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**Short Paper**

# Beliefs and Hesitancy Towards COVID-19 Vaccination among Elderly

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**Abstract**

The conduct of investigating the elderly's beliefs and hesitancy towards COVID-19 vaccination is a great help in helping the elderly to accept the vaccine. This study focused on the beliefs and hesitancy towards COVID-19 vaccination among the elderly as the Philippine Government imposed a mass vaccination program for the people in the country to fight the COVID-19 virus. This study employed a qualitative research method focused on a wide-ranging interview about the participants' profile, beliefs, and hesitancy towards COVID-19 vaccines. A narrative case study approach was used in compiling and analyzing the recorded interview material, and some findings were reported thematically to ensure a better analysis of the data gathered. Thematic analysis was used to see and process qualitative information using coding systematically. The researcher observed that the elderly's beliefs about COVID-19 vaccination contributed to their hesitancy to become vaccinated. The elderly were hesitant about the vaccine due to its safety and efficacy and considering their religious affiliations. A comprehensive information education campaign material is needed to increase their awareness of the benefits of COVID-19 vaccination to address the perceived barriers which are linked to their beliefs such as its side effects and health challenges. Thus, the LGU of Rosales, Pangasinan must consider the information education campaign material proposed by the researcher to increase the elderly's awareness about COVID-19 vaccines.

*Keywords* – beliefs, hesitancy, elderly, COVID-19 vaccination.

## INTRODUCTION

Globally, as of November 22, 2022, there have been 635,229,101 confirmed cases of COVID-19 virus, including 6,602,552 deaths reported to the World Health Organization (WHO), and the numbers are still rising in 72 countries. Weekly COVID-19 cases and deaths continue to decline in most of the world, except in Southeast Asia and the Western Pacific, which saw modest rises. The World Health Organization (WHO) said in its weekly update. The World Health Organization (WHO, 2023) received reports of more than 2.1 million cases, reflecting a 15% drop. Only five countries with the most cases were Japan, South Korea, the United States, Germany, and China, with the most COVID-19 cases infection of these countries, while Japan and South Korea are reporting rising cases. With the vaccination programs running across the globe, the national health services all over the world seemingly were able to contain the virus or continue to fall.

According to Kikut et al. (2022), there is growing evidence that COVID-19 vaccination decisions are strongly connected to behavioral beliefs. Some previous studies have identified associations between positive behavioral beliefs about COVID-19 vaccination and vaccination intentions. Prior research shows that vaccine safety and effectiveness beliefs are strongly associated with hesitancy. Thus, these previous studies show a strong correlation between behavioral beliefs and vaccine intentions.

The health belief model and theory of planned behavior have been widely used to understand the determinants of COVID-19 vaccination (Fan et al., 2021; Betsch et al., 2018). However, the hesitancy toward COVID-19 vaccines is a complex, multi-faceted construct rooted in the sociocultural structures that guide decision-making. Therefore, Siu et al. (2022) revealed that an examination of elements of the health belief model (perceived susceptibility, perceived severity, perceived benefits, and perceived barriers) and the theory of planned behavior (attitude, subjective norms, behavioral intention, perceived behavioral control, and perceived power) that is mainly focused on personal and individual attitudes are adequate when working to understand vaccination behaviors.

The hesitancy toward vaccination with the COVID-19 vaccine remains a problem worldwide and a significant obstacle in the face of the COVID-19 vaccination programs. Vaccination hesitancy is defined as *"the delay in acceptance or refusal of vaccination despite the availability of vaccination services"* (MacDonald, 2015, p. 4161-4164), as cited by Morales et al. (2022).

In the Philippines, there is a limited number of pieces of literature investigating the beliefs and hesitancy of COVID-19 vaccination. As reported by the Philippine News Agency (2022), a total of 59,120,367 individuals nationwide 75.7 percent of the target population are now fully vaccinated against COVID-19 according to the National Task Force against COVID-19. Thus, more public awareness, enhancing their knowledge, and a good mindset regarding COVID-19 are necessary.

## OBJECTIVES OF THE STUDY

The main objective of the study was to investigate the beliefs and hesitancy among the elderly towards COVID-19 vaccination in the Municipality of Rosales, Pangasinan. Specifically, it sought to determine the following questions:

1. What is the demographic profile of the participants;
    a. age;
    b. sex;
    c. religion;
    d. marital status;
    e. highest educational attainment;
    f. source of income;
    g. employment; and
    h. source of information on health-related concerns?
2. What are the beliefs of the participants towards COVID-19 vaccines?
3. What are the factors that affect their hesitancy toward COVID-19 vaccination?
4. What information education campaign material should be proposed to address the problem?

## LITERATURE REVIEW

In the research conducted by Thanapluetiwong et al. (2021) in studying the factors associated with COVID-19 Vaccine Hesitancy in Thai Seniors, the researchers found that people with an education level of elementary school or below had more vaccine hesitancy than those who had graduated with a bachelor's degree or higher. Compared with individuals who had confidence in the healthcare system's competence to manage patients with COVID-19, those who lacked confidence had 6.4 times higher vaccine hesitancy. Additionally, the researchers observed that the fear of COVID-19 was linked to risk perception. Thus, research suggests that those who perceived a greater risk of infection were more likely to receive vaccines. Likewise, when the number of new COVID-19 infections grew, people's vaccine hesitancy decreased.

Moreover, Nicholls et al. (2021) studied the factors associated with older adults' hesitancy toward receiving influenza, pneumococcal, and shingles vaccines. The researchers found that older adults exhibited greater uptake and awareness of the influenza vaccine than the pneumococcal and shingles vaccines. Psychosocial factors were associated with the uptake of the three vaccines, with a lower sense of collective responsibility related to the lack of uptake of all three vaccines. Thus, greater awareness and targeted education about disease risk and vaccine benefits may be required to increase vaccination coverage in the older adult population.

Further, Silva et al. (2022) investigated the perceptions, knowledge, and attitudes about COVID-19 vaccine hesitancy in Older Portuguese adults; the researchers found that the older population trusts the information released by social media and competent national and international authorities, leading to a decrease in Vaccine Hesitancy and Refusal. Additionally, the worries or concerns about its efficacy and perceived safety were the two most important determinants for refusing or not having the intention to get the vaccine. A previous study with Swiss Older adults showed that those unsure or against vaccination prefer to maintain the protective measures (hand hygiene and mask use) rather than be vaccinated.

The study of Fasher et al. (2022) stated that people generally struggle to comprehend probabilistic risk information when it is depicted numerically and often overestimate the occurrence of consequential but unlikely events, including those associated with vaccination—likewise, simple relationship between mortality or morbidity figures and the perception of risk. People do not perceive, interpret or act on risk information as expected by risk experts in general nor specifically when considering vaccines and diseases, as cited by Bond and Nolan (2011).

Vaccination intentions are shown to be a good predictor of subsequent behavior, and understanding the development of COVID-19 vaccination intentions among the public is vital because the vaccination program is the most effective strategy against the COVID-19 outbreak (Walker et al., 2021). Additionally, vaccination is a viable option to reduce the chance of hospitalization and death due to this infection, as cited by the World Health Organization (2009).

Some studies have also focused on social and legacy media's influence on individuals' intention to get the COVID-19 vaccine. Misinformation and unsubstantiated rumors regarding the COVID-19 vaccines have been around and repeatedly shared on social media platforms even before the release of the effective vaccines (Puri et al., 2020). Additionally, the rapid development of COVID-19 vaccines has reportedly raised concerns regarding the safety and long-term effects, even among the medical staff (Dror et al., 2020). Likewise, Allington et al. (2021) stated that the more an individual relied on social media for information on COVID-19, the more likely that the individual was to believe conspiracy theories related to COVID-19 vaccines.

## METHODOLOGY

## *Research Design*

This research employed a qualitative research design. Qualitative research was used to gather primary data through a descriptive survey in the form of questionnaires and interviews to describe the beliefs and hesitancy towards COVID-19 vaccination among the elderly and to address the problem of the COVID-19 vaccination. The interview guide was validated by experts in research.

## *Respondents*

Respondents were selected using purposive sampling with the following criteria: 1) were admitted as an in-patient or out-patient at Conrado F. Estrella Regional Medical and Trauma Center (CFERMTC); 1) were aged sixty-five (65) years or older; 3) had not received COVID-19 vaccines by the time of the study; and 4) exhibits a satisfactory level of fluency and comprehension to answer the questions. The respondents were male and female composed of ten (10) individuals who were classified to the set of criteria drawn by the researcher.

## *Research Instrument and Data Gathering Procedure*

To gather data among the elderly, the researcher conducted a face-to-face interview in investigating their beliefs and hesitancy towards COVID-19 vaccination in an isolated room provided by the Conrado F. Estrella Regional Medical and Trauma Center (CFERMTC).

The researcher observed the IATF protocol for wearing of face mask, social distancing, and handwashing. Moreover, the researcher highly employed moral norms and principles in this study. Rules and policies promote the research's aspiration, such as knowledge, truth, and error avoidance. The public should know the objectives of their study. The researcher honestly reported the data and the results and avoided misrepresenting data. The researcher protects confidential communications, such as documentary papers, respondent data records, and all other evidence entrusted to the researchers and used only for the research objectives.

## *Treatment of Data*

The researcher used codes from P1 to P10 in describing the beliefs and hesitancy of the respondents regarding COVID-19 vaccination. The interviews were transcribed verbatim, and a phenomenological approach was used to explore the meaning and essence of their beliefs and hesitancy toward COVID-19 vaccination.

The researcher pre-identified four (4) major sub-themes based on Health Belief Model (HBM), and the transcripts were analyzed per major theme to identify sub-themes. Moreover, the first and second reading was conducted to identify the major themes. Then, the transcripts were analyzed line by line using an inductive coding process that segmented

the transcripts into small meaning units. Lastly, the four major sub-themes per major theme were derived and organized.

## RESULTS

### *Demographic Profile of the Participants*

Participant One (P1) is 61 years old, a female with no comorbidities; she is a single parent and a college graduate who worked as a seamstress with a monthly family income of Php 10,000 below, whose source of health-related information is from the radio.

Moreover, Participant Two (P2) is a single parent who worked as a seamstress with a monthly family income of Php 10,000 below and relied on the radio for health-related information. However, he is a male college undergraduate and a member of an Evangelical Church.

Furthermore, Participant Three (P3) is 63 years old, female, married, and a technical-vocational graduate who worked as a seamstress earning Php10,000 below with no comorbidities and is an El Shaddai believer.

On the other hand, Participant Four (P4) claimed that she has no comorbidities; a widowed male participant was a college undergraduate working as a construction worker earning Php 10,000 below and relying on social media for health-related information.

Subsequently, Participant (P5) is 64 years old female, married, and a technical-vocational graduate who worked as a seamstress earning Php 10,000 below with no comorbidities and relies on mass media for health-related concerns.

Meanwhile, Participant Six (P6) is 67 years old, a male single parent, and a college undergraduate who worked as a construction worker earning Php 10,000 below. He is hypertensive and gets health-related information from his health worker.

Likewise, Participant Seven (7) is 65 years old, a widowed female participant, college undergraduate working as a seamstress earning Php 10,000 below. She had hypertension and getting health-related information on the radio.

Moreover, Participant Eight (P8) is 62 years old, a male married participant, an evangelical believer, a college undergraduate, and getting health information from mass media. He does not have a monthly income because he is not employed.

Furthermore, Participant Nine (P9) is 64 years old, a male single-parent respondent; he was a college undergraduate earning Php 10,000 – Php 20,000 as a factory worker, and

he is getting health-related information in mass media. Consequently, he has type 1 diabetes and hypertension.

Lastly, Participant Ten (P10) is 60 years old, a widowed female respondent, a Roman Catholic, and a college graduate working as a tutor ranging from Php10,000 to Php20,000 monthly income; he was getting health-related information in mass media.

## *Theme I: Beliefs toward COVID-19 Vaccination*

The participant's beliefs towards COVID-19 vaccination were anchored from the health belief model (HBM). Accordingly, the health belief model is a theoretical model that can guide health promotion and disease prevention programs. The four core components were considered major themes in this study, including Perceived Susceptibility, Perceived Severity, Perceived Benefits, and Perceived Barriers (Table 1). These major themes consisted of four sub-themes from the interviews conducted by the researcher among ten elderly patients of Conrado F. Estrella Regional Medical and Trauma Center (CFETMTC) during the research.

### *Sub-theme 1: Perceived Susceptibility*

Perceived susceptibility refers to the participant's assessment of the risk of developing or acquiring the COVID-19 virus. Health Belief Model hypothesizes that persons who believe they are susceptible to a specific health problem will participate in behaviors to reduce their risk of developing the health problem of concern and in their study is acquiring the COVID-19 virus. As a result of the interview with the participants who are hesitant to receive the COVID-19 vaccination, four sub-themes were identified that contribute to their hesitancy about their beliefs on susceptibility to the COVID-19 virus.

*The elderly is more susceptible or at risk of the COVID-19 virus.*

Getting sick means that older adults with COVID-19 might need hospitalization and intensive care to help them breathe. Accordingly, the risks increase for people in their 50's, increases in their 60's, 70's, and 80's. In other words, the risk for severe illness with COVID-19 increases with age, with older adults at the highest risk. Despite the risks of older adults to COVID-19 disease, it is notable that there are still elderly who refuse to get vaccinated with the COVID-19 vaccine. According to Arbaje (2021), older people are especially vulnerable to severe illness with the new coronavirus. Research shows that adults 60 years and older, especially with pre-existing medical conditions, heart disease, lung disease, or cancer, are more likely to have severe — even deadly — coronavirus infection than other age groups. Being old, having comorbidities, fear of death, and their beliefs that COVID-19 infection has similar symptoms to flu, like cough, cold, and fever, make them hesitant to vaccinate.

Table 1. Generating of Themes

| Code/Labels | Sub-theme | Theme |
|---|---|---|
| • The elderly are more susceptible or at risk of the COVID-19 virus.<br>• COVID-19 virus caused symptoms like cough, flu, and fever which are usual.<br>• The Elderly's comorbidities prevent them from getting vaccinated.<br>• Awareness of preventive practices. | • Perceived Susceptibility | • Beliefs Toward COVID-19 Vaccination |
| • Getting the virus when vaccinated<br>• Getting the vaccine leads to death, and becoming more ill, and suitable.<br>• Faith in God and religious affiliation.<br>• The vaccine can shorten their life | • Perceived Severity | |
| • Being vaccinated could save you from hospitalization<br>• Vaccines can prevent the spread of the COVID-19 virus<br>• Vaccines can reduce the chance of infection<br>• The elderly are prone to severe illnesses, and COVID-19 vaccines can protect you. | • Perceived Benefits | |
| • Side effects of the vaccine<br>• Fear induced by reports of deaths after COVID-19 vaccination and poor long-term efficacy of the vaccine.<br>• Lack of trust in the vaccine<br>• Vaccines being dangerous | • Perceived Barriers | |
| • Social Support Networks and Strong Faith<br>• Safety and Efficacy<br>• Feeling Unsuitable for Vaccination<br>• Peer Pressure | | • Hesitancy Towards COVID-19 Vaccination |

*COVID-19 virus caused symptoms like cough, flu, ad fever, which are usual.*

COVID-19 infection has the same signs and symptoms as common colds, fever, and flu. COVID-19 affects different people in different ways, from mild to moderate illness, and they recover without hospitalization. One cannot tell the difference between symptoms of flu and COVID-19 by symptoms alone since they have some of the same signs and symptoms. Getting treated early for COVID-19 and the flu can reduce the risk of getting sick. Thus, some elderly, due to lack of knowledge, their beliefs toward signs and symptoms show similarities with flu: fever, cough, shortness of breathing, fatigue, sore throat, runny nose, diarrhea, and headache. Four participants considered COVID-19 infection similar to the usual flu, which could cause cough, fever, and cold.

*The elderly's comorbidities prevent them from getting vaccinated.*

According to Applegate and Ouslander (2020), adults 65 years and older and those with underlying medical conditions such as cardiovascular disease, hypertension, and diabetes are at higher risk for developing more severe complications from COVID-19.

Filipinos are aware of the death cases, especially among the elderly, because they know that illnesses and weakness of the body will come out at their age.

*Awareness of preventive practices.*

Preventive practices are the safety measures as direct aid to protect themselves against the COVID-19 virus. Some examples of these are facemasks, alcohol, and social distancing.

***Sub-theme 2: Perceived Severity***

Perceived severity refers to a person's severity of disease, which can be based on medical consequences, like death or disability, or personal beliefs about how the condition or disease would affect life. Accordingly, this also refers to an individual associated with an outcome with potentially serious consequences.

*Getting the virus when vaccinated.*

Some vaccine-hesitant believed that when vaccinated, there is a higher risk of getting the virus, which reduced their motivation to submit themselves to the vaccine site. Some vaccine-hesitant do not believe in acquiring the virus when vaccinated but are still unwilling to be vaccinated.

*Getting the vaccine leads to death and becoming more ill and unsuitable.*

Most vaccine-hesitant viewed the vaccine as leading to death as they witnessed their neighbor suffer and eventually die. Hence, they prefer alternative medicines at their age rather than the COVID-19 vaccines.

*Faith in God and religious affiliation.*

Vaccine-hesitant believes the vaccine is effective in treating the virus, as the expert clinically proves, but this cannot encourage them to become vaccinated. *Vaccines can shorten their life.* Vaccine-hesitant believed that the vaccine could shorten their lives because they witnessed the death cases in their City or Municipality. This conspiracy affects the decision of an unvaccinated person.

***Sub-theme 3: Perceived Benefits***

According to the health belief model, perceived benefits refer to a person's feeling or perception of the effectiveness of various actions to reduce the threat of illness. The course of action a person takes in preventing illness relies on consideration and evaluation of perceived susceptibility and perceived benefits, such that the person would accept the recommended health action if it were perceived as beneficial. In this study, four sub-themes

taken from the interviews show their perception of the benefits of COVID-19 vaccination but are still hesitant to get vaccinated.

*Being vaccinated could save you from hospitalization.*

Even if the participants are vaccine-hesitant, they have viewed the vaccine as a key to saving people from hospitalization. This part slightly motivates them to prevent hospitalization.

*Vaccines can prevent the spread of the COVID-19 virus.*

Most vaccine-hesitant do not believe in spreading the virus if not vaccinated. Hesitant participants know that getting the vaccine will eliminate the virus and become COVID-19 virus free.

*Vaccines can reduce the chance of infection.*

Most vaccine-hesitant were aware of the vaccine's benefits and yet still refused, reducing the chance of vaccination.

*The elderly is prone to severe illnesses, and COVID-19 vaccines can protect you.*

Most vaccine-hesitant participants believed that elders are at higher risk when it comes to severe illnesses; they also believe that the vaccine is effective for a short period, reducing their motivation to submit themselves to the vaccination site.

***Sub-theme 4: Perceived Barriers***

Perceived barriers refer to a person's feelings about the obstacles to performing a recommended health action. There is wide variation in a person's feelings of barriers, which leads to benefit analysis. The persons weigh the effectiveness of the actions against the perceptions that they may be expensive, dangerous, or unpleasant (LaMorte, 2022).

*Side effects of the vaccine.*

Most vaccine-hesitant are afraid of the vaccine because of the side effects, such as fever and body pains. They do not want to submit themselves because they do not want to suffer for a few days.

*Fear induced by reports of deaths after COVID-19 vaccination and poor long-term efficacy of the vaccine.*

Almost all refusing participants face barriers and challenges that hold them to remain unvaccinated, such as death cases, allergies, neighbors, and especially their families. This will contribute to the discouragement of the people.

*Lack of trust in the vaccine.*

Most vaccine-hesitant are worried about safety and efficacy, reducing the chance of submitting themselves to the vaccination site.

*Vaccines are dangerous.*

Vaccine-hesitant gets their information on the radio, television, and from their family and neighbors. They are still hesitant about COVID-19 but firmly believe that the vaccine is not suitable for their health conditions.

## *Theme II: Hesitancy Toward COVID-19 Vaccination*

The hesitancy toward COVID-19 vaccination among the elderly was comprised of four sub-themes. It was pre-identified by the researcher based on the participants' answers during the inductive coding process from the interviews conducted by the researcher among ten elderly patients of Conrado F. Estrella Regional, Medical, and Trauma Center (CFETMTC).

The hesitancy regarding COVID-19 vaccines is evident worldwide (Sallam, 2021). Studies have identified several factors associated with COVID-19 vaccine hesitancy in different domains, such as age, sex, income, marital status, vaccine-related knowledge, beliefs, perceived safety, and side effects. Despite vaccine hesitancy, the demand for vaccines increases over time across the countries are remarkable. Lack of safety, efficacy and unsuitability, social support networks, strong faith, and peer pressure were significant reasons for vaccine hesitancy. Elderly participants who are 60 years old and above and belong to low average income still work for a living.

*Social Support Networks and Strong Faith.*

Four participants claimed that their faith resides alone in God and is influenced by their brothers and sisters who do not have vaccines, which reduces the chance of getting vaccinated.

*Safety and Efficacy.*

All of the vaccine-hesitant are informed about the safety and efficacy of the vaccines. However, they believed it was only a short-term period, reducing the chance of getting vaccinated. Three participants claimed that their hesitancy to vaccination was affected by the reported efficacy.

*Feeling unsuitable for vaccination.*

Although some participants had been vaccinated against seasonal influenza, many believed they were unsuitable for vaccination. This belief in hesitancy affects their motivation to become vaccinated.

*Peer pressure.*

The participants' social networks were a source of peer pressure, affecting their motivation to vaccinate.

## DISCUSSION

The researcher found that most participants were college undergraduates and dominated seamstress as their preferred employment, and some had comorbidities. The majority of them have a monthly income of Php 10,000 and below. The first theme drawn in the study was the beliefs towards COVID-19 vaccination. Their beliefs were reflected in their perceived susceptibility, severity, benefits, and barriers. The participants showed low perceived susceptibility as they denied that they were at risk for contracting the COVID-19 virus; they believed that the COVID-19 virus caused symptoms like cough, flu, fever, and the common cold are usual; moreover, their comorbidities prevented them from getting vaccinated, and the results showed that the participants are highly aware of the preventive practices in fighting COVID-19 virus.

The elderly participants believed that when vaccinated, there is a higher risk of getting the virus; the vaccine can lead to death as they witnessed their neighbor suffer and eventually die; some elders hesitated to take the vaccine due to their strong faith in God; and a belief that getting vaccinated can shorten their life. The elderly participants are vaccine-hesitant, but they viewed that being vaccinated can save one from hospitalization, prevent the spread of the COVID-19 virus, and reduce the chance of infection. At the same time, their perceived barriers are reflected.

The second theme drawn in the study was hesitancy toward COVID-19 vaccination. The elderly participants claim that their faith resides alone in God and is influenced by their relatives and neighbors who do not have vaccines; they believe that the vaccines are only for the short-term period; the elderly participants feel unsuitable for vaccination due to their present condition and their comorbidities; and the influence of their friends affect their motivation to become vaccinated.

The analysis revealed two major themes: Beliefs toward COVID-19 vaccination and Hesitancy toward COVID-19 vaccination. Further investigation also revealed the four major sub-themes in line with the beliefs toward COVID-19 vaccination: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. The research results were in the following key headings: Profile of the mother-respondents, Theme 1: Beliefs toward COVID-19 vaccination, Theme 2: Beliefs toward COVID-19 vaccination, and the proposed information education campaign material.

## CONCLUSIONS AND RECOMMENDATIONS

Most participants are college undergraduates and dominated sewists as their preferred employment; some have comorbidities. Single-parent participants dominated this study, and the primary source of information was the radio, followed by the mass media. The majority of them have a monthly income of Php10,000 and below. The results revealed that the participants showed low perceived susceptibility as they denied that they were at risk for contracting the COVID-19 virus and considered it a common cold, flu, and fever. They are afraid of their comorbidities but unmindful of the severe underlying complications. The elderly participants develop a fear that they become more ill and even lead to death if vaccinated, which shows that their conviction of the perceived severity of COVID-19 is less severe. They are more likely not to participate in behaviors to prevent the COVID-19 infection or reduce the severity. Their perceived benefits are linked to their belief about their susceptibility and severity to the COVID-19 virus. Lastly, their belief in the COVID-19 vaccination can be explained by the perceived barriers caused by the side effects, health challenges, and lack of sufficient information about the COVID-19 vaccination. Hesitancy towards COVID-19 vaccination, the safety and efficacy concerns, and trusting God's faithfulness to save them seemed to be the reasons for the unwillingness to accept COVID-19 vaccines. To increase awareness of immediate vaccination and vaccine acceptance among the elderly, an information education campaign (IEC) material is proposed.

Special emphasis should be given to inspiring the elderly through evidence-based communication and health education by Rural Health Units and Hospitals to reduce vaccine hesitancy and enrich their knowledge about vaccine safety. Strengthen the social support networks for the elderly by providing additional support after vaccination to increase their motivation to receive the vaccine. The Information Education Campaign (IEC) material should be encouraged for use and distribution by hospitals and Rural Health Units to help increase vaccine acceptance among the elderly. Since this study involved a small group of elderly participants, thus, findings of the study should be interpreted with caution. Follow-up studies should involve more participants from different areas to strengthen confidence in the results involving beliefs and hesitancy towards COVID-19 vaccines.

## IMPLICATIONS

In the Philippines, there is a limited number of published articles about the level of knowledge of the beliefs and hesitancy of COVID-19 vaccination. As mentioned, the Philippines represents 53% of its fully vaccinated population and 75.7% of its target population. Sufficient knowledge, acceptance, and positive attitudes prevent COVID-19 infection. Thus, public awareness, knowledge, and a good mindset regarding COVID-19 are necessary.

Even before the pandemic, vaccine hesitancy was identified by the World Health Organization as one of the greatest threats to global health (WHO, 2019). Hesitancy to accept the COVID-19 vaccination is rooted in their underlying beliefs and reasons not to be vaccinated are complex, with identified elements of perceived susceptibility, severity, benefits, barriers, and other factors contributing to their vaccine hesitancy.

The result showed that most participants were college undergraduates, and some were college and technical-vocational graduates. Hence, this implies that the study participants have good knowledge in sharing their beliefs and hesitancy to uptake the COVID-19 vaccines and provide understanding about the nature of the study.

The participants understand that their age is more vulnerable to acquiring the COVID-19 virus, and they believe that the vaccine can shorten their lives as they witness other people suffering and dying. Some believe vaccines are significantly helpful, especially in hospitalization and saving one from COVID-19. Yet, the participants still refused due to relying on their Faith in God alone and taking self-medication because some believed that COVID-19 is like a cough, flu, and fever, which are usual. Most of the participants are afraid because of the side effects of the vaccine, the reported death cases, and their health status, such as other sicknesses and allergies. Additionally, they believed that COVID-19 vaccines are suitable for a short-term period, and the force of peer pressure and social support drives them to become hesitant about the vaccine.

Reluctance to accept vaccination against COVID-19 poses a significant public health risk. The attention to increasing vaccine updates should be focused on providing reassurance and facts to vaccine-hesitant elderly who can still be persuaded to have their vaccines. Thus, the information education campaign (IEC) material should be considered for use and distribution to encourage vaccine-hesitant and help them understand the need to be vaccinated. Thus, the study's findings suggest that COVID-19 vaccination substantially reduces the incidence, hospitalization, and deaths, especially among older adults.

The local government units especially the Rural Health Units are encouraged to continually come up with a program and strategies to increase the level of knowledge and develop a strong positive attitude towards COVID-19 vaccination. The information education campaign (IEC) material is anchored on the results of the study and should be utilized by the Local Government Units especially the Rural Health Units as supplementary material in their campaign strategies and programs on COVID-19 vaccination.

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## DECLARATIONS

### *Conflict of Interest*

The author declares no potential conflicts of interest concerning this study's research, authorship, and/or publication.

### *Informed Consent*

Informed consent was obtained in writing from all participants interviewed in person.

### *Ethics Approval*

Ethics approval was obtained from the Research Ethics Committee of Urdaneta City University, and permission was taken from the Medical Director of Conrado F. Estrella Regional Medical and Trauma Center (CFERMTC) before the start of the study.

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The author is a passionate and dedicated nurse with more than a decade of healthcare experience in a variety of settings, including family healthcare and emergency units where she served as an emergency nurse in Saudi Arabia for seven (7) years and presently holds the same position as Nurse in the emergency ward of Conrado F. Estrella Regional Medical and Trauma Center (CFERMTC) in Rosales, Pangasinan.