Strategi Komunikasi Informasi dan Edukasi Covid-19 Muhammadiyah Provinsi DKI Jakarta terhadap Adaptasi Perilaku Baru

Information Communication and Education Strategy of Muhammadiyah Covid-19 DKI Jakarta Province Toward Behavioral Change

Rizqiyani Khoiriyah¹⁾, Sarah Handayani⊠¹⁾, Rustika Herman¹⁾

¹ Masters Study Program in Public Health, University of Muhammadiyah Prof Dr Hamka (Uhamka), Jakarta Indonesia

Email: <u>sarahhandayani1@gmail.com</u>

ABSTRACT

Background: Muhammadiyah members are the information communication and education (ICE) strategy segments from Muhammadiyah COVID-19 Command Center (MCCC). MCCC aims to deliver education and campaign programs to control COVID-19 specialized for the Muhammadiyah members. **Objective**: This research aims to determine social marketing strategies through the effectiveness of the MCCC website in changing Muhammadiyah members' behavior in Jakarta Province. **Methods**: This research was quasi-experimental with a non-randomized control group design. The sampling technique was accidental sampling, with 50 people in the intervention group and 50 in the control group. For one week, the intervention was to provide COVID-19 prevention material in PDFs, videos, and links sourced from the MCCC website. **Results**: The results show a significant difference in scores of behavior before and after website media intervention (p-value = 0.015). There was no significant difference before and after (p-value = 0.331). **Conclusion**: The intervention of media sourced from the MCCC website was able to impact the adaptation of Muhammadiyah members DKI Jakarta.

Keywords: ICE strategy, Media, Behavioral Change, MCCC

INTRODUCTION

The Coronavirus has shaken the world at the beginning of 2020. Coronavirus disease 2019 (COVID-19) is a disease caused by a new virus, called Coronavirus (SARS-CoV-2). COVID-19 is known to originate from Wuhan, Tiongkok, and be discovered by the end of December 2019. The transmission of COVID-19 occurs rapidly and spreads since it can be transmitted through contact from human to human. As of now, the news of COVID-19 is still the main concern of all nations in order to be cautious and alert in facing the COVID-19 while medicines and vaccines still have not been found (WHO, 2020a).

According to data from the World Health Organization, by May 20th, 2020, COVID-19 has attacked 179 nations all over the world, globally there were confirmed positive COVID-19 cases of 2,719,897 people, 187,705 deaths. Cases in Southeast Asia were (41,073) people with a death rate of 1658 people. Indonesia became the second-highest in Southeast Asia with 8,211 after India. WHO stated that the current situation risk assessment reached a very high risk (WHO, 2020a).

Preventing the spread of COVID-19 can be conducted by always washing hands with soap and flowing water or hand sanitizer. Applying the coughing and sneezing etiquette, as well as always maintaining hand hygiene. Another effort that can be implemented is social distancing by at least one meter with others, particularly those with symptoms. Trying to avoid touching eyes, nose, and mouth before washing hands. Wearing a mask can be done by everyone, not just people with symptoms, cloth masks are the solution to prevent the scarcity of medical masks (Kemenkes RI, 2020a).

Preventing the spread of COVID-19 can be conducted through online media. Efforts to prevent COVID-19 transmission may be in the form of washing hands all the time, wearing a mask, keeping a distance, consuming nutritious food, and exercising



©2022. Jurnal Promkes: The Indonesian Journal of Health Promotion and Health Education. **Open Access under CC BY-NC-SA License**.

regularly (Kemenkes RI, 2020b). In general, health promotion can be implemented through social media, television, film video, VCD, and powerpoint, or printed media like books, storybooks, leaflets, brochures (Quattrin, 2015).

Information Communication and Education (ICE) is already widely known by society, including activists/cadres. The CIE aims to allow the activists to choose, develop, and produce ICE materials according to the needs of the society. And the most important is how to utilize the ICE materials effectively for the efforts of increasing awareness and planting values of change that are more child responsive in the respective communities or work target regions (Sisparyadi, Antik and dkk, 2018). Behavioral change communication is an inseparable part of health promotion and one of the highly important strategies that must be implemented by health promoters in order to achieve public health goals (Yulia, 2018). Information Communication and Education (ICE) in public health is an approach to spread information widely. This has given a huge impact since the last few years to address social problems in public health. The problems were namely the danger of tobacco or smoking, stopping the spread of HIV/AIDS, malaria, and health problems (Nancy R. Lee, 2011).

ICE aims to improve knowledge, change attitudes, beliefs, values, and behaviors of an individual or group. Actively support a problem/issue and attempt to get support from other parties with children, parents, families, teachers, and members, as targets. (Sisparyadi, Antik and dkk, 2018).

According to research by Chin and Mansori conducted in 2018, social marketing intervention in society gave sufficient opportunity for a behavioral change. There was a relation between social marketing campaign success with the Theory of Planned Behavior, Social Cognitive Theory, Protection Motivation Theory, Health Belief Model, and Model of Communication, as the first step that needs to be understood (Chin and Mansori, 2018). Moreover, research about the impact of web media on students' balanced nutritional knowledge had an impact on students' balanced nutritional knowledge, balanced nutritional attitude, and balanced nutritional practice (Lathifa and Mahmudiono, 2019).

Social media is one of the platforms that can be utilized in ICE strategy. The

most popular social media in Indonesia is Youtube in the first place (43%), followed by Facebook (41%), and WhatsApp (40%) (Yulia, 2018). Optimizing social media users in the field of health promotion is done by planning and segmenting the target audience. As well as conducting evaluations that assess health outcomes which are still relatively limited (Firestone *et al.*, 2017).

Muhammadiyah as an organization of Islamic and humanitarian movements attempts with the government in various sectors and supports every existing protocol. Based on the Declaration of the Central Leadership of Muhammadiyah Number 02/MLM/1.0/H/2020 about the Coronavirus Disease 2019 Outbreak that has formed the Muhammadiyah COVID-19 Command Center (MCCC) on March 14th, 2020 (MCCC, 2020). Muhammadiyah COVID-19 Command Center (MCCC) has been spread over 26 regions in Indonesia.

The DKI Jakarta region has become the main focus for COVID-19 development since the discovery of a positive patient for the first time in Depok. DKI Jakarta consists of Central Jakarta, East Jakarta, West Jakarta, North Jakarta, South Jakarta. Muhammadiyah regional administrator or Aisyiah was elected to be the administrator of the MCCC DKI Jakarta. This management is hoped to be able to help Muhammadiyah members in improving knowledge of prevention of COVID-19 transmission and reduction of food issues (Muhammadiyah COVID-19 Command Center, 2020).

Improving knowledge through online and offline information is being called out by the center MCCC to regions and areas. Website is one of the platform media provided by MCCC in hope that it can improve the knowledge and alertness of Muhammadiyah members in an attempt to prevent transmission and spread of COVID-19.

Based on the explanation above, one of the media produced by MCCC about behavioral change is a website. The website covers general knowledge on COVID-19 such as definition, symptoms, impacts, spread, prevention, and how to deal with the COVID-19. With this website, the researcher wanted to find out how the media intervention is able to improve knowledge and behavioral change of Muhammadiyah members in preventing the spread of COVID-19.

METHODS



Quasi-experimental with a pre-test and post-test non-randomized control group design. The sampling technique was accidental sampling. The population was Muhammadiyah members residing in Jakarta. Based on sample calculation, 50 people were in the intervention group and 50 people were in the control group.

This research was done in Central Jakarta, North Jakarta, South Jakarta, East Jakarta, and West Jakarta in July 2020. The inclusion criteria were Muhammadiyah members (Muhammadivah college students in Jakarta region and regional/area Muhammadiyah members administrators), active in 1-2 years membership (both students college and regional/area administrators), active in social media (used internet), and willing to be respondents. The exclusion criteria were Muhammadiyah members DKI Jakarta inactive in an organization for less than 1 year.

Data were primary data collected from the results of filling out Google Form. The variables were behavioral change adaptation, age, sex, and information source that was the most often heard within the last 1 week.

In the intervention group, respondents were given materials on COVID-19 prevention in the form of PDF, video, and link sourced from the MCCC website for 1 week. The topics of the materials were comics on general guidelines for COVID-19, guidelines for congregational worship, guidelines for wearing cloth masks, guidance on caring for the corpses of COVID-19 patients, tips for maintaining mental health during the COVID-19 pandemic, COVID-19 is not a disgrace, stop stigma, tips for being physically and mentally healthy during the COVID-19 outbreak. The control group was given an education in the form of a short summary of the prevention efforts of COVID-19, introducing the MCCC website.

The mechanism to provide intervention to the intervention group was in several stages. The first stage consisted of filling out a Google Form guestionnaire (pre-test). In the second stage, respondents were given materials through short education on COVID-19 and an introduction to the MCCC website. In the third stage, intervention was given through WhatsApp. The intervention was according to the information on the MCCC website. One week later, in the fourth stage, respondents were asked to fill out a post-test.

The intervention for the control group was in 3 stages. The first stage was a post-test conducted by filling out a Google Form questionnaire. The second stage was material provision through short education on COVID-19. A week after the education, respondents were asked to fill out another Google Form questionnaire (post-test).

RESULTS AND DISCUSSION

Respondent characteristics in this research included area, sex, education, occupation, as follows. These characteristics are presented in Table 1.

Table 1.	Respondent Characteristics
	According to Sex, Age,
	Education

Respondent Characteristic s	Med Trea	osite lia atment periment	Education Treatment (Control)		
	'n	%	Ν	%	
Sex					
Female	28	56	33	66	
Male	22	44	17	34	
Age					
Adult	24	48	40	80	
Elder	26	52	10	20	
Education					
Junior High School	1	2	0	0	
Senior High School	9	18	3	6	
College	40	80	47	94	

According to sex, the majority of subjects in the experimental group were female as many as 28 people (56%), likewise in the control group were 33 people (66%). Meanwhile, according to age, in the experimental group, the average were adults (21-45 years old) as many as 24 people (48%), elders (above 46 years old) as many as 26 people 952%), different from the control group where the majority were adults as many as 40 people (80%).

According to education, the majority in the experimental group had a high education of college, namely 40 people (80%), the same as the control group by 47 people (94%). It is shown in the



©2022. Jurnal Promkes: The Indonesian Journal of Health Promotion and Health Education. **Open Access under CC BY-NC-SA License**.

control group that there was no respondent with the education of only junior high school.

(t	o Area,	eristics , Occupa			
Respondent	Webs		Educa		
Characteristic	Medi	-		ment	
S		tment	(Cont	rol)	
	• •	erime			
	nt)				
	Ν	%	Ν	%	
Area					
Central	5	10	11	22	
Jakarta					
North Jakarta	12	24	16	32	
West Jakarta	7	14	6	12	
South Jakarta	14	28	12	24	
East Jakarta	12	24	5	10	
Occupation					
Health Worker	4	8	10	20	
Teacher/Lectu	22	44	18	36	
rer					
Civil Servant	1	2	4	8	
Private	6	12	5	10	
Employee					
Entrepreneur	10	20	0	0	
Freelance	0	0	2	4	

Respondent characteristics in the experimental group according to area show that the majority were from South Jakarta by 14 people (28%), while the least respondents were from West Jakarta by 7 people (1%). In the control group, the most were from East Jakarta as many as 16 people (32%), and the least respondents were from East Jakarta as many as 5 people (10%). According to education, the majority of subjects in the experimental group had a high education of college by 40 people (80%).

In the experimental group, the subject occupation of teacher/lecturer amounted to 22 people (44%), while entrepreneur amounted to 10 people (20%). For the control group, teacher/lecturer was 18 people (36%), while health worker was 10 people (20%). It is shown in the control group that there was no respondent of private employee occupation.



Behavioral Change Adaptation	Inter	vention ((Website)	Control Group (Education)				
	Pre-test					Pos	t-test	
Adaptation	n	%	n	%	n	%	Ν	%
Wearing a Mask								
Never	1	2	1	2	1	2	1	2
Seldom	14	28	3	6	2	4	2	4
Often	35	70	19	38	15	30	18	36
Always	1	2	27	54	32	64	29	58
Washing Hands								
Never					1	2	1	2
Seldom	10	20	4	8	5	10	2	4
Often	24	48	16	32	20	40	23	46
Always	16	32	30	60	24	48	24	48
Shaking Hands								
Never		8						
Seldom	34	68	12	24	5	10	5	10
Often	12	24	30	60	29	58	35	70
Always	4	8	8	16	16	32	10	20
Joining a Gathering								
Never			12	24				
Seldom	5	10	28	56	12	24	9	18
Often	30	60	9	18	26	52	29	58
Always	15	30	1	2	12	24	12	24
Using Transportation								
Never		6	28	56	1	2	1	2
Seldom	5	10	11	22	8	16	7	14
Often	12	24	5	10	15	30	15	30
Always	30	60	6	12	26	52	27	54

Table 3. Behavioral Change

Table 3 displays that the habit of wearing a mask in the intervention group was different in value from pre-test and post-test. On pre-test of the intervention group, the majority of Muhammadiyah members who often used a mask were 35 people (70%), and on post-test, the majority who always used a mask were 27 people (54%). In the control group, on pre-test and post-test, there was 1 person (2%) who never wore a mask, while on the always category was 32 people (64%) and post-test was 29 people (58%). This might happen because the post-test group tended to choose not to use a mask, whereas, in reality, they already received information. The delivery of promotional materials was influenced by an attractive presentation.

The intervention group on the habit of washing hands had the most prominent score in the pre-test group by as many as 24 people (48%), on the post-test of always washing hands was 30 people (60%). Meanwhile, in the control group there was 1 person (2%) who never washed their hands precisely on pre-test and post-test. Even though the improvement of behavioral change was not that significant, it is evident that there was a change in the understanding of the habit of washing hands which in the end resulted in behavioral change.

The habit of shaking hands in the intervention group on pre-test of never was 4 people (8%), while on post-test of still often shaking hands was 30 people (60%). In the control group, often was 29 people (58%), and always was 10 people (20%). In the intervention group on the question of joining а gathering, Muhammadiyah members on post-test of never amounted to 12 people (24%). Meanwhile, in the control group, the majority of often was 26 people (52%) on pre-test, and on post-test was 29 people (58%). In the intervention group, the majority of Muhammadiyah members



©2022. Jurnal Promkes: The Indonesian Journal of Health Promotion and Health Education. **Open Access under CC BY-NC-SA License**.

always used transportation as many as 30 people (60%) on pre-test, while never used public transportation as many as 28 people (56%) on post-test. The many choices of transportation made Muhammadiyah

members chose to use transportation for convenience in activities.

Table 4. Behavioral Change Adaptation ofMuhammadiyah Members

Variable		Tre	ite Media atment rvention)	Education Treatment (Control)		
	_	n	%	n	%	
Pre-test						
Adequate	Behavioral	25	50	20	40	
Adaptation		25	50	30	60	
Good Behavioral A	daptation					
Post-test	•					
Adequate	Behavioral	17	34	26	34	
Adaptation		33	66	24	66	
Good Behavioral A	daptation					

In Table 4 of behavioral adaptation categories on pre-test of the intervention group (Pratamawati and Alfiah, 2017), website media had the same percentage which was adequate behavioral adaptation of 50 people (50%). On the results of posttest in the intervention group, there was a difference between adequate behavioral adaptation of 17 people (34%) and good adaptation of 33 people (66%). In the control group, it is shown that pre-test for adequate behavioral adaptation was 20 people (40%), good behavioral adaptation was 30 people (60%). Meanwhile, on posttest, adequate behavioral adaptation was 26 people (34%), and good behavioral adaptation was 24 people (66%).

Type of Media			Interven (We	tion Gro bsite)	oup	Control Group (Education)			
туре от	Media	P	re-test	Pos	Post-test		re-test	Po	st-test
		n	%	n	%	Ν	%	n	%
Televisi	ion								
Never		1	2	2	4	6	12	7	14
Seldom		16	32	14	28	12	24	12	24
Often		25	50	24	48	22	44	22	44
Always		8	16	10	20	10	20	9	18
Radio									
	Never	20	40	19	38	20	40	19	38
	Seldom	22	44	22	44	20	40	20	40
	Often	6	12	5	10	7	14	10	20
	Always	2	4	4	8	3	6	1	2
Social N	Aedia Onlin	e News							
	Never	0	0	0	0	3	6	3	6

Table. 5 Most Accessed Information Source in the Last One Week



©2022. Jurnal Promkes: The Indonesian Journal of Health Promotion and Health Education. **Open Access under CC BY-NC-SA License**.

			Interven (We	tion Gro bsite)		Control Group (Education)				
Type of N	ledia	Pi	re-test		Post-test		Pre-test		Post-test	
		n	%	n	%	N	%	n	%	
	Seldom	10	20	9	18	2	4	3	6	
	Often	24	48	22	44	24	48	25	5	
	Always	16	32	19	38	21	42	19	38	
Printed M	edia									
	Never	16	32	14	28	10	20	10	20	
	Seldom	21	42	20	40	28	56	27	54	
	Often	10	20	13	26	10	20	11	22	
	Always	3	6	3	6	2	4	2	4	
WHO										
	Never	11	22	12	24	5	10	5	10	
	Seldom	23	46	18	36	23	46	20	40	
	Often	13	26	16	32	17	34	22	44	
	Always	3	6	4	8	5	10	3	6	
Indonesia										
	Ministry of Health									
	Never	5	10	4	8	3	6	3	6	
	Seldom	19	38	17	34	17	34	15	30	
	Often	22	44	25	50	21	42	25	50	
	Always	4	8	4	8	9	18	7	14	
Indonesia	n									
	National									
l	Board for									
	Disaster									
I	Managem									
	ent									
	Never	1	2	1	2	2	4	2	4	
	Seldom	17	34	15	30	15	30	16	32	
	Often	24	48	27	54	24	48	25	50	
	Always	8	16	7	14	9	18	7	14	
мссс										
	Never	11	22	5	10	10	20	11	22	
	Seldom	17	34	15	30	20	40	18	36	
	Often	18	36	24	48	16	32	17	34	
	Always	4	8	6	12	4	8	4	8	
Communi	-					- 10				
	Never	4	8	7	14	10	20	10	20	
	Seldom	44	88	19	38	26	52	24	48	
	Often	2	4	22	44	11	22	13	26	
	Always	4	8	2	4	3	6	3	6	
Governme	-	-				-		_		
	Never	10	20	8	16	7	14	7	14	
	Seldom	15	30	16	32	19 22	38	18	36	
	Often	20	40	19	38	23	46	24	48	
	Always	5	10	7	14	1	2	1	2	
Influence			47	40	20	-	4.4			
	Never	8	16	10	20 ndonesiar	7	14	7	14	



©2022. Jurnal Promkes: The Indonesian Journal of Health Promotion and Health Education. **Open Access under CC BY-NC-SA License**.

			Intervention Group					Control Group			
T	f Madia		(We	bsite)			(Edu	cation)			
туре о	Type of Media		re-test	Pos	st-test	F	Pre-test	Ро	st-test		
		n	%	n	%	Ν	%	n	%		
	Seldom	17	34	17	34	26	52	23	46		
	Often	20	40	18	36	14	28	17	34		
	Always	5	10	5	10	3	6	3	6		
Peer											
	Never	10	20	11	22	16	32	2	4		
	Seldom	18	36	18	36	21	42	23	46		
	Often	18	36	16	32	8	16	18	36		
	Always	4	8	5	10	5	10	7	14		

80 Jurnal Promkes: The Indonesian Journal of Health Promotion and Health Education Vol. 10 No. 1, March 2022, 73-84 doi: 10.20473/jpk.V10.I1.2022.73-84

According to Table 5, it is shown that the majority of Muhammadiyah members in DKI Jakarta seldom listened to the radio, both in the intervention group on pre-test 44% and post-test 44%, and in the control group on pre-test and posttest, which was 40%, within the last one week. In addition, Muhammadiyah members in DKI Jakarta generally never listened to the radio. In the intervention group on pre-test of often reading online news was 48% and post-test of always reading online news was 38%. In the control group, Muhammadiyah members in DKI Jakarta generally often read online news as many as 48% on pre-test, and 50% on post-test.

In the intervention group, pre-test of never reading printed media was 32% and post-test of always reading online media was 28%. In the control group, Muhammadiyah members in DKI Jakarta generally often read online media as many as 56% on pre-test, and 54% on post-test.

In the intervention group on pretest, seldom sourcing WHO was 46%, posttest was 36%. Meanwhile, in the control group, Muhammadiyah members in DKI Jakarta generally often utilized WHO information as many as 34% on pre-test, and 44% on post-test. Muhammadiyah members in the intervention group on pretest for information source of Indonesian Ministry of Health were 46% and post-test were In the control group, 36%. Muhammadiyah members in DKI Jakarta often sourcing the Indonesian Ministry of Health were 42% on pre-test, and 50% on post-test. In the intervention group for often utilizing Indonesian National Board for Disaster Management as information source on pre-test amounted to 48% and 54% on post-test. In the control group,

Muhammadiyah members in DKI Jakarta generally had the same percentages in often utilizing Indonesian National Board for Disaster Management as information source by 48% on pre-test, and 54% on posttest.

In the intervention group on pretest, often utilizing MCCC as an information source was 36%, and post-test was 48%. Meanwhile, on pre-test, there were still some who never utilized MCCC by 22%, and on post-test by 10%. In the control group, Muhammadiyah members in DKI Jakarta generally seldom utilized MCCC as an information source, as many as 40% on pretest, and 36% on post-test. Often utilizing information from a spokesperson as a source was 40% in the intervention group on pretest, and 38% on post-test. Also, on pre-test of always utilizing information from a spokesperson was 10%, and post-test was 14%.

Muhammadiyah members in DKI Jakarta in the intervention group on pretest seldom utilized information from a religious leader and community leader by 88%, and on post-test by 38%. Also, on pretest, never utilized information amounted to 8%, and on post-test amounted to 14%. In the intervention group on post-test, seldom and often utilizing information from a peer were both 36%, and post-test of often was 36%. Also on pre-test of never utilizing information was 8%, and on post-test was 14%. In the control group, Muhammadiyah members in DKI Jakarta generally seldom discussed with a peer as an information source as many as 42% on pre-test and 46% on post-test.

Due to the many information media, Muhammadiyah members could choose freely which information source to refer to. Research results indicated that accessing television, social media online



news, Indonesian Ministry of Health, community leader/religious leader resulted in an almost similar interest to access MCCC.

Table 6. Results of Variable Analysis with Wilcoxon Test

	Interventio	Control
	n	
Sig. pre-	0.015	0.331
post		
Z	-2.424b	972b

Results of Wilcoxon test show that scores of pre-test and post-test in the intervention group can be concluded that the intervention group had a difference before and after being given Website Media information for 1 week. Meanwhile, scores of pre-test and post-test of the control group can be concluded that the control group had no difference before and after education was conducted.

a. Behavioral Change Adaptation

Muhammadiyah has become one of the organizations that took a serious step in preventing the spread of COVID-19 (MCCC, 2020). A control effort is shown from the Government's appeal to solve the outbreak together. In reality, there is still a lot in society, particularly Muhammadiyah members in DKI Jakarta, that does not respect the appeal (Buana, 2017).

During the pandemic, Indonesian members must live according to a new life order, which is able to make peace with COVID-19. The new life order is also known as New Normal with the purpose of keeping society productive and safe from COVID-19 in the pandemic (Kemenkes RI, 2020a). Adaptation of a new habit is believed to be powerful preventing in COVID-19 transmission by wearing a mask, washing hands, keeping distance, not shaking hands, as well as not gathering with many people (WHO, 2020b)

Muhammadiyah COVID-19 Command Center (MCCC) exists to help Muhammadiyah members to adapt by giving up-to-date information through a website, social media, and virtual activities. The wide coverage of Muhammadiyah members in DKI Jakarta requires the formation of regional MCCC, which is for DKI Jakarta. In observing the optimization of the role of regional MCCC, particularly in the spread of information on COVID-19 prevention, it is hoped to be able to result in a new good habit.

The majority of Muhammadiyah members in DKI Jakarta that participated in this research already had pretty good scores of behavioral adaptation. This is shown from the results of pre-test of the intervention group, which was that Website Media had an adequate behavioral adaptation, by 50%. It was proven that after giving intervention for 1 week, there was an increase in the posttest scores by 66%. Based on research by Maher *et al.* (2017), there was simple proof that intervention with social media may be effective. However, further research is needed to determine the maximization of media retention and its involvement or whether behavioral change is sustainable in the long term (Giordano et al., 2017).

Research by Nazir et al in 2020 stated that social media exposure did not have a significant and direct impact on prevention behavior. Social media exposure impacted prevention behavior indirectly through awareness and information exchange (Nazir et al., 2020). A different thing is evident in the results of this research, that there was a significant impact on behavioral adaptation after giving website media information for 1 week, where this became a time limitation in the research.

The contribution of social media in giving an impact to behavioral change adaptation shows a positive relation. Whereas in research by Allington *et al.* (2020), a positive relation was found between health protection behavior and the use of broadcasting media as an information source (Allington *et al.*, 2020). Not only helping with health protection, but Taeo *et al.* (2020) also initiated teeth health and mouth health information during the COVID-19 pandemic, by facilitating mouth health communication and efficiently forming public care through social media (Tao *et al.*, 2020).

Furthermore, awareness and information exchange had a significant and direct impact on prevention behavior (Nazir et al., 2020). In a pandemic situation like the COVID-19 outbreak, social media becomes the most sought-after information collection source. However, thousands of people spread information, sensationalism, rumors, misinformation, and disinformation, hence it is very important for the government and experts to fight the



pandemic and infodemic (Duraisamy, Brindha, Jayaseelan Rathinaswamy, 2020).

The many types of information made Muhammadiyah members in DKI Jakarta use television more often than radio, online news, and printed media. The variety of information is susceptible to misinformation and hoax, therefore active and effective professionals and health authorities are needed to be on social media. As the development of social media users compared to only education. During a crisis, public health literacy improvement for the long term is the most recommended strategy to address problems related to misinformation (Bastani and Bahrami, 2020).

The peculiarity of this pandemic is not only that the virus itself spreads very quickly, but also there is information-and misinformation-about the outbreak (Larson, 2018). Therefore, the panic that arises among the public has triggered the situation to be more of a crisis (Wilson and Chen, 2020). WHO has created a website page functional to bust the myths for addressing and correcting COVID-19. misinformation on Misinformation often results in mass panic, which can only be countered with information (The Lancet, 2020). However, as a consideration, this research can be used as a support in making decisions.

CONCLUSION

MCCC media was able to provide increased knowledge according to the obtained results, as follows; in the intervention group, there was a difference in scores of behavior before and after being given website media intervention for 1 week. The hope that the website can give an impact on respondent behavioral change became one of the achieved indicators that the website and the many interventions outside the research also impacted the behavior of Muhammadiyah members in getting COVID-19 information.

During the preparation and implementation of activities in DKI regional MCCC, there was a lack of collaboration with various parties such the Aisyiah Health Council and PCA. The provision of education and information was already good and optimum for Muhammadiyah members who owned communication devices, however, special attention for Muhammadiyah members who could not access it was needed.

ACKNOWLEDGEMENTS

We thank the UHAMKA Public Health Masters Study Program for providing the author with the opportunity to conduct research for the Master Thesis Research Grant of the Indonesian Ministry of Research, Technology and Higher Education 2020. Also, all respondents and all those who have helped in this research.

REFERENCES

- European Centre for Disease Prevention and Control. (2014). Social marketing guide for public health programme managers and practitioners. <u>http://ecdc.europa.eu/en/publicati</u> <u>ons/Publications/social-marketingguide-public-health.pdf</u>
- Notoatmodjo, S. (2010). Promosi Kesehatan Teori dan Aplikasi. Rineka Cipta.
- Allington, D. *et al.* (2020) 'Health rotective behaviour, social media usage, and conspiracy belief during the COVID-19 public health emergency', *Psychological Medicine*. doi: 10.1017/S003329172000224X.
- Bastani, P. and Bahrami, M. A. (2020) 'COVID-19 Related Misinformation on Social Media: A Qualitative Study from Iran', Journal of medical Internet research. doi: 10.2196/18932.
- Buana, R. D. (2017) 'Analisis Perilaku Masyarakat Indonesia dalam Menghadapi Pandemi Covid-19 dan Kiat Menjaga Kesejahteraan Jiwa', Sosial dan Budaya, Fakultas Syariah dan Hukum Universitas Islam Negeri (UIN) Syarif Hidayatullah Jakarta, 53(9), pp. 1689-1699. doi: 10.1017/CB09781107415324.004.
- Chin, J. H. and Mansori, S. (2018) 'Social Marketing and Public Health: A Allington, D. *et al.* (2020) 'Health rotective behaviour, social media usage, and conspiracy belief during the COVID-19 public health emergency', *Psychological Medicine*. doi: 10.1017/S003329172000224X.
- Bastani, P. and Bahrami, M. A. (2020) 'COVID-19 Related Misinformation on Social Media: A Qualitative Study from Iran', Journal of medical Internet research. doi: 10.2196/18932.



- Buana, R. D. (2017) 'Analisis Perilaku Masyarakat Indonesia dalam Menghadapi Pandemi Covid-19 dan Kiat Menjaga Kesejahteraan Jiwa', Sosial dan Budaya, Fakultas Syariah dan Hukum Universitas Islam Negeri (UIN) Syarif Hidayatullah Jakarta, 53(9), pp. 1689-1699. doi: 10.1017/CB09781107415324.004.
- Chin, J. H. and Mansori, S. (2018) 'Social Marketing and Public Health: A Literature Review ARTICLE INFO', Journal of Marketing Management and Consumer Behavior Chin et al. / Journal of Marketing Management and Consumer Behavior, 2(2), pp. 48-66.
- Cugelman, B., Thelwall, M. and Dawes, P. (2011) 'Online interventions for social marketing health behavior change campaigns: A meta-analysis of psychological architectures and adherence factors', *Journal of Medical Internet Research*, 13(1). doi: 10.2196/jmir.1367.
- Domegan, C. *et al.* (2016) 'Systemsthinking social marketing: conceptual extensions and empirical investigations', *Journal of Marketing Management.* Routledge, 32(11-12), pp. 1123-1144. doi: 10.1080/0267257X.2016.1183697.
- Duraisamy, Brindha, Jayaseelan Rathinaswamy, K. S. (2020) 'Social Media Reigned by Information or Misinformation About COVID-19: A Phenomenological Study', SSRN Electronic Journal, (May). doi: 10.2139/ssrn.3596058.
- European Centre for Disease Prevention and Control (2014) Social marketing guide for public health programme managers and practitioners. Available at: http://ecdc.europa.eu/en/publicati ons/Publications/social-marketingguide-public-health.pdf.
- Firestone, R. *et al.* (2017) 'The effectiveness of social marketing in global health: A systematic review', *Health Policy and Planning*, 32(1), pp. 110-124. doi: 10.1093/heapol/czw088.
- Giordano, V. *et al.* (2017) 'WhatsApp Messenger as an Adjunctive Tool for Telemedicine: An Overview', *Interactive Journal of Medical Research.* doi: 10.2196/ijmr.6214.

Kemenkes RI (2020a) Data pemantauan



Covid-19 Jakarta. Available at: https://corona.jakarta.go.id/id.

- Kemenkes RI (2020b) PEDOMAN PENCEGAHAN DAN PENGENDALIAN CORONAVIRUS DISESASE (COVID-19. Jakarta.
- Larson, H. J. (2018) 'The biggest pandemic risk? Viral misinformation', *Nature*. doi: 10.1038/d41586-018-07034-4.
- Maher, C. A. *et al.* (2014) 'Are health behavior change interventions that use online social networks effective? A systematic review', *Journal of Medical Internet Research*, 16(2). doi: 10.2196/jmir.2952.
- Muhammadiyah Covid-19 Command Center, (MCCC) (2020) Pernyataan Pers PP Muhammadiyah Tentang Pemberlakuan New Normal. Available at:ttps://covid19.muhammadiyah.id /pernyataan-pers-ppmuhammadiyah-tentangpemberlakuan-new-normal-2/.
- Nancy R. Lee, P. K. (2011) Social Marketing Influencing Behaviors for Good. SAGE Publications.Inc. Available at: https://books.google.co.id/books?id =NCoCYpZcR8C&printsec=frontcover &hl=id&source=gbs_ge_summary_r& cad=0#v=onepage&q&f=false.
- Nazir, M. et al. (2020) 'A multidimensional model of public health approaches against COVID-19', International Journal of Environmental Research and Public Health, 17(11), pp. 1-11. doi: 10.3390/ijerph17113780.
- Quattrin, R. (2015) 'Health Promotion Campaigns and Mass Media: Looking for Evidence', Primary Health Care: Open Access. doi: 10.4172/2167-1079.1000190.
- Tao, Z. Y. *et al.* (2020) 'Nature and diffusion of COVID-19-related oral health information on Chinese social media: Analysis of tweets on weibo', *Journal of Medical Internet Research.* doi: 10.2196/19981.
- The Lancet (2020) 'COVID-19: fighting panic with information', *The Lancet*. doi: 10.1016/S0140-6736(20)30379-2
- WHO (2020a) Coronavirus disease 2019 (COVID-19) Situation Report - 96.
- WHO (2020b) 'Coronavirus Disease Situation Report World Health Organization', World Health Organization, 19(May), pp. 1-17.
- Wilson, M. E. and Chen, L. H. (2020) 'Travellers give wings to novel coronavirus (2019-nCoV)', Journal of

Travel	Medicine.	doi:	Dan Komunikasi Perubahan Perilaku				
10.1093/jt	m/taaa015.	(Suatu Pendekatan Studi Literature					
Yulia, I. (2018)	'Optimalisasi Pen	Review)', <i>Hearty</i> , 6(2). doi:					
Media Sosia	al Dalam Pemasara	an Sosial	10.32832/hearty.v6i2.1276.				

