

Does the Government Cyber Public Relations Influence to Public Attitudes And Intentions Vaccine?

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Abstract

The aim of the research is to investigate the effect of cyber public relations the Government of the attitudes and intentions of the public to use the vaccine. The question of research that try to in responsibility within the study time it is investigate exposure cyber Public Relations of the Government related to COVID-19 in the community of Bogor and identify the influence of the government's cyber public relations on the attitudes and intentions of the people of Bogor City to use vaccines. This research is to be carried out in the city of Bogor by using methods of research quantitative with approach descriptive exploratory. A total of 206 people selected as the research sample. The result show that level of knowledge and also access to government cyber public relations sequentially are website, instagram, application, twitter and facebook. Frequency of government cyber public relations access is 1-2 times with a duration of less than 10 minutes. We find that Government Cyber Public Relations are important source would be beneficial to improve vaccine intention but cannot encourage people to intend to use vaccines, meanwhile vaccine attitude can improve people to intend to use vaccines.

Keywords

Cyber Public Relation, Government, Attitude, Intention, Vaccine

1. Introduction

The role of the internet is increasingly important in social, economic and political life in a globalized world. Every year the internet is getting deeper in influencing human life. It is undeniable that this technology has changed world civilization rapidly. Internet users around the world, both mobile and fixed, are increasing continuously. According to AAPJI, internet users in 2019-2020 were 196.71 million out of a total population of 266.91 million Indonesians. Currently the internet is considered the most effective way to receive and share information, because it is very easy to be accessed by anyone. During a pandemic like this, the Internet is a means of making it easier for the public to find out the latest information about Covid-19. Since the beginning of the COVID-19 virus outbreak, social media users have played a role in all stages of knowledge translation, including COVID-19 morbidity and mortality, intervention, spreading rumors and conspiracy theories, and reporting stigma (Islam et al., 2020). The role of government is very important as a party to correct misinformation and rumors (Yas et al., 2021). Public relations, which acts as a liaison between the government and the community, is needed to know the wishes and responses of the community towards the government and its performance. Currently, public relations is a strategic institution that can communicate with a wide audience reach as well as effectively. This communication can be done through a number of media, or by utilizing social media or the PR website can also minimize the circulation of hoax information in the community. Of the 2,276 reports, 1,856 claims were false (82%), 204 were true (9%), 176 were

misleading (8%), and 31 were not proven (1%) (2). In Indonesia, according to the Ministry of Communication and Information, there are 1,197 findings of the COVID-19hoax issue spread across 4 digital platforms in 2020, 1,497 on Facebook, 20 on Instagram, 482 on Twitter, and on YouTube 21 (Zunita, 2020).

With the stipulation of COVID-19 as a national disaster through Presidential Decree (Keppres) of the Republic of Indonesia Number 12 of 2020 concerning the Determination of Non-Natural Disasters for the Spread of Corona Virus Disease 2019 (COVID-19) as a National Disaster and later in the Presidential Decree, the President also stipulates that disaster management caused by the spread of COVID-19 carried out by the Task Force for the Acceleration of Handling Corona Virus Disease 2019 (COVID-19) in accordance with Presidential Decree Number 7 of 2020 concerning the Task Force for the Acceleration of Handling COVID-19. then Badan Nasional Penanggulangan Bencana (BNPB) being the central institution in dealing with the Government has created several media used to distribute information related to COVID-19 which is shown to a wide audience, among others, social media (Facebook, Instagram and Twitter) BNPB in addition to the official website, namely covid.19. co.id and also the United Against COVID-19 application. The use of internet media is expected to have a positive impact, one of which is receiving information and attitudes related to COVID-19 correctly and quickly. Referring to the results of Gracia and Arino's research the need for segmentation strategies to target different communication campaigns depending on the needs and demands of the citizens and to suit the community. The government should conduct a promotional campaign on individuals who have a positive attitude towards e-government (Gracia et al., 2015).

Based on the Lowy Institute report, which was released on March 13, 2021, Indonesia is ranked 86th out of a total of 102 countries studied. Bhutan, is the country that is ranked first in handling this pandemic. This ranking is lower than other ASEAN countries such as Thailand (4), Singapore (14), Malaysia (17) and Myanmar (24). These countries are considered better in responding to the development of the pandemic in their country (Leng et al., 2021). Currently, public relations activities are vital in providing correct information regarding COVID-19. The spread of COVID-19 has become a big problem that is also the responsibility of the government. One form of business carried out is to use the internet as a medium for transferring information related to COVID-19. This action is then called cyber relations which is carried out using the internet. An understanding of the factors that drive doubts about COVID-19 vaccination is essential. To overcome people's doubts about such a vaccine, a strong public health campaign must be developed and maintained. Effective public communication requires informative research that explains deficits in knowledge, attitudes, beliefs, health perceptions, and demographic characteristics that cast doubt on anticipation of a COVID-19 vaccine (Ruiz et al., 2021). The government has created several media that are used to distribute information related to COVID-19 to a wide audience, including the BNPB website (covid.19.co.id), social media (Facebook, Instagram and Twitter) and also applications. The use of internet media is expected to have a positive impact, one of which is receiving information and attitudes related to COVID-19 correctly and quickly.

The purpose of this study is to see the influence of the government's cyber public relations toward COVID-19 on people's attitudes and intentions to use vaccines. In more detail, the research questions that are tried to be answered in this study are investigate the exposure of the Government's cyber public relations toward COVID-19 in the people of Bogor City and analysed the influence of the Government's cyber public relations on the attitudes and intentions of the people of Bogor City to use vaccines.

2. Literature Review

Governments, international bodies such as WHO, and similar local authorities used various media sources, including mass media, print media (also referred to as conventional sources), and digital media (including websites and social media), to reach out to the masses, mobilize them and convey measures against the unprecedented situation. Further, given the uncertain situation, people themselves turned to the internet to search for COVID-19 related information. government information disclosure does help focus public attention on the crisis (Bento et al., 2020). Cyber Public Relations (Cyber PR) is public relations carried out by means of internet electronic media in building a brand and maintaining trust, understanding, image of the company/organization to the public/audience and can be done in an interactive one to one communication. Digital public relations (Cyber PR) involves publishing news releases online to inform stakeholders about an organization's services or updates to these services, harnessing the power of journalism networks and disseminating information over the Internet. Content searchers take the information provided and do one of two things: reuse the information while citing the source, or pass the content in its entirety to

its readers. The purpose of Cyber PR is to build institutional exposure and credibility to a greater public through press releases and highlighting certain aspects or achievements of an Institution to the right audience (Gifford, 2010).

Cyber PR as a strategy that is in line with the public relations function, several things can be used, including: Online Publication, Social Media and Online Community (Aprinta, 2016). Public authorities have seized on this trend and have intensified their presence on social media in the past several years, particularly in the context of many national initiatives to promote e- government (Twizeyimana et al., 2019). e- disclosure linked to public health crises and social media usage by citizens (Cauberghe et al., 2021) social media engagement between public authorities and citizens (Chen et al., 2021). Through the website, the communication function can be conveyed and there are several public relations activities that can be carried out, including: To convey information, to be persuasive, to educate and entertain (Yazid, 2015).

An understanding of the factors that drive doubts about COVID-19 vaccination is critical. To overcome people's doubts about such a vaccine, a strong public health campaign must be developed and maintained. Effective public communication requires informative research that explains deficits in knowledge, attitudes, beliefs, health perceptions, and demographic characteristics that cast doubt on anticipation of a COVID-19 vaccine (Ruiz et al., 2021). Based on the theory of planned behavior (TPB) that the stimulus in this case is a message is an important factor for understanding the behavioral intention determinants of various health-related behaviors (Ajzen, 1991). This is corroborated by the results of the CDC's research by continuing to promote vaccine confidence by adapting information to address individual and community concerns that are critical to preventing the spread of COVID-19. These findings suggest a decrease in non-intent over time as well as concerns about vaccine safety (CDC, 2020). To investigate which of the channel of information from Government Cyber Public Relations to be able to differentiate from other media, we use uses and gratifications where media users can search for information through the media according to their beliefs to fulfill their satisfaction. We do this by focusing on information from Government Cyber Public Relations BNPB. We then link information to theory of planned behavior (TPB) to understand the influence of information on people's attitudes and intentions to use vaccines. Uses and gratification theory emerges from a line of work that focuses on the interdependence relationships between media systems, larger social systems, and media audiences. Together, these theories predict that audiences depend on the media to fulfill specific needs and in the process develop a certain dependence on the media. Ultimately, this can lead to cognitive, affective, and behavioral effects of media use (Littlejohn et al., 2009).

Ajzen developed the model known as the theory of planned behavior (TPB) not to predict, but to understand human behavior, People make decisions through a very complicated process. However, when there is intent to engage in behavior, there are three major variables at play that can be identified. The first is the attitude toward engaging in a behavior. The second is how others are likely to view the behavior, known as the subjective norm. The third is how much control a subject believes they have in engaging in a behavior, otherwise known as perceived behavior control (Ajzen, 1991). The TPB has been successfully applied to vaccine uptake in multiple studies (Agarwal, 2014; Guidry et al., 2021).

Based on the explanation above, the following research hypotheses are proposed:

- H1: Government Public Relations toward COVID-19 has influence on attitude vaccine
- H2: Government Public Relations toward COVID-19 has influence on intention vaccine
- H3: Attitude vaccine has influence on intention vaccine

The current study aims to examine the effect of government cyber public relations on vaccine attitudes and intentions by using a combined version of uses dan gratification and TPB. The investigated model uses vaccine intention as the dependent variable for two reasons. First, as in previous studies, that vaccine intention can be influenced by attitude (Guidry et al., 2021; Sherman et al., 2021; Mir et al., 2021). Second, intention is also influenced by the media as the results of the research of Allington and Hossain (Allington et al., 2021; Hossain, 2019). Integrating the UG and TPB allowed us to measure two considerations that influence an individual's decision to vaccinate. The research model is presented in Figure 1.

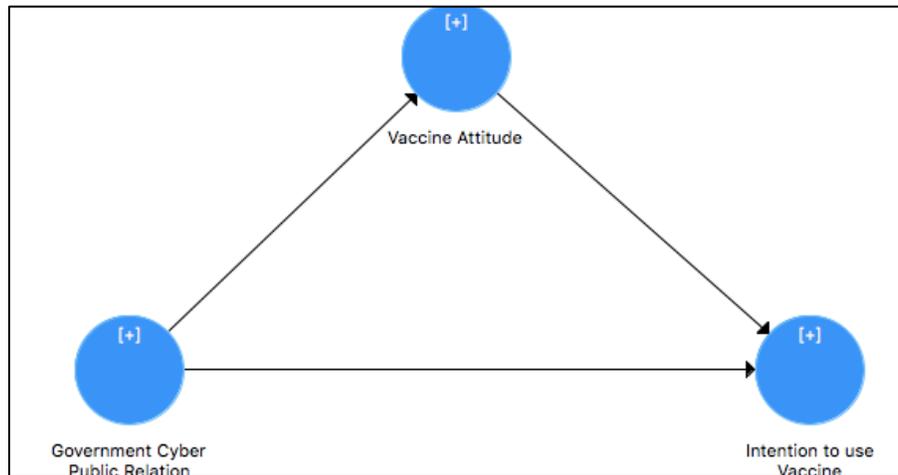


Figure. 1. Research model of the study

3. Methodology

The type of research used in this study is descriptive exploratory with a case study method that aims to describe and determine the effect of Government Public Relations toward COVID-19 exposure on attitudes and intentions to use vaccines. The object of this research is one of the variables, namely the vaccine intention variable with as an independent variable with two dependent variables namely GPNS and vaccine attitude. To measure Government Public Relations toward COVID-19 using a frequency from 0 to more than 7 times and a duration from 0 to more than 60 minutes, meanwhile to measure vaccination intention, we asked participants to state how likely they would be to have a COVID-19 vaccination “when a coronavirus vaccination becomes available to [them]” on an eleven-point scale from “extremely unlikely” (0) to “extremely likely” (10) (Bish et al., 2011; Sherman et al., 2021). Table 1 describes the construct and reference research.

Table 1. Construct and reference research

Construct	Reference
Exposure Government Cyber Public Relations	(Yas et al., 2021; Hossain, 2019; Barrera Verdugo et al., 2021; Jayawinangun et al., 2020)
Attitude Vaccine (AV)	(Sherman et al., 2021)
Intention Vaccine (IV)	(Bish et al., 2011; Sherman et al., 2021)

To approve the proposed conceptual framework and examine the proposed research hypotheses; a questionnaire was developed and administered through the internet to collect required data from people in Bogor, Indonesia. Quota sampling was used, based on region, to ensure that the sample was broadly representative of the Bogor general population. The population in this study is the people of Bogor City, it is known that the population in Bogor City is 1,096,828 people (BPS, 2019), we uses an error of 7%. Calculation of the number of samples using the Slovin formula is 151, 206 completed it (136% completion rate). Table 2 describes the Distribution sample by region.

Table 2. Distribution of the sample

No.	District	Population	Percentage (%)	Target Sample	Collected
1	South Bogor	203.869	19%	28	34
2	East Bogor	107.259	10%	15	27
3	North Bogor	199.200	18%	27	31
4	Central Bogor	104.947	10%	14	23
5	West Bogor	243.293	22%	34	50

6	Tanah Sareal	238.260	22%	33	41
Total		1.096.828	100%	151	206

The data collected in this study will be processed and analyzed with the following procedure:

1. Descriptive statistical analysis is used to analyze the data by describing the data that has been collected which aims to provide an overview or describe the data (Ghozali, 2012). In this study, descriptive analysis was used to describe the exposure (frequency and duration) Government cyber public relations variables, public attitudes and intentions in using vaccines.
2. Structural Equation Model. Analysis of the data used is to explain the influence of cyber public relations on attitudes and intentions to use vaccines, namely Partial Least Square (PLS).

4. Analysis and Discussion

Based on figure 1. It can be seen from 206 respondents, Regarding knowledge about Government Public Relations toward COVID-19, it is known that more than 50% of respondents know about the BNPB website and Instagram, while less than 50% of respondents know about Twitter and Facebook. Meanwhile, to access, only websites are accessed by more than 50% while the rest, namely social media and applications, are accessed by less than 50% of respondents. Based on the frequency of access, it is known that most respondents only access government cyber public relations once, whether it's the website, social media and also applications. The interesting thing is that for websites, Twitter and Facebook, more than 10 percent of respondents visited more than 7 times (Table 2). Based on the duration, it is known that the most frequently used duration is less than 10 minutes, only websites and Facebook access more than 40 minutes by 2 percent of respondents (Table 3).

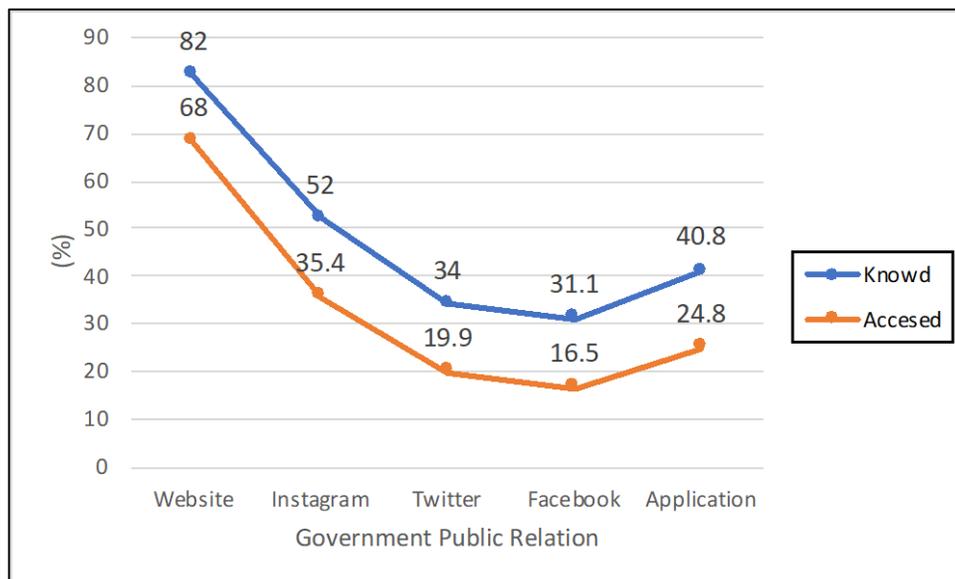


Figure 1. Knowd dan Accesed Government Cyber Public Relations toward COVID-19

Table 2. Frequency of Cyber Public Relation toward COVID-19 access

Government Cyber Public Relation toward COVID-19	Frequency of access (%)							
	1	2	3	4	5	6	7	> 7
Website	34.7	20.1	16.0	3.5	4.2	6.3	1.4	13.9
Instagram	45.5	23.4	10.4	1.3	2.6	3.9	3.9	9.1
Twitter	68.1	2.1	17.0		2.1			10.6
Facebook	65.8	5.3	10.5	5.3				13.2
Application Bersatu Lawan Covid	56.1	17.5	5.3	5.3	7.0		3.5	5.3

Table 3. Duration of Cyber Public Relation toward COVID-19 access

Government Cyber Public Relation toward COVID-19	Duration of access (minute)					
	<10	>10-20	>20-30	>30-40	>40-50	>50-60
Website	84.9	10.3	2.7	2.7	1.4	0.7
Instagram	84.4	9.1	5.2		1.3	
Twitter	82.6	17.4				
Facebook	81.4	9.3	7.0		2.3	
Application Bersatu Lawan Covid	84.2	10.5	1.8	1.8	1.8	

The SmartPLS was used to analyze data and assess the hypothesized paths. For this purpose, measurement and structural models were used (Hair et al., 2019). To assess reflective measurement model, confirmatory factor analysis was performed in SmartPLS 3.2.9. The reliability of the measures was assessed using “composite reliability (CR)” and “Cronbach's α ” following the guidelines of Henseler, Ringle, and Sarstedt (2015). Table 4 depicts the reliability of all the reflective measures based on the values of CR and “Cronbach's α ” (≥ 0.70). “Convergent and discriminant validity” was also assessed. Recommendation factor loading of 0.7 - 0.9, in this study using > 0.6 with considered the indicator leads to an increase in the composite reliability (Hair, 2014). Indicators used as many as 12 of the total 26 indicators as a whole because the loading value is less than 0.6. Also, for all the study variables, the “Average Variance Extracted” AVE of the latent constructs was ≥ 0.50 ; therefore, “convergent validity” was established (Hair et al., 2019). VIF value test is used before structural measurement, VIF value in this test is less than 3 so it is certain that the regression results are not biased (Table 8).

Table 4. Factor loading, Cronbach's Alpha, Composite Reliability (CR), Average Variance Extracted (AVE)

Constructs	Indicators	Code	Loading	Cronbach's Alpha	CR	AVE
Government Cyber Public Relation	D website	D website	0.838	0.738	0.848	0.656
	F Instagram	F Instagram	0.639			
	F website	F website	0.926			
Vaccine Attitude	Without the corona virus vaccination, I will most likely catch the corona virus	att_vac1	0.731	0.919	0.938	0.717
	If I am recommended for vaccination by Friends or family, then I will be vaccinated	att_vac10	0.900			
	Vaccinations allow us to return to "normal"	att_vac11	0.760			
	In general, Vaccination is a good thing	att_vac3	0.867			
	If I am recommended for vaccination by the Government, then I will be vaccinated	att_vac8	0.925			
	If I am recommended for vaccination by a Health Professional, then I will be vaccinated	att_vac9	0.880			
Intention to use Vaccine	When vaccinations are available to you, how likely are you to get them	Intention_vaccine1	0.861	0.795	0.878	0.707
	I believe that I will get a vaccine ration from the government	Intention_vaccine2	0.807			
	I will do anything to get vaccinated	Intention_vaccine4	0.853			

Table 5. Fornell-Larcker Criterion

Construct	Vaccine Attitude	Government Cyber Public Relation	Intention Vaccine
Attitude Vaccine	0.847		
Government Cyber Public Relation	0.233	0.810	
Intention to use Vaccine	0.729	0.243	0.841

Table 6. Cross Loadings

Indicators	Attitude Vaccine	Government Cyber Public Relation	Intention Vaccine
D_website	0.179	0.838	0.209
F_Instagram	0.134	0.639	0.091
F_website	0.235	0.926	0.251
Intention_vaccine1	0.679	0.208	0.861
Intention_vaccine2	0.489	0.174	0.807
Intention_vaccine4	0.643	0.225	0.853
att_vac1	0.731	0.049	0.549
att_vac10	0.900	0.245	0.630
att_vac11	0.760	0.281	0.512
att_vac3	0.867	0.231	0.660
att_vac8	0.925	0.200	0.674
att_vac9	0.880	0.163	0.663

Table 7. Outer VIF Values

	VIF
D_website	1.718
F_Instagram	1.346
F_website	2.100
Intention_vaccine1	1.681
Intention_vaccine2	1.676
Intention_vaccine4	1.692
att_vac1	1.724
att_vac10	2.934
att_vac11	1.866
att_vac3	2.823
att_vac8	2.360
att_vac9	2.478

The structural model results are displayed in Fig. 2. Overall, the independent variables explained 52.7% variance in intention to use vaccine included in the moderate category and 5.4% variance in vaccine attitude included in the weak category. Detail statistics of structural model testing are given in Table 9. The results show government cyber public relations ($\beta = 0.23$, $p < 0.01$) had a positive significant relation with attitude vaccine. Further, government cyber public relations ($\beta = 0.07$, $p = 0.126$) and vaccine attitude ($\beta = 0.71$, $p < 0.01$) significantly related with intention to use vaccine. However, no significant relation was found between government cyber public relations and intention to use vaccine ($\beta = 0.07$, $p = 0.126$).

The results from the study show that out of five types of government cyber public relations sources, only website and Instagram (H1) has significant effects to vaccine attitude. A possible explanation for this is that the public can find more information on posts related to COVID-19 from these two media. In addition, the short duration of accessing Facebook and Twitter may also cause this social media to become unavailable. The website as a medium can provide various kinds of information such as news, the spread of COVID-19, regulations, education, questions and answers, important information and examples of hoaxes, where the media with the closest content is Instagram. However, no significant relation was found between government cyber public relations and intention to use vaccine (H2). These results are also supported by previous studies (Mir et al., 2021; Allington et al., 2021). In this behavioral order, it may be due to low trust in the government so that government cyber public relations has not been able to encourage people to intend to use vaccines, where Indonesia government is still at a low point on transparency of trust in COVID-19 information (Pramiyanti et al., 2020; Amin et al., 2020; Yusnaidi et al., 2020). An alternative to the government cyber public relations can be considered the TikTok application to promote citizen involvement and accelerate the dissemination of health information (Chen et al., 2021). Hence the need for public health campaigns that focus on education and increasing trust with content about the safety, efficacy, and side effects profile of vaccines, the importance of adhering to social distancing guidelines, and providing clear information about the virus and the disease itself (Paul et al., 2021). This also proves that the uses and gratifications theory plays, where other sources of information including media are chosen by the user according to their wishes. The government can use professional health workers and community leaders as disseminators of information, which is one indicator that reflects the attitude of COVID-19 (Paul et al., 2021).

Another finding is that vaccine attitude significantly relates to intention to use vaccine constructs (H3). Planned behavior theory explains whether or not a person will adhere to a particular behavior dependent on three major factors: general attitudes toward vaccination and the COVID-19 vaccine in particular, the attitudes of ‘significant others’ toward the vaccine, and the perceived behavioral control (Ajzen, 1991). In this study, it is more specific to general attitudes toward vaccination. Furthermore, feeling that they will be infected with COVID-19 without a vaccine, will carry out vaccines with recommendations from the government, friends, family, health workers are indicator that reflect the construct. These results are supported by previous research, where a positive attitude towards vaccines has a positive impact on vaccination intentions (Sherman et al., 2021; Chu et al., 2021)

Table 9. Hypothesis testing results

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
Government Cyber Public Relation → Attitude Vaccine	0.233	0.054	4.348	0.000	Supported
Government Cyber Public Relation → Intention to use Vaccine	0.078	0.051	1.530	0.126	Not Supported
Attitude Vaccine → Intention to use Vaccine	0.711	0.040	17.942	0.000	Supported

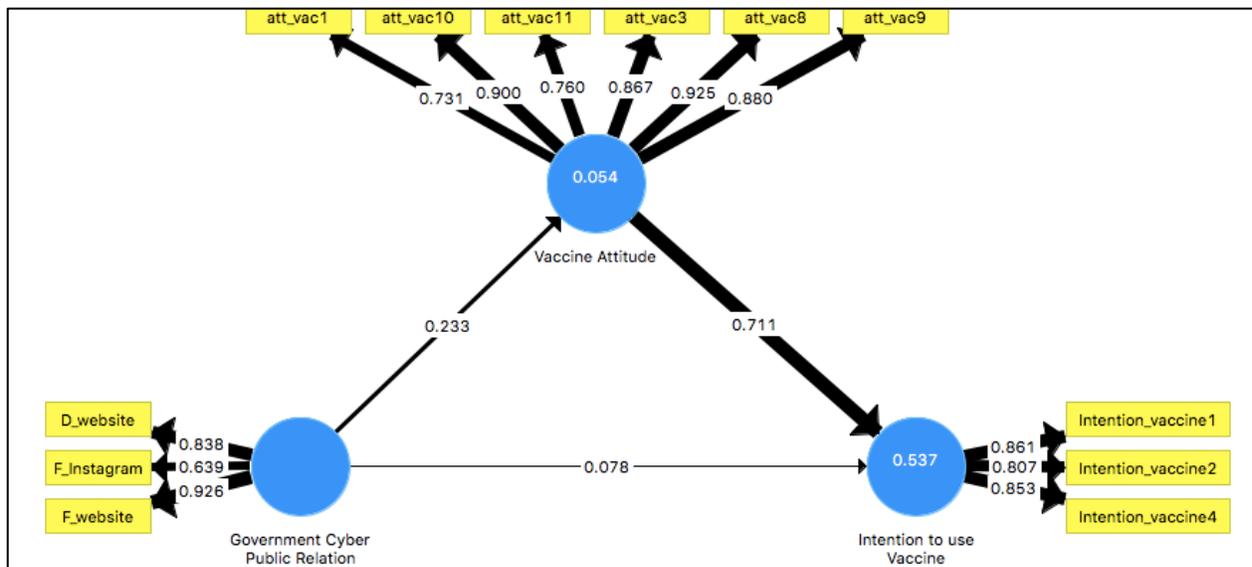


Figure 2. Full Measurement Model describing the value (impact measure) and factor load of all items of each study construct

5. Conclusion

Based on the research results, it can be concluded that level of knowledge and also access to government cyber public relations sequentially are website, instagram, application, twitter and facebook. In general, the frequency of government cyber public relations access is 1-2 times with a duration of less than 10 minutes. Indicators that reflect government cyber public relations are websites and instagram, while indicators that reflect vaccine attitudes include feeling that they will be infected with COVID-19 without a vaccine, will carry out vaccines with recommendations from the government, friends, family, health workers. Meanwhile, indicators that reflect vaccine intentions are the desire for vaccines and also related to vaccine rations from the government.

While the extant literature has examined the uses and gratifications on users, our study is among the earliest to explore uses with Government Cyber Public Relations. We find that Government Cyber Public Relations are important source would be beneficial to improve vaccine intention but cannot encourage people to intend to use vaccines. Our study also used the TPB to measure attitudes and intentions to use the vaccine. We find that vaccine attitude can improve people to intend to use vaccines.

The limitations of this study include only looking at GNPR, not seeing other sources (Farooq et al., 2021) and also with exposure indicators, not covering content (Chen et al., 2021). From the theoretical scope, it also only discusses attitudes, not yet perceived benefits, risk perception, social norms and trust which can influence intentions in the TPB framework (Mir et al., 2021).

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