

# Perceived Effectiveness of Government Preventive Measures as Predictor of Attitude and Acceptance toward COVID-19 Vaccines

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## Abstract

A positive attitude toward the COVID-19 vaccine and increased vaccination uptake made the institutions behind these efforts realize their goal of creating an immune community. This research would provide crucial information on how the government can establish a desirable attitude of people toward COVID-19 vaccines through their responses to the adversities of the pandemic. This study assessed government preventive influence measures 'perceived effectiveness on the citizens' attitudes and acceptance toward the COVID-19 vaccines. The researchers used descriptive-correlational quantitative design and simple regression analysis as research methods. The study was conducted in the City of Panabo, with 384 samples chosen randomly and surveyed through an adapted instrument. The findings of this study revealed that both the levels of perceived effectiveness of government preventive measures and attitudes toward the COVID-19 vaccine were high, while acceptance of the COVID-19 vaccine was only average. The perceived effectiveness of government preventive measures and attitudes and acceptance toward the COVID-19 vaccine have a positive, high and significant relationship. It further revealed a significant influence manifested between the variables of the study. The effectiveness of government preventive measures is an essential factor in influencing citizens' attitudes and acceptance toward the COVID-19 vaccines. When the government implements preventive measures more influential, the higher the confidence in manifesting a positive attitude and good acceptance of the COVID-19 vaccines. Government and local health authorities will be served with assistance in promoting vaccination in the country and strengthening the preventive protocols implemented to control the rapid spread of the COVID-19 disease.

## Keywords

covid-19 vaccines; government protocols; pandemic crisis, philippines

## Introduction

The global spread of COVID-19 disease, which rapidly escalated, affecting 114 countries, has urged the World Health Organization to declare the outbreak a pandemic. It has already affected 210 countries and taken two million lives in a year ([Wang et al., 2021](#)). Many countries were on high alert for the emergence of the disease taking preventive measures into action. The Philippines is one of the countries to immediately place the country in community quarantine to limit the movement of people. However, controlling the spread of the COVID-19 disease remains a bottleneck between the government and its people as a country.

Low acceptance and undesirable attitudes toward the COVID-19 vaccine face a significant concern regarding the vaccination's purpose of controlling the spread of the disease ([Al-Qerem & Jarab, 2021](#); [Nzaji et al., 2020](#); [Sallam, 2021](#)). Vaccine acceptance is a phenomenon across countries that became a

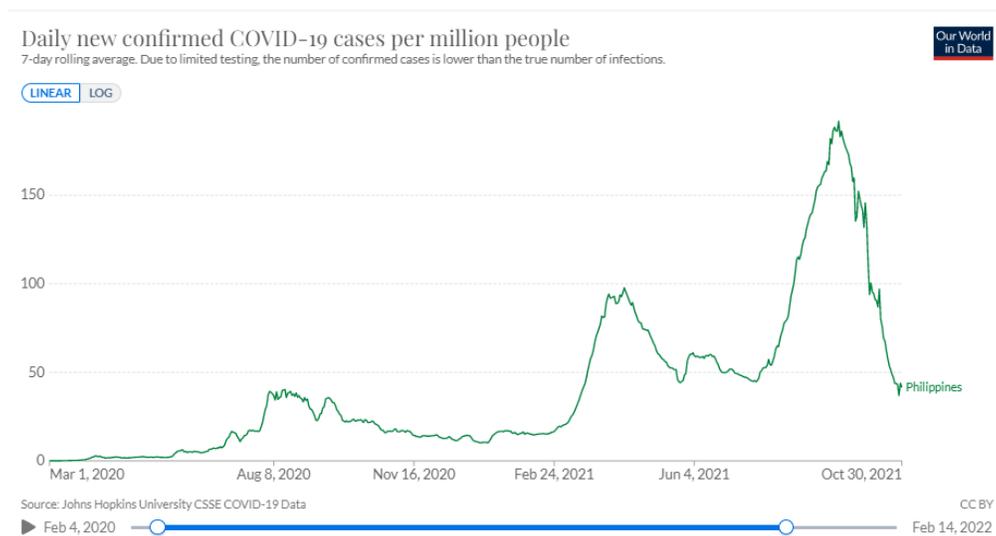
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significant challenge when convincing billions of population regarding its safety and benefits ([Mehrdad et al., 2020](#)).

**Figure 1. Daily Confirmed Cases of COVID-19 in the Philippines**



Source: Our World in Data

Negative attitudes were also associated with low acceptance of vaccines ([Qiao, Chi Tam, & Li, 2010](#)). The undesirable attitude was considered a barrier against vaccination in general ([Al-Qerem & Jarab, 2021](#)), and even the WHO declared vaccine hesitancy despite the availability of vaccines as a health threat. In a survey conducted by Pulse Asia, 61% of Filipino respondents would refuse to be vaccinated when it becomes available during the polling period. Most of the reasons we are concerned about the safety of COVID-19 vaccines. The dengue vaccine (Dengvaxia) Fiasco in 2017 also influenced the Filipino respondents' acceptance of the COVID-19 vaccine due to the revealed side effects ([Agoncillo, 2021](#)).

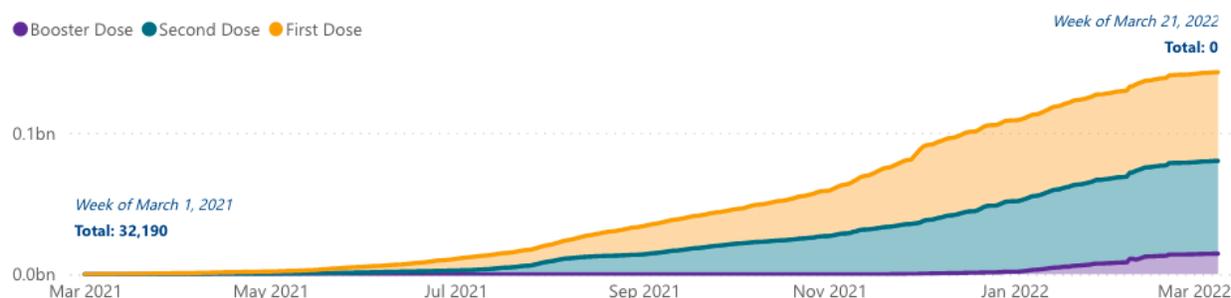
**Figure 2. Filipinos' Acceptance of COVID-19 Vaccine Survey**

| Base: Total Interviews, 100%  |          |     |            |     |     |       |    |    |
|---|----------|-----|------------|-----|-----|-------|----|----|
| If there is already a vaccine against COVID-19, will you get vaccinated or not? | LOCATION |     |            |     |     | CLASS |    |    |
|   | RP       | NCR | BAL<br>LUZ | VIS | MIN | ABC   | D  | E  |
| Yes   | 16       | 21  | 13         | 16  | 20  | 14    | 17 | 12 |
| No  | 61       | 63  | 63         | 56  | 58  | 68    | 59 | 62 |
| <b>UNAIDED</b>  |          |     |            |     |     |       |    |    |
| Cannot say  | 23       | 15  | 24         | 28  | 23  | 18    | 23 | 26 |

Source: Pulse Asia Research Inc.

Vaccine indeed gives the best desire to a perpetual answer for controlling the pandemic ([Mannan & Farhana, 2021](#)). Assessment of attitudes and acceptance rates toward COVID-19 vaccines can make the public willing to stop the spread of the disease and assist the health authorities in extending correspondence campaigns that are truly necessary for making trust stronger unto them. In most kinds of literature, a positive attitude has influenced individuals in conforming to rules, requirements, and guidelines were proven ([Bulgurcu, Cavusoglu, & Benbasat, 2010](#); [Herath & Rao, 2009](#); [McMillan & Conner, 2003](#); [Sasse, Brostoff, & Weirich, 2020](#)). As of August 8, 2021, there are 4.46 billion vaccine doses administered worldwide ([Our World in Data, 2021](#)). In the Philippines, through the passage of Republic Act No. 11525, also known as the COVID-19 Vaccine Program Act of 2021, there are already 24,479,750 doses administered in the country ([Department of Health, 2021](#)).

**Figure 3. Vaccines Administered in the Philippines**



Source: [Department of Health \(2021\)](#)

The significant relationship between government preventive measures toward attitudes and acceptance of the COVID-19 vaccine was objectively supported by related studies highlighting the linkage between the two variables. The preventive measures adopted by the government are said to be one of the key factors that reflect the attitudes and decisions of the people in accepting the vaccine. Lack of trust in institutions is considered a barrier to vaccination ([Freeman et al., 2020](#)). The responsiveness, better regulation, and inclusive policy are said to be making the critical areas for governments to gain public confidence ([Organisation for Economic Co-operation and Development, 2013](#)). It also suggests that well-adapted responsive measures to local norms and better regulation and organization of their implementation could increase public support ([Han et al., 2021](#)).

At least the literature mentioned the efficacy/effectiveness of government preventive measures in the COVID-19 pandemic ([Cowling et al., 2020](#); [Hsiang et al., 2020](#); [Pant, Choudhury, Rajesh, & Yeldandi, 2020](#); [Wilder-Smith & Freedman, 2020](#)). Several studies were conducted to highlight attitudes and acceptance of the COVID-19 vaccine globally ([Al-Mohaithef & Padhi, 2020](#); [Eguia, Vinciarelli, Bosque-Prous, Kristensen, & Saigí-Rubió, 2021](#); [Lazarus et al., 2020](#); [Sallam, 2021](#)). There are focused studies lack regarding the effectiveness of preventive measures toward attitudes and acceptance of the COVID-19 vaccine, especially in the Philippines and its local community. Therefore, it is necessary to proceed urgently with the conduct of this study in considering the beginning of vaccine rollout.

The study's findings would significantly contribute to government strategies for further improvements in their interventions in addressing the effects of a pandemic on the public, which would help assess their views towards the COVID-19 vaccine. In addition, the study results would yield a significant advantage to the field of practice of Public Administration regarding the management of government policies through scrutinizing and analyzing the policy's potential. The assumptions behind the study conclude that the more influential the government implements the preventive measures, the higher the confidence of acceptance and positive attitude toward the COVID-19 vaccine will reflect.

The study's primary purpose is to assess the perceived effectiveness of government preventive measures and their influence on the attitudes and acceptance of the COVID-19 vaccine. To be specific, the study attempts: to describe the level of perceived effectiveness of government preventive measures against COVID-19; to describe the level of attitudes and acceptance of citizens towards the COVID-19 vaccine; to determine the significant relationship between the perceived effectiveness of government preventive measures and attitudes and acceptance towards the COVID-19 vaccine, and to determine if the perceived effectiveness of government preventive measures significantly influences the attitudes and acceptance towards the COVID-19 vaccine.

For this study, these are the following hypotheses. There is no significant relationship between the perceived effectiveness of government preventive measures and attitudes and acceptance towards the COVID-19 vaccine, and the perceived effectiveness of government preventive measures does not significantly influence the attitudes and acceptance towards the COVID-19 vaccine. The researchers attempt to explain government preventive measures' influence on attitudes and acceptance of the COVID-19 vaccine by anchoring the COM-B model - Capability, Opportunity, and Motivation-Behavior.

The study is anchored with COM-B Model, originally developed entirely for any behavior approach by Michie, Atkins, and West. The model's core was provided an analysis that individual and context determinants of behavior share equal importance to influence vaccination factors. Capability and Motivation factors are individual determinants, while Opportunity factors are context/outside of an individual determinant ([Habersaat & Jackson 2020](#)). It interlinked their psychological and physical capability & automatic and reflective motivation (e.g., thinking/worrying about vaccine safety). Thus, it complements the domain of dependent variables, which concerns attitudes and acceptance toward the COVID-19 vaccine.

This model was further adapted to vaccination by the WHO Regional Office for Europe for the WHO Tailoring Immunization Programme approach. Considering physical factors under the opportunity factor that consists of policies, systems, cost and logistics also showed relevant determinants of vaccination behavior ([Brewer, Hall, et al., 2017](#); [Vann, Jacobson, Coyne-Beasley, Asafu-Adjei, & Szilagyi, 2018](#); [Ventola, 2016](#)). Each governmental or non-governmental policy actor has different goals and resources wherein they can take many actions to support or undermine vaccination ([Brewer, Chapman, Rothman, Leask, & Kempe, 2017](#)). They also mentioned one of the general propositions of psychological theories that psychological principles can directly guide the design of systems and policies in facilitating the course of action. They added that interventions could directly facilitate the vaccination by leveraging without trying to change how they feel or think.

The political factor categorizes the study's independent variable, which focuses on government interventions, particularly preventive measures. The adapted and simplified model provides a contextual view of the Opportunity-physical factor, including health behaviors and appropriate legislation. These factors would streamline its influence on vaccination behavior, whereas the opportunity factor would strengthen the independent variable's association with the dependent variable emphasizing political factors or government intervention as drivers of vaccination attitudes and acceptance.

The figure below illustrates the conceptual framework of the study. The first box on the left consists of the independent variable of the study, Perceived Effectiveness of Government Preventive Measures, whereas it refers to the current strategy to restrain the spread of COVID-19 disease, which includes limiting the movement of people ([Güner, Hasanoğlu, & Aktas, 2020](#)). Meanwhile, on the right side, it consists of the dependent variable of the study, Attitude, and Acceptance of COVID-19 Vaccine, whereas it pertains to the expression of support ([Yaqub et al., 2014](#)) and outcome behavior influenced by a wide range of factors ([MacDonald et al., 2015](#)).

**Figure 4.** Conceptual Framework Showing Variables of the Study



The perceived effectiveness of government preventive measures influenced attitudes and acceptance toward the COVID-19 vaccine. A good rating on government performance during the lockdown has driven the willingness of the citizens to take vaccines ([Page, 2021](#)). Firm trust in the central government turned out to increase vaccination uptake in most countries ([Lazarus et al., 2020](#)). The efforts of these authors are crucial in further assessing the outcome of the study. In line with the purpose of this study, it imbues a considerable contribution to determining the linkage and influence of government preventive measures on attitudes and acceptance towards the COVID-19 vaccine.

Vaccines are still one of the critical methods to halt the escalation of the COVID-19 cases ([Pogue et al., 2020](#)), and it is one of the public health interventions ever implemented that is cost-effective and reliable, saving millions of lives over the years ([El-Elimat et al., 2021](#)). However, many people are still hesitant to accept vaccination as different factors affect it. Probable factors influencing the acceptance of the COVID-19 vaccine includes fear about the safety of the vaccine ([Pogue et al., 2020](#)), fear of its

possible side effects ([Williams et al., 2020](#)), lack of trust in institutions ([Freeman et al., 2020](#)), lack of confidence in its efficacy, belief in conspiracy theories ([Salali & Uysal, 2020](#)) and influence of misinformation.

Octa Research Group's survey in the Philippines found that out of the 1,200 respondents, 46% are not willing to get vaccinated, 35% are undecided, and 19% said that they would have themselves vaccinated. Among those unwilling, 73% reasoned because of vaccine insecurity, 29% are unsure of its effectiveness, and 9% said a vaccine is not essential in combating COVID-19 ([Mendoza, 2021](#)). A study in Saudi Arabia revealed that 642 (64.7%) are willing to uptake the COVID-19 vaccine, 70 (7.0%) are not willing, and 280 (28.2%) are reluctant to uptake the COVID-19 vaccine if it is available. Predictors explaining the acceptability of the respondents to the COVID-19 vaccine that were found are trust in the health system and the perceived risk of getting an infection. Higher trust in the health system will result in a higher intention to uptake the COVID-19 vaccine ([Al-Mohaithef & Padhi, 2020](#)).

[Sigfrid et al. \(2019\)](#) emphasized the importance of government in addressing political, economic, administrative, regulatory, logistical, ethical, and social challenges when it comes to global readiness for emerging epidemics ([ALTakarli, 2020](#)). The institution's efforts to reach the public in relieving the burden on vaccine acceptance drive an opportunity to strategize a more developed concept in increasing the uptake. Most participants wanted to receive information on disease prevention from municipal health services, health care providers, and the media ([Weerd, Timmermans, Beaujean, Oudhoff, & Steenbergen, 2011](#)).

Diverse groups can influence the uptake of vaccines, including political decision-makers, immunization program managers, community and religious leaders, health workers, civil society organizations, and media or digital platforms ([Brewer, Hall, et al., 2017](#)). These actors can encourage and discourage vaccination by creating a more or less enabling environment. It is, therefore, essential to consider how the behaviors of actors in the system might influence or affect the behaviors of the general public ([World Health Organization, 2020](#)). The related works of literature and studies emphasize the acceptance and attitude of the general public towards the COVID-19 vaccine and its determinants, as well as the effectiveness of prevention measures and their correlation across the world. This will significantly contribute to the goal position for the dependent and independent variables and their correlations.

## Method

The research study used a quantitative, descriptive-correlational method and simple regression analysis. Quantitative research emphasizes objective measurements and statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys and the manipulation of pre-existing statistical data using computational techniques ([Williams & Babbie, 1976](#)). On the other hand, a descriptive-correlational method was not merely amassing and tabulating facts but also involved proper analysis, interpretation, comparisons, identification of trends and relationships ([Salaria, 2012](#)). Therefore, this research approach fits the study since it used a survey questionnaire to collect data from an enormous scope of respondents, providing the study with a high accuracy level.

The study was conducted in Panabo City, Davao del Norte, with a population of 184,599 ([Philippine Statistics Authority, 2015](#)). During this pandemic, Panabo City is the second city in the province with the highest COVID-19 cases recorded. As of July 26, 2021, the city already has 1,885 COVID-19 positive cases - 101 deaths and 1,616 recoveries ([Provincial Health Office of Davao del Norte, 2021](#)). A random selection of residents was applied to answer the survey questionnaire provided. Moreover, the Raosoft website determined the total number of target samples. Among 184,599 residents, 384 respondents were expected to take the survey questionnaire.

Simple random sampling is a method that randomly chooses a population, giving elements an equal opportunity to be selected ([Turner, 2020](#)). Since Panabo City has an enormous population, this method was applied to treat equal opportunity for the residents to participate in the study regardless of their barangay residency or any division. Raosoft's website was used to determine the total number of target samples. According to its calculation, at least 384 out of 184,599 residents were expected to take the

survey questionnaire. The researchers used a survey questionnaire that was adopted from the studies developed by the following authors: [Prasetyo et al. \(2020\)](#) Factors affecting perceived effectiveness of COVID-19 prevention measures among Filipinos during Enhanced Community Quarantine in Luzon, Philippines: Integrating Protection Motivation Theory and extended Theory of Planned Behavior for perceived effectiveness scale and ([El-Elimat et al. 2021](#)). Acceptance and Attitudes Toward COVID-19 Vaccines: A Cross-Sectional Study from Jordan for acceptance and attitudes towards COVID-19 vaccine scale. The questionnaire contained the direct queries that the respondents answered based on their feelings that individuals might have.

Cronbach's Alpha was used through the conduct of pilot testing in order to test the validity and reliability of the survey questionnaire. The pilot testing was conducted in the Municipality of Carmen, which served at least 30 respondents to ensure that the concerned target population must culturally and contextually accept it. Perceived government preventive measures scale generated a Cronbach's Alpha of 0.799 while attitudes and acceptance towards the COVID-19 vaccine scored 0.807, higher than the required 0.70 for the validity and reliability of the pilot testing.

The researchers handed out the questionnaire to the chosen respondents face-to-face and online. The intended platform used was Facebook, wherein questions were integrated through Google forms. Face-to-face surveys were intended for respondents who were digital immigrants or those who had no access to the internet. The following statistical tool was used to analyze the data: Mean. It was used to determine the extent of perceived effectiveness of prevention measures and the COVID-19 vaccine acceptance and attitude; Pearson R. This was used to analyze the relationship between the perceived effectiveness of prevention measures and the acceptance and attitude of the COVID-19 vaccine. And Simple linear regression analysis. It analyzed the significant influence of effective prevention measures on COVID-19 vaccine acceptance and attitude.

Informed consent was provided during the conduct of the survey. Respondents' rights to voluntarily participate, keep their information confidential, and withdraw their consent to participate at any time were acknowledged by the researchers prior to participation in the study. The respondents' names were not listed in any analysis aspect and were kept from being affected emotionally or physically due to their participation. The questionnaire's reliability and validity were carefully observed as pilot-tested and as a utilized instrument accessed in scholarly journals.

## Results and Discussion

### Perceived Effectiveness of Government Preventive Measures

This section presents the results and discussion uncovered in this study relevant to its objectives. Table 1 shows the result of the responses from the residents of Panabo City on the perceived effectiveness of government preventive measures against COVID-19. The result shows an overall mean of 4.10 with a descriptive level of high and a standard deviation of 0.60. The level indicates that the government preventive measures are effective.

**Table 1.** Level of Perceived Effectiveness of Government Preventive Measures

| No. | Items   | Mean | SD   | Description |
|-----|---|------|------|-------------|
| 1.  | I think the preventive protocols for the COVID-19 outbreak in my country are effective.     | 3.84 | 1.91 | High        |
| 2.  | I think the preventive protocols for the COVID-19 outbreak in my community are informative. | 3.81 | 0.79 | High        |
| 3.  | I think a healthy lifestyle will enhance my immunity.                                       | 4.38 | 0.75 | Very high   |
| 4.  | I think social distancing can prevent the transmission of COVID-19.                         | 4.24 | 0.76 | Very high   |
| 5.  | I think a face mask can prevent the transmission of COVID-19                                | 4.26 | 0.76 | Very high   |
| 6.  | I think proper hygiene can prevent the transmission of COVID-19.                            | 4.32 | 0.81 | Very high   |

|    |   |      |      |      |
|----|---|------|------|------|
| 7. | I think lockdown is an effective way to prevent COVID-19. | 3.89 | 0.94 | High |
|    | Overall mean  | 4.10 | 0.60 | High |

The result revealed that the perceived effectiveness of government preventive measures is high, indicating that the government measures on the COVID-19 pandemic are effective. Therefore, the result corroborates the study of [Cowling et al. \(2020\)](#), which shows non-pharmaceutical interventions such as border restrictions, quarantine, isolation, distancing, and changes in population behavior such as wearing a face mask and hand sanitizing was associated with reduced transmission of COVID-19. Furthermore, the result affirms the statement of [Aman and Masood \(2020\)](#) that a healthy lifestyle and good digestive health can help the body state defeat viral infections. Proper nutrition, sleep, physical activity, and even stress significantly influence our immune system.

### Attitudes and Acceptance Towards COVID-19 Vaccines

Table 2 presents citizens' attitudes towards the COVID-19 vaccine, while table 3 shows the level of acceptance of citizens towards the COVID-19 vaccine, respectively. The overall mean of attitudes towards the COVID-19 vaccine is 3.61, with a standard deviation of 0.57 described as high. It refers to the scale that the attitudes toward the COVID-19 vaccine are positive.

**Table 2.** Level of Attitudes of Citizens towards COVID-19 Vaccines

| No. | Items   | Mean | SD   | Description |
|-----|---|------|------|-------------|
| 1.  | It is important to get a vaccine to protect people from COVID-19.                               | 3.67 | 0.98 | High        |
| 2.  | Pharmaceutical companies are going to develop safe and effective COVID-19 vaccines.             | 3.75 | 0.90 | High        |
| 3.  | COVID-19 vaccines made in Europe or America are safer than those made in other world countries. | 3.29 | 0.83 | Average     |
| 4.  | Side effects will prevent me from taking a vaccine for the prevention of COVID-19.              | 3.51 | 0.91 | High        |
| 5.  | Most people will refuse to take the COVID-19 vaccine once licensed in the Philippines.          | 3.34 | 0.92 | Average     |
| 6.  | The government will make the vaccine available for all citizens for free.                       | 4.11 | 0.94 | High        |
|     | Overall mean  | 3.61 | 0.57 | High        |

Meanwhile, the overall mean of acceptance for the COVID-19 vaccine is 3.25, with a standard deviation of 0.73 described as average. The level indicates that the acceptance of the COVID-19 vaccine is moderately positive.

**Table 3.** Level of Acceptance of Citizens towards COVID-19 Vaccines

| No. | Items  | Mean | SD   | Description |
|-----|--|------|------|-------------|
| 1.  | I am willing to receive the COVID-19 vaccine this year.    | 3.36 | 1.18 | Average     |
| 2.  | I believed that vaccines are safe.                         | 3.47 | 0.93 | High        |
| 3.  | I believed that the COVID-19 pandemic is not a conspiracy. | 3.53 | 0.94 | High        |
| 4.  | I do trust any information regarding the COVID-19 vaccine. | 3.45 | 0.90 | High        |
| 5.  | I am willing to pay for COVID-19 vaccines.                 | 2.46 | 1.13 | Low         |
|     | Overall mean   | 3.25 | 0.73 | Average     |

The result also revealed a high attitude and an average level of acceptance, indicating a positive attitude

and moderately positive acceptance toward the COVID-19 vaccine, respectively. The results obtained from the variable support the idea that a positive attitude towards the COVID-19 vaccine indicates a positive view towards vaccination in general (Cordina, Lauri & Lauri 2021). In the study of Ciardi et al. (2021), respondents were seen to have a positive COVID-19 vaccine attitude as they believed and complied with PPE practices committed to doing the same. A positive attitude is considered a potential factor for decision-making and vaccine effectiveness (Bhattacharyya, Vutha & Bauch 2019). It significantly increases the willingness of an individual to receive a COVID-19 vaccine (Kreps et al., 2021).

### Perceived Effectiveness of Government Preventive Measures on Attitudes and Acceptance towards COVID-19 Vaccines

Table 4 shows the correlation between the perceived effectiveness of government preventive measures and attitudes and acceptance towards the COVID-19 vaccine in the City of Panabo. The finding remarkably showed an overall positive r-value of 0.715 and a p-value of 0.000, indicating a significant relationship between the perceived effectiveness of government preventive measures and attitudes and acceptance towards the COVID-19 vaccine. Moreover, the result suggests the rejection of the null hypotheses of the study. Perceived effectiveness of government preventive measures on attitudes towards COVID-19 vaccine has an r-value of 0.412 and p-value of 0.000, while acceptance towards COVID-19 vaccine collected an R-value of 0.330 and a p-value of 0.000. It means that the independent variable manifests a significant relationship both with attitude and acceptance towards the COVID-19 vaccine as the study's dependent variable.

**Table 4.** Correlation between Variables

| Independent Variable                                      | Dependent Variable                 |                                     |                  |
|---|------------------------------------|-------------------------------------|------------------|
|   | Attitudes towards COVID-19 Vaccine | Acceptance towards COVID-19 Vaccine | Overall          |
| Perceived Effectiveness of Government Preventive Measures | .412**<br>(.000)                   | .330**<br>(.000)                    | .715**<br>(.000) |

There is a positive, high and significant relationship between the perceived effectiveness of government preventive measures and the attitudes and acceptance toward the COVID-19 vaccine. This finding further supports the COM-B Model approach by Michie, Atkins, and West (2014) that the WHO Regional Office further utilized for Europe, which considers that policies, systems, cost, and logistics showed relevant determinants of vaccination behavior (Brewer, Hall, et al., 2017; Vann et al., 2018; Ventola, 2016). The more contextual view of the model under the Opportunity-physical factor verifies the study's findings in streamlining not only health behaviors but also appropriate legislation as critical determinants for vaccination uptake.

Presented in table 5, the data analyzed by simple regression analysis revealed the significant influence of perceived effectiveness of government preventive measures towards attitude and acceptance of the COVID-19 vaccine. All the regression analysis assumptions were complied such as the data normality, the variables linearity, and the Heteroscedasticity. The results significantly influence the perceived effectiveness of government preventive measures towards attitude and acceptance of the COVID-19 vaccine.

**Table 5.** Regression Analysis of the Variables

| Independent Variable                                      | Attitudes and Acceptance towards COVID-19 Vaccine |      |        |      |
|---|---|------|--------|------|
|   | B   | B    | t      | Sig. |
| Constant  | 1.207   |      |        |      |
| Perceived Effectiveness of Government Preventive Measures | 0.597   | .715 | 19.988 | .000 |
|   | R = .715  |      |        |      |
|   | R <sup>2</sup> = .511                             |      |        |      |
|   | F = 399.519                                       |      |        |      |
|   | P = .000  |      |        |      |

The coefficient of determination, the r-squared value, shows that 51.1 percent of the variance in attitude and acceptance of the COVID-19 vaccine was credited to the dimensions or questions on the perceived effectiveness of government preventive measures. In contrast, the remaining 48.9 percent is a coefficient of alienation that is not part of the study. In general, the result indicates that the perceived effectiveness of government preventive measures on COVID-19 significantly influences the attitude and acceptance toward the COVID-19 vaccine.

The result proved that the perceived effectiveness of government preventive measures significantly influences attitude and acceptance toward the COVID-19 vaccine. The result proves [Page \(2021\)](#) claim that among citizens who have an excellent rate of the government's performance, 75% are more likely to get vaccinated, while citizens who have a poor rate, 55%, would like to get vaccinated the vaccine is available. It supports [Michie, Atkins, and West's \(2014\)](#) behavior approach model that context/outside determinants such as policies and systems have equal importance to influence vaccination factors. [Crawshaw et al. \(2021\)](#) added that COM-B-related factors of individuals are shaped by the multiple social, cultural, historical, community, governmental, clinical, and environmental levels that influence acceptance and uptake of COVID-19 vaccination. Moreover, their study further revealed that the Opportunity-related factor of the COM-B Model, which has included a context determinant - trust in government health agencies handling the pandemic - was associated with higher vaccination uptake. Preventive measures, therefore, as a product of governmental policy, have the potential to support or undermine vaccination given its goals and resources ([Brewer, Chapman, et al., 2017](#)).

## Conclusion

The data revealed a high level of perceived effectiveness of government preventive measures among the residents of Panabo City. Hence, government preventive measures were believed to be effective against transmission of COVID-19 disease, considering the means as becoming informative to the respondents. The data indicated a high attitude and an average level of acceptance towards the COVID-19 vaccine. Therefore, there were positive attitudes and a moderately positive acceptance of the COVID-19 vaccine manifested among the residents of Panabo City. The respondents who believed in the importance of getting vaccinated and developing efficacious and safer vaccines were seen to have the willingness to accept the COVID-19 vaccine.

There is a positive, high and significant relationship between the perceived effectiveness of government preventive measures and the attitudes and acceptance toward the COVID-19 vaccine. Thus, government preventive measures correlate to the citizens' vaccination behavior. It further considers that government interventions' effectiveness in this time of pandemic varies the attitudes and acceptance of citizens towards the COVID-19 vaccine. The significant influence of the perceived effectiveness of government preventive measures on attitudes and acceptance toward the COVID-19 vaccine was also revealed in the study. Thus, it implies that the effectiveness of government preventive measures during the pandemic has significantly affected and influenced the attitudes and acceptance of the respondents towards the COVID-19 vaccine.

The study's findings recommend that national and local health agencies promote strict adherence to preventive measures, strengthen vaccination programs by supplementing more detailed information about the vaccine, and address the current pandemic situation to achieve a more positive and high vaccination uptake towards COVID-19 vaccine. The local Government Unit may impose more effective and informative preventive protocols, especially on implemented lockdown, to gain a very high level of effectiveness on preventive measures and increase public trust and vaccination uptake. Public administrators may further review the implementation of policies regarding the effectiveness of preventive measures, especially lockdown and information dissemination, to manifest a very high score of government preventive measures. Lastly, future researchers may research the remaining factors contributing to a more positive attitude and acceptance of the COVID-19 vaccine.

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