

Analysis of Behavioral Intention of Health Protocol Discipline During The Covid-19 Pandemic Using Theory of Planned Behavior (TPB) and Health Belief Model (HBM)

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Abstract

This study aims to determine the effect of subjective norm, attitude toward behavior, perceived behavioral control, perceived susceptibility, perceived severity, and perceived benefit on the intention to discipline health protocols in Indonesia during the COVID-19 pandemic. The combination of variables analyzed in this study has never been studied before. The population of this study is the Indonesian sampled 241 respondents with non-probability sampling technique and using a purposive sampling method. Data were collected using a questionnaire with a five-level Likert scale. This research uses multiple linear regression analysis methods with SPSS software. The results showed that the variables attitude toward behavior, subjective norm, perceived behavioral control, perceived susceptibility, perceived severity, and perceived benefit had a significant effect on the disciplinary intention of health protocols in Indonesia during the COVID-19 pandemic.

Keywords

the intention of health protocols; subjective norm; attitude toward behavior; perceived behavioral control; perceived susceptibility; perceived severity; perceived benefit

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Introduction

Attention to health protocols during the Corona Virus Disease 2019 (Covid-19) pandemic is one of the effective efforts to avoid being infected with the virus before a vaccine is found (Di Gennaro et al., 2020). In less than a year, the number of Indonesians who have been infected with Covid-19 has reached more than one million people. Not only in Indonesia even people all over the world have also been infected in a fast time (Li et al., 2020), so the WHO (World Health Organization) has declared Covid-19 as a pandemic and

imposed a global health emergency and, called for action to break the chain of transmission globally.

The health protocols set by the government have been disseminated to the public through various approaches and marketing communication channels. The media used by the government in the health protocol campaign include television, social media, newspapers, and various other offline media carried out by the central government to the lowest level, namely the village government. However, until July 2021, the

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number of cases infected with Covid-19 continues to increase, reaching more than 50,000 cases per day (databoks, 2021). This is suspected to be due to the community's indiscipline in implementing health protocols, especially wearing masks, washing hands, maintaining distance, and no crowding.

The Indonesian government finally responded to the WHO's call to prevent the spread of this virus by stipulating Presidential Decree No. 12 of 2020 concerning the Designation of Non-Natural Disasters for the Spread of Corona Virus Disease 2019 (Covid-19) as a national disaster on April 13, 2020. The determination of this pandemic brings consequences for the emergence of emotions such as anxiety, depression, anger, and increased sensitivity to social risks. In addition, positive emotions such as happiness and life satisfaction decreased, due to concerns about health conditions (Li et al., 2020).

The Indonesian government has established health protocols during this pandemic period, namely: first, wearing a mask, second, covering your mouth when coughing and sneezing in a crowd, third, getting enough rest if your body temperature is 38°C or more and coughing and runny nose, fourth, prohibition of using public transportation for people who are sick, fifth, if there are people who meet the criteria for suspicion, they will be referred to a Covid hospital or isolated (Kantor Staf Presiden, 2020). Face masks are a form of personal protection during a pandemic. This statement has also been strengthened by the World Health Organization (WHO) through a provisional guide announced on April 6, 2020, regarding the recommendation to wear masks (World Health Organization, 2020).

The government's efforts to build public awareness of implementing health protocols have been carried out through various approaches to public service advertisements (PSA) with a social marketing approach. This approach is expected to be able to provide information slowly, in detail and provide an understanding according to the objectives of the PSA campaign (Rahmi & Laksmi, 2019). PSAs can also convey information or advice on certain health or social issues, as well as a form of promotion of activities that serve the wider community

(Ti et al., 2017). This step is considered effective in changing people's behavior (Cho et al., 2017).

The lack of awareness in implementing health protocols followed by an increasing number of people who are confirmed to be Covid-19 indicates the ineffectiveness of social advertisements or public service advertisements carried out by the government in shaping the behavior of implementing health protocols. According to (Ajzen, 1991) in shaping social behavior, there are several variables that influence, among others, (1) attitudes toward behavior, (2) subjective norms, and (3) perceived behavior control). The Theory of Planned Behavior (TPB) has been widely applied to various fields of behavioral research, including changes in social behavior caused by public service advertisements. In addition, the theory that can be used to predict health-related behavior is the Health Belief Model (HBM) theory which includes perceived susceptibility, namely the assumption that there is a threat of disease that can befall a person, perceived severity, which is a consideration of the seriousness of a disease threat, and perceived benefit, namely the assumption of benefits obtained if you avoid a disease (Rosenstock, 1974).

This study aims to examine the influence of subjective norm, attitude toward behavior, perceived behavior control, perceived susceptibility, perceived severity, perceived benefit, on the implementation of health protocols that have been advertised by the government through public service advertisements in Indonesia.

Literature Review

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) is a development of The Theory of Reasoned Action (TRA). TRA proves that the intention to perform certain actions is caused by two reasons, namely attitudes towards behavior and subjective norms (Fishbein & Ajzen, 1975).

Ajzen (Ajzen, 1991) then added one factor, namely the perception of individual behavior control or perceived behavioral control. The addition of the behavioral control perception factor changed TRA into TPB. According to TPB, behavioral intention shows whether or not the intention

is strong and how big a person's intention is to behave (Ajzen, 1991; Ling et al., 2011; Liu et al., 2018).

Subjective Norm

Subjective norm (subjective norm) is related to the influence or perceived social pressure to indulge or not indulge in certain behaviors (Ajzen, 1991) and is a social pressure to show a particular behavior. Subjective norms are benefits that have a basis for belief (belief) called normative belief (Ajzen, 2005), so this norm can be said as individual beliefs about how they will be viewed by their reference group if they do or do not perform a certain behavior. The important social influence of some behaviors stems from family, life partners, relatives, colleagues at work, and other references related to behavior (Ajzen, 2005) or people in the environment. In this study, subjective norms are defined as a person's perception of the expectations of people in the surrounding environment (reference group) who expect someone to follow the health protocols set by the government during the Covid-19 pandemic.

Expectations and pressures of groups or communities tend to make a person perform certain behaviors (Armitage & Conner, 2010). As with the attitude factor towards behavior, empirical studies have shown a positive relationship between subjective norms and a person's intention to perform certain behaviors including those related to health (Close et al., 2018; Fung et al., 2018; Ates, 2019). During the Covid-19 pandemic, subjective norms that apply to a person's environment tend to make them have the intention of carrying out the government's appeal delivered through public service advertisements to implement health protocols.

Attitude toward Behavior

Attitude according to Ajzen (Ajzen, 2002) is an internal state that influences the choice of individual actions towards certain objects, people, or events. Attitude is a learned cognitive, affective, and behavioral tendency to respond positively or negatively to objects, situations, institutions, concepts, or people.

Attitude indicates the extent to which a behavior is perceived as positive or negative by a person and is a combination of a person's beliefs and values assigned as a result of a particular behavior. (Ajzen,

1991) explained in Theory of Planned Behavior (TPB) that a person's attitude towards a certain behavior shows his intention to show that behavior as one's attitude towards the behavior of carrying out health protocols during the Covid-19 Pandemic as advertised by the government.

In relation to health, various studies that have been conducted have shown that attitudes towards behavior have a positive effect on intentions to behave related to health health (Close et al., 2018; Fung et al., 2018; Ates, 2019). In the context of the Covid-19 pandemic, someone who has a positive attitude towards the government's appeal conveyed through public service advertisements to implement health protocols will have a greater intention to implement them.

Perceived Behavioral Control

In the TPB model, perceived behavioral control refers to a person's perception of the difficulty of carrying out the desired action, related to the belief that the resources and opportunities needed to realize certain behaviors will be available or not (Ajzen, 2005). Perceived behavioral control describes the individual's feeling of self-efficacy in performing certain behaviors. Perceived behavioral control refers to the perceived ease or difficulty in carrying out the behavior and the amount of control a person has over achieving the goals of the behavior (Teo & Lee, 2010).

Empirical studies have proven that the perceived behavioral control can influence behavior directly or indirectly through intentions (Achmat, 2010), including those carried out in the health sector health (Close et al., 2018; Fung et al., 2018; Ates, 2019). During the Covid-19 pandemic, a person's perceived behavioral control tends to make him have the intention of carrying out the government's appeal delivered through public service advertisements to implement health protocols.

Health Belief Model

The HBM theory approach focuses on a person's perception of prevention efforts with behavioral enhancement. A person's perception of a behavior includes: a person's perception of the risk of contracting a disease (perceived susceptibility), a person's perception of the seriousness of a disease, both medical and social, such as death, being ostracized from friends and

family (Perceived severity), positive perceptions of preventive behavior (perceived benefits), negative perceptions of preventive behavior (perceived barriers) and perceptions of one's own ability to perform preventive behavior (perceived self-efficacy) (Rosenstock, 1974; Marriner and Allgood, 2006).

Perceived Susceptibility

Perception of susceptibility describes the perceived susceptibility when under certain environmental conditions, at all ages and all people, and susceptibility when not taking protective measures (Rosenstock, 1974). The perceived susceptibility of a person is a person's subjective assessment of the possibility of being infected with a disease or various health problems (Orji et al., 2012). Previous studies have proven that along with an increasing sense of susceptibility and seriousness, efforts to prevent the spread of disease also tend to increase (Orji et al., 2012; Vazini & Barati, 2015). delivered through public service advertisements.

Perceived Severity of Threats

Perceived severity is the level of seriousness of contracting a disease if left untreated (including evaluation of the medical, clinical, and social consequences that may arise (Rosenstock, 1974). Social consequences can be in the form of moral, religious, societal norms, financial, and others. The seriousness of a threat is a person's perceived severity as a consequence of a particular health condition (Li & Wang, 2021; Orji et al., 2012).

The Health Belief Model (HBM) states that the seriousness of the threat perceived by a person can predict health-related behavior (Orji et al., 2012). If the consequences of contracting a disease are felt by someone big, it will encourage someone to try to avoid it. In other words, the more severe the consequences of contracting a disease, the more it will encourage someone to avoid it. In this study, the perception of the seriousness of the threat of Covid-19 infection will encourage someone to carry out the health protocols that have been conveyed by the government through public service advertisements.

Perceived Benefits

The perceived benefits factor is an individual's belief that if he changes his behavior in a better direction, it will be

beneficial to reduce the risk of disease. A person will adopt a new behavior if the behavior can avoid the risk of getting disease (Rosenstock, 1974). An individual who is willing to change his behavior by implementing health protocols such as wearing a mask, washing hands, and keeping a distance will benefit from avoiding Covid-19.

The HBM theory states that a person tends to adopt actions to overcome obstacles or risks. Someone will tend to act or do something because of the hope of getting benefits can avoid disease. Or it can reduce the susceptibility to contracting a disease that has severe consequences (Jerrald et al., 2020; Glanz et al., 2008).

Methods

This study used an explanatory research method that intends to explain the position of the variables studied and the influence between one variable and another. The approach used in this research is quantitative, which is research conducted to obtain facts about the phenomena that exist in the object of research and seek actual and systematic information or research that involves the use of structured questions and statements in which the answer choices have been predetermined and involves a large number of respondents.

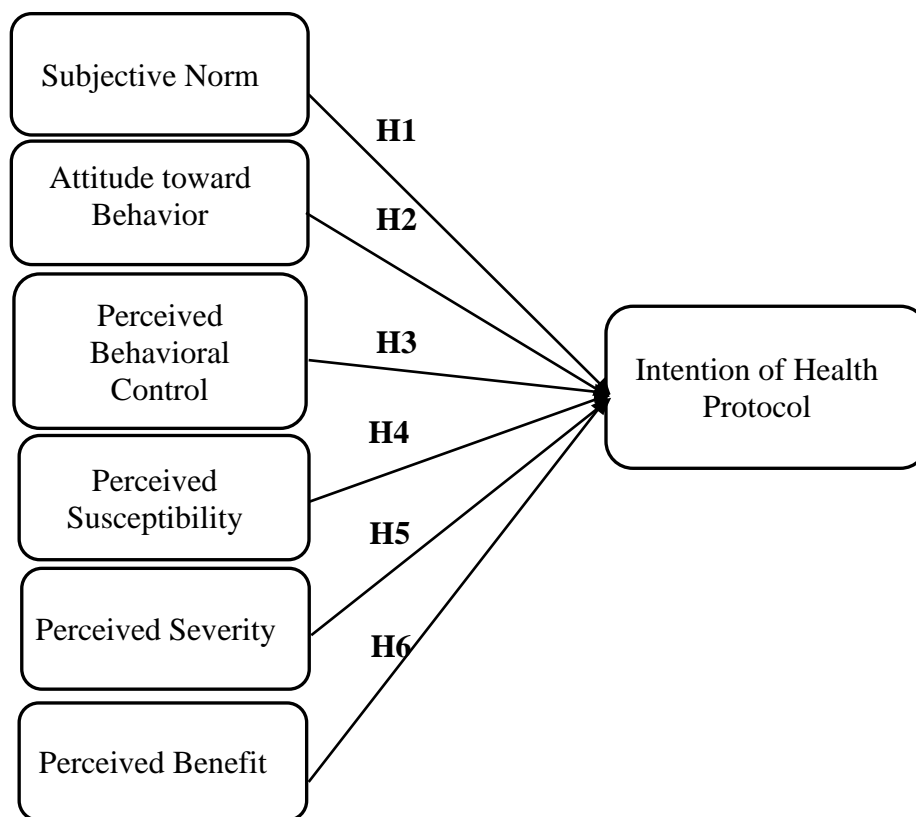
The population in this study were Indonesians who had seen public service advertisements about health protocols. The number of people who have seen public service advertisements about health protocols is not known with certainty (infinite population) so that the sampling technique used in this study is non-probability sampling with the purposive sampling method. The criteria used are that the respondent is at least 17 years old and has seen public service advertisements about health protocols. The data were collected through a questionnaire with a total of 241 respondents. This research uses multiple linear regression analysis methods with SPSS software.

To measure the respondent's perception of the phenomenon in this research variable using a Likert Scale. The variables in this study will be measured and translated into indicators. The indicators were used as a

starting point for compiling items in the form of statements. On the Likert Scale using five levels of answers from very

negative (strongly disagree) to very positive (strongly agree) in the form of statements with a score scale of 1 to 5.

Figure 1. Research Model



Result and Discussion

Demographic of Respondent

Based on the results of descriptive analysis, from 241 respondents, 27.8% of respondents were male and 72.2% of respondents were female. Based on age, 27.4% of respondents were aged less than

or equal to 20 years and aged 21-30 years. Then the respondents aged 31-40 years were 32.4% and the other 10.0% were 41-50 years old. While the rest are more than 50 years old with a percentage of 2.9%. Meanwhile, by province, the majority of respondents came from East Java (70.1%) followed by West Java (7.5%), DKI Jakarta (5.4%) and the rest spread over 14 other provinces (Table 2).

Table 1. Respondent's Gender, Age, and Education

Classification	Information	Amount
Gender	Male	27.8%
	Female	72.2%
Age	≤ 20	27.4%
	21 – 30	27.4%
	31 – 40	32.4%
	41 – 50	10.0%
	> 50	2.9%
Level of Education	High School	44.4%
	Diploma	4.1%
	Bachelor	29.0%
	Master/Doctor	22.0%
	No Answer	0.4%

Table 2. Respondent's Province of Origin

Province	Frequency	Percentage
Aceh	1	0.4%
Bali	8	3.3%
Banten	4	1.7%
D. I. Yogyakarta	2	0.8%
DKI Jakarta	13	5.4%
West Java	18	7.5%
Central Java	9	3.7%
East Java	169	70.1%
South Kalimantan	1	0.4%
East Kalimantan	2	0.8%
Lampung	1	0.4%
NTB	1	0.4%
Riau	5	2.1%
South Sulawesi	2	0.8%
West Sumatera	2	0.8%
South Sumatera	1	0.4%
North Sumatera	2	0.8%
Total	241	100.0%

Validity and Reliability Test

A validity test is a process to determine the accuracy or accuracy of an instrument in measurement. The measurement is said to be valid if the significance value is less than 0.05 and the r count $>$ r table. With the number of respondents as many as 241, then the value of the r table is 0.13. The test results show that all research instruments can be used to measure a variable. This test

is carried out on all questions to determine the reliability or consistency. If Cronbach's alpha (α) is greater than 0.70 then the research data is considered very good and reliable to be used as input in the process of analyzing the data. Cronbach's alpha value of all tested variables has a value greater than 0.7. This value indicates that all variables in this study are reliable and can be used as input in the data analysis process.

Descriptive Analysis of Research Variables

This section describes the frequency distribution of respondents' answers on 7 variables: X1 (subjective norm), X2

(attitudes towards behavior), X3 (perceived behavioral control), X4 (perceived susceptibility), X5 (perceived severity), X6 (perceived benefit), and Y (intention of health protocol) as a whole obtained through a questionnaire.

Table 3. Average Respondents' Answers on Variables

No	Variable	Mean
1	Subjective norm (X1)	4.422
2	Attitude toward behavior (X2)	4.537
3	Perceived behavioral control (X3)	4.124
4	Perceived susceptibility (X4)	3.411
5	Perceived severity (X5)	4.142
6	Perceived benefit (X6)	4.321
7	The intention of health protocol (Y)	4.581

To determine the effect of the independent variables (X1 (subjective norms), X2 (attitudes towards behavior), X3 (perceived behavioral control), X4 (perceived susceptibility), X5 (perceived severity), and X6 (perceived benefits) on the dependent variable Y (intention of health protocol discipline) using regression analysis. In

processing data using multiple linear regression analysis, several stages were carried out to find the effect of the independent variable on the dependent. Based on the results of data processing using SPSS 24 software, a summary is obtained as follows:

Table 4. Multiple Linear Regression Test Summary

Variables	B	t-value	p-value	Inf
Constant	5.040			
X1 (Subjective norm)	0.166	4.549	0.000	Sig
X2 (Attitude toward behavior)	0.139	3.335	0.001	Sig
X3 (Perceived behavioral control)	0.090	2.389	0.018	Sig
X4 (Perceived susceptibility)	0.058	2.320	0.021	Sig
X5 (Perceived severity)	0.072	2.351	0.020	Sig
X6 (Perceived benefit)	0.052	3.383	0.001	Sig
α	= 0.050			
Determination Coefficient (R^2)	= 0.572			
F-count	= 52.037			
F-table ($F_{6,234,0.05}$)	= 2.137			
p-value F	= 0.000			
t-table ($t_{234,0.05}$)	= 1.970			

Based on the table above, the regression model is obtained as follows:
 $Y = 5.040 + 0.166X_1 + 0.139X_2 + 0.090X_3 + 0.058X_4 + 0.072X_5 + 0.052X_6 + e_i$

F Test (Simultaneous Test or Effect Together)

Simultaneous testing was conducted to show whether all the variables used in the regression model had a significant effect on the Y variable (intention of health protocol).

The hypothesis used in testing the coefficients of the regression model simultaneously is as follows:

H0: there is an insignificant effect between the independent variables on the dependent variable

H1: there is a significant effect between the independent variables on the dependent variable.

The decision-making criteria are as follows:
H0 is rejected if $F_{\text{count}} > F_{\text{table}}$, or $p\text{-value} < \alpha$

H0 is accepted if $F_{\text{count}} < F_{\text{table}}$, or $p\text{-value} > \alpha$

Based on the table above, it can be seen that the calculated F value is greater than the F table ($52.037 > 2.137$) and has a p-value smaller than ($0.000 < 0.050$), so H0 is rejected. It means that simultaneously, the independent variables are X1 (subjective norm), X2 (attitudes towards behavior), X3 (perceived behavioral control), X4 (perceived susceptibility), X5 (perceived severity), X6 (perceived benefit) has a significant effect on the Y variable (intention of health protocol).

t-test (Partial Test/Influence of Each)

Partial regression model testing is used to determine whether each independent variable forming the regression model individually has a significant effect on the dependent variable. With the following hypothesis:

H0: There is no significant effect between each independent variable on the dependent variable.

H1: There is a significant effect between each independent variable on the dependent variable.

Decision-making:

H0 is rejected if $|t_{\text{count}}| > t_{\text{table}}$, or $p\text{-value} < \alpha$

H0 is accepted if $|t_{\text{count}}| < t_{\text{table}}$, or $p\text{-value} > \alpha$

Based on table above, the following results are obtained:

The subjective norm has a positive and significant effect on variable Y (Intention to of Health Protocol). It can be seen from the t-test statistics with $|t_{\text{count}}|$ is greater than t table ($4.549 > 1.970$) and the p-value t is smaller than ($0.000 < 0.050$). This test shows the decision that H0 is rejected. A positive coefficient indicates that an increase in the X1 variable (subjective

norm) can significantly increase the Y variable (intention of health protocol).

The test results on the subjective norm variable confirm that a person's perception of his community has an important influence on a person in doing or not doing something. In this context, it can be concluded that the pressure or expectation of a person in a community group will encourage someone to carry out the government's appeal in the form of a health protocol. These results support research conducted by Adiyoso and Wilopo (2021) which states that subjective norms affect a person in doing social distancing. In other cases, subjective norms are also widely used to predict a person's behavior in doing something community-based (Russo et al, 2015; Igwe et al, 2020).

Attitude towards behavior has a positive and significant effect on variable Y (intention of health protocol). It can be seen from the t-test statistics with $|t_{\text{count}}|$ is greater than t table ($3.335 > 1.970$) and the p-value t is smaller than ($0.001 < 0.050$). This test shows the decision that H0 is rejected. A positive coefficient indicates that an increase in the X2 variable (Attitudes towards Behavior) can significantly increase the Y variable (intention of health protocol).

Public attention in carrying out health protocols is also significantly influenced by the attitude towards behavior that a person has. Attitudes that are cognitive, affective, and behavioral tendencies to respond positively or negatively to objects, situations, institutions, concepts, or people are aspects that need to be considered by the government in building public awareness to implement health protocols. The implementation of this health protocol is beneficial for the community to avoid COVID-19. In this health-related discussion, various studies have been carried out and show that attitudes towards behavior have a positive effect on intentions to behave related to health (Close et al, 2018; Fung et al, 2018). From the test

results on this variable, it shows that in addition to paying attention to community pressure, public service advertisements need to pay attention to individual internal aspects (attitudes) to be effective in campaigning for the importance of implementing health protocols in interacting with many people.

Perceived of behavioral control) has a positive and significant effect on variable Y (intention of health protocol). It can be seen from the t-test statistics with $|t \text{ count}|$ is greater than t table ($2.389 > 1.970$) and the p-value t is smaller than ($0.018 < 0.050$). This test shows the decision that H_0 is rejected. A positive coefficient indicates that an increase in the X3 variable (perceived of behavioral control) can significantly increase the Y variable (intention of health protocol).

As one aspect that is considered in the TPB, perceived behavioral control which is a person's perception of the difficulty of carrying out the desired action related to the beliefs one has an effect on the intention of health protocol. Although the perceived behavioral control variable contributes a not too large influence from other variables, in many studies this variable is able to influence a person to take or not to take certain actions as has been done by Bin-Nashwan et al, (2021) where Perceived behavioral control affects the behavior of zakat compliance (Islamic tax) on entrepreneurs in Yemen. In addition, Schlaegel & Koenig, (2014); Haus et al, (2013) and Sitaridis & Kitsios (2019) also prove that perceived behavioral control is able to predict its effect on one's entrepreneurial intentions.

Perceived of susceptibility has a positive and significant effect on variable Y (intention of health protocol). It can be seen from the t-test statistics with $|t \text{ count}|$ is greater than t table ($2.320 > 1.970$) and the p-value t is smaller than ($0.021 < 0.050$). This test shows the decision that H_0 is rejected. A positive coefficient indicates that an increase in the X4 variable

(perceived of susceptibility can significantly increase the Y variable (intention of health protocol).

Perceived susceptibility is the variable with the least effect on the intention of health protocol. This can be caused by the fact that most of the respondents are relatively young, so they feel more secure against the dangers of COVID-19. In several previous studies, this variable has a significant influence on the intention to take various actions that lead to health so that this variable is often used for health promotion. Several previous studies have shown that perceived susceptibility can predict a person's intention to take health actions such as those carried out by Babazadeh et al, (2020) and Castellini et al, (2020) because of a person's vulnerability. In addition, Graffigna et al, (2020) stated that the perception of vulnerability encourages someone to vaccinate.

The perceived of severity variable has a positive and significant effect on variable Y (intention of health protocol). It can be seen from the t-test statistics with $|t \text{ count}|$ is greater than t table ($2.351 > 1.970$) and the p-value t is smaller than ($0.020 < 0.050$). This test shows the decision that H_0 is rejected. A positive coefficient indicates that an increase in the X5 variable (perceived severity) can significantly increase the Y variable (intention of health protocol).

Another variable in the Health Belief Model (HBM) theory, namely perceived severity also has a large influence on the intention of health protocol. The considerable influence of the perception of seriousness felt if infected with COVID-19 to carry out this health protocol can be caused by the large amount of information received by the public. During the COVID-19 pandemic, there was indeed a lot of information from various media including social media that could shape perceptions of the seriousness of the impact if infected with this virus. So, this variable can affect a person's intention to carry out a health protocol. Li et al (2020)

confirmed that perceived severity has a positive effect on mental health problems that encourage someone to be emotionally disturbed. Rubin & Wessely (2020) stated that the perception of the seriousness of the threat of COVID-19 affects life satisfaction and positive emotions in China.

Variable of perceived benefits has a positive and significant effect on variable Y (intention of health protocol). It can be seen from the t-test statistics with $|t \text{ count}|$ is greater than t table ($3.383 > 1.970$) and the p-value t is smaller than ($0.001 < 0.050$). This test shows the decision that H_0 is rejected. A positive coefficient indicates that an increase in the X6 variable (perceived benefit) can significantly increase the Y variable (intention of health protocol).

In addition to the several perceptions that describe the fear of COVID-19 above, one of the variables in the HBM Theory is the perceived benefit if you are not infected with COVID-19. In general, Indonesian people are motivated to carry out health protocols because they want the benefits of not being infected. The expected benefits of avoiding COVID-19 include a healthy body, a calmer feeling, harmonious interactions in the family, and a happier feeling. The effect of perceived benefits on the intention of health activity is stated by Huang et al (2020) and Cahyanto et al (2016) that a person will maintain his health because he hopes to obtain various benefits.

The results of this study can be used as material for consideration by certain parties such as the government in responding to the pandemic. Experience in dealing with the COVID-19 pandemic in Indonesia is a valuable lesson. The government seems stuttering in responding to the pandemic and has difficulty building public awareness to implement health protocols. As a consequence, positive cases of COVID-19 continue to grow and the death rate is high. Approaches through TPB and HBM to build public awareness such as the results of this study can be used as a reference for

conducting public campaigns so that the government's appeal is effective.

Conclusion

From the results of the above discussion, it can be concluded that subjective norm, attitude towards behavior, perceived behavioral control, perceived susceptibility, perceived severity, and perceived benefits have a significant effect on the intention of health protocol. From these conclusions, it shows that all independent variables that affect the dependent variable significantly are marked by all p-values less than 0.05. These results can be used as a basis for decision-making by the government or other parties in building public awareness for the intention to discipline in implementing health protocols. If the public service advertising approach from the government contains subjective norms, attitude toward behavior, perceived behavior control, perceived susceptibility, perceived severity, and perceived benefits, it will increase public awareness in implementing health protocols. If the health protocols set by the government are implemented by the community, cases infected with COVID-19 will decrease and the death rate can be minimized.

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Notes on Contributors

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References

- Achmat, Z. (2010). Theory of planned behavior, masihkah relevan? http://zakarija.staff.umm.ac.id/download-aspdf/umm_blog_article_112.pdf, diakses 12 Februari 2021
- Adiyoso, W. and Wilopo (2021). Social distancing intentions to reduce the spread of COVID-19: the extended theory of planned behavior. *BMC Public Health* (2021) 21:1836
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50, 179-211.
- Ajzen, I. (2005). *Attitudes, personality, and behavior*: McGraw-Hill Education (UK)
- Ajzen, I. (2006). Constructing a TPB Questionnaire: Conceptual and Methodological Considerations.
- Armitage, C.J & Conner, M. (2001). Efficacy of the theory of planned behavior: a meta analytic review. *British Journal of Social Psychology*. 40. 471-499.
- Ates, H. (2019). Elementary school teachers' behavioral intentions for healthy nutrition: Extending theory of planned behavior. *Health Education*, 119(2), 133–149. <https://doi.org/10.1108/HE-11-2018-0056>
- Babazadeh, T. Nadrian, H. Ranjbaran, S. Rezakhani-Moghaddam, H. & Aghemiri, M. (2020). Cognitive factors associated with brucellosis preventive behaviours among diagnosed patients: An application of empowerment model. *East Mediterr Health J.* 8, 576; doi:10.3390/vaccines8040576
- Bin-Nashwan, S.A, Jabbar, H. A, Dziegielewska, S.F, & Aziz, S.A. (2021). Moderating Effect of Perceived Behavioral Control on Islamic Tax (*Zakah*) Compliance Behavior among Businessmen in Yemen. *Journal of Social Service Research*, 47:2, 292-302, DOI: [10.1080/01488376.2020.1767260](https://doi.org/10.1080/01488376.2020.1767260)
- Cahyanto, I. Wiblishauser, M. Pennington-Gray, L. & Schroeder, A (2016). The dynamics of travel avoidance: The case of ebola in the US. *Tourism Management Perspectives*, 20 (2016), pp. 195-203
- Castellini, G. Savarese, M. Leone, S. Previtali, E. Armuzzi, A. Graffigna, G. (2020). Italian IBD patients coping with Covid-19 emergency: The mitigating role of psychological readiness to engage in self-care. *Inflamm Bowel Dis.* 26(10):e130-e131. doi: 10.1093/ibd/izaa185.
- Cho, K. W., Lee, J., Ryu, J. Hye, & Kim, S. J. (2017). Effects of anti-smoking public service announcements on the attitudes of Korean college students toward smoking. *Osong Public Health and Research Perspectives*, 8(6), 397–404. <https://doi.org/10.24171/j.phrp.2017.8.6.07>
- Close, M. A., Lytle, L. A., Chen, D. G., & Viera, A. J. (2018). Using the theory of planned behavior to explain intention to eat a healthful diet among

- Southeastern United States office workers. *Nutrition and Food Science*, 48(2), 365–374. <https://doi.org/10.1108/NFS-06-2017-0123>
- Databoks (2021). *Bertambah 54,5 Ribu, Kasus Baru Covid-19 Indonesia Tertinggi Kedua di Dunia*. <https://databoks.katadata.co.id/datapublish/2021/07/15/bertambah-545-ribu-kasus-baru-covid-19-indonesia-tertinggi-kedua-di-dunia> (Accessed on Agustus 2021).
- Di Gennaro, F., Pizzol, D., Marotta, C., Antunes, M., Racalbuto, V., Veronese, N., & Smith, L. (2020). Coronavirus diseases (COVID-19) current status and future perspectives: A narrative review. *International Journal of Environmental Research and Public Health*, 17(8). <https://doi.org/10.3390/ijerph17082690>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: an introduction to theory and research*, Reading, MA: Addison-Wesley.
- Fung, T. K. F., Griffin, R. J., & Dunwoody, S. (2018). Testing Links Among Uncertainty, Affect, and Attitude Toward a Health Behavior. *Science Communication*, 40(1), 33–62. <https://doi.org/10.1177/1075547017748947>
- Glanz, K. Rimer, B.K. and Viswanath, K. (2008), *Health behavior and health education: theory, research, and practice*. (pp. 23–40). Jossey-Bass.
- Graffigna, G. Palamenghi, L. Vegni, E. & Bosio, A.C. (2020). Relationship between Citizens' Health Engagement and Intention to Take the COVID-19 Vaccine in Italy: A Mediation Analysis. *Vaccines*, 8(4),576; <https://doi.org/10.3390/vaccines8040576>
- Haus, I., Steinmetz, H., Isidor, R., & Kabst, R. (2013). Gender effects on entrepreneurial intention: A meta-analytical structural equation model. *International Journal of Gender and Entrepreneurship*, 5(2), 130–156. <https://doi.org/10.1108/17566261311328828>.
- Huang, X. Dai, S. & Xu, H. (2020). Predicting tourists' health risk preventative behaviour and travelling satisfaction in Tibet: Combining the theory of planned behaviour and health belief model. *Tourism Management Perspectives*. Volume 33, January 2020, 100589. <https://doi.org/10.1016/j.tmp.2019.100589>
- Igwe, A, Ogbo, A, Agbaeze, E, Abugu, J, Ezenwakwelu, C, and Okwo, H. (2020). Self-efficacy and subjective norms as moderators in the networking competence–social entrepreneurial intentions link. *SAGE Open* July-September 2020: 1–16
- Jerrald L, Tian-Zhi L, Gretel J. W, Ker-Kan T, (2020). The health belief model and colorectal cancer screening in the general population: A systematic review, *Preventive Medicine Reports*, 10.1016/j.pmedr.2020.101223, 20, (101223)
- Kantor Staf Presiden. (2020). Pemerintah Terbitkan Protokol Kesehatan Penanganan COVID-19. Berita KSP. <http://ksp.go.id/index.html>
- Li, J.B, Yang, A. Dou, K. & Cheung, R.Y.M. (2020). Self-control moderates the association between perceived severity of coronavirus disease 2019 (COVID-19) and mental health problems among the chinese public. *International Journal of Environmental Research and Public Health*. 2020, 17, 4820; doi:10.3390/ijerph17134820
- Li M, Wang W. (2021). Educational disparities in covid-19 prevention in china: the role of contextual danger, perceived risk, and interventional context. *Int J Environ Res Public Health*; 18,

- <http://dx.doi.org/10.3390/ijerph18073383>
- Li, S., Wang, Y., Xue, J., Zhao, N., & Zhu, T. (2020). The impact of covid-19 epidemic declaration on psychological consequences: A study on active weibo users. *International Journal of Environmental Research and Public Health*, 17(6). <https://doi.org/10.3390/ijerph17062032>
- Liu, S., Chiang, Y. Te, Tseng, C. C., Ng, E., Yeh, G. L., & Fang, W. T. (2020). The theory of planned behavior to predict protective behavioral intentions against PM2.5 in parents of young children from urban and rural Beijing, China. *International Journal of Environmental Research and Public Health*, 15(10), 1–17. <https://doi.org/10.3390/ijerph15102215>
- Marriner-Tomey, A., & Alligood, M. R. (2006). *Nursing theorists and their work*. 6th ed. St. Louis, Mo.: Mosby/Elsevier.
- Orji, R., Vassileva, J. & Mandryk, R. (2012). Towards An Effective Health Interventions Design: An Extension of The Health Belief Model. *Online Journal Of Public Health Informatics*, 4.
- Rahmi, A. S., & Laksmi. (2019). The organization communication climate at Intan Special Library. *Library Philosophy and Practice*, 2019.
- Rosenstock, I. M. (1974). The health belief model and preventive health behavior. *Health Education Monographs*, 2, 354-386
- Rubin, G. J., & Wessely, S. (2020). The psychological effects of quarantining a city. *BMJ*, 368. <https://doi.org/10.1136/bmj.m3313>
- Russo D.A, Stochl J, Painter M, Shelley GF, Jones PB, Perez J. (2015). Use of the theory of planned behaviour to assess factors influencing the identification of students at clinical high-risk for psychosis in 16+ education. *BMC Health Serv Res*. 15(1). <https://doi.org/10.1186/s12913-015-1074-y>
- Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. <https://doi.org/10.1111/etap.12087>.
- Sitaridis, I., & Kitsios, F. (2019). Entrepreneurship as a career option for information technology students: Critical barriers and the role of motivation. *Journal of the Knowledge Economy*, 10(3), 1133–1167. <https://doi.org/10.1007/s13132-018-0519-z>.
- Teo, T. & Lee, C.B. (2010). Examining the efficacy of the theory of planned behavior (tpb) to understand pre-service teachers intention to use technology, *Proceeding Ascilite Sydney*, Nanyang Technology University, Singapore
- Ti, L., Fast, D., Small, W., & Kerr, T. (2017). Perceptions of a drug prevention public service announcement campaign among street-involved youth in Vancouver, Canada: A qualitative study. *Harm Reduction Journal*, 14(1), 1–9. <https://doi.org/10.1186/s12954-017-0132-7>
- Vazini, H., & Barati, M. (2015). The health belief model and self-care behaviors among type 2 diabetic patients. *Iranian Journal of Diabetes and Obesity*, 6, 107-113.
- Voon, M. L., Lo, M. C., Ngui, K. S. & Ayob, N. B. (2011). The influence of leadership styles on employees' job satisfaction in public sector organizations in Malaysia. *International Journal of Business, Management and Social Sciences*, 2, 24-32.
- World Health Organization. (2020). Anjuran mengenai penggunaan

masker dalam konteks covid. in world health organization (Issue April). <https://www.who.int/docs/default-source/searo/indonesia/covid19/anjuran->

[mengenai-penggunaan-masker-dalam-kontekscovid-19.pdf?sfvrsn=8a209b04_2](#)