

Exploring COVID-19 Vaccine Hesitancy Continuum from the Experiences and Beliefs of Social Studies Students in LNU

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Abstract:- The COVID-19 pandemic is a global health concern that caused massive disruption to almost all aspects of human life. Hence, the scientific community developed vaccines to reduce the risks of the virus. Vaccination against COVID-19 has been rolled out to countries worldwide, including the Philippines, in the effort to attain herd immunity. Yet, despite the vaccine's availability, people continue to express hesitancy. This study explores the COVID-19 vaccine hesitancy from the experiences and beliefs of Social Studies students in LNU. A case study design was used to gain deep insights into how the experiences and beliefs of Social Studies students shaped vaccine hesitancy. Employing Thematic Analysis, the research findings are: (1) the common reasons for vaccine hesitancy of Social Studies students are, family pressure, health concerns, and the perceived necessity of vaccination, other factors include religious belief and vaccine efficacy, (2) the hesitant students expressed a positive outlook towards new health protocols stating that it is implemented for the good of the majority, however, they are aware and have experienced mobility restrictions in entering commercial establishments and, (3) lastly, the vaccine-hesitant students are aware of their immunity as unvaccinated and their social acceptance in the community they belong.

Keywords:- Vaccine Hesitancy, experiences, beliefs, Social Studies students, Case Study, Reasons for vaccine hesitancy

I. INTRODUCTION

A. Background of the Study

The novel coronavirus (COVID-19) outbreak caused by the widespread effects of the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov-2) has profoundly affected almost all aspects of life including health, economic activities, and education. While the current COVID-19 pandemic is starting to develop a significant drop around the world, one cannot disregard the over 5 million deaths and close to 300 million reported cases worldwide, as of January 2022 (Worldometers, 2022). These notable devastating effects of the pandemic, including the high mortality rate, underscored the need for vaccination against COVID-19. Furthermore, social distancing measures and movement restrictions have been introduced for risk prevention measures.

As part of the global effort, the scientific community, together with the multilateral organizations and the pharmaceutical industry worked together to develop and manufacture vaccines to fight COVID-19. Globally, more than 21 vaccines have been approved for general, and emergency use and are currently rolled out in different countries (The COVID19 vaccine race – weekly update, 2022), including BioNTech, Pfizer vaccine, CoronaVac vaccine, Covaxin, Johnson & Johnson, Moderna, Novavax, AstraZeneca, Sinopharm, and Sputnik V vaccine. These vaccines, on the other hand, were developed in a short period and were mass-produced due to the immediate impact of the coronavirus on countries across the globe (Amit et al., 2022). Despite scientific evidence asserting that these vaccines are safe, countries worldwide face various challenges, including vaccine hesitancy and anti-vaccination sentiments (Amit et al., 2022). Vaccine hesitancy, as defined by the World Health Organization, is “the delay in acceptance or refusal of vaccination despite the availability of vaccination services.” It is considered one of the top ten threats to global health despite evidence of the vital role of vaccination in improving population health outcomes (McDonald et al., 2015). Previous research also shows that vaccination hesitancy is widespread worldwide, with wide variation in the reasons given for vaccine refusal (Wagner et al., 2019). The Philippines, for instance, has faced these problems since the vaccination rollouts that started last March 2021 (Amit et al., 2022). Only 55% of Filipinos expressed willingness to vaccinate against COVID-19, and as of September 16, 2021, only 30% of the population has been vaccinated (Amit et al., 2022). Various factors influenced the vaccine hesitancy of Filipinos including a lack of trust and confidence in the safety and effectiveness of vaccines. Such lack of trust stems from the social trauma due to the Dengvaxia controversy (Dayrit, et al., 2020).

To gain a nuanced understanding of this case, various research was conducted to determine the reasons for the COVID-19 vaccine hesitancy among different groups of people. For instance, in a study conducted by Troiano & Nardi (2021), Black/African individuals were found to have a lower acceptance rate of the vaccine as did individuals with low education. On the other hand, in the case of medical students in India, vaccine hesitancy is shaped by various factors including vaccine efficacy, fear of possible side effects, and societal pressure (Jain, et al., 2021). While a study of Filipino housewives by Espiritu et al. (2022), vaccine hesitancy stems from fear, which many housewives are still afraid of its possible consequences on their bodies,

the news they read on social media about people's experiences following vaccination, and the fear of dying after being vaccinated.

Several studies also found aspects such as sociodemographic, and psychological, that foster vaccine hesitancy (Abdulmoneim et al., 2021; Troiano & Nardi, 2021). Findings of these studies revealed that education was cited as part of the socio-demographic factor that influenced one's decision to be hesitant toward vaccination (Troiano & Nardi, 2021). Another determinant of vaccine hesitancy is rooted in relationships with friends and family (social factors) that significantly impact those afraid to be vaccinated. Hearing favorable and unfavorable comments about vaccines or their adverse effects substantially affects their decision-making process (Thompson, 2021). Moreover, Murphy et al. (2021) also found that those who were vaccine-hesitant, as well as those who were resistant, were more self-serving, held strong religious viewpoints, and held an internal locus of control.

Media misinformation also holds a strong influence on people's hesitancy. Different fake news and misinformation circulating on various internet platforms lead people to not adhere to the health-preventive measures recommended by the health experts. According to Gudi, et al. (2021), as cited in Kricorian & Equils (2021), misinformation about the safety of COVID-19 vaccinations gains traction in people's minds as it builds on previous worries, fosters doubt, and a skeptical attitude toward vaccines, and prevents individuals from becoming vaccinated. In the case of college students, a study by Silva et al. (2021) social media misinformation about vaccines is a major barrier to vaccine acceptance.

Previous studies were able to determine various factors of vaccine hesitancy from different groups of people. Yet no studies were conducted to explore vaccine hesitancy in the case of education students, particularly Social Studies majors. Given this, the researchers decided to conduct this study to explore the experiences and beliefs of hesitant students. Given the present situation that LNU is providing free vaccines to students, yet despite the availability of vaccines, there are still individuals who remain hesitant. This research will focus on unvaccinated Social Studies students of Leyte Normal University and explore their experiences and beliefs that influence them to be hesitant towards vaccination. It is relevant to consider vaccine hesitancy among Social Studies students who are also at a high risk of being infected by the COVID-19 virus because as pre-service teachers it will be a barrier to participating in face-to-face classes and internships. Moreover, experiencing severe COVID symptoms could result in hospitalization and death, which will prevent them from functioning as active members of society (Hamdam et al., 2021).

B. Statement of the Problem

Despite the availability of vaccines and the vaccination campaigns conducted by higher educational institutions, including the Leyte Normal University, some students remain hesitant about vaccination. Hence, this study aims to explore the vaccine hesitancy of Social Studies students at Leyte Normal University. At this stage in the research, vaccine hesitancy will be defined as the "delay in acceptance or refusal of vaccination despite the availability of vaccination services." (World Health Organization). Specifically, this study aims to answer the following questions:

Why some Social Studies students are hesitant toward COVID-19 vaccination?

- How do unvaccinated Social Studies students describe their decision toward COVID-19 vaccine hesitancy?
- How do unvaccinated Social Studies students respond toward health protocol/new usual standards imposed by commercial establishments and government institutions?
- What are the idea/s of unvaccinated Social Studies students as to what will happen for those unvaccinated individuals in terms of their:
 - immunity?
 - mobility?
 - social acceptance?

C. Theoretical Framework

The theoretical underpinnings of this study are the Theory of Planned Behavior and 5C of the psychological antecedent of vaccination. The Theory of Planned Behavior was established by Icek Ajzen as an attempt to anticipate human behavior at a certain time and place, in which an individual's "belief structure" ultimately determines his or her intention to engage in a particular behavior (Ajzen, 2021). As applied to the context of the COVID-19 vaccine, belief structure consists of attitude toward the COVID-19 vaccine (i.e., its perceived necessity, benefit, and effectiveness), subjective norms (i.e., whether significant others support getting a COVID-19 vaccine or not), and perceived behavioral control (i.e., the degree to which COVID-19 vaccination is perceived to be within the individual's control) (Guidry, et al., 2020).

Apart from the TPB, this study is also theoretically driven by the 5C psychological antecedent of vaccination proposed by Bestch et al. (2020) to further explain vaccination behavior. It includes confidence (trust in vaccine efficacy, safety, and necessity, and the system that delivers it), complacency (perceiving the disease as low risk), barriers (perceived low vaccine availability, affordability, and accessibility), the calculation (analyzing the positives and 6 negatives of vaccination), and responsibility (willingness to take the vaccine for protecting others via herd immunity).

These two theoretical underpinnings will guide the researchers to understand the reasons behind vaccine hesitancy of unvaccinated Social Studies students.

D. Scope and Delimitation

The general intent of this study is to explore the vaccine hesitancy of vaccine-hesitant Social Studies students based on their experiences and beliefs. This study will mainly encompass Social Studies students of Leyte Normal who have not received their vaccination until March 21, 2022. Moreover, the participants will be selected using purposive sampling. Additionally, this study will be conducted in the province of Leyte, where the selected participants reside. The scope and delimitation of this study suggest that the results could not be generalized to the experiences and beliefs of other university students who are hesitant to get COVID-19 vaccines.

E. Significance of the Study

This study aims to be beneficial to the following:

- **Local Government Unit.** This study will benefit the Local Government Unit-Interagency Task Force (IATF) in promoting confidence in the effectiveness and safety of the COVID-19 vaccines. This will help Local Government Units improve their imposition of health protocol, mobility restrictions, and information campaigns to gain public trust and instill public faith in vaccine efficacy and the institutions that oversee the immunization effort.
- **Health Institutions/Authorities.** Health experts can get some cues or relevant information about how some sectors, particularly students, view or reasons behind vaccine hesitancy given the prevailing condition of emergency use permits of this COVID-19 vaccine.
- **Future Researchers.** The findings of this study will be of help as reference material to future researchers interested in exploring vaccine hesitancy among college students. This study will also contribute to the building blocks of knowledge for future researchers in the same field of interest.

F. Definition of Terms

a) Vaccine hesitancy

- It is conceptually defined as "delay in acceptance or refusal of vaccination despite the availability of vaccination services." (World Health Organization).
- It is operationally defined as the delay of Social Studies students in taking COVID-19 vaccines despite the availability of vaccines.

b) Herd Immunity

- Conceptually defined as inoculating a large portion of the population.
- Operationally defined as vaccinating a large portion of the population to people against the COVID-19 virus and mitigating the spread.

c) LNU

- Conceptually defined as Leyte Normal University, a nonprofit public higher education institution located at Paterno Street, Tacloban City.
- Operationally defined as a public state University where the participants are currently studying.

II. REVIEW OF LITERATURE

This chapter discusses the pieces of literature to which the present study is related or has some similarities. This gives the authors the background in understanding the study.

III. FACTORS INFLUENCING VACCINE HESITANCY

A. Societal Factors

According to the study by Morales et al. (2022) on COVID-19 vaccine hesitancy determinants, social groups of the identified hesitant individuals greatly influence fostering and reinforcing vaccine hesitancy. According to a Kaiser Family Foundation poll (KFF, 2021), one of the most prevalent reasons for altering one's attitude is seeing family and friends vaccinated safely and without adverse effects. On the other hand, those who decline vaccination cite evidence from relatives and friends that they have also experienced brief adverse effects from the vaccine. Many underlined the importance of their friends, family, and doctors in getting them to receive the vaccine. These individuals have been convinced after observing their friends and relatives obtain immunizations without experiencing severe side effects, conversing with family members about the prospect of traveling safely, and discussing their risks with their physicians (Wingfield, 2021). In support of this, Dr. Amesh Adalja, a senior scholar at the Johns Hopkins Center for Health Security in Baltimore, agreed with the study's conclusions that friends, family members, and trusted individuals were the most important predictors of vaccination status. Relationships with friends and family significantly impact those afraid to be vaccinated. Hearing 10 favorable and unfavorable comments about vaccines or their adverse effects substantially affects their decision-making process (Thompson, 2021). Moreover, studies on the motivations for vaccinations found that social groups comprised of family and friends could provide either incentives for or barriers to vaccination (Person et al., 2020; Stout et al., 2020). Siu et al. (2022) also mentioned that participants who were cautious regarding vaccination had friends and family members who were similarly uncertain about having their vaccinations. Furthermore, vaccine hesitancy of medical students claims that vaccination is necessary to resume face-to-face classes and get their personal life back together (Jain et al., 2021). Koo et al. (2021) pointed out that awareness of the social consequences of COVID-19 can encourage hesitant individuals to vaccinate or adopt prosocial and altruistic behaviors, such as receiving the vaccination. On the other hand, Dube et al. (2013) suggest that if COVID-19 vaccination is perceived as a social norm or those around you or whom you respect will be vaccinated, this might persuade hesitant individuals to receive their vaccination.

B. Trauma, anxiety, and fear

According to Vergara (2021), the Philippines experienced one of the most controversial vaccinations in history that mainly impacted children. This social trauma caused by the Dengvaxia controversy resulted in high vaccine hesitancy among Filipinos as early as 2018. In the same study, Vergara asserted that the traumatic experience of Dengvaxia vaccines reduced the vaccine confidence of Filipinos, particularly in Chinese manufactured COVID-19 vaccines. For instance, in the 2021 Social Weather Survey, 63% of adult Filipinos prefer American and European manufactured vaccines compared to China, which has a 19% vaccine confidence rate. This vaccine preference impacted the subsequent vaccination efforts, including the COVID-19 vaccination.

On the other hand, when vaccination requires an injection, fears contribute to vaccine apprehension. Irrational concern or anxiety can cause an internalized stress response, manifesting as vasovagal responses eerily similar to vaccination side effects and reactions (Entertainment Times, 2021). According to Rush (2021), when vaccines are rolled out across the country, various mental health disorders may interfere with vaccine compliance. Anxiety and panic attacks, specific phobias such as trypanophobia or needle phobia, agoraphobia, obsessive-compulsive disorder (OCD), and unresolved trauma, which can afflict black and brown communities, are among the mental health problems that are especially vulnerable to vaccine and fear. They are unable to receive the vaccine due to mental health difficulties. In Greene County, people claim that politics is not the most influential factor in their vaccine beliefs but their primary concern is anxiety – fear that the vaccine was produced hastily and that long-term adverse effects are unknown (Hoffman, 2021).

C. Health Concerns

Another reason why individuals express hesitancy towards COVID-19 vaccination is health concerns, particularly its side effects. According to Entertainment Times (2021), COVID-19 vaccination side effects are rarely pleasant, and the fear of experiencing them has actively discouraged many individuals from receiving the vaccine. The majority of reactogenic adverse effects are temporary inflammatory reactions. Although reactogenicity is influenced by numerous variables, including host characteristics (age, gender, etc.), vaccination type, composition, method of administration, and others (Laupèze et al., 2019).

Moreover, a study by Molla (2021) explains why some individuals are reluctant to receive the vaccine and what might be done to change their thoughts. Forty-five percent of those who stated they would definitely not get the vaccine cited unpleasant effects as a reason, and forty-five percent cited cost. Nevertheless, the report suggests that immunization campaigns should address the fear of adverse effects, which is one of the primary reasons why some individuals refuse to get vaccinated. And to shed light on this concern, Ganesan et al. (2022) conducted a study to find out the possible side effects of the COVID-19 vaccine

for residents in UAE following their vaccination. It was found in the study that adverse effects of both the inactivated and mRNA vaccines developed mostly within 24 h of vaccination and about 95% were mild requiring no or home-based treatment. The adverse effects are more likely to be systemic side effects and younger individuals, females, and people with comorbidities.

While the Center for Disease Control and Preventions (2022) listed vaccination exemptions only for individuals with “severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of the COVID-19 vaccine and immediate allergic reaction of any severity to a previous dose or known (diagnosed) allergy to a component of the vaccine.”

D. Vaccine brand preference and efficacy

On the one hand, a study by Amit et al. (2022) asserted that brand preference among COVID-19 vaccines was one of the reasons for vaccine hesitancy in the Philippines. The study further stated that when the Philippines administered its first procured vaccine which was SinovacCoronaVac, a Chinese biopharmaceutical manufactured vaccine, participants questioned the effectiveness of the vaccine, especially since this was given to health workers despite the lack of published data on its significance at the time and initial announcements that these were not recommended for high-risk individuals. In a similar study, participants also cited that other 12 countries do not recognize Sinovac Coronovac. Therefore, they wanted to wait for different brands of vaccines to be administered.

Another factor that contributes to COVID-19 vaccine hesitancy is its efficacy. For instance, in the Philippines, vaccine safety and efficacy issues surged on different media platforms. According to Gonzales (2021), the numbers of individuals who are hesitant to take COVID-19 vaccination shots are concerned about the vaccines' safety and efficacy, as indicated by two Department of Health polls (DOH). As further cited in the article of Gonzales (2021), the DOH Philippines, conducted an online survey with over 43,000 replies from all priority categories, according to Health Undersecretary Maria Rosario Vergeire, to determine why people refused immunizations. During an online press conference, she revealed that the top three reasons individuals are hesitant to be vaccinated, according to a survey, are as follows: To start, they are concerned about the potential negative implications. Second, as a result of unfavorable information spread through social media. Third, they are skeptical of the vaccines' efficacy. A similar assertion can be seen in the study of Eleje et al. (2021), in which they assert vaccine efficacy stems from the concern of the alleged inability of the vaccine to protect against all known strains of COVID-19(20/108), as well as the cold chain storage challenges (26/108) usually encountered in Nigeria. Similarly, in the Philippines, vaccine efficacy has been the primary concern of hesitant individuals in which COVID-19 vaccines are viewed as insufficient in solving the COVID-19 pandemic (Amit et al., 2022).

E. Religious Affiliation/Beliefs

A study by Garcia & Yap (2021) asserted that religious affiliations and beliefs are associated with vaccine apprehension or hesitancy. According to them, vaccination hesitancy among devotees results from spiritual teachings prioritizing prayers over medicine. Lack of appropriate knowledge of the available vaccines, some devotees seek divine interventions, using or accepting alternative means to disease treatment, such as the use of holy water and prayers, out of fear that vaccination may result in the death of their children. In other religious beliefs, such as Islam's case, vaccines with pork derivatives are prohibited from being given to children. Moreover, believers are eager to adopt alternative techniques for disease cure, such as water and prayers since they fear vaccination would kill their children (Espiritu et al., 2022). Additionally, religious and philosophical traditions promote different views on vaccination. Religious opposition to vaccines is generally based on ethical dilemmas associated with using human tissue cells for vaccine creation and beliefs that the body is sacred. It should not receive certain chemicals, animal blood, or tissues and should be healed by God or natural means (Espiritu et al., 2022). In support of this, according to McCausland (2021), the Christian argument for religious exemptions often follows two tracks: first, the vaccination doses were manufactured using aborted fetal cell lines, and the human body is the temple of "God's Holy Spirit" and therefore acquiring a vaccine would be a sin. In addition, some religious communities believe that the virus poses no threat to Christians because the blood of Jesus is powerful enough to shield them from disease (Kuhn, 2021). In connection with this, Stevenson (2021) asserts that Christians frequently say that being forced to take the vaccination is a violation of their religious beliefs because their bodies are considered sacred temples that must be kept clean.

F. Vaccination decision-making

Attitudes toward vaccination cannot be classified as anti- or pro-vaccine but rather as a continuum between total acceptance and open refusal of some or all immunizations (Kumar et al., 2016). The epidemiological triangle, which describes the complex interaction of 14 environmental (i.e., external), agent (i.e., vaccination), and host (or parent)-specific characteristics, can be used to explain vaccine hesitancy. Moreover, research has shown that vaccination decision-making should be studied and understood in a broader socio-cultural context as vaccination is part of a "wider social world." Its decision-making is influenced by various social factors such as past experiences with health services, family histories, feelings of control, and conversations with friends (Stefanoff et al., 2010).

G. Perceptions toward new standard health protocols

In terms of the mandatory vaccination policy, a study by Graeber et al. (2021) reveals that a mandatory vaccination would almost certainly achieve herd immunity against COVID19 since all those for whom there is no medical contraindication would also get vaccinated. About half of the respondents approve and disapprove of such a mandatory vaccination policy. At the same time, most participants (95%) agreed that the elderly or individuals

with chronic illnesses such as diabetes and heart disease were more susceptible to severe COVID-19 infections (Khabour et al., 2020).

On the other hand, a study conducted in Nepal revealed that respondents had a high awareness of COVID-19, personal preventative measures, and population-level solutions. They stated that the utilization of masks, hand sanitizers, hand washing, and proper lockdown would assist in the prevention of the disease (Bhatt et al., 2020). In the same study, there was a positive perception of universal safety measures for COVID19. However, negative perceptions also existed, such as COVID-19 attacking only older people and coughing into the elbow was not good practice to prevent the spread of the virus (Singh et al., 2020). Similarly, participants from a study conducted by Vadivu and Annamuthu (2020) believed that quarantine, social distancing, and face masks could break the chain of COVID-19 spread.

Moreover, in terms of mobility restrictions, according to Mayo Clinic (2021), public health restrictions due to the COVID-19 outbreak have canceled festivals, concerts, and other events. Numerous vacations and huge gatherings have been delayed or postponed. For those still unvaccinated, close contact with people who do not live with them increases the chance of infection with the virus that causes COVID-19. That is why, if they have not received a COVID19 vaccine, any activity that permits them to maintain a social distance, at least 6 feet (2 meters), from others is considered low risk. Numerous activities are available close to home, whether visiting a favorite public, state, or national park or simply spending time in one's neighborhood (Espiritu et al., 2022).

According to Queensland Government (2021), unvaccinated individuals will be prohibited from visiting vulnerable environments, including hospitals, residential aged care, disability accommodations, and jails, from 17 December 2021. It does not apply to residents or patients of these institutions, and medical care, end-of-life visits, childbirth, and emergency scenarios will be exempted. The gap between vaccinated and unvaccinated people will undoubtedly expand as authorities in the United States and Europe seek or impose tighter restrictions on people who have not received a COVID19 vaccine (Ellyatt, 2021).

Although most governments have yet to make COVID-19 immunization mandatory for their citizens, a few have established vaccination cards that give vaccinated people more freedom and career opportunities than unvaccinated ones. COVID-19 immunization status is increasingly influencing freedom to travel, work, engage, and enjoy leisure activities. For instance, in the Philippines, as COVID cases start to surge due to the new COVID variant (Omicron) the Philippine government banned unvaccinated individuals in Manila from public transports with its "no vaccination, no ride policy" (Al Jazeera, 2022).

H. Immunity and social acceptance of unvaccinated individuals

In terms of immunity, according to Espiritu et al. (2022), unvaccinated individuals think that their natural immune system will protect them against COVID-19 disease if they are healthy. They further explained that if hesitant individuals have any health problems, they may worry that even mild or transient side effects from the vaccine could cause diseases their body cannot handle. Therefore, these immunizations are unnecessary or potentially dangerous in their eyes. Hesitant individuals may perceive that they have natural solid immunity that would protect them from a viral infection. Johns Hopkins medicines explicitly explained that whether or not an individual was infected by COVID-19, getting the COVID-19 vaccine is the best protection against COVID-19. Various studies supported this claim; for instance, the U.S. Centers for Disease Control and Prevention (CDC) released a report on Oct. 29, 2021, that says getting vaccinated for the coronavirus when you've already had COVID-19 significantly enhances your immune protection and further reduces your risk of reinfection.

Vaccine hesitancy is a varied group (Larson & Broniatowski, 2021). Hesitation manifests in a variety of ways, including postponing vaccination due to safety concerns, anxiety based on individual or group experiences from the past, and doubts over COVID-19 immunizations. Individuals who oppose vaccinations are not necessarily "anti-vaxxers," but they may seek information from anti-vaccine organizations to support or contradict their concerns. Consequently, vaccine-hesitant individuals are persuadable by anti-vaccine advocates. In addition, they risk being judged or labeled "anti-vaccine" by the very people who are best suited to encourage healthy behaviors: health care providers. Attwell & Smith (2017) reinforced this assertion by noting that self-esteem is central to Social Identity Theory in which membership in highly respected groups enhances individuals' self-esteem. They further stated that vaccine-reluctant persons and vaccine-accepting individuals alike view themselves as intelligent. Therefore, it influences their immunization decisions.

The general trend of previous studies was focused on the vaccination perception of parents, elders, and professionals while putting on little emphasis on college students. These gaps on the issue of vaccine hesitancy provided limited in-depth investigation of the experiences and beliefs of college students, particularly Social Studies students who are hesitant to acquire vaccines. Based on the researchers' knowledge, this research will be the first to study vaccine hesitancy of unvaccinated Social Students in LNU.

IV. METHODOLOGY

A. Research Design

This study is qualitative research and will employ an explanatory case study design. According to Dudovskiy (2011), an explanatory case study aims to answer 'how' or 'why' questions with minimal influence over the occurrence of events on the researcher's part. Moreover, based on the Chinese Government Scholarship (2018) reviews, explanatory research does not give the researchers conclusive evidence. Nevertheless, it helps the researchers to understand the problem more efficiently. This research design will allow participants to thoroughly explain their experiences and beliefs about their apprehension toward COVID-19 vaccination. The participants will also provide information that will determine the cause and effect of their hesitation to take COVID-19 vaccines. Additionally, this type of qualitative research design will enable the researchers to conduct in-depth interviews and use open-ended questions, which will provide richer data in a comprehensive understanding of the research problem.

B. Research Locale

This study will be conducted within the Province of Leyte, where the participants reside.



Fig. 1

C. Participants of the Study

The participants will be selected based on their knowledge and experience of the subject (Manen, 2014). In determining the participants, the researchers will employ purposive sampling. Participants will be purposely selected based on their ability to illuminate the information needed for investigating the specific case of the vaccine. This will allow the researchers to precisely describe the population's characteristics (Johnson & Christense, 2014). The participants will be chosen based on a single criterion: unvaccinated since March 21, 2022. Therefore, the participants of this study are the unvaccinated Social Studies students at Leyte Normal University, residing within the province of Leyte, and are willing to participate. To further explain this type of sampling technique, Nueman (2009), as cited in Bakar & Ishak (2014), explained that purposive sampling is an appropriate sampling procedure in qualitative research, particularly when it involves selecting participants for special situations to gain a deeper understanding of the specific case.

D. Data Collection Method

In this study, the researchers will utilize face-to-face and online semi-structured interviews to elicit the participants' thoughts, opinions, and experiences about COVID-19 vaccine hesitancy. A semi-structured interview is commonly used in qualitative studies in which the researchers prepare a specific set of open-ended questions that will be supplemented with follow-up questions (Adams, 2015). Additionally, open-ended questions will further help the researchers establish conversations with the participants, who will openly share their beliefs and experiences about their hesitancy toward the COVID-19 vaccination. Furthermore, interviews will be conducted where the participants are safe and convenient.

On the other hand, the researchers intend to conduct an informal interview with the participant's family member/s in instances that data will need nuance elaboration. With this, the researchers will use an interview guide to ensure that essential questions concerning the participant's responses will be addressed.

Before the actual interview, the researchers will provide an invitation letter. Once the participants agree, the researchers will seek their approval through the informed consent form. The informed consent form will be given days before the interview to give the participants enough time to review their participation. The researchers will guarantee that the discussion will be conversational and that there are no right or wrong answers. Moreover, the information the participants share will be treated with utmost confidentiality. Interviews will be audio-recorded, and the participant's responses will be transcribed and will undergo analysis and interpretation.

E. Ethical Consideration

The researchers will ensure that ethical standards established for academia and research will always adhere to. The researchers will always get signed informed consent from the participants before conducting the interview. Hence, the researchers will provide a consent letter showing the participant's grant of permission. Furthermore, the researchers will also ensure participants' anonymity and avoid disclosing their personal information and responses. The ethical letter shall also serve as a data privacy waiver following the ethical standards and Republic Act 10173 or the Data Privacy Act of 2012.

Moreover, the participants have the right to withdraw their participation and will not be forced to join the research team. Any discriminatory acts, unnecessary and offensive words or phrases formulating the research questions, and the actual conduct of the interview will be strictly avoided. In addition, the participant's responses will be treated with no biases, and the researchers' personal experiences and opinions will not affect how the responses will be analyzed. Lastly, questions that might disclose the personal information of the participants are excluded, such as their names, email addresses, and mobile numbers.

F. Research Reflexivity

COVID-19 exposed how healthcare system weaknesses can have enormous consequences for health, economic advancement, public trust in the government, and social cohesion. As part of the global effort to contain the spread of the virus, the Philippines took steps to mitigate the virus through the procurement of vaccines and inoculating a high share of the population. Some educational institutions, for instance, the Leyte Normal University, have joined in the effort to provide free vaccines to its students.

However, challenges arise in this vaccination campaign as people become hesitant about vaccination. While medical experts assert that getting vaccinated is a primary step in fighting against COVID-19, this has become the most significant challenge since many are still reluctant to be vaccinated. This study will examine vaccine hesitancy, particularly in the case of unvaccinated Social Studies students. It is noteworthy that the researchers are also Social Studies students who might have experienced the same situations as the participants. Hence, to avoid being partial and biased, the researchers guarantee that they will remain neutral whatever the results would be. Therefore, the results will be analyzed based on the participant's point of view.

G. Data Analysis

After gathering the data, all the responses provided by the participants will undergo qualitative data analysis. And then, the researchers will carry out identification, investigation, examination, and interpretation. The fundamental qualitative data analysis process will begin once the data has been codified and organized. Afterward, the researchers will use the data and information to find relevant patterns and themes behind their responses from the online interview. Specifically, the researchers will use Thematic Analysis. As defined by Braun and Clarke, thematic analysis, as cited in Kiger and Varpio p. 2 (2020), "is a method for analyzing qualitative data that entails searching across a data set to identify, analyze, and report repeated patterns." The researchers will further employ a six-phase process of thematic analysis:

- Step 1: Familiarization with the data set. It entails repeated and active reading through the data (Braun & Clarke, 2006).
- Step2: Generating Initial Codes. Coding is the process of organizing the data by bracketing chunks (or text or image segments) and writing a word representing a category in the margins (Rossman & Rallis, 2012).
- Step 3: Searching for themes. The researchers will find patterns in the numerous codes developed and create themes. A thematic map will also help the researchers visually demonstrate cross-connections between concepts, main themes, and sub-themes (Braun & Clarke, 2006).
- Step 4: Reviewing themes. After creating the themes, the researchers will assess the usefulness and accuracy of the coded data placed within each theme.
- Step 5: Defining and naming themes. The researchers will define and describe each theme, including why it is essential to the broader study question. This step will also

include creating a concise and comprehensible name for each theme.

- Step 6: Producing the report. The researchers will write the final analysis and description of the findings.

V. RESULTS AND DISCUSSIONS

This study examines the vaccine hesitancy of Social Studies students and explores how their experiences and beliefs influence their a) decision to be hesitant in getting COVID-19 vaccines, b) describe their decision toward COVID-19 vaccine hesitancy, c) response towards health protocols and new normal standards imposed by commercial establishments and government institutions, and d) their insights of the immunity, mobility, and social acceptance of the unvaccinated individuals. Although previous researchers have studied this problem, this study is the first to explore vaccine hesitancy, particularly in the case of Social Studies students at LNU. This study mainly focuses on the sensemaking of 3 unvaccinated students regarding their hesitancy of COVID-19 vaccination.

Based on the data collected from the face-to-face interview, 3 themes emerged: reasons for vaccine hesitancy, (2) awareness of new health protocols and standards, and; (3) stand on immunity and social acceptance of the unvaccinated. The themes and sub-themes suggest that despite the vaccine availability, still, there are students who remain hesitant, and their experiences as unvaccinated vary. The themes and subthemes will be further illustrated below.

A. Theme 1: Reasons for vaccine hesitancy

a) Health concerns

The participants cited their health concerns as a reason for not getting vaccinated. They said that it might trigger their health conditions. In the words of the participants:

Participant 1: *"There are factors that affect my decision to not be vaccinated. First, I have a health condition. I experienced seizures in my elementary years. Hence, my parents are hesitant because vaccines might trigger my health condition."*

Participant 2: *"I am hesitant towards COVID-19 vaccines because I have an undiagnosed palpitation."*

b) Family pressure

The participants cited influence and pressure from their family and friend as a reason to be hesitant in getting the COVID-19 jabs. They recalled having conversations with their family and friends regarding the possible side effects of the vaccine. For instance:

Participant 1: *"I wanted to be vaccinated, but my parents do not want me to get my COVID-19 jabs."*

Participant 2: *"My aunt told me that if I experience something wrong in my health, then I should not get the vaccines. Moreover, the rest of my family members are unvaccinated, even my aunt who is a health practitioner is unvaccinated."* Participant 2 added, *"I also have an asthmatic friend. We both have asthma. After she got her vaccine shot, she experienced severe asthma. Hence, she regrets her vaccination because even though she knew she have asthma, still she chose to be vaccinated which worsen her health condition."*

Participant 3: *"When I asked for my permission to get the vaccines, they both declined. I told them that there is a rumor that face-to-face classes will soon resume, and I had to be vaccinated. Yet, they do not want me to be vaccinated because of my health condition, which is I had asthma during my younger years. Also, they fear that I will experience the same side effects that my neighbor experienced when they got their COVID-19 jabs."*

From the responses, it can be viewed that the participant's family has a significant influence on their decision to be hesitant in getting COVID-19 vaccines.

c) The perceived necessity of vaccines

Another reason for vaccine hesitancy is the perceived necessity of the participants in terms of COVID-19 vaccines. They pointed out vaccines are unnecessary because they only stay in their house. For instance:

Participant 1: *"I will only get my COVID-19 vaccines if face-to-face classes will resume. But as of the moment, I don't need those vaccines because I am only in our house, and we are still in online class"*

Participant 2: *"I do not see yet the necessity of vaccines because I am only in our house. I don't travel, there are no face-to-face classes. Hence, for me, not unless I will travel to different places, then I will submit myself for vaccination."*

The responses reveal that the vaccine hesitancy of the participants is viewed by the necessity of vaccines in terms of their mobility; particularly, two of the participants expressed that they do not see the need for vaccines unless face-to-face classes will resume.

d) Other Factors

The participants expressed other factors that influenced their vaccine hesitancy. Participant 1 cited that her father's religious belief influenced her hesitancy to vaccinate against COVID-19. Specifically, her father's religion is Christian Born-Again, and she recalled hearing her father's religious idea about vaccines. For instance:

Participant 1: *“Another reason is because of my father’s religion which is Born-Again Christian. Their pastor told them that vaccines are prohibited in their religion.”*

To gain in-depth knowledge of the participant’s father’s religious beliefs, the researchers interviewed him and found out that acquiring COVID-19 vaccines is prohibited in their religion. As he explained *“Vaccines are synthetic and are prohibited in our religion because we consider it a mortal sin to let foreign objects alter our body. We have to respect what God gave us, which is our body, the temple of God.”*

On the other hand, participant 2 expressed her vaccine hesitancy regarding the efficacy of COVID-19 vaccines. According to her, even vaccinated individuals still catch the COVID virus. As she pointed out: *“Even the vaccinated ones still catch COVID-19 virus. If health experts assert that once we get our vaccines, then we will be free from COVID, then my family and I will submit ourselves for vaccination.”*

B. Theme 2: Awareness of new health protocols/standards Conform to the good of the majority.

The participants expressed awareness of the new normal protocols imposed by the government and commercial establishments. For instance:

Participant 1: *“The new health protocols imposed by the government are for the good of the people. I don’t have a negative opinion about vaccination cards as requirements in entering establishments because it is for the safety of all. However, in terms of vaccination, senior citizens who are considered vulnerable should be exempted. But, despite being unvaccinated, commercial establishments should let the elderlies enter the establishments.”*

Participant 2: *“I have nothing against the new normal standards because those are implemented to mitigate the spread of the virus. However, for me, as unvaccinated, we should be given consideration because not all are willing to be vaccinated.”*

Participant 3: *“The new health protocols are for the good of every individual. Those are implemented for our safety and to lessen the COVID-19 cases in our country.”*

a) Limited mobility

While the government and commercial establishments imposed mobility restrictions on unvaccinated individuals and some required vaccination cards, the participants are aware of their limited mobility as unvaccinated. In the words of the participants:

Participant 1: *“In terms of mobility, it will be limited because there are establishments that require vaccination cards, for example in Alangalang National High School.”*

Participant 2: *“During the lockdowns, and we were in Alert level 3, there were establishments that are strict in terms of vaccination cards. We could not enter, for example, Robinsons, because the establishment requires a vaccination card for entry.”*

Participant 3: *“There is mobility restriction for unvaccinated, but still the government should consider their decision to not be vaccinated, and let them go to places if they have important things to do.”*

The responses reveal that the participants have a positive outlook on the new health standards. However, they provided their insights on considering vulnerable individuals who do not want to be vaccinated but still should be given the right to enter commercial establishments. The researchers also noted that participant 2 would resort to deceitful means by using someone’s vaccination card to enter commercial establishments. Participant 2 explain by saying *“I borrow my cousin’s vaccination card and I use it to enter some establishments.”*

C. Theme 3: Stand on immunity and social acceptance of the unvaccinated

a) Awareness of one’s immunity

In terms of the participants’ belief about the immunity of unvaccinated individuals, the participants expressed awareness of the health consequences of unvaccinated individuals in which unvaccinated will be prone to the COVID19 virus. As the participants pointed out:

Participant 1: *“In terms of immunity, according to the Department of Health, unvaccinated individuals like me, are prone to be infected with COVID-19 virus.”*

Participant 3: *“Unvaccinated individuals are at high risk of getting COVID-19. They will not be protected against the virus.”*

Contrastingly, participant 2 hesitantly does not want to let a foreign element alter her health. As she said: *“For me, I will have peace of mind if I*

am not vaccinated. I know am healthy even without vaccines.”

b) Awareness of one's social acceptance

One of the challenging situations that unvaccinated individuals face is how they will be accepted in a community where most are vaccinated. But, in the responses of the participants, they are aware of what society will think about unvaccinated individuals. For example, in the words of the participants:

Participant 1: *“Maybe some people whom you will be socializing with will be hesitant to talk to you because you are unvaccinated.”*

Participant 2: *“We haven't experienced discrimination just because my family and I are unvaccinated. Also, my friends respect my decision towards vaccination and they don't commit discriminatory acts against me.”*

Participant 3: *“It's our choice to be hesitant because we are in a democratic country. So, we have to be responsible in terms of our actions, and we should not encourage discrimination against the unvaccinated individuals.”*

Results reveal that health concerns, family pressure, and perceived necessity to get vaccinated addressed vaccine hesitancy. Other factors include religious belief and vaccine efficacy.

In terms of health concerns, the participants expressed their health conditions that might be triggered if they will be inoculated with COVID-19 vaccines. Similar findings show that the perception of low COVID-19 vaccine safety emerged as the common predictor of vaccine hesitancy among teachers and students (Chen, et al., 2022). Health risks include neurological conditions such as strokes, convulsions, and difficulty moving (Espiritu, et al., 2022). This corresponds to the study of Manning et al. (2021) who noted that concerns about vaccine safety and side effects of COVID-19 vaccines are associated with the reluctance to get vaccinated.

Moreover, with regard to fear and anxiety about vaccination, Rush (2021) stated that mental health conditions may be associated with being hesitant. An illustration can be seen in the case of Greene Country, in which, evidence suggests that people assert that politics is not the primary factor influencing their vaccine attitudes. Their primary source of concern is fear — fear that the vaccine was developed in haste and that long-term side effects are unknown (Hoffman, 2021). Another salient result of this study is the family pressure that the participants experience which reinforces their hesitancy to get vaccinated. The social networks of the participants, particularly their families were found to be shaping the decisions to remain hesitant in which, based on the responses, both the participant's families are hesitant toward COVID-19 vaccines. This can be recalled in the conversations they had with their family and friends. According to the study by Morales et al. (2022), on COVID-19 vaccine hesitancy determinants, social groups of the identified hesitant individuals have a great influence

in fostering and reinforcing vaccine hesitancy. Consistent findings of the studies on the motivations for vaccinations found that social groups comprised of family and friends could provide either incentives for or barriers to vaccination (Person et 2020; Stout et al 2020).

Another noteworthy finding of this study with regards to the reasons for the participants' hesitancy is their perceived necessity of getting COVID-19 jabs. The participants do not see the importance of COVID-19 vaccines at the moment because, in relation to their mobility, they are only at their homes. Hence, vaccination is not necessary for them unless face-to-face classes will resume. Similar findings can be seen with regard to vaccine hesitancy of medical students stating that vaccination is necessary to resume face-to-face classes and get their personal life back together (Jain, et al., 2021). On the other hand, Dube et al. (2013) state that if COVID-19 vaccination will be perceived as a social norm or those around you, or whom you respect, will be vaccinated, this might persuade hesitant individuals to receive their vaccination.

Apart from the aforementioned factors, religious affiliations and vaccine efficacy are associated with the vaccine hesitancy of the participants. Based on the response of participant 1, the religious affiliations of their family foster their vaccine hesitancy. To shed light on this matter, the researchers conducted an informal discussion with the participant's father (virtual) and it was found that their religion (Born Again) is against COVID-19 vaccines for they think that man's body is a temple of God, hence, it should not be altered by foreign elements, such as the COVID-19 vaccines. Consistent with this finding, religious opposition to vaccines is generally based on ethical dilemmas associated with the use of human tissue cells for vaccine creation and beliefs that the body is sacred. It should not receive certain chemicals, animal blood, or tissues and should be healed by God or natural means (Espiritu et al., 2022). Whereas scientifically and medically sound, religious beliefs affect evidence, resulting in various vaccination responses, including vaccination hesitancy (Garcia & Yap, 2021).

On the other hand, vaccine efficacy was cited by participant 2 as the reason for vaccine hesitancy. The hesitancy to vaccinate is viewed on the efficacy of the vaccine to prevent infections from the virus and ensure that it will keep the vaccinated individuals will not be prone to getting infected. This finding can be asserted with the study of Eleje et al. (2021) in which the study asserts vaccine efficacy stems from the concern of the alleged inability of the vaccine to provide protection against all known strains of COVID-19 (20/108), as well as the cold chain storage challenges (26/108) usually encountered in Nigeria. In the Philippines, vaccine efficacy has been the primary concern of hesitant individuals in which COVID-19 vaccines are viewed as insufficient in solving the COVID-19 pandemic (Amit et al., 2022). In the same study, the participants expressed disappointment and questioned the need for the vaccines given the information they have read and/or watched about still being at risk of getting infected despite being vaccinated.

In terms of the new normal standards and protocols, the responses of the participants illustrate awareness of the health protocols and standards imposed by the government in spite of the struggles they have encountered of being unvaccinated. It was stated that the participants agree and accept those health restrictions because they respectively believe that it is for the good of the majority and in order to mitigate the spread of cases of COVID-19 as well. This research finding is similar to the study by Kumala (2020) in the context of prevention efforts carried out in the implementation of health quarantine as regulated in Act Number 6 of 2018 concerning Health Quarantine.

In terms of mobility, the participants are aware that unvaccinated individuals have limited mobility. According to Mayo Clinic (2021), public health restrictions due to the COVID-19 outbreak have canceled festivals, concerts, and other events. Numerous vacations and huge gatherings have been delayed or postponed. For those who are still unvaccinated, close contact with people who do not live with them increases the chance of infection with the virus that causes COVID-19. That is why, if they have not received a COVID-19 vaccine, any activity that permits them to maintain a social distance, at least 6 feet (2 meters), from others is considered low risk. There are numerous activities available close to home, whether visiting a favorite public, state, or national park or simply spending time in one's neighborhood (Mayo Clinic, 2021).

The response of the first participant illustrated in the third theme showed awareness that in terms of immunity unvaccinated individuals are much more prone to have novel coronavirus (COVID-19). Participants 1 and 2 admitted that unvaccinated individuals are more prone to the COVID-19 virus. Johns Hopkins medicines explicitly explained that whether or not an individual was infected by COVID-19, getting the COVID-19 vaccine is the best protection against COVID-19. Various studies supported this claim; for instance, the U.S. Centers for Disease Control and Prevention (CDC) released a report on Oct. 29, 2021, that says getting vaccinated for the coronavirus when you've already had COVID-19 significantly enhances your immune protection and further reduces your risk of reinfection. Moreover, a study published in August 2021 indicates that if you had COVID-19 before and are not vaccinated, your risk of being re-infected is more than two times higher than for those who got vaccinated after having COVID-19.

Contrastingly, the response of the second participant revealed different findings. The second participant shared experiences that being unvaccinated will make the participant peaceful or at ease if no substance will stimulate the participant's natural immune system. Additionally, the participant stated that so far being unvaccinated the participant's immunity remains healthy. This finding contradicts to the previous research by Espiritu, et al. (2022) who may think that their natural immune system will protect them against COVID-19 disease if they are healthy. If they have any health problems, they may worry

that even mild or transient side effects from the vaccine could cause diseases their body cannot handle.

To the degree, that vaccine hesitancy is determined by the attitudes toward the behavior (vaccine-hesitant) subjective norm (the family influence that shaped the decision), and behavioral intention (the intention of the participants to remain unvaccinated). The findings of the study are in line with the theoretical frameworks which are the Theory of Planned Behavior and 5C psychological antecedent. With the previous studies exploring COVID-19 vaccines and the hesitancy of individuals toward immunization against the virus, one could make a general statement of the problem without considering some substantial factors. The same findings have been revealed from this study, however, an interesting factor was revealed in which the decision of the two participants to remain hesitant is because of how they perceived vaccination as unimportant for this specific period since they are only at their homes. Moreover, though the participants remain hesitant toward COVID-19 inoculation, they consider getting their jabs only if face-to-face classes resume and vaccination cards are required in school.

However, this study has also its limitations. Reflecting on the findings, we can see that vaccine hesitancy is rooted in various factors. Yet, further studies are needed to extend the findings of the case, especially since our sample size is relatively small. This also means that the findings are not generalizable to other hesitant college students.

VI. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents a summary of the findings, conclusions based on the data analysis, and recommendations.

A. Summary

Vaccination against COVID-19 has been rolled out to countries worldwide, including the Philippines in the effort to attain herd immunity against the virus. In addition, some educational institutions, for instance, the Leyte Normal University, have joined in the effort to vaccinate its students. However, despite the availability of vaccines, there are still who remain hesitant. This study aimed to explore the vaccine hesitancy of the unvaccinated, particularly in the case of Social Studies students at LNU through the four research questions: (a) Why some Social Studies students are hesitant toward COVID-19 vaccination? (b) How do unvaccinated Social Studies students describe their decision toward COVID-19 vaccine hesitancy? (c) How do unvaccinated Social Studies students respond toward health protocol/new usual standards imposed by commercial establishments and government institutions? and; (d) What are the idea/s of unvaccinated Social Studies students as to what will happen for those unvaccinated individuals in terms of their: immunity, mobility, and social acceptance?

Research question 1 identified various factors behind vaccine hesitancy including health concerns, family pressure, and perceived necessity to get vaccinated addressed vaccine hesitancy. Other factors such as religious belief and vaccine efficacy also emerged in this study. With the research findings in the first research question, it can be asserted that the participants described their decision to remain hesitant based on various factors in their personal and social aspects. Research question 3, reflected the standpoints of the participants regarding new health protocols in which the participants expressed a positive outlook on these protocols, however, consideration should be given to some vulnerable individuals. While research question 4 reflected the participant's awareness of one's immunity, mobility, and social acceptance.

B. Conclusions

Based on the findings of the study, the following conclusions are derived: Despite the vaccination drive of the Leyte Normal University and the availability of vaccines, vaccine hesitancy still exists among Social Studies students. As a result, we discovered various factors why these students are hesitant which can help contribute new insights on vaccine hesitancy among Social Studies students. First, it was revealed that they are afraid of the possible side effects of COVID-19 vaccines on their health. Their previous experiences and the conversations they had with their family regarding the safety of vaccines significantly influence their decision. Family pressure on the other hand also reinforces vaccine hesitancy of the participants because most of their family members have negative perceptions about the vaccines. With this, social networks, particularly the family, hold a strong influence on the behavior of the hesitant individuals towards COVID-19 vaccination. Another noteworthy reason is how the participants perceived COVID-19 vaccines in which their hesitancy is driven by their personal standpoints that they do see yet the necessity of vaccination because they are only at their homes. Only if face-to-face classes will resume, then the participants will consider getting their jabs. Other factors such as religious belief and vaccine efficacy also emerged in the findings. On the other hand, although faced with restrictions for being unvaccinated (e.g. limited mobility), the participants are aware that the new health protocols/standards imposed by government institutions and commercial establishments are for the safety and good of the people. However, it was noted that the participants shared their insights on these protocols and that important consideration should be given to those unvaccinated individuals who can't have their jabs, for instance, the elderly experiencing medical conditions should be allowed to enter establishments, as well as in buying basic necessities. Meanwhile, it was drawn from the findings that vaccine-hesitant students are aware of their immunity as unvaccinated individuals. Although the sensemaking of the participants regarding their immunity contradicts each other, two are aware that unvaccinated are prone to get infected, while the other participant believed in natural immunity. Finally, various studies assert unvaccinated individuals are likely to be discriminated but, the vaccine-hesitant did not experience discrimination, but

they are aware of what society will think of unvaccinated people.

C. Recommendations

The findings of the study recommend the following:

- **Local Government Units and Inter-Agency Task Force** should promote confidence in the effectiveness and safety of the COVID-19 vaccines by communicating effectively with the public and building public trust so that hesitant individuals will have the confidence to consider vaccination. In addition, LGU and IATF should encourage conversations with vaccine-hesitant people to understand the reasons behind their hesitancy and look closely at the participants' point of view on why they are hesitant to get vaccinated, taking into account their experiences and beliefs.
- **Health authorities and institutions** should conduct programs and seminars to educate vaccine-hesitant individuals regarding misinformation and vaccine conspiracies circulating on social media and provide factual data on the vaccine's side effects to reduce the health concerns of 41 hesitant people. They should comprehensively discuss medical terms to avoid misunderstanding or confusion.
- **Future researchers** should have more research participants and explore the reasons for vaccine hesitancy of other education students enrolled in different programs. They should also extend or modify the outcome of this study.

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