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FACTORS AFFECTING ACCEPTANCE OF COVID-19 VACCINE OF PUV DRIVERS IN BULAKAN, BULACAN

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ABSTRACT
Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) is the newly discovered strain of coronavirus which caused the COVID-19 disease that generates thepandemic. Some of the ways to control this pandemic is to make a vaccine that will provide immunization from the virus. In a short time, pharmaceutical companies are already in the clinical phase in making the vaccine due to the advanced technology. However, some people are hesitant to take the COVID-19 vaccine due to the factors that affect their acceptance of COVID-19 vaccine. The virus is still prevalent but the transportation resumes their operation, which makes public utility vehicle drivers more prone to the virus. Thus, this research aims to assess the factors affecting the acceptance of PUV drivers in Bulakan, Bulacan and its relationship to whether they will accept the COVID-19 vaccine or not. The researchers will be utilizing the Correlation Descriptive Study Design and probability sampling under fishbowl method. Questionnaires will be distributed to PUV drivers in Bulakan, Bulacan to gather data.

KEYWORDS: COVID-19. SARS-CoV-2. Vaccine. Immunization. Pandemic. PUV.

CHAPTER 1
The Problem and Its Background
INTRODUCTION
The world is in a pandemic because of the COVID-19 disease that puts a catastrophe worldwide. According to the World Health Organization (2020), Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) is the newly discovered coronavirus strain that caused the COVID-19 disease. The symptoms of this disease are fever, dry cough, and other respiratory illnesses. High-risk patients with diabetes, cardiovascular disease, cancer, and chronic respiratory disease have a higher chance of getting a severe illness (WHO,2020). On October 31, 2020, a total of 44,592,789 confirmed cases of COVID-19 with 1,175,553 deaths were recorded all over the world. (WHO,2020). And onthe same date, there are 376,935 COVID 19- cases with 7,147 deaths in the Philippines (Department of Health,2020). Thus, the health problems in the country exponentially increased, which puts the health of Filipinos in danger.

Some of the ways to control this health crisis are by proper disinfecting and following health protocols to stop the transmission of the virus (WHO, 2020). But the best way to put the pandemic under control is to make a vaccine that will provide immunization from the virus. In a short period, international pharmaceutical companies are already in the clinical trial phase in making the vaccine, which is reasonable because of the advanced technology available (Calina et al., 2020). Moreover, the Philippines expects to receive the COVID-19 vaccine, most likely from April to June 2021 if the top vaccine candidates willbe approved (Ranada, 2020).

Despite the incoming vaccine, some people are hesitant and not confident to take the COVID-19 vaccine which affects the acceptability of COVID-19 to the public. Acceptance of the COVID-19 vaccine is essential in the plan to control the spread of the virus, achieving a public acceptance will make a big leap in ending the pandemic. However,there are following factors stated in this study, which affect the acceptance of COVID-19 vaccine such as (1) knowledge about vaccine, (2) beliefs about the vaccine, (3) warp speed of making the COVID-19 vaccine, (4) past vaccine safety concerns, and (5) cost of COVID-19 vaccine. For these reasons, people who would refuse to take the COVID-19 vaccine have a higher chance of acquiring the virus and spreading it as well. To stop the spreading of the virus, the government implemented community quarantine to lessen the transmission of the virus.

On March 15, 2020, the government declared an enhanced community quarantine in the National Capital Region which was followed by other cities qualified for the quarantine (Ranada, 2020; Talabong 2020). On

August 19, 2020, it shifted to general community quarantine, enabling companies, establishments, and transportation to resumetheir operations following health safety protocols (Balibay, 2020). The unavailability of a vaccine for COVID-19 puts people at risk of acquiring the virus. For this reason, working people including public utility vehicle drivers are highly prone to the virus. PUV drivers have constant exposure to commuters every day, which makes them highly susceptible to the virus. Furthermore, their exposure to air and handling money can put them at high risk of acquiring and spreading the virus as well. Even though proper social distancing and preventive protocols were implemented by the government, it is hard to assure compliance and the virus is unpredictable. In this case, they are one of the working people who need to be prioritized for the vaccination because of their high exposure to the public which increases their susceptibility to the virus and capability to spread it. Even with the risk of spreading the virus, access to public transportation continues to increase due to the demands of the commuters. (San Juan, 2020).

After the shift to the general community quarantine, some municipalities already have access to PUV's. One of those municipalities is Bulakan, Bulacan, the PUV drivers follow scheduled working hours to control the population in todas in accordance with the physical distancing protocol. On November 4, 2020, there were 232 confirmed cases of COVID-19 with 35 active cases recorded in the town. (Rural Health Unit,2020). Despite this, PUV's are already available to the public to accommodate the increasing commuters who travel every day (Subingsubing, 2020). This will put risk to the PUV drivers and to the whole community in acquiring the said virus because of the high possibility of contacting asymptomatic patients. Therefore, the researchers aims to assess the factors of acceptance that affects the acceptance of PUV drivers in Bulakan, Bulacan and its relationship to whether they will accept the COVID-19 vaccine or not because these factors will affect their decision if they would take the COVID-19 vaccine or not, which will cause a big impact on the controlling and prevention of the said virus in the town.

Background of the study

SARS-CoV-2, the newly discovered strain of coronavirus that has been discovered in December 2019, is the novel coronavirus that is causing COVID-19. The first case of infection was reported in Wuhan, China and the following infected people all came from a public market in Wuhan, China which suggests that the said place was the source of an outbreak of this virus. Thorough studies were made and the genetic sequencing shows animal genomic figures which led the scientists that it originates from animals (Sheng, 2020). The spread of the virus came across the globe, infecting almost all of the countries worldwide and one of the greatly affected countries is the Philippines.

In the Philippines, the first-ever case of a 38-year old Chinese national that has been recorded was on January 30, 2020. Even though there were recorded active cases in the Philippines, the government did not close the boundaries still until March 7, 2020, when the first local transmission was recorded that gave way to continuous spread of the virus (*COVID-19 Response in the Philippines | WHO Philippines*, 2020). As the count of the active cases rose exponentially, on March 15, 2020, the government put the NCR on a lockdown wherein ECQ was applied to the region. This caused the people to stay at home as much as possible that is why a lot of establishments, companies, and workers had to stop their operations for a while. As the continuous accumulation of cases, the quarantine continues to be implemented but as time goes by and the need of some operations to continue, it gradually relaxed from ECQ to GCQ. The usual businesses also came back andone of these is public utility transportation.

Resuming the transportation operations, PUV drivers are one of the high-risk people in contracting the virus because they are those exposed to different people and areas that might have been infected and contaminated. These drivers are involved in physical interaction such as handling fairs and exchanges and, in this way, the virus can be easily transmitted. The WHO suggests that the distance between people must be at least 1 meter,but in a public utility vehicle reducing its capacity to 50 %, physical distancing is not assured. With the lack of preventive measures and the protocols that have not been strictly followed, PUV drivers would most likely be infected by the said virus and if that happens,they will be the carrier of the virus. The threat of the uncontrollable spread of disease willhappen. Thus, when the vaccine for COVID-19 becomes available, these drivers who are exposed to commuters should accept the vaccine. But their decision to be vaccinated or not may depend on several factors.

With the big problem of acquiring and transmitting the virus that the PUV drivers may possibly encounter, the researchers would like to assess the factors affecting their acceptance of the COVID-19 vaccine and determine its relationship with their decision of getting the vaccine or not in Bulakan, Bulacan. The primary factors to be assessed are (1) knowledge about the vaccine, and (2) belief about the vaccine; while the secondary factors are: (1) cost of the COVID-19 vaccine (2) past vaccine safety concerns, and (3) the warp speed of making the COVID-19 vaccine.

First is the knowledge about the vaccine and it is a primary factor that will help thePUV drivers to weigh their decision of COVID-19 immunization. Lack of knowledge about the vaccine is one of the reasons cited why most Filipinos do not adhere to the immunization program. Study shows that Filipinos who have a higher knowledge of immunization tend to have themselves vaccinated (Carlos, C. & Eugenio, C., 2017). The PUV drivers need

to assess their knowledge regarding the vaccine since they may not be aware of how the vaccine works and how efficient vaccines are.

Secondly, Filipinos are known to have health superstitions and some still believe inthese beliefs despite the advancement of medicine today. In the present day, some of the Filipino health practice is linked to beliefs and practices of the past (Makati Medical Center, 2019). Reliance on indigenous healers is one of the ways how Filipinos treat theircertain symptoms since it will be a lot cheaper than the actual medical check-up (Stanford School of Medicine, 2020). The problem of unidentified diseases may arise since the disease is not properly diagnosed. This may hinder the Filipinos from getting the vaccine because of the reliance of Filipinos on these superstitious beliefs and it is much cheaper than getting the actual medical treatment.

Thirdly, the cost of the COVID-19 vaccine being a socio-economic wise concern of the PUV drivers because they are financially affected by the lockdown that had happened all over the Philippines. For a PUV driver in time of the pandemic, vaccination would be less prioritized because of their low income due to the factors like fewer passengers due to minimized capacity of vehicles, less working hours per day due to nationwide curfew, and unstable amount of income per day since their income is reliant on the number of passengers. On the other hand, PUV drivers may be urged to have themselves vaccinated because it is the only thing that can provide immunity to them from the virus and for the sake of their passenger's safety.

Fourth is the past safety concerns that is also considered as a factor that may affectthe acceptance of PUV drivers from getting the vaccine. As per the Department of Health, forfeiture of public confidence in the immunization program carried about by the Dengvaxia controversy has been known as a factor that chipped into vaccine hesitancy of the Filipinos (Montemayor, 2019). As a result, many Filipinos have an issue with getting the vaccine due to the past experiences that build up the fear of getting another vaccine. (Icamina, 2019). The problem with vaccine-hesitancy has not been completely resolved and the intense anxiety around vaccines over-all (Larson et al., 2019). However, PUV drivers may probably still think that the vaccine can also be safe and effective just like the other vaccines that had no record of adverse effects once they know how vaccines work.

Lastly, the warp speed of creating the COVID-19 vaccine motivates all of the pharmaceutical companies to produce the COVID-19 vaccine as soon as possible or by January 2021 as a factor to consider for the PUV drivers (Schimdt, 2020). However, it couples with dangers: due to concerns with immune responses to COVID-19 immunization that could boost infection or aggravate illness in people who become SARS-CoV-2 infected despite vaccination (Moore & Klasse, 2020). With the time frame of production, the potential benefits and risks may not be outweighed, and this will build-up loss of publicconfidence towards COVID-19 immunization.

Considering all of these factors, it would weigh in the process of decision making of the PUV drivers as to whether or not they will get the COVID-19 vaccine. It is initiated with the need of getting the vaccine to protect themselves against the said virus. Afterwards, these factors will come into play since getting the vaccine is linked with life and personal decisions. Varying from how these factors would affect their decision, this must be further assessed to know how these factors would be significant and affect the decision of PUV drivers about getting the COVID-19 vaccine.

Assessment of these factors' affects with the acceptance of the COVID-19 vaccineof the PUV drivers is essential to address their concerns regarding having the vaccine. It isvery important for them to be vaccinated because they are one of the essential workers in the community because they mobilize people. Their decision of getting the vaccine may beconsidered as a perceived risk to the community because if these drivers acquire the said virus, the spread of the virus will be fast and uncontrollable since they get along with different passengers heading to different destinations.

Theoretical Framework

The following theories will be used by the researchers as a guide in making the tools for its measurement and to assess factors affecting acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan.

1. Health Belief Model.

The Health Belief Model (HBM) is used for understanding various health and illness behavior. Several constructs comprise this model such as *Perceived susceptibility* which refers to perceptions regarding the vulnerability of PUV Drivers in contracting the virus because of the potential risk of infection in their vehicle since coronavirus spreads through droplets which may enter the eyes, nose and mouth, directly or after touching contaminated objects like money for fares. Concerning vaccination, *perceived benefits* willdefine the PUV drivers' advantage when they get vaccinated. Some advantages are this will be able to keep them from contracting the virus for it is the safest way to build protection against the virus and will contribute to help stop the pandemic. While *perceived severity* refers to assumptions regarding the dreadful effects if they have contracted the disease while transporting which is the mild to severe condition of people with COVID-19. *Perceived barriers* are described as the belief that being vaccinated has hindrances due to psychosocial, financial factors, knowledge and doubts towards the vaccine. *Cues to action*include information, people, and events that will serve as guides for PUV drivers with regards to the process of their decision making about getting vaccinated. Therefore, exploring HBM constructs that

influence COVID-19 vaccination may be significant to enhance the acceptance of the vaccine.

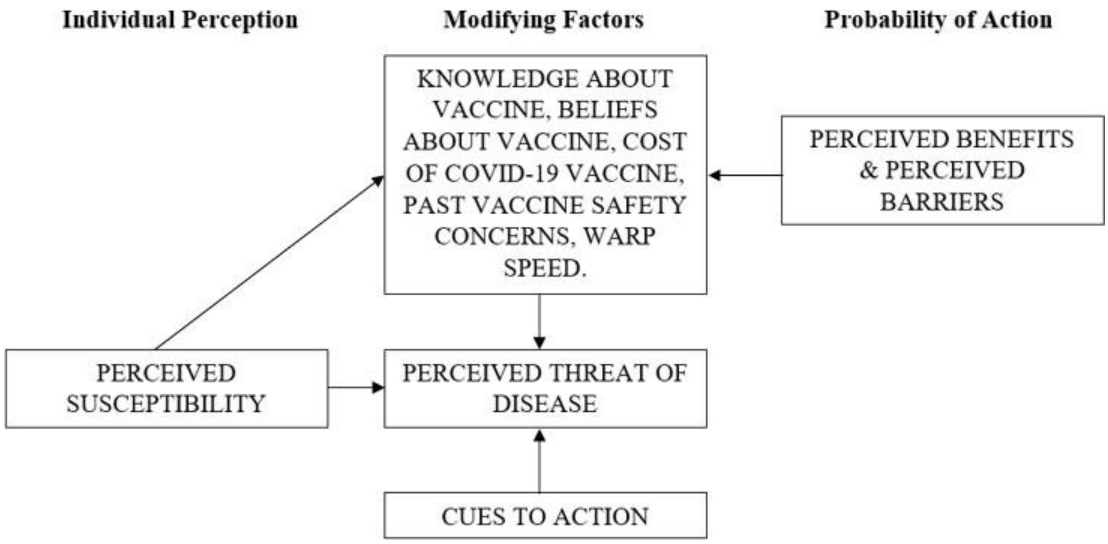
Figure 1 shows the HBM theoretical model. For the individual perceptions, these are factors that affect the perception of illness which is the *perceived susceptibility*, which represents the vulnerability of PUV drivers to contract the disease which affects the *modifying factors* (1) Knowledge about Vaccine (2) Beliefs about the vaccine. (3) Cost ofCOVID-19 Vaccine (4) Past Vaccine Safety Concerns (5) Warp Speed. These modifying factors are affected by the *perceived benefits and barriers* in doing the recommended action. Because *perceived benefits* represent the positive consequences of PUV drivers if they will get vaccinated and *perceived barriers* are the hindrances that will affect their perspective towards the vaccine. The *perceived threat* is affected by the modifying factors, cues to action and perceived susceptibility. Finally, the *perceived risk* of the disease affectsthe probability of doing the recommended action.

2. Mere Exposure Theory

In Mere Exposure Theory, the exposure develops a preference for the things or persons familiar to them. Thus, familiarity will increase by repeated exposure. If the PUV drivers are well informed, they can better process judgment and preferences towards the vaccine. This theory also supports that human beings prefer to stick with familiar things. Therefore, if a famous pharmaceutical company produces the vaccine even if they lack knowledge about the trials it has undergone, they will establish trust and confidence.

3. Availability Heuristics Principle

Figure 1. Theoretical Model of the Health Belief Model

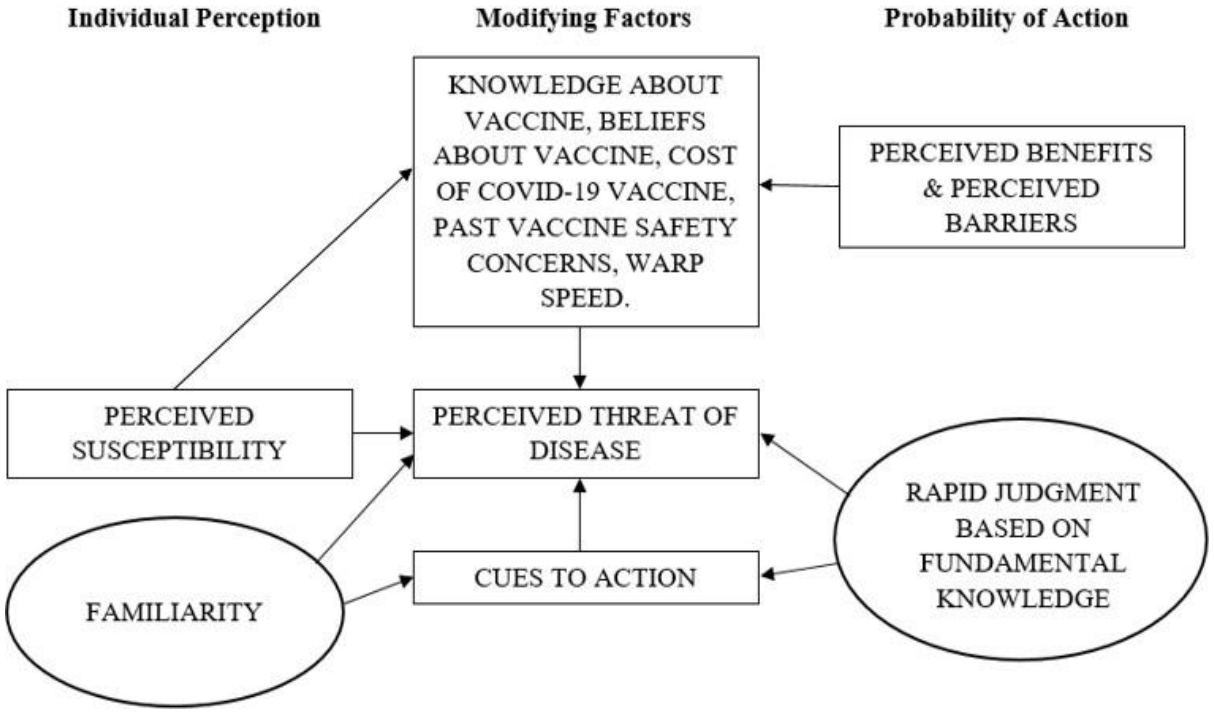


Availability Heuristic Principle is when you are trying to decide, several related events or situations might immediately pop up to the forefront of your thoughts. It is making rapid assessment and judgment about something based on the knowledge that youknow.

Using this, PUV drivers might or might not consider the possibility of being vaccinated. It all depends on the knowledge they have about the vaccine. For instance, if PUV drivers heard some of the news about Dengvaxia, it might contribute to their perspective on not being vaccinated once it is available.

For a better understanding of the relationship between these theories being used in this study, an integrated theoretical model is also considered. It is the combination of the theories stated above which brace up its relevance in decision making of PUV drivers whether they're going to be vaccinated or not. *Figure 2* shows that the availability heuristics is a rapid judgment based on fundamental knowledge that can be affected by the perceived threat of disease and mere exposure is the familiarity that affects the cues to action and perceived threat to magnify the higher risks of PUV drivers due to exposure.

Figure 2. Integrated Theoretical Model



4. Rational theory of choice: logic of consequence

Rational choices are based on a decision-making process that is consequential and preference-based. They are consequential in the sense that the action of PUV drivers is dependent on anticipating the future effects which is the acceptance of being vaccinated ofCOVID-19 vaccine of current action which is recognising the specific factors such as knowledge, belief, cost and past vaccine safety concern. They are preference-based in the sense that the consequences are assessed in terms of personal preferences and the specific factors. Alternatives are interpreted in terms of their expected consequences. It is used to reflect a judgment on mental health that is demonstrated by an action or process for takingaction.

Objectives of the study

The general objective of this research is to assess the factors affecting the acceptance of PUV drivers in Bulakan, Bulacan and its relationship to whether they will accept the COVID-19 vaccine or not.

The specific objectives of this study are the following:

1.To determine the profile of the Filipino PUV drivers

1.1 Age
1.2 Sex
1.3 Address
1.4 Association they belong to
1.5 Type of PUV (Jeepney or Tricycle)
1.6 Number of hours driving per day

2. Determine whether PUV drivers in Bulakan, Bulacan are willing to be vaccinatedor not.
3. To assess the following factors can affect the acceptance of PUV drivers towards the COVID-19 vaccine

3.1 Primary Factors
3.1.1 Beliefs about vaccine
3.1.2 Knowledge about vaccine
3.2 Barriers
3.2.1 Cost of Vaccine3.2.2Warp Speed
3.2.2 Past Vaccine Safety Concerns

4. To determine the relationship between the factors affecting acceptance and the acceptance of PUV drivers of the COVID-19 vaccine.
5. Determine if there is significant difference on the factors that can affect the acceptance of PUV drivers towards the COVID-19 vaccine and their correspondingprofile variables.

Hypothesis of the study

The null hypothesis **(H0)** of the study is that there is no significant relationship between the factors of acceptance and the acceptance of PUV drivers of Bulakan, Bulacan towards COVID-19 vaccine.

The alternative hypothesis **(H1)** of the study is that there is a significant relationship between the factors of acceptance and the acceptance of PUV drivers of Bulakan, Bulacantowards COVID-19 vaccine.

Significance of the study

This study would benefit the following

1. PUV Drivers in Bulakan,Bulacan

As a respondent, it can give them a self-assessment if they would take the vaccine or not due to the factors stated.

2. The community in Bulakan, Bulacan

It will benefit the community in Bulakan, Bulacan especially the commuters who ride PUV's every day. If this study proves that the factors affect the acceptance of

PUV drivers in the town towards the COVID-19 vaccine, they can be aware of the risk of PUV drivers being reluctant to take the vaccine due to the factors stated. They will be able to take extra precautions to prevent contact with the PUV drivers to ensure their safety from the virus. On the other hand, it will give them assurance if the PUV drivers in the town are willing to take the COVID-19 vaccine which will give them peace of mind about their safety.

3. Local Government

If this research shows that the factors affects the acceptance of PUV drivers in Bulakan, Bulacan in COVID-19 vaccine, this study can help the government by using the factors stated as a basis to develop a plan or program in convincing PUV drivers to take the vaccine. It can be giving the right information about the COVID-19 vaccine which will bring enlightenment and assurance to their concerns in taking the vaccine. On the contrary, the government can easily gain adherence to the COVID-19 vaccine from PUV drivers in Bulakan, Bulacan if they are willing to take the vaccine even with the factors given.

4. Future COVID-19 vaccine developers

This study would give them awareness and will let them focus more on people's concerns about the development of the COVID-19 vaccine. Addressing the factors that affect the acceptance towards COVID-19 vaccine will help remove people's doubts and boost the confidence in taking the COVID-19 vaccine.

5. Future researchers

This study would serve as a basis and reference to the student researchers in the same area. They can use the recommendation in the study to take measures for a better research.

Scopes and delimitation

This study focuses on assessing the factors affecting the acceptance of PUV drivers in Bulakan, Bulacan and its relationship to whether they will accept the COVID-19 vaccine or not. The chosen respondents are composed of the PUV drivers from the Municipality of Bulakan, Bulacan. A simple random sampling technique by using the fishbowl method will be utilized to divide the population of PUV Drivers. The statistician will determine the number of participants. Moreover, the PUV drivers are also determined in terms of age, sex, address, the association they belong to, type of PUV, and the number of hours driving per day. The gathering of data is improvised to ensure the safety of the researchers and also the respondents from getting exposed to the SARS-CoV2 virus. The researchers decided to use the following theories: Health Belief Model, Mere Exposure, and Availability Heuristics Principle, as a guide that may help in assessing the individuals' beliefs and attitudes to explain and predict their health behaviors. Each of the respondents will be given questionnaires through online, phone call surveys, or anything that works both ways.

The researchers delimit this study to the Municipality of Bulakan, Bulacan. The researchers did not consider the other municipalities of Bulacan upon making this study. The chosen respondents from this research are Jeepney drivers and Tricycle drivers only. They must have a license coming from the Land Transportation Office (LTO) and must belong to an association that is recognized by their local government. Colorum drivers were not considered as a respondent because there isn't anything that could prove that driving PUV is their main source of income and they are violating the law laid out by the LTFRB. One of the main drawbacks that the researchers see in this study is the honesty of the PUV drivers in answering the items in the questionnaire. The researchers don't have the means to know if the respondents answer what they want or it is just for compliance. Another thing that could be a downside of this study is the clarity of the questions to the PUV drivers. It would be difficult for researchers to fully explain everything since it will be done online. The above mentioned may affect the quality of the result that the researcher will get. The setting of the research can also be considered as a limitation because not all of the researchers come from this place. Also, the SARS-CoV2 or COVID-19 limits this study especially in the gathering of data because pose a great risk to the health of the researchers and respondents.

Definition of terms

In the context of this research, the following terms are being defined for a better understanding of this study.

Acceptance. Is a process in which the PUV drivers recognise the Factors: knowledge, beliefs, warps speed, and past vaccine safety concern to form a decision towards the COVID-19 vaccine.

Clinical Trial. New tests and treatments like COVID-19 vaccines have to undergo this process before being approved for widespread use.

Cost of the vaccine. The measurement of the extent of how affordable the COVID-19 vaccine is to the PUV drivers.

COVID-19. An infectious disease caused by Coronavirus and can be transmitted through direct contact with respiratory droplets of the person infected, which makes PUV drivers more susceptible to this virus by being exposed to many people every day. It usually manifests flu-like symptoms and shortness of breath.

Decision-making. It is a cognitive process where the PUV drivers choose if they are willing to be vaccinated by COVID-19 vaccine or not.

Knowledge – it is the awareness on information of a particular topic.

Operation Warp Speed. A fast pacing production of

COVID-19 vaccines as it hopes to control the pandemic. This operation may affect the perspectives of PUV drivers, for theymight question the safety and efficacy of a vaccine that will be produced in such a fast phase.

Pandemic. This is when a disease is spread worldwide and is affecting a large number of the population.

Past Vaccine Safety Concern. Worries or concerns of the people in the vaccine that is brought upon by the results of the previous vaccines.

Perspective. Refers to the way the drivers see or understands particular points regarding the COVID-19 vaccine.

Physical distancing. It is maintaining a safe distance that minimizes person-to-person transmission and to prevent more rapid spread of COVID-19.

Public Utility Vehicle. Refers to vehicles for public transportation such as jeepneys and tricycles that carry commuters. It has a budget-friendly fare, runs in specific routes with scheduled time.

T-lymphocytes -It is a defensive blood cell produced as the immune response to the COVID-19 vaccine that protects the body from the SARS-CoV 2 virus.

Vaccination. It refers to the injection of a vaccine, which helps stimulate the immune system against COVID-19.

Virus. An infectious agent invades and infects their host, such as humans, and affects many areas in the body, including the respiratory system.

CHAPTER 2
Review of Related Literature and Studies

This chapter presents the related literature and studies would elaborate and give rationale and justification of the importance of conducting this research.

1. COVID-19: History and How it Affects the Whole World

COVID-19 is an illness caused by severe acute respiratory syndrome coronavirus 2 (SARs-CoV-2). It is a disease that infects humans, typically leading to an upper respiratory infection. It comes from a group of animal viruses emerge in bats and unknown animal reservoirs that may transmit the virus to humans and highly communicable diseasethat came out in late 2019. The virus is spread through the air by coughing and sneezing, close personal contact, touching an object or surface contaminated with the virus, and rarely, by fecal contamination. Persons with COVID-19 may undergo symptoms such as cough and shortness of breath, runny nose and sore throat, fever or chills, muscle or body aches, fatigue, loss of taste, headache, nausea or vomiting, diarrhea (Australian Government Department of Health, 2020). A person with COVID-19 can be asymptomaticor pre-asymptomatic. Government asked to isolate those persons who acquire the symptoms of COVID-19 to prevent the contagious spread of the virus. According to Chen et al. (2020), In the province of Guangdong, southern China started the outbreak of COVID-19, and concluded that the virus originated from bats that were eaten as an exotic food past (Guan et al.,2003).

The accelerated dissemination of the global COVID-19 pandemic is creating fear among individuals around the globe. This affects the country's economy, societal beliefs, and psychological tension, independent of which directness of the infected individual touch. In 110 countries there were 118,000 cases of coronavirus (Behay, 2020). As the COVID-19 case arises some countries immediately banned travel to other countries and issue an intermittent lockdown in all establishments. The research shows that the COVID-19 outbreak affects people's mental health that causes them anxiety and economic failure.

Every region has fundamental growth downgrades that turn down the progress indevelopment goals and lead to extreme poverty (The World Bank, 2020). The spread of COVID-19 affects our everyday life in the Philippines. This pandemic turned out to be totally shaped by social phenomena such as economic inequality, the spread of misinformation, and entrenched racial. It brought economic failure in the economy. Also, the Global Economic Prospects (2020) state that the baseline forecast envisions in global GDP in 2020 is 5.2 percent contraction. Over a long period of time, pandemic triggered a global crisis through lower investment, lost work, fragmentation of global trade, and lack of supplies. Many of us affect our usual daily lives like schools closed their physical contact with the teacher and turned education online, many workers lost their jobs due to the low demand of income of industries (Behay, 2020). As of November 4, 2020, DOH (2020) reported that the Philippines have already 389,124 total confirmed cases, 31,679 active cases, and 7,367 deaths caused by COVID-19.

An individual can easily prevent the spread of a range of chronic disease through some basic behavioral changes like staying at home and avoiding any direct contact with any healthy or infected person, which has been called shielding. Frequently washing handsfor at least 20 s with soap and water or hand sanitizer with at least 60% alcohol, especially after touching common surface areas, using the bathroom, or shaking hands, avoiding touching eyes, nose, and mouth with unwashed hands; and disinfecting surfaces using household sprays or wipes.

2. Implementation of Precautionary measures

Being in contact with infected people is the primary reason for acquiring the virus.It spreads through droplet form that can get from coughing, sneezing, and speaking

from the infected person (WHO, 2020). The primary health agency of the Philippines which is DOH, released safety precautions to the public to prevent transmission of the said virus. These health protocols are strictly implemented in the country to reduce the increasing rate of COVID-19 cases (Department of Health, 2020). These protocols are as follows: (1) proper disinfecting, (2) physical distancing, (3) wearing face masks & face shields, and (4) quarantine (Department of Health, 2020).

All these measures are designed to stop the transmission and the spreading of the virus, however, on November 6, 2020, the Philippines still ranked 23rd in the most affected countries by COVID-19 disease in the whole world (WHO, 2020). Therefore, the implementation of measures did not significantly decrease the COVID-19 cases in the country. In this case, having a vaccine is the best option that can surely decrease the growing COVID-19 cases in the country by providing immunity against the COVID-19 disease. (Lee, 2020).

3. COVID-19 Situation in the Philippines

As the COVID 19 pandemic strikes the Philippines Filipinos express panic in various behaviors such as the psychological stress of the individuals concerned despite the directness of contact with the infected. This also affects the economy and social values in the country (Nicomedes & Avila, 2020).

3.1. Transition from ECQ to GCQ

The enhanced community quarantine started to be implemented from March 17 to April 30 throughout Luzon-wide in attempts to limit population movement and to control the virus from spreading. To suppress the COVID-19 outbreak, the government put an effort into the post-ECQ isolating at least 70% of infectious cases through better contact tracing, social distancing, individual or household isolation, and reduced delays in time to seek care for symptomatic cases (Abrigo, et al. 2020).

The Philippine government responded to the COVID-19 pandemic and considered science's advice and scientific information and illustrated its various contexts of formulating a policy informed by epidemiological models. This determined how the Philippine government and its public recognized the importance of the role of scientists providing scientific information in economic and political life in the COVID-19 crisis (Vallejo & Ong, 2020).

The Philippine economy is challenging but necessary to provide indications that any potential response to arrest the spread of the disease is not worse than the negative impacts of the disease itself. Responses to epidemics may have unintended consequences on other material measures of well-being, including food security. (Thomas, et al. 2014; Abrigo, et al. 2020).

According to Ocampo and Yamagishi (2020), as the economy started the lockdown in response to the COVID-19 pandemic the people have been affected mentally and physically, as the governments around the world are speculating if not to implement the relaxation strategy for those drastic measures early this year. Although the emerging of literature, pragmatic experience of those countries that already lifted the harsh measures, and the resurgence of the second wave of cases that may burden the health care systems are being considered.

3.2. Implementation of GCQ.

The careful transition from ECQ to relaxed GCQ is very crucial for the governments in order to balance the two conflicting objectives that keep mortality at a minimum and initiate an economic restart. Nevertheless, without controlled experiments and documented experience on such a massive scale, governments resort to a trial-and-error approach to designing effectively a post-lockdown strategy (Ocampo & Yamagishi, 2020).

After more than 2 months of enhanced community quarantine (ECQ), Metro Manila, CALABARZON, Central Luzon areas, the provinces of Albay, Pangasinan, and Davao city implemented general community quarantine (GCQ) which started on June 1, 2020. The business industry such as the food and transportation sector were permitted to resume their operations at 50% up to a full capacity of the area in order to prevent economic damage in the country (Ibañez et al., 2020).

The government issued a memorandum that ordered continues the implementation of the community quarantine guidelines drafted by the Agency Task Force for the Management of Emerging Infectious Diseases (IATF-EID) especially in areas with a high risk of exposure to COVID-19 such as health care settings, supermarkets, wet market, offices and other workplaces (Velante, 2020).

Most Filipinos within the working class are commuters. within the 'old normal', most of those daily travelers have to travel to school or work using various modes of conveyance. However, the woes of the Philippines' commuting public are a long-standing issue even before COVID-19. The lack of efficient and sufficient mass transit systems and daily road congestion has been an everyday source of stress and frustration. Therefore, In the short-term, provide well-controlled and coordinated transport services that can ensure social distancing and other health safety measures upon the implementation of the GCQ (Ugay, et al., 2020).

Preventive measures such as wearing face masks, face shields, and social distancing will help to reduce the possibility of being exposed to the virus or spreading the virus. These are not enough to ensure safety from the virus. Vaccines to prevent COVID- 19 will helps the immune system to be ready to fight against the virus once a person is exposed (CDC, 2020).

"Mandating COVID-19 vaccine" SHRM Organization (2020) stated that even thevaccine to prevent COVID-19 is not yet available. It is not too early to encourage employers in considering whether they will require employees to have vaccination when the vaccine is ready and available.

4. COVID-19 Vaccine

Vaccine provides antibodies which eliminates the pathogen in our body. With the vaccine, our body gets immunized and protected from the pathogens even without acquiring it (Pappas, 2010). An example of this pathogen is the SARS-COV 2 or also known as COVID-19 virus, this is a newly discovered virus that caused the pandemic, and one of the solutions that may help to control this is through vaccines which will provide a defense against the virus. Bringing a vaccine to the market can typically take 10 to 15 years. It is a lengthy process but because of the operation warp speed, laboratories and pharmaceutical companies are on a race to provide the vaccine which leads them to usingdifferent approaches in creating a vaccine.

The making of these vaccines for this virus is still ongoing but few top vaccine candidates are most likely to be done by the next few months. But even after the approval, there are possible hindrances to face when it comes to the production and distribution of the vaccine. One of the examples of this was when BioNTech/Pfizer announce that their vaccine is 90% effective in the early analysis of their Phase 3 Clinical Trials but it needs to be refrigerated at -70 to -80 degrees or else it will expire after 5 days when store at normal refrigeration which is commonly available at hospitals. Distribution would be a problem for those nations who'll not be able to afford ultra-cold freezers but they have assured that they will do their best to make it possible for everyone.

In a short period, some pharmaceutical companies are already in phase 3 of clinical trials which give hopes to end this pandemic. The top three vaccine candidates are from Moderna, BioNTech/Pfizer, and AstraZeneca, the most top-funded companies which promised to produce the vaccine by December to January 2021. (Pagliarulo et al., n.d.) According to Moderna, the price of their vaccine is ranging from $32 to $37 for small volume orders which is roughly around 1,500 to 1,800 pesos. As per other pharmaceutical companies that are part of the Operation Warp Speed, their vaccine will cost around $4 to $20. Also, the cost of the vaccine will depend on how many doses would be needed. Pfizer and Moderna are both testing a two-dose regimen.

5. Working Class People

This pandemic has brought great fear to the people because it endangers their life by just acquiring the virus. In order to minimize the spread of the virus, the government has implemented community quarantine. Community quarantine restricts the movement of the people within the area of quarantine. It includes the production of goods, schools and universities, mass transportation, and work.

According to the SWS national mobile phone survey, a very-high 39.5% of adults who are jobless. Most of the jobless lost their job/livelihood during the crisis of covid-19 pandemic. The qualified participants of this survey jobless adults are those who left their jobs, looking for a job for the first time, and those who lost their job because of the economic crisis. Aside from that, Based on Gutierrez (2020), a lot of workers were placedin a 'no work, no pay' policy because a lot of businesses were halted.

In addition, the Department of Labor and Employment stated in their Job Displacement Report that 3, 115, 160 workers have been affected due to the pandemic crisis. Many establishments implemented flexible work schedules but it affected millions of workers.

Apart from the working class people, the daily wage earners and those from the informal sectors have been the most affected because of the implemented lockdown according to Purugganan (2020). In an online discussion, Wilson Fortaleza of Manggagawa Partylist said that the informal sectors work in a poor condition with minimal earning.

These Informal sectors Includes street vendors, transport workers such as jeepney driversand tricycle drivers.

6. PUV drivers During the Quarantine

Bulacan is one of the cities in the Philippines that have been transitioning from Enhanced Community Quarantine (ECQ) to Modified Enhance Community Quarantine (MECQ) to General Community Quarantine since President Rodrigo Duterte announces that the country will be put under lockdown due to the threats of the SARS-CoV2 virus. Itsuspends a lot of daily activities such as school, work, and even mass transportation.

Based on the Board Resolution No. 060 series of 2020 signed by the Land Transportation Franchising & Regulatory Board (LTFRB), all the operation of the Public Utility Vehicle is postponed until further notice during ECQ and because of this, many PUV drivers have lost their source of income. According to Cerudo (2020), a lot of Jeepney drivers were seen in several streets of Manila begging for money and they only eat once a day to save the little money they have.

As stated in the report of San Juan (2020), the emergency aid fund was distributed to the 17, 467 PUV drivers led by the Department of Social Welfare and Development in cooperation with the Landbank of the Philippines and The Department of Transportation. Each of them received ₱5000 for PUV drivers residing in Metro Manila and ₱8000 outsideMetro Manila.

Lifting the MECQ to GCQ also means that the halting of

mass transportation will also be lifted. According to Balbin (2020), the operation of public utility vehicles will resume after it was stopped because of community quarantine. Drivers must follow the protocol laid out by the government such as those who are not wearing face masks and faceshields will not be given a ride. In addition, According to Dela Cruz (2020), the Department of Transportation imposed that physical distancing must be strictly followed in public transportation.

Also, according to the protocol laid out by the Department of Transportation, PUV drivers must wear face masks and gloves at all times. The drivers must be regularly checked by a safety officer to ensure that they are fit to work by checking their body temperature. If they show a symptom of the disease, they must immediately go to the nearest medical facility. Public Utility Jeep must only occupy half of the full capacity of the vehicle while Tricycle is only good for 1 passenger at max.

After the lockdown has been lifted up, Nicholas (2020) articulated in her report that the Development Bank of The Philippines has been acting on some ways to help the transportation sector by giving PUV drivers subsidize while recovering from the loss they incur.

7. Factors that may Affect the Acceptance of PUV Drivers in COVID-19 Vaccine

7.1 Knowledge about the COVID-19 Vaccine

The relationship between the knowledge and acceptance of the vaccine is significant since people who exhibited low levels of belief in the vaccine are those who have low levels of education (Kara, S., 2018). Understanding how the vaccine works contributes to the confidence of getting the vaccine. The study "*Understanding vaccine knowledge, attitudes, and decision-making through college student interviews*" by Sandler, K., et. al (2019) stated that prioritization of vaccination is low despite the positive behavior towards vaccines because of lack of knowledge in vaccine and how it works. PUV drivers may exhibit low knowledge about the vaccine since they are the people in the poor class people and their access to education may be limited to them. This may affect their prioritization of vaccines since they have not built enough confidence in the vaccine that is yet to be available for COVID-19.

7.2 Belief about the COVID-19 Vaccine

Belief about health especially in treating certain illnesses is still somehow linked and rooted in the superstitions and indigenous healing. Superstitions became a social norm whenever Filipinos are getting sick and seeking treatment from faith healers. Since these beliefs are already established in the past, it is hardly removed from the perception of Filipinos towards the treatment of illnesses (Kaylacio, M., 2018). Filipino parents refuse to vaccinate their child because of the belief that the children are born healthy and the risk of side effects may occur once their healthy child would get vaccines (Tupas, J., 2014). This is a great contributor to the fear that vaccines really do not work and it may cause side effects since it is the parents who are vaccine-hesitant. Rooted with these beliefs, this may be a contributing factor to the acceptance of the PUV drivers of the COVID-19 vaccine.

7.3 The Cost of the COVID-19 Vaccine

Socio-economic wise, PUV drivers belong to low-income earners and fit to the vulnerable employment sector without social fortification such as medical insurance and benefits, and social security insurance unlike to those regular employees (Torres, 2010). As COVID-19 pandemic strikes, PUV drivers like jeepney drivers are amongst the primary casualties of the community quarantine (Senate of the Philippines, 2020) and the financial struggle made, even more, worse due to: temporary suspension of transportation, lesser passenger capacity, and limited hours of operation. Since their income is based on the number of passengers, it is clear that the low-income earners PUV drivers have suffered more financially during the pandemic. Moreover, the financial difficulty may defer the priority of PUV drivers in COVID-19 immunization since the vaccine may be a bit expensive for these people.

The cost of the vaccine as of now is still not properly established but as the United States of America's leading pharmaceutical company in the vaccine race, Moderna, pacts to peddle their vaccine with the other countries for $32-$37 per dose (Healthline, 2020). The Philippine government will deal with international pharmaceutical companies in getting the COVID-19 vaccine and if the government will purchase vaccines at the same price as Moderna's vaccine, it will be more or less ₱1,600-₱1,850 per dose without tax. The Philippine government has not confirmed if they will subsidize the immunization but they guaranteed that they will prioritize their initial budget for the military men and healthcare workers. However, Presidential Spokesperson Harry Roque noted that the government cannot put a budget to get all of the Filipinos inoculated (Parrocha, 2020).

The average daily take-home income excluding boundary fees of PUV drivers, especially Jeepney drivers are more or less ₱400 a day (Dela Cruz, 2020), enough to feed a family for a day. With that being said, it is more likely to be impossible for a PUV driver to be vaccinated because they cannot afford it, nor they are not prioritized to be the beneficiary in the initial purchasing of the vaccines. This could hinder PUV drivers' decision in getting the COVID-19 vaccine.

7.4 Past Vaccine Safety Concerns

Vaccine is one of the greatest achievements in health all over the world and it has saved lives from vaccine-preventable diseases. However, due to the loss of public confidence for vaccines, the emergence of vaccine-preventable diseases caused outbreaks. Vaccine hesitancy can be rooted in beliefs, religion, culture, and misleading

information that has been circulating online and spread by anti-vaccine people (Geoghegan et al., 2020). These people included advertisements that even include famous people in order to make the public misinformed about vaccines. Regardless of the numerous scientific evidence that prove that vaccines are safe, there were risen controversies that arise with immunization.

The world's first vaccine – the smallpox vaccine, created by Edward Jenner is the most successful vaccine ever made. It eradicated smallpox and successfully treated infected people. However, problems with the vaccine came out as most survivors had permanent injuries such as scarring and loss of lip, nose, ear tissue, and in some, sight. This led to criticism of the vaccine including Alfred Russel Wallace, a known co-discoverer of natural selection. Because of the incident, the United Kingdom published literature and cartoons for satirical outputs that had made the public worry. This started the Anti-Vaccination Leagues formation and numerous journals, tracts, and literature opposing vaccination that came across to Europe (Dubé et al., 2014). As time went by, the spread of the news about the smallpox controversy came across the globe.

Autism has been inclining with the vaccine by anti-vaccine groups when a paper authored by Andrew Wakefield said that vaccines can induce autism. The study has shown that it was prominent to only children that have pervasive development disorder but the paper was removed in the medical register in the United Kingdom since it was problematic.

The paper was retracted due to inconsistent comparison of variables carried out in the study(Geoghegan et al., 2020). Although it was pulled out of the medical register because of its loopholes, the anti-vaccine group stood firm in their decision not to get the vaccine and raised their viewpoints about vaccines to the masses. The Lancet Child & Adolescent (2019) stated that since then, vaccine hesitancy risen and 90% of the countries worldwide have reported refusal and delay of acceptance of the vaccine. Parents have been hesitant to have their children be vaccinated because of the misinformation that it might cause autismto their child.

The controversy about Dengvaxia – the world's first Dengue vaccine made by Sanofi created fear to the public after the analysis report of Sanofi that the vaccine may induce higher-risk of Dengue to patients that have not posed Dengue infection beforehand. 10% of the children that have been inoculated from the Philippines have an increased risk of developing dengue and since then, the Philippines have suspended Dengvaxia immunization – creating fear to parents from having their child be vaccinated. The autopsies have also shown Dengvaxia-linked deaths, and these findings are enough to say that there were really negative impacts about the vaccine. The news has circulated in the Philippines and also worldwide (Fatima & Syed, 2018).

Vaccine hesitancy came from the negative impacts that the vaccine made, and it intensifies through the misinformation led by the anti-vaccine groups all over the media. The problem also started due to a lack of information from some people regarding the vaccine. PUV drivers may be aware of the vaccine news that had been circulating and the fear for the COVID-19 may rise because of this. COVID-19 would be the newly discovered treatment for the vaccine. Besides, it will be the fastest vaccine to be approved for use inhistory. This may cause hesitation to the PUV drivers to get the vaccine.

7.5 Warp Speed Production of COVID-19 Vaccine

The usual clinical development of a vaccine takes about 10-15 years. It is a long complex process that involves different phases to prove its safety and efficacy. Vaccine development undergoes exploratory stage, preclinical stage, Investigational New Drug (IND) application, clinical trials, post-monitoring, and Vaccine Adverse Event Reporting System (VAERS) to make sure that the vaccine that will be approved and produce for the public is efficacious and will not cause harm to humans (Bowman, 2016).

However, the making of the vaccine against COVID-19 is going under pressure because of the Operation Warp Speed by the USA President Donald Trump's administration that encourages the pharmaceutical companies to provide a vaccine for approval by January 2021 (Schmidt, 2020). This intensifies the making of the vaccine since the world really needs a solution for the uncontrollable spread of the virus.

Inclined with the speed of the vaccine development is a potential risk that may harm the people who will receive the virus. The foreseen risk that Moore & Klasse (2020) is concerning with the immune response that will be triggered by the vaccine. In addition, it is also observed consistently that there is a lack of relationship between strong antibody responses and the improvement of the disease. The variety of results that came out since the immune response that came out in the findings still varies due to some factors such asage and condition. The vaccine that may be the first to be approved for mass production and consumption may pose risks because the study is still uncertain and needs to be furtherstudied.

These factors are foreseen to affect whether the PUV drivers will get the COVID- 19 vaccine or not. The making of this novel vaccine is expensive since the virus is just newly discovered. Pharmaceutical companies invested a huge amount of money to produce this vaccine that is why it may cost expensive for the initial release. However, there are still people that do not want to be vaccinated due to past safety concerns regarding the vaccine especially now that the vaccine is made under time pressure and urgency to have a solution for the crisis.

Determination of the significance of these factors in the relationship with the acceptance of the vaccine is important to assess their decision since the acceptance of the vaccine is also concerned with the perceived risk in the community.

8. The Acceptance of People in COVID-19 Vaccination

Immunization against COVID-19 is a key strategy to slow down the elevation of the COVID-19 pandemic that is why the vaccine development is made in a fast pace manner so that it will be readily available as soon as possible. Understanding the acceptance of vaccination is related to the perceived risks in the community. A study that has been conducted in Indonesia entitled "Acceptance of a COVID-19 Vaccine in Southeast Asia: A Cross-Sectional Study in Indonesia" of Anwar, S. et. al, has found that the vaccine acceptance is based on the immunization effectiveness (Harapan et al., 2020).On the other hand, vaccines would likely be accepted when an employer or government would require to have them vaccinated (Gostin, L. et. al, 2020). In the study "*A global survey of potential acceptance of a COVID-19 vaccine* " by Lazarus et al., (2020 people who earn above $32/day were 2.18 times more likely to answer positively if they will have the vaccine or not than people earning below $2/ day.

Moreover, the willingness of people to accept the vaccine is still inadequate. The government plays an important role in building public confidence towards the COVID-19 vaccine. Their crucial role is to spread the word of how vaccines work and how it can prevent and protect humans from acquiring the COVID-19. Communication between the government and people shall be clear to introduce that the vaccine is safe and effective that will result in positive belief and behavior (Lazarus et al., 2020).

9. The Relationship of Factors of Acceptance and the Acceptance of COVID-19 Vaccine

To control the spread of the virus, the availability of effective COVID-19 vaccine is a big help. Based on the study of Malik, A. et.al (2020), Acceptance of COVID-19 can be concluded based on demographic characteristics. Most jobless in the community has a lower acceptance rate of a COVID-19 vaccine due to low income. Media coverage and direct manifestation to the community has an impact in acceptance and eventual uptake of COVID-19 vaccine. Due to misinformation released by the government about the efficacy and safety of the vaccine affects their decision in accepting the vaccine.

Acceptance of vaccines in China during the COVID-19 pandemic choose to take the vaccination with routine immunization schedules and prefer vaccines from other countries. Patients with the most needed the COVID-19 vaccine would accept the vaccination in controlling the pandemic. In addition, unstable results shown in previous study from the United Kingdom can affect the acceptance of vaccines based on socio- demographic characteristics (Fang et. al, 2020).

The acceptance of the COVID-19 would be difficult to implement to the community. The effectiveness of the vaccines has greatly influenced the acceptance of the COVID-19 vaccines. *Acceptance of a COVID-19 Vaccine in Southeast Asia: A Cross- Sectional Study in Indonesia* Harapan et al. (2020) stated that if the vaccines were 95% effective, 93. 3% of the respondents are willing to be vaccinated when the government will provide the vaccine for free. However the percentages decrease to 67% if the effectivenessof the vaccines range in 50 %.

10. Theories to be applied in the study and how it is related

Health Belief Model

Due to failure in tuberculosis (TB) health screening program the Health Belief Model (HBM) was developed during the 1950s and has been frequently used in health communication (Rosenstock, 1974). The HBM uses several constructs and aims to ponder the prediction on why people engage in prevention, screening, and managing health conditions.

Perceived susceptibility is the first construct which is the belief that he/she might acquire a certain condition. The second one is *perceived severity* is the belief regarding how severe a condition is as well as its consequences. Third is the *perceived benefits* which is the individuals' belief in which the recommended action can reduce the severity of the possible consequences of a condition. The fourth construct is the *Perceived Barriers* which represents the costs of doing the recommended action. *Cues to action* portrays the components that trigger the individual to do the recommended activity and *Self-Efficacy i*n which the individual accepts that he/she is capable of executing the recommended activity (Glanz et al, 2002).

The HBM suggests that a person only takes measures only if he/she anticipates negative impact on his/her own health. Also, if he/she thinks that it can be circumventedby doing the proposed action and also if he/she believes that he/she is efficient enough of doing the proposed action (Rosenstock, 1974). The HBM could be a perfect representation to assess the Relationship of Factors of Acceptance and the Acceptanceof COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan on whether they will decide to be vaccinated or not since it can show benefits which is to be immunized against the virus and barriers specifically on financial status, if they can afford they might consider getting the vaccine since exposure to a wide variety of people increase your susceptibility and risk to the virus. The above mentioned are few of the constructsthat the HBM comprises.

Mere Exposure Effect

In 1876, Gustav Fechner, an experimental psychologist, conducted Mere Exposure Theory and was intensively explored by social psychologists, Robert Zajonc and his colleagues in 1968. They later on theorized that being constantly exposed to something greatly affects people's preferences because familiarity can reduce the uncertainty that we feel about something. The theory also states that people develop a positive outlook towards something if they frequently saw it in advertisements.

It is also stated that the more that people know about something, the better they can process it. Regarding the information about the vaccinations relating to this theory, if the PUV drivers are well-informed that can enhance their processing judgment during the decision making and might consider to be vaccinated. The drivers might take it the other way around if they are informed about the warp speed production of the vaccines. They might not consider it if they will take the negative side which questions the safety and efficacy due to fast pacing production. They are primed to be cautious around new things, since they could be dangerous to them.

Availability Heuristics Principle

As proposed by Tversky & Kahneman in their paper Availability: A Heuristic for Judging Frequency and Probability, Availability Heuristics Principle is used when you are confronted by a strenuous task and you need to make decisions quickly. The mind tends to analyze it into simpler forms and limit it into your available knowledge or instances that flashes in your mind. They also stated that reliance on this principle could lead to biases. Availability Heuristic Principle is the tendency to use significant and salient information that comes to mind and is recalled quickly and easily when making decisions about the future. (Baumeister & Bushman, 2007).

This principle challenges the ability of PUV drivers to accurately judge the probability of being vaccinated against COVID-19 because it might lead to biased judgments. As past vaccine safety concerns are negative memories or knowledge like in Dengvaxia.

The Idea of Choice; Logic of Consequences

Based on the study of Debra Satz and John Ferejohn rational choice theory explains the mental state of one person according to his/her action on which consideration of the preference and beliefs are being done. It consists of a psychological theory that explains the social aggression on the mental state of one being and recognising the individual instinct and interactions. They interpreted that the rational choice theory is plausible and can't be individualist. (Satz & Ferejohn, 1994)

12. Susceptibility of PUV Drivers

Perceived susceptibility represents the vulnerability of the public utility drivers to contract the COVID-19 virus. It is easier for the public transportation system to know and to distinguish how the virus is spreading. Tirachini (2020) proposed a transportation model on how to assess the spread of virus in public transportation. The model characterizes passengers in different states. Susceptible state for those who are not infected, infected state and still traveling state, quarantined state or those who are infected but not traveling, and lastly, immune state or those who are traveling again. By knowing how the virus is spreading, it is easier to predict how susceptible the PUV drivers are in having the virus. It is also supported by Pardo (2020) in which stated in his report that in New york, 4% of 1300 who are admitted in hospital due to the virus all used public transportation.

11. Process of vaccine decision making

The major current challenges in the national immunization enterprise are the aim of matching decision making and knowledge of people about the current vaccine. Credible source of information about the safety of the vaccine can help them to determine their decision in getting vaccinated. With the help of public health agencies, government and pharmaceutical manufacturer can increase the rate of getting vaccinated to prevent diseases (NFID, 2008). World Health Organization provide detailed information about the general vaccine on how they implement the vaccine and managing the side effects. Evaluating the cost and finance of the vaccine is included in the plan of getting their decision. Moreover, providing information in the public by giving deep knowledge and understanding in policy making of the vaccine can support the decision making in getting vaccinated or not.

CHAPTER 3

Methods and Procedure

This chapter presents the research methodologies and statistical treatments that were used in conducting this study. The researchers utilized Correlation descriptive as the study design. Tricycle and Jeepney Drivers from Bulakan, Bulacan are the population in this study. The researchers used a self-made survey questionnaire that will be validated by the professionals.

MethodologyStudy Design

In this study, the researchers utilized the Correlation Descriptive Study Design. This study design is appropriate because the researchers would want to determine the relationship between the factors of acceptance and the acceptance of PUV drivers towards COVID-19 vaccine.

Setting of the Study

The study focused on the municipality of Bulakan, Bulacan. It is a first-class coastal municipality in the province of Bulacan composing 14 barangays. It has a land area of 72.90 km^2 (28.15 sq mi) that makes up 2.61% of the Bulacan. It is one of the municipalities that has shifted from extreme community quarantine to general community quarantine that allows the PUV

drivers to operate with safety protocols.

Figure 3: Map of Bulakan, Bulacan.

Subject/Respondents of the Study

The study chose PUV drivers of both tricycle and jeepney in Bulakan, Bulacan as only these PUV are available in the municipality. The researchers gathered the master list of each Tricycle Operators and Drivers Association (TODA) and Jeepney Operators and Drivers Association (JODA) that are acknowledged by the local government of Bulakan, Bulacan. 327 respondents was the sample size obtained from the master list computed using 5% margin of error resulting to compute the participants to be enrolled in the study. The researchers sent a letter with consent form to the president of each TODA and JODA and list of the drivers who are chosen to be the participants of the study using the fishbowl method.

Sampling Technique

The researchers used the simple random sampling technique by using the fishbowlmethod. In this method, the researcher assigned a number to tricycle drivers of each Tricycle Operators and Drivers Association (TODA) which is collected in the sampling list. These numbers are written in a piece of paper. The papers are rolled up and shuffled in the bowl all together then the researchers picked the number of computed sample sizes. This method is utilized because the only demographic available in the list is only names of the PUV drivers. Thus, they will have equal chances of being a participant in the study.

The researchers selected the participants randomly from each Tricycle Operators and Drivers Association (TODA) particularly from BSBPT, SABTODA, TJSTODA, MATODA, SJ TODA, SF TODA, and BGB JODA. This sampling focused on the PUV drivers, which best enable the researchers to answer the research questions.

Using a simple random sampling technique by using the fishbowl method, the study's respondents consisted of one thousand eight hundred eighty-five (1785) PUV drivers from seven (7) different TODA of Bulakan, Bulacan. A survey questionnaire was read via phone call to the respondents with a small description indicating the confidentiality of their answers as well as a consent asking for their permission in agreeing to participate in the study. The answers of the respondents gave the researchers the information needed in terms of their representation of the association.

Research Instrument

The researchers, with the help of a psychometrician, designed a survey questionnaire entitled "COVID-19 Vaccination Likelihood Scale" that were used in the study. The content of the instrument was based on the objectives of the study and is written in the Filipino language for better understanding and comprehension of the PUV drivers.

The questionnaire has two sections: I and II

- Part I contains the demographic profile of the respondent.
- Part II contains the Likelihood of Vaccination Among PUV Drivers and Factors Affecting their Decision. It contains four subsections representing each factor which are: Cost of Vaccine, Warp Speed, Past Issues about Vaccination, and Decision with regards to being vaccinated.

The instrument was structured in the modified Likert fashion, on a 5 – point scale,ranging from "1 - Definitely Not" through "2 - Probably Not", "3 - Possible", "4 – Probably" to "5 - Definitely". Respondents will be instructed to respond to their degree of agreement with the statements contained in the instrument.

Questionnaire

Minamahal na Kalahok,

Kami po ay grupo ng mga mag-aaral mula sa kursong BS Pharmacy sa Centro Escolar University. Kami ay nagsasagawa ng isang pag-aaral ukol sa "Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan" na naglalayong malaman ang antas ng posibilidad ng pagtanggap sa bakuna laban sa COVID-19 at ang mga salik na nakakaapekto sa desisyon upang magpabakuna ng mga PUV drivers.

Kaugnay nito, nais naming hilingin ang inyong pagpayag upang maging kalahok saaming pag-aaral. Makakaasa po kayo na ang inyong personal na impormasyon at mga sagot ay pananatilihin naming pribado, at gagamitin lamang sa pag-aaral na ito.

Lubos na Gumagalang,Mga Mananaliksik

COVID-19 VACCINATION LIKELIHOOD SCALE
Part I. Demographic Data
Directions. Kindly provide the information needed.

*(**Panuto.** Punan ang mga hinihinging impormasyon.)*

Name (*Pangalan)*(Optional):_____

Age (Edad):_____ Sex (Kasarian):_____Male (Lalaki)_____(Female) Babae

Address (Tirahan): _____

Antas ng Pag-aaral:_____Elementarya_____Sekondarya_____Kolehiyo Type of PUV (Uri ng Minamanehong PUV).
____Jeepney _____TricycleAssociation (Samahang Kinabibilangan).
____BSBPT TODA _____MATODA _____BGB JODA
____SABTODA _____SJ TODA
____TJSTODA _____SF TODA

Number of Hours Driving Per Day (Bilang ng Oras ng Pamamasada sa Bawat Araw)
____1 hour (1 oras) _____4-6 hours (2-6 na oras)

____2-3 hours (2-3 na oras) _____7-8 hours (7-8 na oras)

____more than 8 hours (higit sa 8 oras)

Part II. Likelihood of Vaccination Among PUV Drivers and Factors Affecting their Decision *(Posibilidad na Pagbabakuna ng mga Drayber ng PUV at Mga Salik na Nakaka-apekto sa Kanilang Desisyon)*
Using the scale indicated below, indicate the likelihood of acting towards the given statement. (*Gamit ang scale, ilagay kung ano ang posibilidad ng pagsang-ayon o paggawang mababanggit na mga pahayag.*)

1 – Strongly Disagree (Lubos na Hindi Sumasang-ayon)
2 - Disagree (Hindi Sumasang-ayon)
3 - Neutral (Niyutral)
4 - Agree (Sumasang-ayon)
5 – Strongly Agree (Lubos na Sumasang-ayon)

	1	2	3	4	5
I. Kaalaman sa Bakuna					
1. May alam ako kung paano ginawa ang bakuna.					
2. Alam ko kung paano gumana ang bakuna sakatawan.					
II. Paniniwala sa Kalusugan/Bakuna					
3. Naniniwala ako sa kakayahan ng tradisyunal na panggagamot (albularyo) kaysa sa bakuna					
4. Mas pipiliin ko magpatingin sa tradisyunal na manggagamot (albularyo) kaysa magpabakuna.					
III. Halaga ng Bakuna					
5. Magpapabakuna ako kung ito ay ibibigay nanglibre ng gobyerno.					
6. Handa akong magbayad ng anumang halaga upang makapagbakuna laban sa virus.					
7 Magpapabakuna ako kung ang presyo nito ay hindi mabigat sa bulsa.					
8. Magpapabakuna ako kung ito ay sasagutin ng TODA nami bilang "requirement" sa hanapbuhay.					
II. Warp Speed					
9 Magpapabakuna ako kapag may sapat na suplay ng bakuna na magagamit mula sa merkado.					
10. Magpapabakuna ako kung ang bakuna na gagamitin ay mula sa isang may kredibilidad at kilalang kompanya.					

11. Magpapabakuna ako kapag dumaan sa tamang proseso ang pagsusuri sa kalidad at bisa ng bakuna.					
12. Magpapabakuna ako kung ang bakuna ay tulad ng nakasanayan o pangkaraniwang bakuna na dati nang ginagamit.					
III. Nakaraang Pag-aalala Ukol sa Kaligtasan					
13. Magpapabakuna lamang ako kung napatunayanna ito ay mabisa at walang 'side effects.'					
14. May pag-aalinlangan ako sa pagpapabakuna dahil sa takot na maaari itong maging dahilan ng akingpagkamatay tulad ng dulot ng Dengvaxia.					
15. May pag-aalinlangan ako sa pagpapabakuna dahil nagdudulot ito ng higit na komplikasyon kaysa paggaling.					
16. May pag-aalinlangan ako sa pagpapabakuna sapagkat ang COVID-19 ay simpleng karamdaman lamang na hindi nangangailangan ng lunas tuladng bakuna.					
IV. Desisyon Upang Magbakuna					
17. Ako ay magpapabakuna ng COVID-19 vaccine para sa kaligtasan ko at ng aking pamilya at pasahero.					
18. Magpapabakuna ako dahil ito ay "required"upang makapamasada.					

Procedure Data Collection

For this research, the researchers aim to gather data assessing the factors affecting acceptance of COVID-19 vaccine of PUV drivers in Bulakan, Bulacan. The researcher requested the list of PUV drivers in Bulakan, Bulacan to the President of each TODAs and assigned a certain number for each information for the fishbowl method. The researchers used either an online survey or phone call interview depending on what the respondent prefers. The survey method is the collection of information from a respondent through their responses to the questions (Check & Schutt, 2012, p. 160). The interview is an important technique in the gathering of data that involves verbal communication between the researcher and the respondent it is usually used in survey design and descriptive studies (Mathers et al.,2000). The online survey was conducted through messenger, the researcher sent the structured questionnaires into the messenger account of the respondents, the collected answered survey will be documented in a specific file that contains the responses of the respondent who prefer online surveys for organizing the collection of data. In the phone call interview, the researcher called the respondent and asked questions using the structured questionnaire while having a conversation the researcher recorded and transcribed the answer of the respondent. The researcher provided the consent form for the respondent. Answers of the respondents were gathered and analyzed for Data analysis.

Data Analysis

Various statistical formulas were used in order to discuss the findings of the studyand in order to analyze the data collected. The data gathered are tabulated, analyzed and treated statistically using the following statistical tools.

Weighted mean was utilized by the researchers to determine the mean of the factors that can affect the acceptance of PUV drivers towards the COVID-19 vaccine.

Where

$$\bar{x} = \frac{\sum x_i}{n}$$

$\bar{x}$ = sample mean

$\Sigma \bar{x}i$ = summation of all the x-values

n = number of items in the sample

Pearson's Correlation Coefficient is the correlation statistic that the researcherswas used to determine if there is a significant relationship between the factors of acceptance and the acceptance of PUV drivers towards the COVID-19 vaccine would affect their decision to be vaccinated or not.

$$r = \frac{\sum (x_i - \underline{x})(Yi - \underline{y})}{\sqrt{\sum (x_i - \underline{x})^2 \sum (Yi - \underline{y})^2}}$$

Where

r = correlation coefficient

x_i = values of the x– variable in a sample

$\underline{x}$ = mean of the values of the x- variable

Yi =value of the y- variable in a sample

y = mean of the values of the y- variable

Independent t-test was employed to determine the significant difference in the factors affecting acceptance of COVID-19 vaccine of PUV Drivers in Bulakan, Bulacan. The t-test is computed using the following formula:

$$t = \frac{\underline{x} - \underline{y}}{\sqrt{\left[\frac{\sum (x - \underline{x})^2 + (y - \underline{y})^2}{n_1 + n_2 - 2}\right]\left[\frac{1}{n_1} + \frac{1}{n_2}\right]}}$$

Where:
$\bar{x}$ = mean of sample 1
y = mean of sample 2
$n1$ = number of trials in sample 1
$n2$ = number of trials in sample 2
$n1$ = number of sample 1

To facilitate the computation, SPSS Statistics was used.

Ethical Considerations
The respondents filled up informed consent as permission for data collection. Also,they are not forced to answer all the given questions and let them freely state their opinions. Moreover, the researchers asked the respondents permission before the phone interview starts to record the voice call due to data privacy act. The researchers ensured the confidentiality, integrity, and dignity of the respondents' information to protect their privacy. Moreover, all the data collected with honesty and transparency.

CHAPTER 4
Presentation, Analysis, and Interpretation of Data
This chapter presents the data gathered, results from the statistical treatment andanalysis, and the interpretation of findings. Each is further elaborated and the outcomes obtained are analyzed and interpreted.
1. Demographic Profile of the Respondents
2. Age

Table 1.1: Frequency and Percentage Distribution of Respondentsin Terms of Age.

Age	Frequency	Percent (%)
20 and below	1	0.3
21-30	27	8.3
31-40	79	24.2
41-50	105	32.1
51-60	80	24.5
61 and above	35	10.7
Total	**327**	**100.0**

Table 1.1 shows the percentage and frequency distribution of the 327 respondents in terms of age. Majority or 32.1 percent of the respondents are within 41-50 years old. This is followed by respondents who are within 51-60 years old with 80 respondents or 24.5 percent. Respondents ages 31-40 years old have 24.2 percent with 79 frequency while 61 and above respondents have 10.7 percent with 35 frequency. 21-30 years old with 27 respondents or 8.3 percent while the lowest is the 20 years old and below respondents that have 0.3 percent or 1 frequency. Majority of the respondents are ages between 41-50 this age bracket is included in the age group who are allowed to go out of their homes during community quarantine, but there are still 35 PUV drivers who are included in the age bracket of 61 above who are not following the protocol.
1 Sex

Table 1.2: Frequency and Percentage Distribution of Respondentsin Terms of Sex.

Sex	Frequency	Percent (%)
Male	318	97.2
Female	9	2.8
Total	**327**	**100.0**

Table 1.2 shows the percentage and frequency distribution of the 327 respondents in terms of sex. It can be seen that the majority of the 327 respondents are male with 318 or 97.2 percent while only nine respondents or 2.8 percent are female. Most of the respondents are male because it is more usual that males are PUV drivers than females because it is a male-dominated job in the Philippines. As European Economic and Social Committee (2015) says, transportation is a male-dominated job because it is centered around the lifestyle of men and mostly, employment of transportation jobs are mostly geared towards men.
1 Educational attainment

Table 1.3: Frequency and Percentage Distribution of Respondentsin Terms of Educational attainment.

Educational Attainment	Frequency	Percent (%)
Not Educated	27	8.3
Elementary	67	20.5
Secondary	160	48.9
College	73	22.3
Total	**327**	**100.0**

Table 1.3 shows the percentage and frequency distribution of the 327 respondents in terms of educational attainment. Most of the respondents in this study are secondary level graduates with 160 or 48.9 percent; followed by college graduates have 73 respondents or 22.3 percent while the elementary graduates have 67 respondents or 20.5 percent, and the lowest of which is the not educated with 27 respondents with 8.3 percent.

It shows that most PUV drivers have enough education that made them literate enough to comprehend and understand things regarding COVID-19 vaccine.
1 Type of PUV

Table 1.4: Frequency and Percentage Distribution of Respondentsin Terms of type of PUV.

Type of PUV	Frequency	Percent (%)
Tricycle	303	92.7
Jeepney	24	7.3
Total	**327**	**100.0**

Table 1.4 shows the percentage and frequency distribution of the 327 respondents in terms of Type of PUV. 303 respondents or 92.7 are tricycle drivers while only 24 or 7.3percent are jeepney drivers. Majority of the respondents that were interviewed were tricycle drivers because there are only limited routes allowed for the

jeepneys because other towns limit the entry of people from other towns to avoid an outbreak and the Governor requires jeepney operators to propose new route plans which will be submitted to the local chief executive for approval.

1 **Association**

Table 1.5: Frequency and Percentage Distribution of Respondentsin Terms of Association.

Association	Frequency	Percent (%)
BSBPT TODA	109	33.3
SABTODA	44	13.5
TJSTODA	46	14.1
MATODA	37	11.3
SJTODA	30	9.2
SFTODA	34	10.4
BGB JODA	27	8.3
Total	**327**	**100**

Legend: BSPT TODA -"Bagumbayan, Sta Ines, Bambang. Perez, Taliptip Tricycle operators and drivers association", SABTODA- "Santa Ana, Bagumbayan Tricycle operators and drivers association", TJSTODA - " Triple Junction Subdivision Tricycle operators and drivers association", MATODA- " Sto. Cristo Matungao Tricycle operators and drivers association", SJTODA- "San Jose Tricycle operators and drivers association", SFTODA- "San Francisco Tricycle operators and drivers association", BGB JODA- " Bagumbayan Jeepney operators and drivers association"

Table 1.5 shows the percentage and frequency distribution of the 327 respondents in terms of association. It can be seen that the majority of the respondents in this study are members of BSBPT TODA with 109 respondents or 33.3 percent; followed by TJSTODA with 46 respondents with 14.1 percent. SABTODA have 44 respondents with 13.5 percent while MATODA have 37 respondents with 11.3 percent. Furthermore, SFTODA has 34 respondents with 10.4 percent while SJTODA has 30 respondents with 9.2 percent, and the lowest of which is the BGB JODA with 27 respondents with 8.3 percent.

It shows that most of the respondents are members of BSPT TODA because they consisted of a high number of members while BGB JODA is the least due to small population based on the master list. It shows that the higher the number of members of the association the higher the respondents the researchers will get.

1. Number of hours driving per day

Table 1.6: Frequency and Percentage Distribution of Respondentsin Terms of number of hours driving per day

No. of Hours Driving per Day	Frequency	Percent (%)
less than 1 hour	7	2.1
1 hour	1	0.3
2-3 hours	18	5.5
4-6 hours	63	19.3
7-8 hours	112	34.3
more than 8 hours	126	38.5
Total	**327**	**100.0**

Table 1.6 shows the percentage and frequency distribution of the 327 respondents in terms of number of hours driving per day. Majority of the respondents in this research drive more than 8 hours a day with 126 frequency or 38.5 percent followed by 112 respondents or 34.3 percent who drive 7 to 8 hours per day. 63 respondents or 19.3 percent drives 4 to 6 hours per day while 18 respondents or 5.5 percent drives 2 to 3 hours per day.Moreover, 7 respondents or 2.1 percent drive less than an hour per day, and the lowest of which is 1 respondent with 0.3 percent drives 1 hour per day.

It shows that the respondents are more exposed to the public due to their long number of hours driving per day. In this case, PUV drivers in Bulakan, Bulacan increases their risk in acquiring and transmitting the virus as well.

2. Assessment of Respondents in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan

2.1. Knowledge about vaccine

Table 2.1: Knowledge about the Vaccine (Kaalaman sa Bakuna).

Kaalaman sa Bakuna	5 SA(LS)	4 A(S)	3 N(N)	2 D(HS)	1 SD(LHS)	Std. Deviation	Weighted Mean	Verbal Interpretation
	Frequency							
May alam akokung paano ginawa ang bakuna.	15	11	34	34	224	1.116	1.65	D(HS)
Alam kokung paano gumana ang bakuna sa katawan	18	8	44	42	215	1.137	1.69	D(HS)
Overall Weighted Mean							**1.67**	**D(HS)**

Legend: 4.50-5.00 SA(LS) – "Strongly Agree(Lubos na Sumasang-ayon)", 3.50-4.49 A(S) – "Agree (Sumasang-ayon)", 2.50-3.49 N(N) – "Neutral(Niyutral)", 1.50-2.49, D(HS) – "Disagree (Hindi Sumasang-ayon)", 1.00-1.49 SD(LHS) – "Strongly Disagree (Lubos na Hindi Sumasang- ayon)"

The table shows the assessment of the PUV drivers in terms of the COVID-19 vaccine (Kaalaman sa bakuna). The question, "Alam ko kung paano gumana ang bakuna sa katawan." obtained the highest weighted mean of 1.69 and is verbally interpreted as " Disagree (Hindi Sumasang-ayon)/D(HS)" while the question "Alam ko kung paano gumana ang bakuna sa katawan" obtained weighted mean of 1.65, thus, were also verbally interpreted as Disagree (Hindi Sumasang-ayon)/D(HS)". As a whole, the respondents' "Response regarding the Vaccine" got an overall weighted mean of 1.67 and was verbally interpreted as Disagree (Hindi Sumasang-ayon)/D(HS)". The table shows that most of the respondents do not have a deeper knowledge of how the vaccine is being manufactured and how it works in the body. Most of the respondents come from low-income backgroundsand earn about 300 to 385 per day and their main concern is how they can provide for their daily necessities and their family rather than having the knowledge of how the vaccineis being manufactured and how it works Lowy Institute (2021).

Table2.2: Beliefs about the Vaccine.

Paniniwala sa Kalusugan/Bakuna	5 SA (LS)	4 A (S)	3 N (N)	2 D (HS)	1 SD (LHS)	Std. Deviation	Weighted Mean	Verbal Interpretation
	Frequency							
Naniniwala ako sa kakayahan ng tradisyunal na panggagamot (albularyo) kaysasa bakuna	73	16	95	23	120	1.547	2.69	N (N)
Mas pipiliin ko magpatingin sa tradisyunal na manggagamot (albularyo) kaysamagpabakuna.	52	11	95	30	139	1.456	2.41	D(HS)
Overall Weighted Mean							2.55	N (N)

Legend: 4.50-5.00 SA(LS) – "Strongly Agree(Lubos na Sumasang-ayon)", 3.50-4.49 A(S) – "Agree(Sumasang-ayon)", 2.50-3.49 N(N) – "Neutral(Niyutral)", 1.50-2.49, D(HS) – "Disagree (Hindi Sumasang-ayon)", 1.00-1.49 SD(LHS) – "Strongly Disagree (Lubos na Hindi Sumasang- ayon)"

Table 2.2 shows the assessment of respondents in the factors affecting acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan in terms of beliefs about the vaccine. The statement "Naniniwala ako sa kakayahan ng tradisyunal na panggagamot (albularyo) kaysa sa bakuna" obtained the highest weighted mean of 2.69 which verbally interpreted as Neutral "(Niyutral)". This is followed by "Mas pipiliin ko magpatingin sa tradisyunal na manggagamot (albularyo) kaysa magpabakuna." with a weighted mean of 2.41 respectively.Furthermore, the overall weighted mean of the question under beliefs about the vaccine is 2.55 and is verbally interpreted as Neutral "(Niyutral)". It shows thatthe PUV drivers have unbiased beliefs in the ability of traditional medicine but they rather get vaccinated. One of the ways how Filipinos treat their certain symptoms is dependence on indigenous healers since it will be a lot cheaper than the actual medical check-up (Stanford School of Medicine, 2020). Makati Medical Center (2019) stated that some Filipinos still believe in health superstitions despite the advancement of medicine today. It shows that traditional beliefs is hard to get rid the perception of Filipinos towards the treatment of illnesses.

2.3 Cost of Vaccine

Table 2.3: Assessment of Respondents in the Factors Affecting Acceptance of COVID-19Vaccine of PUV Drivers in Bulakan, Bulacan in terms of Cost of Vaccine.

Halaga ngBakuna	5 SA (LS)	4 A (S)	3 N (N)	2 D (HS)	1 SD (LHS)	Std. Deviation	Weighted Mean	Verbal Interpretation
	Frequency							
Magpapabakuna ako kung ito ay ibibigay nang libre ng gobyerno.	198	32	50	9	38	1.385	4.05	A(S)
Handa akong magbayad ng anumang halaga upang makapagbakuna laban sa virus.	39	31	99	33	125	1.387	2.47	D(HS)
Magpapabakuna ako kung angpresyo nito ay hindi mabigat sa bulsa.	108	30	128	11	50	1.376	3.41	N(N)
Magpapabakuna ako kung ito ay sasagutin ngTODA namin bilang "requirement" sa hanapbuhay.	170	38	74	12	33	1.342	3.92	A(S)
Overall Weighted Mean							**3.46**	**N(N)**

Legend: 4.50-5.00 SA(LS) – "Strongly Agree(Lubos na Sumasang-ayon)", 3.50-4.49 A(S) – "Agree(Sumasang-ayon)", 2.50-3.49 N(N) – "Neutral(Niyutral)", 1.50-2.49, D(HS) – "Disagree (Hindi Sumasang-ayon)", 1.00-1.49 SD(LHS) – "Strongly Disagree (Lubos na Hindi Sumasang- ayon)"

Table 2.3 shows the assessment of respondents in the factors affecting acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan in terms of Cost of Vaccine.The statement "Magpapabakuna ako kung ito ay ibibigay nang libre ng gobyerno" obtained the highest weighted mean of 4.05 which was verbally interpreted as "Strongly Agree(Lubos na Sumasang-ayon)" while the statement "Handa akong magbayad ng anumang halaga upang makapagbakuna laban sa virus" obtained the lowest mean of 2.47 which was verbally interpreted as "Disagree (Hindi Sumasang-ayon)".

The other statements "Magpapabakuna ako kung ang presyo nito ay hindi mabigat sa bulsa" have 3.41 weighted mean which was verbally interpreted as "Neutral(Niyutral)" while the statement "Magpapabakuna ako kung ito ay sasagutin ng TODA namin bilang "requirement" sa hanapbuhay" obtained weighted mean of 3.92which was verbally interpreted as "Agree (Sumasang-ayon)".

Furthermore, the overall weighted mean of the assessment of respondents in the factors affecting acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan in terms of Cost of Vaccine is 3.46 which was verbally interpreted as "Neutral(Niyutral)". It shows that the PUV drivers are less likely to pay for the vaccine due to their low income and financial priorities. Also, the pandemic affects them financially because they are forced to stop their operations which turns to zero income and more debts. Before the pandemic, the jeepney drivers estimately earned 1,500 pesos per day, but due to the pandemic, they ended up begging for money in the streets for foodand necessities(Arab News, 2020). The Sinovac vaccine which the DOH-Philippines endorses cost 3,629.50 for 2 doses (Domingo, 2020). In this case, PUV drivers can't afford the COVID-19 vaccine because it doesn't fit their budget because of their financialstatus and priorities. However, it states that they are willing to be vaccinated if it's provided for free and if it's become a requirement in their work.

Table 2.4: Assessment of Respondents in the Factors Affecting Acceptance of COVID-19Vaccine of PUV Drivers in Bulakan, Bulacan in terms of Warp Speed.

Warp Speed	5 SA(LS)	4 A(S)	3 N(N)	2 D(HS)	1 SD(LHS)	Std. Deviation	Weighted Mean	Verbal Interpretation
	Frequency							
Magpapabakuna ako kapag may sapat na suplay ng bakuna na magagamit mula sa merkado.	199	8	74	15	30	1.362	4.02	P(M)
Magpapabakuna ako kungang bakuna na gagamitinay mula sa isang may kredibilidad at kilalang kompanya.	214	17	62	11	23	1.258	4.19	P(M)
Magpapabakuna ako kapag dumaan sa tamang proseso ang pagsusuri sakalidad at bisa ng bakuna.	222	12	67	6	20	1.203	4.25	P(M)
Magpapabakuna ako kungang bakuna ay tulad ng nakasanayan o pangkaraniwang	203	15	70	9	30	1.330	4.08	P(M)

bakuna na dati nang ginagamit.								
Overall Weighted Mean							4.13	P(M)

Legend: 4.50-5.00 SA(LS) – "Strongly Agree(Lubos na Sumasang-ayon)", 3.50-4.49 A(S) – "Agree(Sumasang-ayon)", 2.50-3.49 N(N) – "Neutral(Niyutral)", 1.50-2.49, D(HS) – "Disagree (Hindi Sumasang-ayon)", 1.00-1.49 SD(LHS) – "Strongly Disagree (Lubos na Hindi Sumasang- ayon)"

Table _2.4 shows the assessment of respondents in the factors affecting acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan in terms of Warp Speed. The statement "Magpapabakuna ako kapag dumaan sa tamang proseso ang pagsusuri sa kalidad at bisa ng bakuna." obtained the highest weighted mean of 4.25 which was verbally interpreted as "Definitely (Tiyak)" while the statement "Magpapabakuna ako kapag may sapat na suplay ng bakuna na magagamit mula sa merkado." obtained the lowest mean of 4.02 which was verbally interpreted as "Possible (Marahil/Siguro)". The quality and efficacy of the vaccine is most prioritized in terms of vaccine acceptance because for these people, what really matters is how the vaccine will work on our bodies. However, knowing that it is made under time pressure, assurance of the quality and efficacy of the vaccine should be emphasized in order for them to be encouraged to have the vaccine. The New York Times (2021) stated that people were so hesitant about getting the vaccine before the immunization had rolled out but over the weeks, when they knew that the vaccine was showing efficacy and safety, people tended to shift their decisions about getting the vaccine. Other countries like United States of America had started to immunized their people of the vaccine and no adverse effects was recorded yet regarding the vaccine (aside from the natural immune response of the body), this may influenced the PUV drivers to consider themselves to be vaccinated as long as itwould be the same results it would manifest to them.

Table 2.5: Assessment of Respondents in the Factors Affecting Acceptance of COVID-19Vaccine of PUV Drivers in Bulakan, Bulacan in terms of Past Vaccine SafetyConcerns.

Nakaraang Pag-uukol ngKaligtasan	5	4	3	2	1	Std. Deviation	Weighted Mean	Verbal Interpretation
	SA(LS)	A(S)	N(N)	D(HS)	SD(LHS)			
	Frequency							
Magpapabakuna lamang ako kung napatunayan na ito ay mabisa at walang 'side effects.'	211	17	60	14	25	1.293	4.15	A(S)
May pag- aalinlangan ako sa pagpapabaku na dahil sa takot na maaari itong maging dahilan ng aking pagkamatay tulad ng dulotng Dengvaxia.	76	24	99	39	89	1.484	2.87	N(N)
May pag- aalinlangan ako sa pagpapabaku na dahil nagdudulot ito ng higit nakomplikasyonkaysa paggaling.	74	11	88	30	124	1.556	2.64	N(N)
May pag- aalinlangan ako sa pagpapabakuna sapagkat ang COVID-19 ay simpleng karamdamanlamang na hindi	82	17	77	32	119	1.594	2.73	N(N)
nangangailangan ng lunas tuladng bakuna.								
Overall Weighted Mean							3.10	N(N)

Legend: 4.50-5.00 SA(LS) – "Strongly Agree(Lubos na Sumasang-ayon)", 3.50-4.49 A(S) – "Agree (Sumasang-ayon)", 2.50-3.49 N(N) – "Neutral(Niyutral)", 1.50-2.49, D(HS) – "Disagree (Hindi Sumasang-ayon)", 1.00-1.49 SD(LHS) – "Strongly Disagree (Lubos na Hindi Sumasang- ayon)"

Table 2.5 shows the assessment of the respondents in the factors affecting acceptance of COVID-19 vaccine of PUV drivers in Bulakan, Bulacan in terms of past vaccines safety concerns. The statement " Magpapabakuna lamang ako kung napatunayan na ito ay mabisa at walang 'side effects.'" obtained a weighted mean of 4.15. It is the only one that can be verbally interpreted as Agree (Sumasang-ayon). While, the remaining statements "May pag-aalinlangan ako sa pagpapabakuna dahil sa takot na maaari itong maging dahilan ng aking pagkamatay tulad ng dulot ng Dengvaxia", "May pag-aalinlangan ako sa pagpapabakuna dahil nagdudulot ito ng higit na komplikasyon kaysa paggaling", "May pag-aalinlangan ako sa pagpapabakuna sapagkat ang COVID-19 ay simpleng karamdaman lamang na hindi nangangailangan ng lunas tulad ng bakuna"obtained a weighted mean of 2.87, 2.64, 2.73 respectively. All of them can be verbally interpreted as Neutral (Niyutral). As a whole, it can be interpreted that the respondents' assessment towards COVID-19 vaccine in terms of past vaccine safety concern is Neutral (Niyutral), since the overall weighted

mean is 3.10.

Based on the result, it shows that the respondents are showing concerns about the covid- 19 vaccine but still they are considering to be vaccinated only if the covid-19 vaccine is proven effective and doesn't show side effects.It is supported by funk and Tyson (2020) because it states that 62% of the public are still showing wariness and are still uncomfortable to be vaccinated while only 37% are comfortable enough to be vaccinated. It is also mentioned there that many people who said they don't want to be vaccinated could still change their decision.

Table 2.6: Assessment of Respondents in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan in terms of Decision regarding theVaccine.

Desisyon Upang Magbakuna	5 SA(LS)	4 A(S)	3 N(N)	2 D(HS)	1 SD(LHS)	Std. Deviation	Weighted Mean	Verbal Interpretation
	Frequency							
Ako ay magpapabakuna ng COVID-19 vaccine parasa kaligtasanko at ng aking pamilya at pasahero.	239	7	51	11	19	1.199	4.33	A(S)
Magpapabak una ako dahilito ay "required" upang makapamasada.	234	7	57	7	22	1.224	4.30	A(S)
Overall Weighted Mean							**4.31**	**A(S)**

Legend: 4.50-5.00 SA(LS) – "Strongly Agree(Lubos na Sumasang-ayon)", 3.50-4.49 A(S) – "Agree (Sumasang-ayon)", 2.50-3.49 N(N) – "Neutral(Niyutral)", 1.50-2.49, D(HS) – "Disagree (Hindi Sumasang-ayon)", 1.00-1.49 SD(LHS) – "Strongly Disagree (Lubos na Hindi Sumasang- ayon)"

Table 2.6 shows the Assessment of Respondents in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan in terms of Decision regarding the Vaccine. The question, "Ako ay magpapabakuna ng COVID-19 vaccine para sa kaligtasan ko at ng aking pamilya at pasahero." obtained the highest weighted mean of 4.33 and is verbally interpreted as "Agree (Sumasang-ayon)/A(S)" while the question "Magpapabakuna ako dahil ito ay "required" upang makapamasada." obtained weighted mean of 4.30, thus, were also verbally interpreted as "Agree (Sumasang- ayon)/A(S)".

As a whole, the respondents "Decision regarding the Vaccine" got an overall weighted mean of 4.31. It can be interpreted that the PUV drivers are willing to be vaccinated if it is for their safety and their families and passengers as well. They are also willing if it is required since the majority of them have this as their only source of income to provide for their daily needs. Wang et al. (2021) stated in their study Change of Willingness to Accept COVID-19 Vaccine and Reasons of Vaccine Hesitancy of WorkingPeople at Different Waves of Local Epidemic in Hong Kong, China: Repeated Cross-Sectional Surveys that working people who were exposed to greater risks of COVID-19 infection, have longer working hours but receive lower salaries than professionals and managers/administrators, which more likely to have lower socioeconomic status were found to be more willing to accept the vaccine and less likely to be hesitant.

Table3: Correlation of Assessment of Respondents in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan.

Correlation of Assessment of Respondents in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers inBulakan, Bulacan			
	Desisyon Upang Magbakuna		
	Pearson Correlation	p-value	Remarks
Kaalaman sa Bakuna	-0.168**	0.002	Significant
Paniniwala sa Kalusugan/Bakuna	0.050	0.363	Not Significant
Halaga ng Bakuna	0.415**	0.000	Significant
Warp Speed	0.617**	0.000	Significant
Nakaraang Pag-aalala Ukolsa Kaligtasan	0.241**	0.000	Significant

This table shows that "Kaalaman sa Bakuna" is significant in the decision of takingthe vaccine inversely since it shows weak negative remarks, meaning, the more that the people know about the vaccine the less likely they would have themselves vaccinated. "Paniniwala sa Kalusugan/Bakuna" shows no significant

relationship with their decision. "Halaga ng Bakuna" is significant to the decision of taking the vaccine because the more that the people will be favored to be given the vaccine for free or at little cost, the higher the chance they would likely to be vaccinated. "Warp Speed" is also significant to the decision of getting the vaccine. "Nakaraang Pag-aalala Ukol sa Kaligtasan" is also significant to the decision because the more they know about how the vaccine worked before, the higher the chance they are having themselves vaccinated.

Table 3.1: Significant Difference in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan and their Corresponding Variables.

3.1. Factors vs Age

	Age	Mean	Std. Deviation	F Value	p-value	Decision	Remarks
Kaalaman saBakuna	20 and below	1.000		1.247	0.287	Do not RejectHo	Not Significant
	21-30	1.889	1.227				
	31-40	1.551	0.922				
	41-50	1.610	0.998				
	51-60	1.863	1.227				
	61 and above	1.543	0.789				
Paniniwala sa Kalusugan/Bakuna	20 and below	2.500		0.659	0.655	Do not RejectHo	Not Significant
	21-30	2.630	1.560				
	31-40	2.570	1.346				
	41-50	2.371	1.316				
	51-60	2.738	1.450				
	61 and above	2.557	1.434				
Halaga ng Bakuna	20 and below	3.000		0.388	0.857	Do not RejectHo	Not Significant
	21-30	3.417	0.877				
	31-40	3.541	0.905				
	41-50	3.371	1.090				
	51-60	3.500	0.977				
	61 and above	3.514	0.788				
Warp Speed	20 and below	5.000		1.223	0.298	Do not RejectHo	Not Significant
	21-30	3.759	1.182				
	31-40	4.209	1.023				
	41-50	4.050	1.191				
	51-60	4.197	1.106				
	61 and above	4.336	0.935				
Nakaraang Pag-aalala Ukol sa Kaligtasan	20 and below	4.000		0.856	0.511	Do not RejectHo	Not Significant
	21-30	3.157	1.103				
	31-40	3.259	1.113				
	41-50	2.952	1.076				
	51-60	3.106	1.117				
	61 and above	3.064	1.157				
Desisyon Upang Magbakuna	20 and below	3.000		1.346	0.245	Do not RejectHo	Not Significant
	21-30	3.907	1.271				
	31-40	4.411	0.950				
	41-50	4.262	1.185				
	51-60	4.388	1.153				
	61 and above	4.443	0.930				

Table 3.1 shows the Significant Difference in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan and their Corresponding Variables using independent sample t-test. All of the factors obtained p-values greater than 0.05 level. This implies that the null hypothesis "There is no significant difference between the respondents' on the factors affecting acceptance of COVID-19 vaccine and age" is accepted. Therefore, respondents in all ages have similar assessments to the factor affectingacceptance of COVID-19 vaccine.

Table 3.2: Significant Difference in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan and the Sex.

	Sex	Mean	Std. Deviation	t valu e	p- valu e	Decision	Remarks
Kaalaman saBakuna	Male	1.667	1.054	4.57 7	0.001	Reject Ho	Significant
	Female	1.111	0.333				
Paniniwala sa Kalusugan/Bakuna	Male	2.535	1.386	- 1.231	0.219	Do not RejectHo	Not Significant
	Female	3.311	1.364				
Halaga ng Bakuna	Male	3.464	0.963	0.229	0.819	Do not RejectHo	Not Significant
	Female	3.389	1.232				
Warp Speed	Male	4.155	1.092	2.058	0.040	Reject Ho	Significant
	Female	3.389	1.409				
Nakaraang Pag-aalala Ukol sa Kaligtasan	Male	3.097	1.103	0.031	0.976	Do not RejectHo	Not Significant
	Female	3.083	1.262				
Desisyon Upang Magpabakuna	Male	4.341	1.103	0.559	0.577	Do not RejectHo	Not Significant
	Female	4.111	1.364				

Table 3.2 shows the comparison between the respondents' assessment on the factors affecting acceptance of COVID-19 vaccine and sex using an independent sample t- test. the "Kalaalman sa bakuna" and "Warp Speed" obtained a p-value of 0.001 and 0.040 respectively which is less than 0.05 level. This implies that the null hypothesis "There is no significant difference between the respondents' assessment on the factors affecting acceptance of COVID-19 vaccine and sex " is rejected. Thus, there is a significant difference between the respondents' assessment on the factors affecting acceptance of the COVID-19 vaccine and sex. As viewed from the mean, males have a greatly higher assessment in the factors affecting acceptance of COVID-19 vaccine in termsof kalaalaman sa bakuna and warp speed with a mean of 1.667 and 4.155 respectively as compared to females with a mean of 1.111 and 3.389.

However, the rest of the factors affecting acceptance of the COVID-19 vaccine obtained p-values of greater than 0.05 level. Hence, the null hypothesis "There is no significant difference between the respondents' assessment on the factors affecting acceptance of the COVID-19 vaccine and sex" is accepted. In other words, respondents whether male or female have a similar assessment to the factors affecting acceptance of the COVID-19 vaccine.

Table 3.3: Significant Difference in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan and the Type of PUV.

	Type of PUV	Mean	Std. Deviation	t valu e	p- value	Decision	Remarks
Kaalaman saBakuna	Tricycle	1.668	1.048	- 0.180	0.857	Do not RejectHo	Not Significant
	Jeep	1.708	1.031				
Paniniwala sa Kalusugan/Bakuna	Tricycle	2.578	1.399	1.257	0.210	Do not RejectHo	Not Significant
	Jeep	2.208	1.188				
Halaga ng Bakuna	Tricycle	3.483	0.953	1.443	0.150	Do not RejectHo	Not Significant
	Jeep	3.188	1.136				
Warp Speed	Tricycle	4.127	1.101	- 0.390	0.697	Do not RejectHo	Not Significant
	Jeep	4.219	1.194				
Nakaraang Pag-aalala Ukol sa Kaligtasan	Tricycle	3.077	1.087	- 0.969	0.341	Do not RejectHo	Not Significant
	Jeep	3.344	1.314				
Desisyon Upang Magpabakuna	Tricycle	4.289	1.119	- 1.768	0.088	Do not RejectHo	Not Significant
	Jeep	4.646	0. 938				

Table 3.3 shows the Significant Difference in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan and type of PUV using independent sample t-test. All of the factors obtained p-values greater than 0.05 level. Thisimplies that the null hypothesis "There is no significant difference between the respondents' assessment on the factors affecting acceptance of COVID-19 vaccine and type of PUV" is accepted. Therefore, respondents in all types of PUV have similar assessment to the factor affecting acceptance of COVID-19 vaccine.

Table 3.4: Significant Difference in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan and the Association.

	Association	Mean	Std. Deviation	F Value	p- value	Decision	Remarks
Kaalaman sa Bakuna	BSBPT TODA	1.486	1.037	0.068	0.977	Do not Reject Ho	Not Significant
	SABTODA	1.898	1.199				
	TJSTODA	1.804	0.975				
	MATODA	1.824	1.075				
	SJTODA	1.617	0.838				
	SFTODA	1.706	1.095				
	BGB JODA	1.630	0.996				
Paniniwala sa Kalusugan/ Bakuna	BSBPT TODA	2.335	1.455	2.107	0.099	Do not Reject Ho	Not Significant
	SABTODA	3.011	1.345				
	TJSTODA	2.620	1.226				
	MATODA	2.662	1.541				
	SJTODA	2.733	1.331				
	SFTODA	2.529	1.370				
	BGB JODA	2.222	1.163				
Halaga ng Bakuna	BSBPT TODA	3.528	0.996	0.367	0.777	Do not Reject Ho	Not Significant
	SABTODA	3.523	0.785				
	TJSTODA	3.554	0.765				
	MATODA	3.541	0.834				
	SJTODA	3.050	1.280				
	SFTODA	3.368	0.966				
	BGB JODA	3.407	1.173				
Warp Speed	BSBPT TODA	4.225	1.118	1.214	0.305	Do not Reject Ho	Not Significant
	SABTODA	4.176	0.848				
	TJSTODA	4.098	1.043				
	MATODA	4.054	1.031				
	SJTODA	3.783	1.462				
	SFTODA	4.184	1.117				
	BGB JODA	4.194	1.208				
Nakaraang Pag-aalala Ukol sa Kaligtasan	BSBPT TODA	3.048	1.099	1.694	0.168	Do not Reject Ho	Not Significant
	SABTODA	3.028	0.987				
	TJSTODA	3.255	1.065				
	MATODA	3.297	1.010				
	SJTODA	2.467	1.014				
	SFTODA	3.324	1.218				
	BGB JODA	3.269	1.267				
Desisyon Upang Magbakuna	BSBPT TODA	4.404	1.077	0.715	0.543	Do not Reject Ho	Not Significant
	SABTODA	4.034	1.138				
	TJSTODA	4.283	1.042				
	MATODA	4.284	0.983				
	SJTODA	3.833	1.533				
	SFTODA	4.603	0.952				
	BGB JODA	4.685	0.890				

Table 3.4 shows the Significant Difference in the Factors Affecting Acceptance of COVID- 19 Vaccine of PUV Drivers in Bulakan, Bulacan and their Corresponding Variables using independent sample t-test. All of the factors obtained p-values greater than 0.05 level. This implies that the null hypothesis "There is no significant difference between the respondents' on the factors affecting acceptance of COVID-19 vaccine and type of association " is accepted. Therefore, respondents in all associations have similar assessment to the factor affecting acceptance of COVID-19 vaccine.

Factor vs Educational Attainment

	Educational Attainment	Mean	Std. Deviation	F Value	p-value	Decision	Remarks
Kaalaman sa Bakuna	Not Educated	1.685	1.295	0.068	0.977	Do not Reject Ho	Not Significant
	Elementary	1.634	1.002				
	Secondary	1.666	1.013				
	College	1.712	1.073				
Paniniwala sa Kalusugan/Bakuna	Not Educated	2.907	1.448	2.107	0.099	Do not Reject Ho	Not Significant
	Elementary	2.410	1.485				
	Secondary	2.669	1.365				
	College	2.228	1.283				
Halaga ng Bakuna	Not Educated	3.491	1.095	0.367	0.777	Do not Reject Ho	Not Significant
	Elementary	3.351	0.990				
	Secondary	3.492	0.954				
	College	3.486	0.945				
Warp Speed	Not Educated	4.472	1.108	1.214	0.305	Do not Reject Ho	Not Significant
	Elementary	4.063	1.151				
	Secondary	4.158	1.015				
	College	4.021	1.246				
Nakaraang Pag-aalala Ukol sa Kaligtasan	Not Educated	2.880	0.94	1.694	0.168	Do not Reject Ho	Not Significant
	Elementary	3.037	1.157				
	Secondary	3.230	1.103				
	College	2.938	1.100				
Desisyon Upang Magbakuna	Not Educated	4.611	0.964	0.715	0.543	Do not Reject Ho	Not Significant
	Elementary	4.261	1.256				
	Secondary	4.294	1.115				
	College	4.301	1.003				

The table shows the comparison between the factors affecting the acceptance of COVID-19 vaccine and the educational attainment of the respondents. By using the independent sample t-test, it shows that the value obtained in the p-value is greater than 0.05 thus, making the null hypothesis "There is no significant difference between the respondents' on the factors affecting acceptance of COVID-19 vaccine and the educational attainment" is accepted. Hence, all of the respondents' assessments are similar with one another regardless of their educational attainment.

Table 3.3: Significant Difference in the Factors Affecting Acceptance of COVID-19 Vaccine of PUV Drivers in Bulakan, Bulacan and Number of Hours Driving per Day.

	No. ofHoursDriving per Day	Mean	Std. Deviation	F Value	p- value	Decision	Remarks
Kaalaman saBakuna	less than 1hour	1.143	0.378	1.506	0.188	Do not RejectHo	Not Significant
	1 hour	1.000					
	2-3 hours	1.556	1.097				
	4-6 hours	1.706	0.974				
	7-8 hours	1.848	1.162				
	more than 8hours	1.548	0.970				
Paniniwala sa Kalusugan/Bakuna	less than 1hour	2.143	1.464	1.228	0.296	Do not RejectHo	Not Significant
	1 hour	2.500					
	2-3 hours	2.389	1.510				
	4-6 hours	2.770	1.417				
	7-8 hours	2.696	1.373				
	more than 8hours	2.357	1.356				
Halaga ng Bakuna	less than 1hour	3.393	1.117	0.742	0.592	Do not	Not

						RejectHo	Significant
	1 hour	5.000					
	2-3 hours	3.278	0.840				
	4-6 hours	3.393	1.003				
	7-8 hours	3.484	0.885				
	more than 8hours	3.494	1.034				
Warp Speed	less than 1hour	4.643	0.378	1.488	0.193	Do not RejectHo	Not Significant
	1 hour	3.250					
	2-3 hours	4.292	0.956				
	4-6 hours	3.933	1.182				
	7-8 hours	4.040	1.088				
	more than 8hours	4.274	1.116				
Nakaraang Pag-aalala Ukol sa Kaligtasan	less than 1hour	2.714	0.756	1.143	0.337	Do not RejectHo	Not Significant
	1 hour	4.000					
	2-3 hours	3.083	1.191				
	4-6 hours	2.940	1.024				
	7-8 hours	3.027	0.987				
	more than 8hours	3.252	1.235				
Desisyon Upang Magbakuna	less than 1hour	4.143	1.574	1.262	0.280	Do not RejectHo	Not Significant
	1 hour	4.000					
	2-3 hours	4.500	0.857				
	4-6 hours	4.079	1.261				
	7-8 hours	4.259	1.050				
	more than 8hours	4.468	1.077				

The table _ displays the assessment on the significant difference of the factors thatcan affect the acceptance of PUV drivers towards the COVID-19 vaccine and number of hours driving per day using independent sample t-test. Based on the table above, all the P- values are greater than 0.05. It indicates that the null hypothesis "There is no significant difference between the respondents' assessment on the factors affecting acceptance of COVID-19 vaccine and number of working hours" is accepted. It shows that no matter how long the respondent's exposure to the public, it does not affect their acceptance in COVID-19 vaccine.

CHAPTER 5

Summary, Conclusions, and Recommendations

This chapter deals with the summary of findings, conclusions, and recommendations on the factors affecting acceptance of COVID-19 vaccine of PUV drivers in Bulakan, Bulacan.

SUMMARY OF FINDINGS

The salient findings of the study are as follow.

1. Most of the PUV drivers of Bulakan, Bulacan are literate male tricycle drivers of BSBP TODA around 41-50 years old, driving more than 8 hours per day.
2. PUV drivers do not have enough knowledge regarding the vaccine and they are just neutral between having themselves vaccinated and being cured by traditional healers. However, PUV drivers are willing to be vaccinated if it is given for free, regardless of the past vaccine safety concerns and as long as it is proven safe and effective.
3. 74.47% of the PUV drivers are willing to be vaccinated.
4. The factors have a significant relationship with the decision and acceptance of the vaccine except for the beliefs about the vaccine.
5. PUV drivers have similar assessment to the factor affecting acceptance of COVID-19 vaccine regardless of their demographic profile.

CONCLUSION

There is a significant relationship between the factors of acceptance: Knowledge about the vaccine, Cost of the

vaccine, Warp Speed, and Past Vaccine safety concerns, and the acceptance of PUV drivers of Bulakan, Bulacan towards COVID-19 vaccine except for the Beliefs, which means that there is no significant relationship between the acceptance of PUV drivers of Bulakan, Bulacan towards COVID-19 vaccine.

Recommendation

The researchers would like to recommend the following for future researchers toconsider.

1. Use a dichotomous questionnaire such as yes or no questionnaire becauseit is easier for the PUV drivers to answer since they are fast paced, they don't have an ample amount of time.
2. Try other respondents aside from PUV drivers that are also at high risk inacquiring the COVID-19 virus such as street vendors, security guards.
3. Other municipalities in Bulacan since the researchers only include themunicipality of Bulakan.

BIBLIOGRAPHY

1. 26 jeepney routes in Bulacan OK's _ Philstar. (n.d.).
2. 2020, October 8, Philippines' COVID-19 cases top 331,000, death toll hits 6,000, Xinhua, Retrieved from http://www.xinhuanet.com/english/2020-10/08/c_139425938.htm
3. Abrigo, M. R. M, Uy, J., Haw, N. J., Ulep, V.G.T., & Francisco, A. K. (2020). Projected Disease Transmission, Heath System Requirements, and Macroeconomic Impacts ofthe Coronavirus Disease 2019 (COVID-19) in the Philippines. https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps2015.pdf
4. Arab News. (2020). Philippine 'jeepney' drivers hit by COVID-19 crisis. Www-arabnews- com-node-1720471-business-economy.pdf
5. Aurora Quadra-Balibay. (2020). *HAPPENING_ Public transportation resumes as Metro Manila shifts to GCQ - Good News Pilipinas*. Good News Pilipinas. https://www.goodnewspilipinas.com/happening-public-transportation-resumes- as-metro-manila-shifts-to-gcq/#:~:text=The Department of Transportationannounced,in addition to face masks.
6. Balbin, M. (2020). *Public transport resumes in Bulacan.https://www.pna.gov.ph/articles/1106732*
7. Baumeister, R. (2008). Social Psychology & Human Nature. Belmont, CA: Thomson
8. *Version* (p. 600). https://books.google.com/books?id=Ab02eJm-FTUC&pgis=1
9. Baumeister, R. F., & Bushman, B. (2007). *Social Psychology and Human Nature, Brief.*
10. Board Resolution No. 060 Series of 2020. Retrieved from: https://ltfrb.gov.ph/wp-content/uploads/2020/04/BOARD-RESOLUTION-060-S.-2020.pdf
11. Bostock, B. (2020). *Moderna CEO says the global population could start getting access to its vaccine by late March or early April 2021*. Business Insider. https://www.businessinsider.com/moderna-ceo-vaccine-ready-late-march-early- april-2021-2020-10
12. Bowman, J. (2016). Vaccine Development, Testing, and Regulation | History of Vaccines. In *The college* testing-and-regulati
13. Calina, D., Docea, A. O., Petrakis, D., Egorov, A. M., Ishmukhametov, A. A., Gabibov, A. G., Shtilman, M. I., Kostoff, R., Carvalho, F., Vinceti, M., Spandidos, D. A., & Tsatsakis, A. (2020). Towards effective COVID‐19 vaccines: Updates, perspectives and challenges (Review). *International Journal of Molecular Medicine*, *46*(1), 3–16. https://doi.org/10.3892/ijmm.2020.4596
14. CDC. (2020). *Benefits of Getting a COVID-19 Vaccine. Retrieved* from https://www.cdc.gov/coronavirus/2019-ncov/vaccines/about-vaccines/vaccine-benefits.html
15. Cemino D.J.(2020)." What is COVID-19?". Retrieved from https://www.medscape.com/answers/2500114-197401/what-is-covid-19
16. Centers for Disease Control and Prevention (CDC). (2018). Understanding How VaccinesWork *Centers for Disease Control*, *August*, 1–2. https://www.cdc.gov/vaccines/hcp/conversations/downloads/vacsafe-understand- color-office.pdf
17. Cerudo, A. 2020. *Out of Job jeepney drivers in Manila turn to begging amid. ECQ.*:https://www.untvweb.com/news/out-of-job-jeepney-drivers-in-manila- turn-to-begging-amid-ecq/
18. Check J., Schutt R. K. Survey research. In: J. Check, R. K. Schutt., editors. *Research methods in education*. Thousand Oaks, CA:: Sage Publications; 2012. pp. 159–185. https://books.google.com.ph/books?hl=en&lr=&id=nSWYAAAAQBAJ&oi=fnd&p g=PP1&ots=U9etP-1Hni&sig=Q42aNjBk6dhrn7LJmw4DG1YmTKk&redir_esc=y#v=onepage&q&f=f alse
19. Chen, F., Cao, S., Xin, J., & Luo, X. (2013). Ten years after SARS: where was the virus from?.*Journal of thoracic disease*, *5 Suppl 2*(Suppl 2), S163–S167. https://doi.org/10.3978/j.issn.2072-1439.2013.06.09
20. Clinical Trials, Retrieved October 29, 2020, from World Health Organization website, https://www.who.int/health-topics/clinical-trials/#tab=tab_1
21. Cold storage is the main hurdle to Pfizer's COVID-19 vaccine _ World Economic Forum. (n.d.). https://www.weforum.org/agenda/2020/11/pfizer-vaccine-covid19- cornavirus-storage-hospital-healthcare/
22. COVID-19 vaccine update_ Pfizer may be the frontrunner, but Canada has hedged its bets. (n.d.). https://theconversation.com/covid-19-vaccine-update-pfizer-may-be-the- frontrunner-but-canada-has-hedged-its-bets-149962
23. Cullen, W., Gulati, G.& Kelly, B. D. (2020). Mental health in the COVID-19 pandemic. doi:

10.1093/qjmed/hcaa110

24. Dela Cruz, R. (2020). *DOTr to 'strictly enforce' distancing in public transport.* https://www.pna.gov.ph/articles/1115934

25. Department of Health website. (2020). *Department of Health website*. 1,062 Health Workers in Philippines Infected with COVID-19 |. http://www.doh.gov.ph/node/21296

26. Department of Health. (2020). *Official DOH updates on the coronavirus disease 2019(COVID-19) in the Philippines*. https://covid19.healthypilipinas.ph/updates-covid

27. Department of Health. (2020). *Official DOH updates on the coronavirus disease 2019(COVID-19) in the Philippines*. https://covid19.healthypilipinas.ph/updates-covid

28. Domingo, K. (2020). Which COVID-19 vaccine is most cost-friendly for PHgovernment_ _ABS-CBN News https://news.abs-cbn.com/news/12/10/20/which-covid-19-vaccine-is-most-cost-friendly-for-ph-government

29. Dozens of COVID-19 vaccines are in development. Here are the ones to follow. | National Geographic. (n.d.). https://www.nationalgeographic.com/science/health-and-human- body/human-diseases/coronavirus-vaccine-tracker-how-they-work-latest-developments-cvd/

30. Dubé, E., Laberge, C., Guay, M., Bramadat, P., Roy, R., & Bettinger, J. (2013). Vaccine hesitancy: An overview. *Human Vaccines and Immunotherapeutics*, *9*(8): 1763–1773. https://doi.org/10.4161/hv.24657

31. Dubé, E., Vivion, M., & MacDonald, N. E. (2014). Vaccine hesitancy, vaccine refusal and the anti-vaccine movement: Influence, impact and implications. *Expert Review of Vaccines*, *14*(1): 99–117. https://doi.org/10.1586/14760584.2015.964212

32. Fatima, K., & Syed, N. I. (2018). Dengvaxia controversy: Impact on vaccine hesitancy. *Journal of Global Health*, *8*(2), 8–10. https://doi.org/10.7189/jogh.08.020312

33. Fouad N. A. (2020). Editor in Chief's Introduction to Essays on the Impact of COVID-19 on Work and Workers. *Journal of vocational behavior*, *119*, 103441.https://doi.org/10.1016/j.jvb.2020.103441

34. Funk, C. & Tyson, A. (2020). Intent to Get a COVID-19 Vaccine Rise to 60% as Confidence in Research and Development Process Increases. Retrieved from: https://www.pewresearch.org/science/2020/12/03/intent-to-get-a-covid-19- vaccine-rises-to-60-as-confidence-in-research-and-development-process-increases/

35. Geoghegan, S., O'Callaghan, K. P., & Offit, P. A. (2020). Vaccine Safety: Myths and Misinformation. *Frontiers in Microbiology*, *11*(March), 1–7. https://doi.org/10.3389/fmicb.2020.00372

36. Glanz, K., Rimer, B. k., & Viswanath, K. (2002). Health Behavior and Health Education: Theory, Research and Practice (2nd edition)

37. Glanz, K., Rimer, B. k., & Viswanath, K. (2002). *Health Behavior and Education: Theory, Research, and Practice 4th Edition.*

38. Guan, Y., Zheng, B. J., He, Y. Q., Liu, X. L., Zhuang, Z. X., Cheung, C. L., Luo, S. W., Li, P. H., Zhang, L. J., Guan, Y. J., Butt, K. M., Wong, K. L., Chan, K. W., Lim, W., Shortridge, K. F., Yuen, K. Y., Peiris, J. S., & Poon, L. L. (2003). Isolation and characterization of viruses related to the SARS coronavirus from animals in southern China. *Science (New York, N.Y.)*, *302*(5643), 276–278. https://doi.org/10.1126/science.1087139

39. Harapan, H., Wagner, A. L., Yufika, A., Winardi, W., Anwar, S., Gan, A. K., Setiawan, A. M., Rajamoorthy, Y., Sofyan, H., & Mudatsir, M. (2020). Acceptance of a COVID- 19 Vaccine in Southeast Asia: A Cross-Sectional Study in Indonesia. *Frontiers in Public Health*, *8*(July), 1–8. https://doi.org/10.3389/fpubh.2020.00381

40. Hu, B., Guo, H., Zhou, P. *et al.* Characteristics of SARS-CoV-2 and COVID-19. *Nat Rev Microbiol* (2020). https://doi.org/10.1038/s41579-020-00459-7

41. Humanitarian Country Team (2020) *Covid-19 Humanitarian Response Plan Philippines.*https://reliefweb.int/sites/reliefweb.int/files/resources/200511_COVID-19%20Philippines%20HRP%20Revision%20Final.pdf

42. Ibañez, J. P., Espedido, G. L., & Ang, A. J. (2020).*PHL to open up economy as lockdown eases.BusinessWorldOnline*.https://www.bworldonline.com/phl-to-open-up- economy-as-lockdown-eases/

43. Icamina, P. (2019). *Philippine disease outbreaks linked to vaccine fear*. Sci Dev Net. https://www.scidev.net/asia-pacific/health/feature/philippine-disease-outbreaks%0A-linked-to-vaccine-fear.html%0

44. Islam, N., Sharp, S. J., Chowell, G., Shabnam, S., Kawachi, I., Lacey, B., Massaro, J. M., D'Agostino, R. B., & White, M. (2020). Physical distancing interventions and incidence of coronavirus disease 2019: Natural experiment in 149 countries.The BMJ, 370, 1–10. https://doi.org/10.1136/bmj.m2743

45. Jef, T. (2014). *Myths and superstitions hamper Philippines immunization drive - UCA News*. https://www.ucanews.com/news/myths-and-superstitions-hamper- philippines-immunization-drive/71864#

46. Kalaycio, M. (2018). *Pathologic superstition MDedge Hematology and Oncology*. MDEdge. https://www.mdedge.com/hematology-oncology/article/178494/patient- survivor-care/pathologic-superstition

47. Kara, S. S., Polat, M., Yayla, B. C., Demirdag, T. B., Tapisiz, A., Tezer, H., & Camurdan, A. D. (2018). Parental vaccine knowledge and behaviours: A survey of Turkish families. *Eastern Mediterranean*

Health Journal, *24*(5), 451–458. https://doi.org/10.26719/2018.24.5.451

48. Koven, S. (2020). "Engla, Journal - 2010 - New England Journal." New England Journal of Medicine 1–2.
49. Larson, H. J., Hartigan-Go, K., & de Figueiredo, A. (2019). Vaccine confidence plummets in the Philippines following dengue vaccine scare: why it matters to pandemic preparedness. *Human Vaccines and Immunotherapeutics*, *15*(3), 625–627. https://doi.org/10.1080/21645515.2018.1522468
50. Lazarus, J. V., Ratzan, S. C., Palayew, A., Gostin, L. O., Larson, H. J., Rabin, K., Kimball, S., & El-Mohandes, A. (2020). A global survey of potential acceptance of a COVID- 19 vaccine. *Nature Medicine*. https://doi.org/10.1038/s41591-020-1124-9.
51. Lee, B. Y. (2020). How effective does a COVID-19 coronavirus vaccine need to be to stopthe pandemic ? A new study has answers. In *Science, The Wire* (pp. 1–5). https://theconversation.com/how-effective-does-a-covid-19-coronavirus-vaccine- need-to-be-to-stop-the-pandemic-a-new-study-has-answers-142468
52. Lowy Institute, (2021) Philippine Government Driving Jeepneys Off the Road https://www.lowyinstitute.org/the-interpreter/philippines-government-driving-jeepneys-road
53. Mathers, N., Fox, N.J. & Hunn, A. (2020). *Using interviews in a Research.* https://www.researchgate.net/publication/253117832_Using_Interviews_in_a_Research_Project
54. Memorandum Circular No. 20-33 series of 2020. *Revised Category I-IV Business Establishments Guideline On Community Quarantine* Retrieved from: https://www.dti.gov.ph/sdm_downloads/memorandum-circular-no-20-33/
55. Moore, J. P., & Klasse, P. J. (2020). COVID-19 Vaccines: "Warp Speed" Needs Mind Melds, Not Warped Minds. *Journal of Virology*, *94*(17), 1–32. https://doi.org/10.1128/jvi.01083-20
56. Nicolas, B. (2020). *DBP to give subsidies to lockdown-hit PUV Drivers.* https://businessmirror.com.ph/2020/10/19/dbp-to-give-subsidies-to-lockdown-hit-puv-drivers/
57. Ocampo, L.& Yamagishi, K.(2020).*Modeling the lockdown relaxation protocols of the Philippine government in response to the COVID-19 pandemic: An intuitionistic fuzzy DEMATELanalysis.*https://scholar.google.com.ph/citations?user=IsNabnwAAAAJ&hl=en&oi=sra
58. Pardo, C. (2020). The New Finding of the Covid-19 in Public Transportation. Retrieved from: https://www.transformative-mobility.org/news/the-new-findings-of-the-covid-19-in-public-transport
59. Pastor, C.K. L. (2020). *Sentiment analysis of Filipinos and effects of extreme community quarantine due to coronavirus (COVID-19) Pandemic*.http://www.jcreview.com/fulltext/197-1588900606.pdf
60. Protocol/Guidelines for Public Transport Operations. 2020. Retrieved from https://www.lto.gov.ph/images/Advisory/COVID-19_Transport_Protocol_v3_+ROAD.pdf
61. Ranada, P. (2020). *Govt experts says earliest time PH can get COVID-19 vaccine is April to June 2021*. Rappler. https://www.rappler.com/nation/government-expert-says- earliest-time-philippines-can-get-covid-19-vaccine-april-june-2021
62. Rosenstock, I. M., & Ph, D. (1960). Historical Origins of the Health Belief Model. *Health Education Monographs*, *2*(4), 328–335.
63. Rural Health Unit (2020). COVID-19 Update. *Bayan ng Bulakan.* https://www.facebook.com/vergel.c.meneses/photos/a.1668746040073465/27931 20924302632/
64. San Juan, A (2020) *17000 PUV Drivers received cash from SAP*. https://mb.com.ph/2020/04/18/17000-puv-drivers-receives-cash-assistance-from-sap/
65. Sandler, K., Srivastava, T., Fawole, O. A., Fasano, C., & Feemster, K. A. (2020). Understanding vaccine knowledge, attitudes, and decision-making through college student interviews. *Journal of American College Health*, *68*(6), 593–602. https://doi.org/10.1080/07448481.2019.1583660
66. Satz. D., & Ferejohn J.,(1994). *Rational Choice and Social Theory.The Journal of Philosophy, 91(2), 71-87. https://www.jstor.org/stable/2940928?seq=1*
67. Schaab, G., Pfau, O., Ryfa, M., & Birkan, B. (1876). *Katja Falkenbach*. 0–1. https://www.wiwi.europa-uni.de/de/lehrstuhl/fine/mikro/bilder_und_pdf-dateien/WS0910/VLBehEconomics/Ausarbeitungen/MereExposure.pdf
68. Schmidt, C. (2020). *"Warp Speed" COVID-19 Vaccine Efforts Aim for Diverse Volunteers and Long-Lasting Protection - Scientific American*. Scientific American. https://www.scientificamerican.com/article/warp-speed-covid-19-vaccine-efforts- aim-for-diverse-volunteers-and-long-lasting-protection/
69. SHRM (2020) *Mandating COVID-19 Vaccine.* https://www.shrm.org/resourcesandtools/tools-and-samples/exreq/pages/details.aspx?erid=1624
70. Talabong, R. (2020). *Coronavirus Metro Manila Lockdown Begins*. Rappler. https://www.rappler.com/nation/coronavirus-metro-manila-lockdown-begins
71. Tee, M. L., Tea, C. A., Ancalan, J.P., Aligam, K.J.G., Reyes, P. W. C., Kuruchittham, V. H.,& Roger, C. (2020)*Psychological impact of COVID-19 pandemic in the Philippines* https://reader.elsevier.com/reader/sd/pii/S016503272

0326495?token=4710CF37D90 EA4068262AA0CD25BA6071B86F05775DAFE15 D3788BB598306E79D4B4869 FBEF44520C3E528AEF2F39BD5

72. The Lancet Child & Adolescent Health. (2019). Vaccine hesitancy: a generation at risk. *The Lancet Child and Adolescent Health*, *3*(5), 281. https://doi.org/10.1016/S2352- 4642(19)30092-6.
73. Tirachini, A. (2020). Covid-19 and Public Transportation: Current Assessment, Prospect, and
74. Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, *5*(2), 207–232. https://doi.org/10.1016/0010- 0285(73)90033-9
75. Ugay, J., Lavares, M., Cruz, J., Muyrong, M. (2020).*Overhauling Land Transportation inthe New Normal and Beyond.* http://ateneo.edu/sites/default/files/downloadable-files/ADMU%20WP%202020-08_0.pdf
76. Vaccine Prices For COVID-19 Begin To Emerge _ Shots - Health News _ NPR. (n.d.). https://www.npr.org/sections/health-shots/2020/08/06/899869278/prices-for-covid- 19-vaccines-are-starting-to-come-into-focus
77. Velante C.S (2020).Palace orders strict health protocols amid GCQ status. https://www.manilatimes.net/2020/11/01/news/national/palace-orders-strict-health-
78. protocols-amid-gcq-status/789775/
79. Wang, K., Wong, E. L. Y., Ho, K. F., Cheung, A. W. L., Yau, P. S. Y., Dong, D., Wong,
80. S. Y. S., & Yeoh, E. K. (2021). Change of willingness to accept covid-19 vaccine andreasons of vaccine hesitancy of working people at different waves of local epidemic in hong kong, china: Repeated cross-sectional surveys. Vaccines, 9(1), 1–15. https://doi.org/10.3390/vaccines9010062
81. WHO (2020) Coronavirus disease (COVID-19): How is it transmitted? In
82. *https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-*
83. *answers-hub/q-a-detail/q-a-how-is-covid-19-*
84. *transmitted?gclid=CjwKCAjwz6_8BRBkEiwA3p02VQbTttHzPi2U9R0jgRkTgYA5nn*
85. *owO_Eu3YQ_ePtWmkYIE_MDr1RQiRoCeNQQAvD_BwE*.
86. WHO. (2020). SARS (Severe Acute Respiratory Syndrome) - WHO. Retrieved November 6, 2020, from https://www.who.int/ith/diseases/sars/en/
87. *WHO-Coronavirus-Disease-COVID-19-Dashboard-_-WHO-Coronavirus-Disease-*
88. *COVID-19-Dashboard* (2020).World Health Organization.https://covid19.who.int/
89. World Health Organization (2010). *Activities Pursuant To The Revised Omnibus*
90. Pandemic, Retrieved February 24, 2010 from World Health Organization
91. World Health Organization (2020). *Coronavirus*. Retrieved https://www.who.int/health-topics/coronavirus#tab=tab_1
92. World Health Organization. (2020). WHO Coronavirus Disease (COVID-19) Dashboard |WHO Coronavirus Disease (COVID-19) Dashboard In *Who*. https://covid19.who.int/%0Ahttps://covid19.who.int/%0Ahttps://covid19.who.int/region/wpro/country/cn%0Ahttps://covid19.who.int/?gclid=CjwKCAjwztL2BRATEiwAvnALcpJvfJoB2ZO9AW4cscOjOPpuNNisqVVlTkpdslGJOuXSFkrhbLCafxoCjBNQAvD_BwE%0Ahttps://covid19.who.int/
93. Wu, Z., McGoogan, J.M. Asymptomatic and Pre-Symptomatic COVID-19 in China.
94. *Infect Poverty* **9,** 72 (2020). https://doi.org/10.1186/s40249-020-00679-2
95. ZAJONC, R. B. (1968). Attitudinal Effects of Mere Exposure. *Journal of Personality and Social Psychology*, *9*(2 PART 2), 1–27. https://doi.org/10.1037/h0025848