n	%
Sex		
Male	157	38.29
Female	253	61.71
Age (in years)		
<18	1	0.24
18-25	152	37.07
26-35	139	33.9
36-45	79	19.27
46-55	21	5.12
56-65	15	3.66
>65	3	0.73

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Residences		
Urban	93	22.68
Rural	317	77.32
Latest Education		
Did not finished basic education	1	0.24
Finished basic education	1	0.24
Junior high school	1	0.24
Senior high school	65	15.85
Diploma	9	2.2
Bachelor	240	58.54
Master	80	19.51
Doctor	13	3.17
Religion		
Moslem	394	96.1
Non Moslem	16	3.9
Marital Status		
Single (not married/divorce/widowed)	190	46.34
Married	220	53.66
Occupation		
Not working (incl. students)	135	32.93
Academic	72	17.56
Government agency	71	17.32
Private employees	95	23.17
Others	37	8.78
Occupational status		
Full time	209	50.98
Part time	49	11.95
Not working	105	25.61
Others (Looking for work, Pensioner, others)	47	11.47

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Working in health sector		
Yes	160	39.02
No	250	60.98
Monthly Stipend		
None	75	18.29
<IDR. 1.416.000	23	5.61
IDR. 1.416.000-2.128.000	42	10.24
IDR. 2.128.000-4.800.000	120	29.27
IDR. 4.800.000-24.000.000	137	33.41
>IDR. 24.000.000	13	3.17
Subjective social status		
Low (1-4)	24	5.85
Midle (5-7)	267	65.12
High (8-10)	119	29.02
Health Insurance		
Indonesia Health Universal Coverage (BPJS)	270	65.85
Private health insurance	20	4.88
Both	72	17.56
None	48	11.71
Total	410	100

B. Distribution of information seeking behaviour

Table 2 shows that 131 people (31.95%) respondents find it difficult in deciding whether the information found via the internet can be trusted or not. Also 121 (29.51%) find it difficult in deciding whether the information was written for commercial purposes (eg by someone who wants to sell product) or for the general information.

No	Item	Answers							
		Very easy		Easy		Difficult		Very difficult	
		N	%	N	%	N	%	N	%
1	Make a choice from all the information you find?	86	20.98	287	70.00	34	8.29	3	0.73

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2	Using the right words or searching for the right questions to find the information you need?	89	21.71	286	69.76	32	7.80	3	0.73
3	Found the right information?	55	13.41	283	69.02	68	16.59	4	0.98
4	Decide whether the information can be trusted or not?	51	12.44	219	53.41	131	31.95	9	2.20
5	Decide whether the information is written for commercial purposes (eg by someone who wants to sell a product)?	50	12.20	232	56.59	121	29.51	7	1.71

C. Distribution of social media platforms choices

No	Item	Often		Sometimes		Rarely		Never		Don't know	
		N	%	N	%	N	%	N	%	N	%
1	Facebook	66	16.10	74	18.05	122	29.76	130	31.71	6	1.46
2	Twitter	63	15.37	57	13.90	92	22.44	177	43.17	7	1.71
3	Instagram	226	55.12	93	22.68	46	11.22	34	8.29	3	0.73
4	YouTube	206	50.24	130	31.71	46	11.22	26	6.34	3	0.73
5	Tik Tok	60	14.63	43	10.49	54	13.17	224	54.63	15	3.66
6	Pinterest	27	6.59	46	11.22	76	18.54	220	53.66	26	6.34
7	Snapchat	3	0.73	7	1.71	46	11.22	306	74.63	34	8.29
8	Reddit	1	0.24	11	2.68	22	5.37	291	70.98	68	16.59
9	Whatsapp	302	73.66	62	15.12	25	6.10	15	3.66	1	0.24
10	Weixin/We Chat	0	0.00	11	2.68	24	5.85	306	74.63	52	12.68
11	Line	89	21.71	61	14.88	70	17.07	161	39.27	15	3.66
12	Telegram	39	9.51	111	27.07	93	22.68	142	34.63	12	2.93

D. Distribution of the topic of the Halal Covid-19 vaccine target

Table 5 shows what is considered very important when looking for information about Covid-19 and related topics is that 339 (82.68%) respondents have verified the information. Furthermore, the news comes from official sources with 82,44%, and respondents considered the information up-to-date 78.78%.

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Table 5. Distribution of the topic of the Covid-19 vaccine target

No	Item	Answers							
		Very important		Somewhat important		Not too important		Not important at all	
		N	%	N	%	N	%	N	%
1	The latest information	323	78.78	78	19.02	8	1.95	1	0.24
2	The information has been verified	339	82.68	63	15.37	6	1.46	2	0.49
3	You learn the most important things fast	243	59.27	146	35.61	20	4.88	1	0.24
4	Information comes from official sources	338	82.44	65	15.85	6	1.46	1	0.24
5	Dissent is represented	200	48.78	186	45.37	22	5.37	2	0.49
6	The subject is dealt with comprehensively	254	61.95	141	34.39	13	3.17	2	0.49

E. Respondents' satisfaction with halal COVID-19 vaccine information from the internet

Table 6 shows that 208 people (50.73%) felt neutral about the COVID-19 vaccine information obtained from the internet, and 154 (37.56%) respondents were satisfied with the information obtained.

Table 6. Distribution of respondents' satisfaction with halal COVID-19 vaccine information from the internet

Variabel	n	%
Respondent satisfaction		
very dissatisfied	7	1.71
not satisfied	33	8.05
neutral	208	50.73
satisfied	154	37.56
very satisfied	8	1.95
Total	410	100.00

F. The respondents' socio-demographic characteristics and overall digital health literacy

Table 7 shows the regression analysis results between the respondents' socio-demographic characteristics and overall digital health literacy. it can be concluded that there is a significant relationship between the socio-demographic characteristics of the respondents and digital health literacy ($p = 0.000$). Partially, it can be seen that the socio-demographic characteristics of

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respondents that have a significant relationship with digital health literacy are marital status ($p = 0.005$), subjective social status ($p = 0.000$), and working in the health sector ($p = 0.000$).

Table 7. the respondents' socio-demographic characteristics and overall digital health literacy

Variabel	B (SE)	95% C1		Linear Regression	
		Lower Bound		Bivariate	Multivariate
Gender	-1.72	-4.435	0.994	0.214	0,000
Age	-0.317	-1.912	1.278	0.696	
Residence	0.991	-2.306	4.288	0.555	
last education	1.355	-0.23	2.941	0.094	
Religion	1.217	-3.114	5.548	0.581	
Marital status	-5.015	-8.513	-1.517	0.005*	
Profession	-0.693	-1.85	0.464	0.24	
Job status	0.031	-1.014	1.077	0.953	
Average Monthly Expenditure	0.219	-0.912	1.351	0.704	
Adequacy	-0.664	-2.823	1.495	0.546	
Subjective social status	2.528	1.594	3.462	0.000*	
Working in the health sector	-6.708	-9.591	-3.826	0.000*	
Health Insurance	-0.071	-1.271	1.129	0.908	

CONCLUSION

From this discussion, it is clear that in general the community has excellent digital literacy skills related to information about Halal Covid-19 vaccines that are spread in online media. It's just that unfortunately the community's ability to process false information needs to continue to be improved, especially related to matters related to religious issues, where this theme on social media is still quite easy to cause controversy. This shows the need for good forms of health communication to the community, especially in the most important matters such as health and life.

LIMITATION & FURTHER RESEARCH

The limitations of the study, this study is still in the beginning stage. We hope after this stage it can develop into various methods that can test how far the level of digital health literacy intelligence that exists in the community.

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