FACTOR INFLUENCING COMPLIANCE OF MASK USAGE AMONG BANGKALAN SUB-DISTRICT COMMUNITY DURING COVID-19 PANDEMIC

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ABSTRACT

Bangakalan Sub-district occupies the most patients infected by COVID-19 in Bangkalan Regency. Meanwhile, Bangkalan Regency itself has a significant number of COVID-19 patients. Various efforts continuously have been done to control the rate of COVID-19 transmission, and one of the efforts is mask usage. Mask usage compliance can be influenced by several factors. This study aimed to find out which factors can significantly influence mask usage among the Bangkalan Sub-district community. This study used an analytical observation with a cross-sectional approach and obtained 100 samples. The number of respondent who compliant were 32 people (32%) (male 8 (8%), female 24 (24%), moderately compliant 33 people (9% male (9%), female 24 (24%)) and 35 people less compliance (male 13 (13%), female 22 (22%)). Based on the crosstab analysis Chi square test, only enabling and reinforcing factors that correlated with mask usage compliance. In the enabling factor, there are two elements that are significantly related to mask usage compliance : providing spare masks whenever leaving the house (p-value=0,027) and good mask maintenance (p-value=0,000). In reinforcing factor, there are two elements that are significantly related to mask usage compliance : receiving warnings on mask usage from co-workers/schoolmates/college friends (p-value=0,002) and receiving warnings on mask usage from community leaders (p-value=0,040). The ordinal regression analysis showed factors that did not significantly influence mask usage compliance were predisposing factor (*p-value* = 0,452) and enabling factor (*p-value* = 0,527). Meanwhile, reinforcing factors (*p-value* = 0,001) significantly influenced mask usage compliance. When these three factors were described, the results of the ordinal regression showed ease of getting mask (*p-value* = 0,000), good mask maintenance (*p-value* = 0,037), receive warnings through social media (*p-value* = 0,043), and receiving warnings from the community leaders (*p-value* = 0,046) significantly influenced mask usage compliance among Bangkalan Sub-district community during COVID-19 pandemic.

KEYWORDS

COVID-19, Enabling Factor, Mask Compliance, Predisposing Factor, Reinforcing Factor

INTRODUCTION

At the end of December 2019, there was pneumonia which is caused by *severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)*, while the disease is called *coronavirus disease 2019* (COVID-19). There is a significant increase in the number of positive confirmed cases in many countries, which made the World Health Organization (WHO) declare COVID-19 as global pandemic [1]. As of July 2020, East Java Province had the highest number of confirmed positive cases with 21125 cases or 20,7% of the total cases in Indonesia [2]. *SARS-Co-V-2* can be transmitted through respiratory droplets between humans. Close contact can be the source of virus transmission, either direct or indirect contact with mucous membrane. Therefore, WHO urges the public to do preventive steps by either hand wash or hand rub, physical distancing and avoiding crowded areas, avoiding touching eyes, nose, and mouth, applying proper coughing and sneezing etiquette, staying at home if there is no urgent need, but if it is necessary to leave the house, use mask that covers nose and mouth [3]. China, South Korea, and Japan have implemented mask-wearing behavior plus instant hand hygiene (MIH) behavior, and it has been proven that these 3 countries have well-controlled cases. However, under certain conditions, where an individual can not maintain a distance of at least 1 meter from other people, for example by direct communication, in public spaces, or on public transportation, one thing that needs to be maintained is to use masks appropriately [4]. The public is encouraged to wear masks either in sick or healthy conditions. A recent study showed medical masks

can block cough particles 56,1% and cloth masks can block cough particles 51,4%. While the combination of these two types of masks can block cough particles 85,4% [5].

One survey was conducted in East Java Province which stated that non-compliance with mask usage was still high [6]. Bangkalan District is one of the regencies in East Java Province which has a significant number of positive confirmed cases of COVID-19, especially in Bangkalan Sub-district. According to Airlangga University Epidemiologist, Dr. Windhu Purnomo stated that the Bangkalan District community has very poor health protocol discipline, there are still many people who do not wear masks in public places such as markets or public transportation [7]. Compliance of mask usage during COVID-19 pandemic itself is a positive behavior. According to Green Lawrence, there are three factors that can influence behavior, those are predisposing factors (knowledge, attitudes, beliefs, norms, experience), enabling factors (facilities and infrastructure or health service), and reinforcing factors (social support from environment, health workers, community leaders) [8]. For some of these studies, further study and research are required to increase compliance of mask usage among Bangkalan Sub-district communities during COVID-19 pandemic.

MATERIALS AND METHODS

Data of this study were collected from questionnaires that were distributed from August to September 2021 in Bangkalan Sub-district. This study used an analytical observation method with a cross-sectional approach and obtained 100 samples. The independent variables in this study are predisposing factors, enabling factors, and reinforcing factors. While the dependent variable in this study is compliance of mask usage which are categorized into compliant, moderately compliant, and less compliant.

The questionnaires had been tested for validity and reliability (Table 1). The validity test used a product-moment correlation, while the reliability test used an internal consistency reliability approach that used Cronbach's alpha (Table 2). The validity test and reliability test in this study required 30 respondents who came from outside of Bangkalan Sub-district, yet still within the scope of Bangkalan Regency. Question items were valid if it had product-moment correlation value greater than r_{table} value of 0,3061. Meanwhile question items were reliable if it had Cronbach's alpha value greater than 0,60

Chi-square test used in this study to know the correlation between independent variables and the dependent variable. The dependent variable has a three-level ordinal scale and three independent variables also have an ordinal scale, therefore ordinal regression analysis is required. Furthermore, ordinal regression test was also conducted for each question element from independent variables which had a significant value of more than 0,25 in the chi-square test to determine the odds ratio.

RESULTS AND DISCUSSION

Bivariate Test Analysis Result

Based on bivariate test conducted on sociodemographic data towards mask usage compliance, age (*p-value* = 0,093), religion (*p-value* = 0,342), last of education achieved by respondent formally (*p-value* = 0,909), gender (*p-value* = 0,0510) and occupation (*p-value* = 0,196) had similarities. Those results had *p-value* more than 0,05 which means five sociodemographic data had no significant correlation with mask usage compliance among Bangkalan Sub-district community during COVID-19 pandemic.

Bivariate test was also conducted on predisposing factor elements (Table 3). The results were that knowledge (*p-value* = 0,724) and attitude (*p-value* = 0,801) had a significance value more than 0,05. This concluded that knowledge and attitude had no significant correlation with mask usage compliance among the Bangkalan Sub-district community. Based on bivariate test analysis conducted on enabling factor elements, providing spare mask when leaving the house (*p-value* = 0,028) and good mask maintenance (*p-value* = 0,000) had significant correlation with mask usage compliance and could stand firm enough even though without other elements. Meanwhile, five other elements had *p-value of* more than 0,05.

Reinforcing factor has seven elements in this study. Two of the elements had significant correlation with mask usage compliance. Those were receiving mask usage warnings from co-workers/schoolmates/ college friends (*p-value* = 0,002) and receiving mask usage warnings from community leaders (*p-value* = 0,040) which means these two elements could stand firm enough even though without other elements. The five other elements had *p-value of* more than 0,05.

Multivariate Test Analysis Result

Results of the multivariate test analysis is presented in Table 4.

Analysis of Sociodemographic Characteristic towards Compliance of Mask Usage

Age is one of the sociodemographic elements which can influence individual compliance. This is proven by a study from Haischer *et al.,* where age significantly influenced compliance of mask usage with *p-value* < 0,001 [9]. While in this study age did not have significant correlation with compliance of mask usage, this was proven by a bivariate test where age had *p-value* of 0,093. The result of this study is in line with Wijaya's study, age did not have significant correlation toward COVID-19 health protocol compliance [10]. The older age gets the better cognitive level of an individual and is supported by more experiences and better ability to make decisions[11, 12]. However, the elderly tend to easily believe fake news through *WhatsApp* and they are unable to recheck on hoax bot/booster. While the younger age tends to easily feel that they still have a healthy body as they think they have a good immune system against the virus [9].

Level of education can influence individual learning ability, therefore individuals who have higher educational levels are expected to be easier on receiving information and taking part to establish good behavior [13]. This statement is conformable with Goiceochea *et al.* study result [14]. Otherwise, in this study, level of education did not have significant correlation with compliance of mask usage with *p-value* of 0,909 in line with Mayasari *et al.* study result [15]. However, not all individuals who have lower educational levels also have lower compliance with mask usage. This is due to a large number of health promotions that appear from various platforms [16].

Gender can influence COVID-19 preventive behavior. Women are better at wearing masks to prevent COVID-19 because women have a caregiver role within the family, in contrast to men who tend to be more disobedient at wearing masks because masks are seen as a sign of weakness [9, 14]. Meanwhile, in this study, gender did not have significant correlation with compliance of mask usage based on a bivariate test with *p-value* of 0,510 in line with the result of Khairunnisa *et al.* research. This can happen because, during COVID-19 pandemic, everyone is exposed to information [17].

Occupation did not have significant correlation with compliance of mask usage in this study, it was proven by *p-value* of 0,196. This result is compatible with the result of Khairunnisa *et al.* research which stated occupation did not have significant correlation with compliance of COVID-19 preventive behavior. This can happen because occupation does not hamper individuals to do COVID-19 preventive behavior [17].

Bivariate test conducted on the religion element of this study, a *p-value* of 0,342 was obtained which means religion did not have significant correlation with compliance of mask usage among Bangkalan Sub-district community. This is caused by the regulations and policies issued by the Minister of Religion prevail and must be applied to all religious communities in Indonesia [18].

Analysis of Predisposing Factor towards Compliance of Mask Usage

Knowledge and attitude are two of the predisposing factor elements. Individuals who have better knowledge and attitude are expected to also have a better level of compliance. The result of ordinal regression showed a *p-value* of 0,452 which indicated predisposing factor did not significantly influence mask usage compliance among Bangkalan Sub-district community during COVID-19 pandemic. This result is in line with Liswanti *et al.* study [19]. This study also showed knowledge did not have significant correlation with mask usage compliance, proven by bivariate test with *p-value* of 0,724 conformable with the previous study done by Purnamayanti and Astiti [20]. However, the result of this study is in contrast with Andriyanto *et al.* study [21]. Real action is required to perform healthy behavior and to take real action based on knowledge, individuals have to reach the third level of

knowledge called application, not limited to knowing (first level) and understanding (second level). Besides knowledge, this study also showed that attitude did not have significant correlation with mask usage compliance proven with *p-value* of 0,801 in line with Mayasari *et al.* study [15] and contrast with Purnamayanti and Astiti study [20]. This was caused by the individual attitude not reaching the second level of attitude which is responding and still in the first level (receiving), therefore there was no response toward positive attitude.

Analysis of Enabling Factor towards Compliance of Mask Usage

Availability of facilities that are easily obtained and can be utilized is one important thing to establish good behavior [22]. In line with this statement, ease of getting mask influenced mask usage compliance by ordinal regression analysis with *p-value* of 0,000. This happens because masks can be purchased through online shops, making it easier for people to get masks they want specifically. The enforcement using double masks consisting of medical and non-medical masks, means some maintenance of reusable (non-medical) masks is required. The non-medical mask should be washed frequently and handled with care [23]. The more people know and carry out good mask maintenance properly, the more compliant the mask usage will be. In line with this study result, good mask maintenance significantly influenced mask usage compliance, as evidenced by ordinal regression analysis with *p-value* of 0,037.

Free masks that are given to the community are expected to increase mask usage compliance as the result of Yunita *et al.'s* study [24]. Meanwhile, the result of this study is that free masks did not have significant correlation with mask usage compliance with *p-value* of 0,985. This can happen because the community has not realized yet about COVID-19 hazard and the importance of COVID-19 preventive behavior.

Mask availability at home had a bivariate test *p-value* of 0,256. Mask availability at office/school/campus had an ordinal regression test result *p-value* of 0,235 while providing a spare mask when leaving the house produces a *p-value* of 0,149 through an ordinal regression test, which means that all these three elements did not significantly influence compliance of mask usage. The result of this study is not in line with the previous study done by Ghiffari *et al.* [25].

Mask price increases at the beginning of the pandemic caused destitute people difficulty to purchase masks. It is conformable with two studies which had the result that mask price significantly influenced mask usage compliance with *p-value* of 0,041 [26, 27]. However, in this study, the normal price of the mask produced *p-value* of 0,331 through bivariate test, which means the normal price of the mask did not have significant correlation with mask usage compliance.

In this study, the enabling factor did not significantly influence mask usage compliance among the Bangkalan Sub-district community during COVID-19 pandemic. This is proven by the result of ordinal regression analysis which produced a *p-value* of 0,527. However, when the elements of the enabling factor were described, there were two elements that significantly influenced mask usage compliance. This can happen because these two elements which have strong influence/effect on mask usage compliance can be weakened by other elements when all elements are combined. Enabling factor did not significantly influence on mask usage compliance among Bangkalan Sub-district community during COVID-19 pandemic due to masks are only worn at certain times, for example, office employees will take off their masks when they arrive at the office and due to the effect of vaccine euphoria. Mask will not affect compliance if the community does not understand the urgency of mask usage.

Analysis of Reinforcing Factor towards Compliance of Mask Usage

This study stated reinforcing factor had significant influence on mask usage compliance among Bangkalan Sub-district community during COVID-19 pandemic, proven by an ordinal regression analysis of 0,001 with an odds ratio value of 3,877 which means reinforcing factor can increase mask usage compliance 3,877 times. The result of the previous study done by Purba is also in line with this study result [28]. Social media is one of the health promotion media which can display information to the public [29]. Receiving warning messages through social media was a significant element that influenced mask usage compliance, evidenced by the result of ordinal regression analysis of 0,043 in line with Asnuddin and Pratiwi's study result [30]. However, the result of this study did not have

the same result as the study conducted in Jakarta, Bogor, Depok, Tangerang, Bekasi [31]. Receiving warnings from community leaders also had a significant influence on mask usage compliance among Bangkalan Sub-district communities through ordinal regression of 0,046 in line with research of Pratiwi and Budiono [32]. A significant result of this study can occur because of the high level of supervision, reprimand, and the provision of instruction given by local officials from the Regent, Military District Commander, Head of Resort Police ultimatums on improving health protocols.

According to Presidential Instruction number 6 of 2020 and Reagent's Regulation number 63 of 2020, people who violate health protocol will be given administrative punishment which is delegated to local regional officials. This punishment has several forms, including singing the national anthem, mentioning Pancasila, push-ups, cleaning public facilities such as town squares, public burial places, worship places. However, even though there are regulations or policies and violations for those who do not comply on mask usage in Bangkalan Sub-district, through the result of bivariate test, policies and violations did not have significant correlation mask usage compliance. This could happen because violations and policies might not be sufficient to create a deterrent effect for people who do not comply with mask usage.

Outdoor media is media delivered outdoors using printed media such as billboards or banners [33]. The result of this study indicated outdoor media did not significantly influence mask usage compliance as evidenced by a *p-value* of 0,640 through ordinal regression analysis. This can happen because the banner was not installed properly therefore the information could not be read or seen clearly.

Receiving warnings on mask usage compliance from co-workers/schoolmates/college friends had *p-value* of 0,710 through ordinal regression test which means it did not significantly influence mask usage compliance among Bangkalan Sub-district community. The result of this study is not in line with the result of Liswanti *et al.'s* research [19]. Conducive and communicative environment will be able to make individuals learn about the meaning of a rule and internalize it then display it through behavior [34]. The role of co-workers/schoolmates/college friends did not significantly influence mask usage compliance perhaps because during this pandemic period the frequency of meeting colleagues or friends is decreasing due to the implementation of work from home and online class.

Family plays a role in conveying information, providing advice, and providing motivation to implement healthy living behavior [31]. This theory is in line with Purba *et al.'s* research [35]. However, the result of this study is completely in contrast with the theory. Warnings regarding mask usage by the family resulted in *p-value* of 0,259 through bivariate test, therefore this element did not have significant correlation with compliance of mask usage. This can happen because respondents in this study were more than 18 years old, which at this age tended to be considered capable of doing things with their own decisions based on their respective understandings.

The health worker's role did not have significant correlation with mask usage in this study which had *p-value* of 0,346. This result was not in line with research conducted in Jakarta, Bogor, Depok, Tangerang, Bekasi [31]. This could happen due to the increased number of COVID-19 patients and ending with health workers required in the healthcare environment, therefore community leaders are required to work together on promoting health to the community.

CONCLUSIONS AND SUGGESTION

According to data analysis and discussions, there are several conclusions in this study. Predisposing factor did not significantly influence mask usage compliance among the Bangkalan Sub-district community. Enabling factor elements that significantly influenced mask usage compliance are ease of obtaining masks and good mask maintenance. However, overall, the enabling factor did not significantly influence mask usage compliance among the Bangkalan Sub-district community. Reinforcing factor elements that significantly influenced mask usage compliance among Bangkalan Sub-district community are receiving mask usage warnings through social media and receiving mask usage warning from community leaders, and entire of reinforcing itself also significantly influenced mask usage compliance among Bangkalan Sub-district community during COVID-19 pandemic.

From the results of the implementation and awareness of the limitations of this study, the research has several suggestions, those are: this study has limited questions and limited availability of answers by questionnaires. To find out the respondent's answers clearly and completely, it would be better if the next researcher conducted research through in-depth interviews; the results of this study could be considered for the public to be more careful in filtering information related to COVID-19 pandemic and hoped that Bangkalan Sub-district community will always aware that pandemic has not been over yet, therefore mask usage should be done obediently.

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Table 1. Questionnaire Validity Test

Ques-tion	Predisposing Factor		Enabling Factor		Reinforcing Factor		Mask Usage Compliance	
	Product Moment	***P-value***	***Product Moment***	***P-value***	***Product Moment***	***P-value***	***Product Moment***	***P-value***
1	0,721	0,000	0,370	0,022	0,589	0,000	0,675	0,000
2	0,418	0,011	0,787	0,000	0,728	0,000	0,580	0,000
3	0,464	0,005	0,539	0,001	0,498	0,003	0,702	0,000
4	0,600	0,000	0,607	0,000	0,504	0,002	0,438	0,008
5	0,551	0,001	0,591	0,000	0,595	0,000	0,865	0,000
6	0,547	0,001	0,370	0,022	0,684	0,000	0,833	0,000
7	0,572	0,000	0,455	0,006	0,731	0,000	0,910	0,000
8	0,350	0,029	-	-	-	-	0,411	0,012

9	0,363	0,024	-	-	-	-	0,585	0,000
10	0,451	0,006	-	-	-	-	0,422	0,010
11	0,428	0,009	-	-	-	-	0,619	0,000
12	0,385	0,018	-	-	-	-	-	-
13	0,533	0,001	-	-	-	-	-	-
14	0,430	0,009	-	-	-	-	-	-

Source: Primary data processed 2021

Table 2. Questionnaire Reliability Test

Questionnaires	Cronbach's Alpha
Predisposing Factor	0,794
Enabling Factor	0,635
Reinforcing Factor	0,717
Mask Usage Compliance	0,856

Source: Primary data processed 2021

Table 3. Bivariate Test Data Analysis Results

		Compliance of Mask Usage			Total (n)	*P-value*
		Compliant (%)	Moderately compliant (%)	Less compliant (%)		
Sociodemographic Characteristic						
Age	Late teenager	18 (18%)	25 (25%)	29 (29%)	72 (72%)	0,093
	Early adult	4 (4%)	4 (4%)	2 (2%)	10 (10%)	
	Late adult	5 (5%)	1 (1%)	0 (0%)	6 (6%)	
	Early geriatric	5 (5%)	3 (3%)	4 (4%)	12 (12%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Religion	Islam	31 (31%)	33 (33%)	35 (35%)	99 (99%)	0,342
	Protestan	1 (1%)	0 (0%)	0 (0%)	1 (1%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Level of Education	College	24 (24%)	25 (25%)	25 (25%)	74 (74%)	0,909
	Senior High School	8 (8%)	8 (8%)	10 (10%)	26 (26%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Gender	Women	24 (24%)	24 (24%)	22 (22%)	70 (70%)	0,510
	Men	8 (8%)	9 (9%)	13 (13%)	30 (30%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Occupation	Goverment Worker	9 (9%)	8 (8%)	3 (3%)	20 (20%)	0,196
	Privet Sector Employee	4 (4%)	7 (7%)	3 (3%)	14 (14%)	

	Entepreneur	2 (2%)	0 (0%)	2 (2%)	4 (4%)	
	Not Working	4 (4%)	2 (2%)	2 (2%)	8 (8%)	
	Students	9 (9%)	14 (14%)	21 (21%)	44 (44%)	
	Freelancer	1 (1%)	1 (1%)	3 (3%)	5 (5%)	
	Teacher	3 (3%)	1 (1%)	1 (1%)	5 (5%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Predisposing Factor						
Knowlegde	Good	17 (17%)	20 (20%)	18 (18%)	55 (55%)	
	Bad	15 (15%)	13 (13%)	17 (17%)	45 (45%)	0,724
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Attitude	Good	18 (18%)	21 (21%)	20 (20%)	59 (59%)	
	Bad	14 (14%)	12 (12%)	15 (15%)	41 (41%)	0,801
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Enabling Factor						
Obtaining free mask	Yes	18 (18%)	18 (18%)	19 (19%)	55 (55%)	
	No	14 (14%)	15 (15%)	16 (16%)	45 (45%)	0,985
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Mask availability at office/school/campus	Yes	16 (16%)	18 (18%)	10 (10%)	44 (44%)	
	No	16 (16%)	15 (15%)	25 (25%)	56 (56%)	0,069
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Mask availability at home	Yes	11 (11%)	17 (17%)	12 (12%)	40 (40%)	
	No	21 (21%)	16 (16%)	23 (23%)	60 (60%)	0,256
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Providing spare masks whenever leaving the house	Yes	31 (31%)	29 (29%)	26 (26%)	86 (86%)	
	No	1 (1%)	4 (4%)	9 (9%)	14 (14%)	**0,027**
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Mask price	Yes	30 (30%)	30 (30%)	29 (29%)	89 (89%)	
	No	2 (2%)	3 (3%)	6 (6%)	11 (11%)	0,331
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Ease of getting mask	Yes	32 (32%)	33 (33%)	32 (32%)	97 (97%)	
	No	0 (0%)	0 (0%)	3 (3%)	3 (3%)	0,057
	Total	32	33	35	100	

		(32%)	(33%)	(35%)	(100%)	
Good mask maintenance	Yes	32 (32%)	32 (32%)	25 (25%)	89 (89%)	**0,000**
	No	0 (0%)	1 (1%)	10 (10%)	11 (11%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Reinforcing Factor						
Receiving warnings on mask usage through social media	Yes	30 (30%)	30 (30%)	28 (28%)	88 (88%)	0,187
	No	2 (2%)	3 (3%)	7 (7%)	12 (12%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Receiving warnings through outdoor media	Yes	30 (30%)	31 (31%)	28 (28%)	89 (89%)	0,110
	No	2 (2%)	2 (2%)	7 (7%)	11 (11%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Policies and violations	Yes	25 (25%)	27 (27%)	27 (27%)	79 (79%)	0,886
	No	7 (7%)	6 (6%)	8 (8%)	21 (21%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Receiving warnings on mask usage from family	Yes	32 (32%)	31 (31%)	32 (32%)	95 (95%)	0,262
	No	0 (0%)	2 (2%)	3 (3%)	5 (5%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Receiving warnings on mask usage from co-workers/schoolmates/college friends	Yes	32 (32%)	32 (32%)	27 (27%)	91 (91%)	**0,002**
	No	0 (0%)	1 (1%)	8 (8%)	9 (9%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Receiving health promotions from healthy workers	Yes	30 (30%)	27 (27%)	30 (30%)	87 (87%)	0,350
	No	2 (2%)	6 (6%)	5 (5%)	13 (13%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	
Receiving warnings on mask usage from community leaders	Yes	29 (29%)	27 (27%)	23 (23%)	79 (79%)	**0,040**
	No	3 (3%)	6 (6%)	12 (12%)	21 (21%)	
	Total	32 (32%)	33 (33%)	35 (35%)	100 (100%)	

Source: Primary data processed 2021

Table 4. Multivariate Test Data Analysis Results

		Estimate	Wald	*P-value*
Independent Variables				
Threshold	Less compliant	-1,428	10,807	0,001
	Moderately compliant	0,113	0,077	0,781
Location	Predisposing Factor	0,294	0,565	0,452
	Enabling Factor	-0,254	0,400	0,527
	Reinforcing Factor	-1,355	10,868	0,001

Independent Variable Elements				
Threshold	Less compliant	-1,945	23,747	0,000
	Moderately compliant	-0,148	0,194	0,659
Location	Mask availability at office/school/campus	-0,499	1,412	0,235
	Providing spare masks whenever leaving the house	-1,012	2,083	0,149
	Ease of getting mask	**-21,145**	**0,000**	**0,000**
	Good mask maintenance	**-2,598**	**4,337**	**0,037**
	Receiving warnings on mask usage through social media	**-1,339**	**4,095**	**0,043**
	Receiving warnings through outdoor media	-0,353	0,219	0,640
	Receiving warnings os mask usage from co-workers/schoolmates/college friends	-2,312	3,258	0,710
	Receiving warnings on mask usage from community leaders	**-1,082**	**3,989**	**0,046**

Source: Primary data processed 2021

Table 5. Predisposing Factor Questionnaire

Predisposing Factor Question	Answer Choices
When is the wrong time of hand washing?	a. Before eating b. After giving care to patient c. Before using toilet d. After doing activities in public space
What is the minimum alcohol content can be made for hand sanitizer?	a. 10% b. 25% c. 60% d. 90%
COVID-19 can be diagnosed using PCR samples taken from...	a. nasopharyngeal and oropharyngeal b. Hands and feet nail c. Hair d. Hands palm
Which one is the type of coronavirus that caused COVID-19?	a. MERS-CoV b. SARS-Cov c. SARS-CoV2 d. MERS-CoV2
How many days COVID-19 symptoms can appear?	a. 1-5 days b. 2-5 days c. 1-7 days d. 2-14 days
Which is the most correct information about COVID-19 therapy?	a. There is no spesific drug, only supportive therapy, bedrest, healthy food b. Vitamin C and Red blood booster drug c. Influenza drug and antibiotic drug d. Fruits, vegetables, and red blood booster
What is the minimum mask layer whic is effective on preventing the spread of virus?	a. 1 b. 2 c. 3 d. 5
The main purpose of mask usage during COVID-19 pandemic is...	a. Avoiding punishment from government b. Preventing transmission of COVID-19 virus c. As a requirement to go to mall or market d. All is wrong
Which one is the recommended fabric material for the outermost layer of the mask (the layer that surrounding environment) ?	a. Polypropilene b. Cotton c. Cellulose d. Silk
How to use the right mask on the face?	a. Covering nose and mouth b. Covering nose, mouth, chin c. Covering nose, mouth, cheeks d. Covering nose, mouth, chin, cheeks
What is the minimum water temperature to wash cloth masks with detergent?	a. 40° C b. 50° C c. 60° C d. 70° C

Do you think inappropriate mask usage will still protect you from the virus?	a. Yes b. No
Do you agree with the information that COVID-19 can be cured by consuming garlic or ginger?	a. Yes b. No
Do you believe if COVID-19 pandemic will eventually be well controlled	a. Yes b. No

Source: Primary data processed 2021

Table 6. Enabling Factor Questionnaire

Enabling Factor	Answer Choices
Do you get free masks around ?	a. Yes b. No
Does your workplace/campus/school provide masks?	a. Yes b. No
Does your family always provide masks at home?	a. Yes b. No
Do you have habit of providing a spare mask whenever leaving the house?	a. Yes b. No
Do you buy masks in normal prices?	a. Yes b. No
Is it easy for you to providing masks?	a. Yes b. No
Is it easy for you to do good mask maintenance	a. Yes b. No

Source: Primary data processed 2021

Table 7. Reinforcing Factor Questionnaire

Reinforcing Factor	Answer Choices
Do you receive warning massage about mask usage through social media?	a. Yes b. No
Are there mask usage warnings around local public space?	a. Yes b. No
Does the government implement a policy regarding violations of mask usage non-compliance in your environment?	a. Yes b. No
Does your family always remind you to use masks during COVID-19 pandemic?	a. Yes b. No
Does your school/college/work friends always remind you to use masks?	a. Yes b. No
Are the health workers around you good at promoting health, especially about mask usage during COVID-19 pandemic?	a. Yes b. No
Are the community leaders (regional heads, clerics, priests) in your area good enough at promoting health and giving warnings about mask usage?	a. Yes b. No

Source: Primary data processed 2021

Table 8. Mask Usage Compliance Questionnaire

Mask Usage Compliance	Answer Choices			
	1 (Never)	2 (Seldom)	3 (Often)	4 (Always)
I use masks whenever leaving the house				
I use masks by covering the mouth, nose, chin, and cheeks				
When I talk to other people, I do not take the mask off and leave it closed				
I use masks either I am sick or healthy				
I change the mask after using it for a maximum of 4 hours				
I wash my hands before using the masks and after removing the mask				
If my hands accidentally touch the front side of the mask, I would wash my hands immediately				

When my masks is wet or damp, I immediately replace it with a new one	
I do not reuse disposible masks and throw it away immediately after using it	
I use one mask only for myself and do not share it with others	
Everytime I use a mask, I check for tears or holes on the mask, and make sure not to use a damaged mask	

Source: Primary data processed 2021