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**The Intention of Healthy Behavior During the COVID-19 Pandemic Among Community Members in Indonesia: Applying the Theory of Planned Behavior**

**Heni Trisnowati1, Helfi Agustin2, Safriyani3, Yayi Suryo Prabandari4**

**1Division of Health Promotion, Study Program of Public Health, Faculty of Health Science, Universitas Respati Yogyakarta, 2** **Departement of Public Health, Universitas Ahmad Dahlan (UAD) Yogyakarta Indonesia, 3** **Departement of Public Health, Faculty of Sport Science, Universitas Negeri Manado, Indonesia, 4Department of Health Behavior, Environment and Social Medicine, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada Yogyakarta , Indonesia**

**Abstract**

**Background:** The Coronavirus-2019 (COVID-19) pandemic is a health emergency that has caused a humanitarian crisis in most countries worldwide. The steps to prevent and protect Indonesian community members from COVID-19 are by implementing “Gerakan Masyarakat Hidup Sehat“ or GERMAS (Healthy Living Community Movement). This study describes a healthy behavior Intention among diverse members of the Indonesian community during the COVID-19 based on the theory of planned behavior. Moreover, this study analyzes the relationship between attitude, subjective norms, and perceived control with intention to prevent COVID-19 transmission

**Subjects and Method:** This study used a cross-sectional design with convenient sampling. Data collection was conducted by an online survey and distributed by personal WhatsApp or WhatsApp groups between June 30-July 20, 2020. The number of respondents was 1,611 people from 34 provinces in Indonesia. Data analysis was done by measuring frequency distribution and chi-square tests (p<0.05) with the SPSS-22 program.

**Results:** Most of the respondents have engaged in an intention of healthy behavior to prevent COVID-19. However, most respondents (96.5%) had the intention to smoke during the COVID-19 pandemic. There is a significant relationship between Perceived Control, Subjective Norm, and Attitude to behave in a healthy lifestyle intention to prevent COVID-19 transmission. Respondents with perceived supportive control had 2.08 times the intention of engaging in healthy behavior compared to respondents with perceived control inhibition.

**Conclusion:** This study provides insight into the importance of health promotion campaigns for the prevention and control of COVID-19. Healthy behavior is believed to be beneficial for the health of the body and is a protective factor or prevention against the transmission of COVID-19.

**Keywords:** healthy behavior, intention, COVID-19, community, theory of planned behavior

**Correspondence:**

Heni Trisnowati. Study Program of Public Health. Faculty of Health Science, Universitas Respati Yogyakarta (UNRIYO). JL. Raya Tajem KM 1.5 Maguwoharjo, Depok, Sleman, Yogyakarta, Indonesia 55282. Email address : [heni\_trisnowati@respati.ac.id](mailto:heni_trisnowati@respati.ac.id).

Mobile : 08176362938

**BACKGROUND**

The Coronavirus-2019 (COVID-19) pandemic is a health emergency that has caused a humanitarian crisis in most countries worldwide. Globally, as of March 14, 2022, there have been 456,797,217 confirmed cases of COVID-19, including 6,043,094 deaths (WHO, 2022). Now ranked highest in the number of COVID-19 cases among Asian countries, Indonesia officially announced the findings of the first case on March 2, 2020, since then, confirmed cases have increased significantly. As of March 14, 2022, Indonesia reported finding 5,900,124 confirmed cases,152,437 deaths, and 5,434,729 recoveries (Satgas Covid, 2022).

The Indonesian government has implemented several national policies to break the chain of transmission, including restrictions on activities among members of religious groups, closing of public places/facilities (offices, schools, etc.), and cancellations of socio-cultural activities in the community, including strictly enforced limitations in transportation modes (INGSA, 2020). These public health regulations indirectly change individual behavior, especially daily eating, activity, and sleeping behavior, which are known to be independent risk factors for metabolic complications such as obesity, diabetes, and cardiovascular disorders (Hallal et al., 2012; Górnicka et al., 2020).

COVID-19 is a new infectious disease caused by the Severe Acute Respiratory Syndrome-Coronavirus 2 (SAR-CoV2) and is spread mainly through droplets of saliva or discharge from the nose when an infected person coughs or sneezes (WHO, 2020a). This virus poses a potentially serious health threat to the entire global population. Older individuals and those with pre-existing medical conditions appear to be at the greatest risk of developing severe and fatal infections (WHO, 2020b). For example, recent research has found a link between lifestyle behaviors and COVID-19 infection. Individuals between the ages of 40 and 69 who have smoking behavior, increased alcohol consumption, are physically inactive, and/or are obese are more likely to be hospitalized for COVID-19. The risk of hospitalization increases with the number of behaviors exhibited (Hamer et al., 2020). Furthermore, smoking has implications for symptom severity, longer hospitalizations (Alqahtani et al., 2020; Patanavanich & Glantz, 2020; Reddy et al., 2021), and higher mortality from COVID-19 (Vardavas & Nikitara, 2020).

The steps to prevent and protect Indonesian community members from COVID-19 are by implementing “Gerakan Masyarakat Hidup Sehat“ or GERMAS (Healthy Living Community Movement). These activities are as follows: 1) diligently washing hands with soap, 2) eating with balanced nutrition, 3) diligently exercising and getting enough rest, 4) keeping the environment clean, 5) not smoking, 6) drinking 8 glasses of mineral water/day, 7) eat perfectly cooked food and do not eat meat from potentially infectious animals, 8) if you have a fever and shortness of breath, go to a health facility immediately, 9) wear a mask when coughing or cover your mouth with the inside of your upper arm, and 10) do not forget to pray (Kemenkes RI, 2020).

TPB reveals that intention is the main determinant of individual behavior. Intentions are directly driven by three main constructs, namely attitudes, subjective norms, and perceived control. The theory proposed that the stronger the intention, the more likely the individual will perform a behavior (Ajzen, 2005, 2011a). Additionally, individual attitudes play an important role in developing individual intentions to behave (Ajzen, 1991, 2011a). Attitudes are determined by individual beliefs regarding the results obtained from these behaviors (behavioral beliefs). Individuals who have strong beliefs that have negative values will produce negative behavior and attitudes as well. Likewise, subjective norms are determined by normative beliefs, namely, whether or not the individual who becomes their role model approves of the behavior. People who believe for sure that their role models think they should behave in a certain way will be motivated to meet the expectations from their role models that will later form positive subjective norms. Ajzen concluded that perceived control is the idea of the formation of a person's behavior which is also influenced by the motivation (intention) and ability (control behavior) of the individual (Glanz et al., 2008).

In summary, TPB argues that three types of beliefs determine a person's intention to perform a particular behavior. An individual's belief about a behavior leads to a favorable or unfavorable attitude towards that behavior; a person’s beliefs about how others perceive their behavior determine subjective norms; and beliefs about the degree to which he or she has control over behavior determine the level of perceived behavioral control. Where subjective attitudes and norms are favorable, perceived control is high, and a strong intention to perform the behavior should result. Perceived behavioral control can serve as a rough proxy for actual control over behavior (perceived control will of course be more accurate in some cases than in others); thus, it can contribute to the prediction of actual behavior. In other words, the successful performance of the behavior will be the result if the individual has sufficient intention and control over the internal and external factors that affect the performance (Riekert et al., 2014).

This study examines the intention of healthy living in Indonesian society during the COVID-19 pandemic based on the theory of planned behavior. TPB was chosen because research related to measuring public health behavior with the extended TPB approach has not been conducted in Indonesia (Yastica et al., 2020). In particular, TPB can be applied to take preventive measures against COVID-19 transmission, which is currently the center of attention (Yastica et al., 2020). Recent research showed that TPB is a good instrument for predicting the intention to perform a behavior (Mouloudj & Stojczew, 2021; Tran et al., 2021). The TPB framework emphasizes the importance of TPB constructs to predict and explain intentions in the context of a pandemic that could have major implications for researchers, policymakers, and practitioners in the future in the effort to habituate healthy behavior as a protective factor against COVID-19 exposure. Targeting individual attitudes, norms, and perceived control can effectively promote protective behavior intended to reduce the spread of COVID-19 and similar viral outbreaks (Gibson et al., 2021).

**SUBJECTS AND METHOD**

1. **Study Design**

This study used a cross-sectional design. Data collection was conducted by distributing questionnaires online through personal WhatsApp media or WhatsApp groups between June 30 - July 20, 2020. Questionnaires were distributed through the professional network of health promotion lecturers throughout Indonesia, and distributed again in a chain from individuals to family members or colleagues.

1. **Population and Sample**

Respondents are Indonesians aged 15-64 years, who are willing to be respondents. The sampling method was done by consecutive sampling and 1,611 respondents were obtained from 34 provinces in Indonesia.

1. **Study Variables**

Research variables include: intentions to perfom "perilaku hidup bersih dan sehat" (PHBS), subjective norm, perceived control, and attitude.

1. **Operational Definition of Variables**

Dependet variable : The Intention to perfom behavior among Indonesians during the COVID-19 pandemic consist of bringing cutlery to work; smoking; exercising or physical activity, consume vegetables, fruit and dring 8 glasses; cover the mouth when coughing, using a mask, using hand sanitizer, washing hands with soap. The answer was yes or no.

Independent variabel : Perceived control : consist of an nformation related to COVID-19 from television, radio, and the internet is very useful. The answer was yes or no. Subjective norm : Easy to understand health information related to COVID-19; Believing that COVID-19 is a global political fabrication. The answer was yes or no. Attitudes : Willing to provide funds to buy masks, soap/hand sanitizer eat nutritious food to prevent COVID-19; Healthy people are at the forefront of fighting COVID-19, not staff at the hospital. The answer was yes or no.

1. **Study Instruments**

The research instrument is a closed questionnaire with answer choices, "yes," "undecided," and "no" for the variables of intention, attitude, subjective norm, and perceived control. Meanwhile, the behavior was given a choice of answers “always,” “often,” rarely,” and “never. Each measure is given a score and if the individual's total score exceeds the sample mean score, it is categorized as "positive" and if the individual's total score is less than the sample mean score, it is categorized as "negative". Age was divided into six categories, namely, 15–19, 20-29, 30-39, 40–49, 50–59, and 60 years or older. Gender was categorized as male or female, and educational attainment was categorized as primary, secondary, and university

1. **Data analysis**

Data processing was done using the Statistical Package for Social Sciences (SPSS) version 22 program (IBM Corp., Armonk, NY). Meanwhile, data were analyzed using frequency distribution and chi square tests with p<0.05 set as significant

1. **Research Ethics**

This research protocol has been approved by Health Research Ethics. Committee of Ahmad Dahlan University, Indonesia, for research and publication purposes (Number: 012004018 on June 27, 2020.

**RESULTS**

1. **Sample Characteristics**

It consists of two parts. Part one presents the characteristics of sample (study population), including variables under study. Description of the study population is important for it allows readers to apply properly the research findings on the association of variables (or effect of one variable on another) if there is shown to exist (**see Table 1**).

**Description of Respondent Demographic Factors**

Most respondents, as many as 1,538 (95.5%) were in the age group 17–59 years and 1,035 (64.2%) were with a university education level. Most of the respondents as many as 1,380 (85.7%) have activities or work that can be done indoors such as civil servants, private employees, health workers, students, educators, homemakers, and some laborers, farmers, etc. Most of the respondents as many as 1,172 (72.7%) are male. Table 1 depicts the demographic factors of the respondents.

**Attitude**

Attitudes are determined by an individual's beliefs about the results of taking an action (behavioral beliefs) and are compared with the results of the evaluation of the action. Most respondents as many as 1,598 (99.2%) have positive attitudes towards behavior that can prevent exposure to COVID-19 such as being willing to divert the allocation of funds to buy masks, soap/hand sanitizer, and eat nutritious food to prevent COVID-19. Additionally, most respondents, as many as 1,449 (89.9%) believe that healthy communities are the front line against COVID-19, not hospital staff. Respondents believe that the community plays an important role in preventing and controlling COVID-19 transmission.

**Subjective Norms**

Subjective norms are formed by the normative beliefs of the people around the respondent. Most respondents understand the health information related to COVID-19 that was received, namely, 1,326 (81.7%), and more than half or 898 (55.7%) of the respondents believed that COVID-19 was a result of global political engineering.

**Perceived Control**

Perceived control is formed by information obtained from individuals regarding COVID-19. Most respondents as many as 1,556 (96.6%) stated that information obtained through television, radio, and internet media was useful in increasing knowledge about COVID-19. The media most frequently accessed by respondents was the Internet or social media with as many as 1,253 (77.8%). Most respondents as many as 1,110 (68.9%). frequently sought information on the number of COVID-19 cases. The frequency distribution of perceived behavior control, subjective norms, and attitudes are shown in Table 2.

Intention to perform healthy behavior during the COVID-19 pandemic

More than 91% of respondents had intention to perfom healthy behavior during the COVID-19 pandemic such as washing hands with soap, using hand sanitizer, using a mask when leaving the house, covering mouth when coughing or sneezing, consuming fruit or vegetables, doing sports, and bringing eating utensils when going to work. However, what is still worrisome is the fact that most (96.5%) or 1,476 respondents continue to smoke during the COVID-19 pandemic.These responses can be seen in Figure 2.

1. **Bivariate Analysis**

**Attitude and intention to perform healthy behavior**

The results of the analysis of the relationship between attitude and intentions for clean and healthy living behavior (PHBS) show that most respondents as much as 58.1% with a positive attitude have a strong PHBS intention while some respondents as much as 46.4%. with a negative attitude have a strong behavioral intention. The results of the chi-square test obtained p-value = 0.004 meaning that there is a relationship between attitude and PHBS intentions. The results of the analysis obtained an odds ratio (OR) of 1.58, which means that respondents with a positive attitude have a 1.58 greater chance of having the intention of doing clean and healthy living behavior than respondents with a negative attitude.

**Subjective norms and intention to perform healthy behavior**

Gender, age, education level, and activity are not related to the ease of respondents in understanding information about COVID-19 because the chi-square test results obtained a p-value > 0.05 (0.84; 0.53; 0.84; and 0.33). Furthermore, most respondents who work outdoors (50.6%) believe that COVID-19 is the result of global political engineering, while most respondents who work indoors (56.8%) do not believe that COVID-19 is a result of global political engineering. Statistical results using the chi-square test show that the respondent's activity is related to the belief that COVID-19 is from global political engineering with a p-value of 0.035. Respondents with outdoor activities are 0.74 more likely to believe that COVID-19 is the result of global political engineering compared to respondents with indoor activities. Meanwhile, the results of the chi-square test indicated gender, age, and education level are not related to the belief that COVID-19 is a result of global political engineering with a p-value > 0.05. The p-values were 0.45; 0.36; and 0.83, respectively.

Almost half of the respondents as many as 374 (48.5%) with a positive norm subjectively had a strong intention to perform a healthy lifestyle while some respondents as many as 242 (29.0%) with a negative subjective norm had a strong intention to perform healthy behavior, Most respondents as much as 593 (71.0%). with a negative subjective norm having a weak intention to perform a healthy lifestyle, Statistical test results obtained p-value = 0.000, indicating that there is a relationship between the subjective norms with behavioral intentions. Furthermore, the OR of 2.28 means that respondents with a positive subjective norm have 2.28 times greater chance of intention to perform healthy behaviors that protective against exposure to COVID-19.

**Perceived control and intention to perform a healthy behavior**

The results of the bivariate analysis with the chi-square test showed that the respondent's age, gender, education level, and activity were not related to perceived control because there was a p-value > 0.05 with 0.53; 0.06; 0.06; and 0.96, respectively. Furthermore, the results of the analysis of the relationship between perceived behavior control and healthy behavior intentions indicated that most respondents as many as 848 (54.5%) with perceived control supported having healthy behavior intentions, while some respondents as many as 708 (45.5%) with perceived behavior control supported those with weak behavioral intentions. The results of the chi-square test obtained p-value = 0.008 meaning that there is a relationship between perceived control and behavioral intentions. Furthermore, the OR value of 2.08 means that respondents with perceived supportive control have 2.08 times greater chance of having a strong intention to engage in COVID-19 prevention behavior.

**DISCUSSION**.

**The intention of healthy behavior as a protective factor against exposure to COVID-19**

This study describes the healthy living intention in the community during the COVID-19 pandemic in Indonesia. These findings agree with the results of a recent study (Yanti et al., 2020) in Bali, which showed that the distribution of community behavior indicated that the community members had complied with health protocols during the COVID-19 pandemic. However, what is still worrisome is that most respondents (96.5%) or 1,476 respondents continue to smoke during the COVID-19 pandemic. The results of this study support similar findings that people in Wonosobo Regency have COVID-19 prevention behaviors which are shown by staying at home, using masks, always washing hands with soap, keeping a distance, avoiding crowds, and consuming multivitamins (Setiawan et al., 2017).

Previous research (Cvetković et al., 2020). reported significant behavioral changes in terms of maintaining hand hygiene and social distancing but respondents had low adherence to the use of protective masks. The lack of availability of protective masks and the low recommendation from the World Health Organization (WHO) and national health experts regarding the use of protective masks for healthy people during this study are suspected to be factors that contribute to the low adherence to this behavior. Public understanding of certain health hazards with perceived severity and vulnerability greatly influences community assessments of the dangers of these diseases (Prasetyo et al., 2020). Access to information plays an important role in shaping community assessments.

The findings of frequent exercise in this study conform to previous studies (Ding et al., 2020; Giulianotti et al., 2020) that there was an increase in public interest and involvement in exercising during the COVID-19 pandemic. Even though at the beginning of the lockdown, respondents experienced a decrease in motivation for fitness training due to psychological changes in mental fatigue, fear, anxiety, stress, and frustration. However, over time, respondents learned to adapt to the COVID-19 pandemic situation healthily and positively including self-motivation to find alternative ways to continue fitness training at home (Giulianotti et al., 2020). Furthermore, this motivation is triggered by several considerations including the availability of free time, increased health awareness, and massive messages recommending exercise during a pandemic from the media, government, and health authorities such as the WHO (Ding et al., 2020). Some alternatives include switching to yoga and meditation (Giulianotti et al., 2020), high-intensity exercise at home, lifting heavy buckets, and large water bottles, and jumping around a room or in place with a jump rope. All of these alternative settings also greatly contribute to the respondents' physical and mental health (Jiménez-Pavón et al., 2020; Nicol et al., 2020).

Smoking impacts COVID-19 outcomes including increasing disease severity, need for mechanical ventilation, need for intensive care unit (ICU) hospitalization, and mortality (Huang et al., 2020; Liu et al., 2020; Zhang et al., 2020; Zhou et al., 2020). The results of this study showed that 85.8% of respondents answered rarely smoked during the pandemic, 6.7% smoked frequently, 4.0% always smoked, and 3.5% never smoked. This shows that most respondents still smoked during the pandemic with infrequent frequency. The findings agree with recent research (Caponnetto et al., 2020), which found a decrease in cigarette consumption during the lockdown period in Italian society. However, several previous studies noted different findings; there was a significant increase in smoking behavior during the COVID-19 pandemic (Bommelé et al., 2020; Klemperer et al., 2020).

Several factors that contribute to increasing or decreasing smoking behavior have been identified (Caponnetto et al., 2020). COVID-19 pandemic has "forced" every country to strictly restrict population mobility, and even impose a total lockdown. This circumstance directly causes 1) less opportunity for smokers to practice daily smoking habits such as smoking cigarettes during rituals, drinking coffee at bars, or while driving home/work or home/university. Supported by previous research that smoking behavior is often very tied to habits and routines, space and place, for example, smoking during work breaks in the morning, or while waiting at bus stops (Conklin et al., 2008, 2010) so that, as a consequence of COVID-19, the implementation of lockdown has changed these behavioral patterns; (2) variations in the lifestyle habits of each smoker's family; for example, spend more time at home with children or a cohabiting partner who does not smoke may lead people to reduce their cigarette consumption slightly out of respect for their family members (Beth Thomeer et al., 2019); 3) or out of the fear of the development of COVID-19 showing symptoms of a cough that is common in smokers and people who are positive for COVID-19, thereby forming a negative perspective on smoking (Patanavanich & Glantz, 2020).

Another factor is that boredom and stress due to the prolonged lockdown period due to the pandemic are driving factors for frequent smoking behavior (Bommelé et al., 2020; Grogan et al., 2020). In this context, respondents interpret smoking as a logical coping mechanism to deal with pandemic situations to maintain the stability of their psychological condition (Patwardhan, 2020; Grogan et al., 2022) indicating that boredom, social distancing, and social isolation in lockdown add to their levels of stress and uncertainty. Meanwhile, related to COVID-19, many health promotions are aimed to encourage current smokers to improve their smoking habits, and former smokers to continue not smoking.

**Application of Theory of Planned Behavior**

The theory of planned behavior (TPB) was chosen because research related to measuring public health behavior with the extended TPB approach has not been conducted in Indonesia (Yastica et al., 2020). In particular, it can be applied to take preventive measures against COVID-19 transmission, which is currently the center of attention (Yastica et al., 2020). TPB is a good instrument for predicting the intention to perform a behavior (Mouloudj & Stojczew, 2021; Tran et al., 2021). The TPB framework emphasizes the importance of TPB constructs to predict and explain intentions in the context of a pandemic that could have major implications for researchers, policymakers, and practitioners in the future in the effort to habituate healthy behavior as a protective factor against COVID-19 exposure. Targeting individual attitudes, norms, and perceived control can effectively promote protective behavior intended to reduce the spread of COVID-19 and similar viral outbreaks (Gibson et al., 2021).

This study identified the relationship between Perceived Control, Subjective Norms, and Attitude in the intentions to practice clean and healthy living behavior (PHBS). There is a significant relationship between these components. The TPB was developed from the theory of reasoned action (TRA), which states that behavior results from the person’s intention (Ajzen, 1985; cited in (Stevenson, 2014). In turn, a person's intention to engage in a particular behavior is a function of the following: (1) the individual's attitude towards the behavior, whether it is positive or negative, and (2) the individual's perception of the subjective norms associated with the behavior, involving social pressures to perform certain behaviors or not. Therefore, an individual is more likely to perform a behavior when it is viewed positively by the individual and when the individual believes that others whom they value also approve of the performance of that behavior (Ajzen, 1985; cited in (Stevenson, 2014).

In this study, respondents with a positive attitude had 1.58 greater chance of having the intention of doing clean and healthy living behavior than respondents with a negative attitude. Attitudes are determined by the individual's beliefs about the outcomes of performing the behavior (behavioral beliefs) and are weighed by the evaluation of the outcomes. Thus, someone who has a strong belief that a positive outcome will result from performing a behavior will have a positive attitude towards that behavior. Conversely, someone who has a strong belief that a negative outcome will result from that behavior will have a negative attitude (Glanz et al., 2008).

Furthermore, this study also found that respondents with positive norms subjectively had 2.28 times greater chance of conducting healthy behaviors that were protective against exposure to COVID-19. A person's subjective norms are determined by their normative beliefs, that is, whether the important referent individual approves or disapproves of performing the behavior, weighed by their motivation to comply with the referent. An individual who believes that a particular reference person thinks they should perform a behavior and is motivated to meet the expectations of that reference person will hold a positive subjective norm (Glanz et al., 2008). Most respondents could understand the health information related to COVID-19 that was received, namely, as many as 1,326 (81.7%), and more than half or 898 (55.7%) of the respondents believed that COVID-19 was the result of global political engineering. Respondents with outdoor activities were 0.74 more likely to believe that COVID-19 is the result of global political engineering compared to respondents with indoor activities. Meanwhile, the results of the chi-square tests indicated gender, age, and education level were not related to the belief that COVID-19 is the result of global political engineering with a p > 0.05. The p-values were 0.45; 0.36; and 0.83, respectively.

Remarkably, the responses of the participants of this research show that although more than half of them believe that COVID-19 is a result of global political engineering, these respondents still practice healthy behavior. This can be caused by respondents being in an environment that has a positive view of healthy behavior. Healthy behavior is beneficial for body health and is a protective factor against exposure to COVID-19. Meanwhile, most respondents still smoke despite the COVID-19 pandemic because smoking causes smokers to become dependent or addicted to it, making it difficult to control (Ling & Glantz, 2002; Pierce, J.P., Distefan, J.M., Hill, 2005).

Respondents' perceived control is influenced by information obtained from individuals regarding COVID-19. Most respondents stated that information obtained through television, radio, and internet media was useful in increasing knowledge about COVID-19 many as 1,556 (96.6%). The results showed that there was a relationship between perceived control and behavioral intentions. Respondents with perceived supportive control had 2.08 times greater chance of having a strong intention to perform healthy behavior compared to respondents with perceived control that inhibited or did not support. As mentioned in TPB theory, perceived control is determined by a person's control beliefs about the presence or absence of facilitators and barriers to behavioral performance, weighed by the perceived power or impact of each control factor to facilitate or inhibit that behavior (Glanz et al., 2008). Other research results show that information exposure has a positive effect on risk perception. Thus, the perception of risk mediates the relationship between information exposure and infection prevention behavior (Fenitra et al., 2021).

Holding subjective attitudes and norms constant, a person's perception of the ease or difficulty of performing a behavior will influence his or her behavioral intentions. The relative weighted influences of these three factors in determining the intention will vary for different behaviors and populations. In particular, the attitude remains a strong predictor of intention after controlling for past behavior and strengthens the case for trying to target attitudes as part of an intervention (Ajzen, 2011b). The results of other studies show that subjective norms as an external factor of TPB have a stronger influence than internal factors, i.e., attitude, and behavior control. It seems that in collectivist societies, restrictions imposed by family and friends, as well as government sanctions have a stronger influence on a person's decision to travel or behave in a healthy manner which can reduce the risk of contracting COVID-19 (Rahmafitria et al., 2021).

**Conclusions**

The intention of a healthy bahavior to prevent COVID-19 has been engaged in by the majority of respondents during the COVID-19 pandemic. However, the majority (96.5%) of respondents still had intention to smoke during the COVID-19 pandemic. More than half of the respondents believe that COVID-19 is the result of global political engineering but these respondents still practice healthy behavior. There is a significant relationship between Perceived Control, Subjective Norm, and Attitude with intention to perform healthy behavior during the COVID-19 pandemic. Healthy behavior is believed to be beneficial for the health of the body and is a protective factor or prevention against the transmission of COVID-19.

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**CONFLICT OF INTEREST**

“There are no conflicts of interest”

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Table 1. Description of Respondent Demographic Factors (N=1,611)

| Demographic factors | (N) | | | (%) |  |
| --- | --- | --- | --- | --- | --- |
| **Age** | |  |  | | |
| < 20 years | 308 | | | 19.1 |  |
| 20–29 years | 597 | | | 37.1 |  |
| 30–39 years | 268 | | | 16.6 |  |
| 40–49 years | 282 | | | 17.5 |  |
| 50–59 years | 125 | | | 7.8 |  |
| >60 years | 31 | | | 1.9 |  |
| **Sex** |  | | |  |  |
| Female | 439 | | | 27.3 |  |
| Male | 1172 | | | 72.7 |  |
| **Education** |  | | |  |  |
| College | 1035 | | | 64.2 |  |
| Senior high School | 556 | | | 34.5 |  |
| Elementary School | 20 | | | 1.3 |  |
|  |  | | |  |  |
| **Activities** |  | | |  |  |
| Outdoor | 231 | | | 14.3 |  |
| Indoor | 1380 | | | 85.7 |  |
| **Occupations** |  | | |  |  |
| College student | 649 | | | 40.3 |  |
| Lecturer, teacher, researcher | 204 | | | 12.7 |  |
| Health workers (doctors, nutritionists, sanitarians, laboratory assistants) | 139 | | | 8.6 |  |
| Civil servant | 211 | | | 13.1 |  |
| Homemaker | 79 | | | 4.9 |  |
| Entrepreneur | 78 | | | 4.8 |  |
| Labor, driver, farmer | 186 | | | 11.6 |  |
| Pensionary | 13 | | | 0.8 |  |
| Unemployment | 25 | | | 1.6 |  |
| No Answer | 27 | | | 1.6 |  |

Table 2 . Description of information, perceived control, subjectify norm, and attitudes

|  |  |  |  |
| --- | --- | --- | --- |
| **Information about COVID-19** | Category | n | (%) |
| Sources of information related to COVID-19 | Television | 305 | 18.9 |
| Radio | 6 | 0.4 |
| Internet/social media | **1253** | **77.8** |
| Counseling from health workers | 26 | 1.6 |
| Newspaper | 3 | 0.2 |
| Banners/leaflets/brochures | 18 | 1.1 |
| types of information related to COVID-19 | Number of cases | **1110** | **68.9** |
| Prevention | 325 | 20.2 |
| Symptom | 67 | 4.2 |
| News/story/memes | 109 | 6.8 |
| Frequency of updating information related to COVID-19 | > 3 days | 320 | 19.9 |
| 2–3 days | **735** | **45.6** |
| Every day | 553 | 34.3 |
| **Perceived control** |  |  |  |
| Information related to COVID-19 from television, radio, and the internet is very useful | Yes | **1556** | **96.6** |
| **Subjective norm** |  |  |  |
| Easy to understand health information related to COVID-19 | Yes | **1316** | **81.7** |
| Believing that COVID-19 is a global political fabrication | Yes | **898** | **55.7** |
| **Attitudes** |  |  |  |
| Willing to provide funds to buy masks, soap/hand sanitizer eat nutritious food to prevent COVID-19 | Yes | **1598** | **99.2** |
| Healthy people are at the forefront of fighting COVID-19, not staff at the hospital | Yes | **1449** | **89.9** |

Table 3. Relathioship between Attitude, subjective norm, perceived and intention to perform a behavior

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Intention to perform the behavior** | | | | | | OR (95% CL) | *P*-Value |
| Weak | | Strong | | Total | |
| N | % | N | % | N | % |
| **Attitude**     Negative     Positive | 90  605 | 53.6  41.9 | 78  838 | 46.4  58.1 | 168  1443 | 100  100 | 1.58 (1.16-2.20) | 0.004 |
| Total | 695 | 43.1 | 916 | 56.9 | 1611 | 100 |  |  |
|  | | | | | | | | |
| **Subjective norm**  Negative    Positive | 593  402 | 71,0  51,8 | 242  374 | 29,0  48,5 | 835  776 | 100  100 | 2.28 (1.86-2.79) | 0.000 |
| Total | 995 | 61,7 | 616 | 38,3 | 1611 |  |  |  |
| **Perceived control**  Not support    Support | 35  708 | 63,6  45,5 | 20  848 | 36,4  54,5 | 55  1556 | 100  100 | 2.08 (1.19-3.66) | 0.008 |
| Total | 743 | 46.1 | 868 | 53.9 | 1611 |  |  |  |

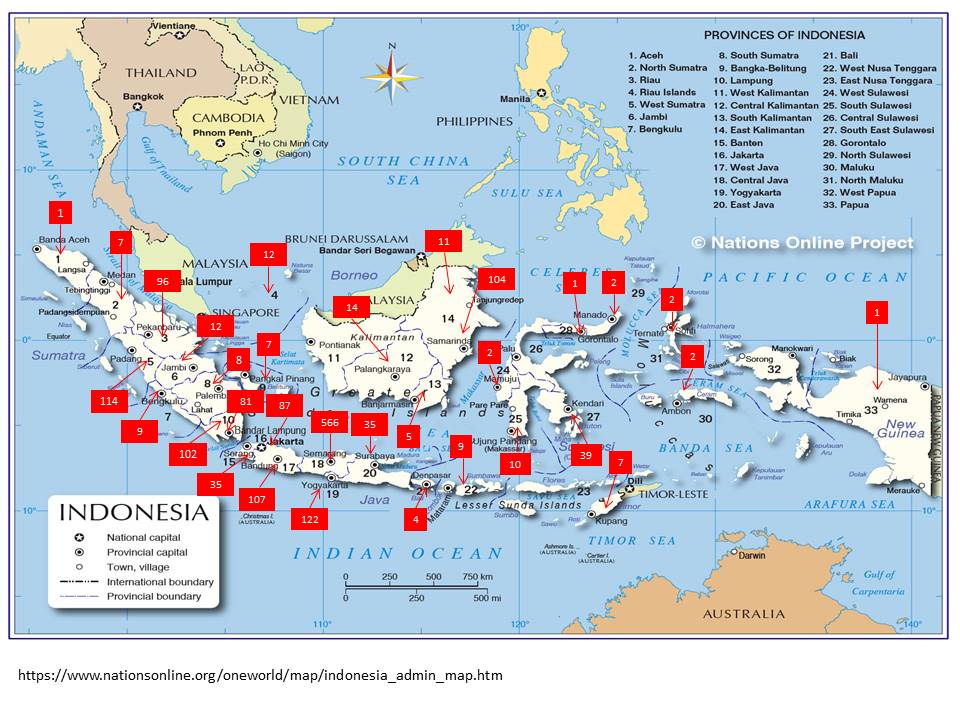


Figure 1. Distribution of respondents by the provinces in Indonesia.

Figure 2. Description of the Intention to perfom behavior among Indonesians during the COVID-19 pandemic.