

# COVID-19 Vaccine Hesitancy among Undergraduate Students

Kristel Diane N. Betana<sup>1</sup>  
School of Health and Allied Sciences  
University of Saint Louis  
Tuguegarao City, Cagayan  
line 4: e-mail address if desired

Hannah Jerah Longat<sup>3</sup>  
School of Health and Allied Sciences  
University of Saint Louis  
Tuguegarao City, Cagayan  
line 4: e-mail address if desired

Hannah V. Lacambra<sup>2</sup>  
School of Health and Allied Sciences  
University of Saint Louis  
Tuguegarao City, Cagayan  
line 4: e-mail address if desired

Carl Angelo B. Salvatierra<sup>4</sup>  
School of Health and Allied Sciences  
University of Saint Louis  
Tuguegarao City, Cagayan  
line 4: e-mail address if desired

**Abstract**—The COVID-19 vaccine provides the best hope for a permanent solution to controlling the pandemic. In order to further promote the uptake of the COVID-19 vaccine and combat vaccine hesitancy, an understanding of vaccination hesitancy of society must be done. This study aimed to assess and describe COVID-19 vaccine hesitancy among university students. This study used a descriptive qualitative research design to identify and describe the students' reasons behind COVID-19 vaccine hesitancy and their motivations for vaccine acceptance. The study was conducted among 21 undergraduate students aged 18 years old and above, who are not in any allied health course and who have not received any dose of the COVID-19 vaccine as of January 2022. Analysis of the students' responses revealed two major themes explaining the student's reasons behind vaccine hesitancy namely: Personal Barriers and Familial Barriers to vaccination. Personal barriers included the students' fear of needles and fear of the unknown side or adverse effects of the vaccine and their inability to leave their homes due to COVID-19 restrictions. Familial barriers included the decision of their parents not to receive the vaccine due to uncertainty and fear about the side and adverse effects of the vaccine. However, the students also mentioned that they believe the vaccine will keep them safe from COVID-19 infection and that they will get vaccinated when it becomes mandatory or required for face-to-face classes. The study therefore concludes that hesitancy towards COVID-19 vaccination is still present among university students due to misinformation and uncertainty about how the vaccine works and its possible side effects. It is important therefore that the university will employ information dissemination programs for students and their parents to encourage voluntarily vaccination before face-to-face classes will start. However, making vaccination a requirement for face-to-face classes can also be an effective strategy to ensure that all undergraduate students receive COVID-19 vaccine and ensure the safety of students and employees of the university.

**Keywords**— Vaccine hesitancy, COVID-19 vaccine, university students

## I. INTRODUCTION

In December 2019, various cases of unidentifiable pneumonia were reported in Wuhan, Hubei Province, China. Epidemiological findings show that transmission occurs through human-to-human contact and was later confirmed to be caused by a novel corona virus infection (Huang, Lei, Xu, Liu, & Yu, 2020). World Health Organization declared the outbreak of novel corona virus, COVID-19; in January 2020 as a public health concern worldwide and in March 2020, it was declared as a pandemic (World Health Organization, 2020). To help curb the virus and save the health systems across the world from complete collapse, a nationwide lockdown was imposed (Lloyd and Blakemore, 2020). SARS-CoV-2 is a highly contagious virus and the increasing rates of COVID-19 triggered the development of vaccine against the disease.

Vaccines are considered as the most important public health measure and effective strategy in protecting the population. Vaccine development is making progress in an unparalleled pace. Once available, it is important to maximize vaccine approval and coverage (Fisher, et al. 2020). The COVID-19 vaccine provides the best hope for a permanent solution to controlling the pandemic. A vaccination must be accepted and utilized by a huge majority of the population to be effective (Abdul, Mursheda, & Farhana, 2020). Several vaccines have already been approved against the disease and it is currently distributed globally (Islam, et al. 2021).

World Health Organization identifies vaccine hesitancy or reluctance of patients to receive vaccine as one of leading threats to global health (Puri et al., 2020; World Health Organization, 2019). To combat the vaccine hesitancy and promote the uptake of the vaccine, utilization of effective communication strategies must be done (French, et al. 2020)

As the number of COVID-19 cases in the Philippines continues to climb, vaccination hesitancy among Filipinos remains high. A survey conducted by Pulse Asia last March 2021 showed that the majority of respondents (61%) would

answer” no” to getting vaccinated against COVID-19 if the vaccine was available during the polling period. By 2021, the government hopes to have vaccinated 70% of Filipinos. To attain this aim, an average of 350,000 to 500,000 injections a day are required. As of January 6, 2022, about 51.66 million individuals in the Philippines were completely vaccinated against the COVID-19 virus. This covers people who got immunizations in single doses. In comparison, around 57.45 million individuals have yet to get their second dosage of the vaccination. Meanwhile, over 2.81 million individuals have already gotten a booster dose (Statista Research Department, 2022). With the recent surge of COVID-19, the government has been continuously promoting vaccination against the virus.

In order to further promote the uptake of the COVID-19 vaccine and combat vaccine hesitancy, an understanding of vaccination hesitancy of society must be done. Understanding how university students feel about COVID-19 and whether or not they want to be vaccinated is crucial for public health planning and the promotion of expanded face-to-face classes for tertiary education. To properly frame public health signals to action, it is vital to understand the perspectives of students about perceived severity, challenges, and benefits in order to create successful educational programs and universal vaccination uptake. The aim of the study is to describe the vaccination hesitancy among students towards COVID-19 vaccine. Specifically, it aimed to describe why students are hesitant to take the COVID-19 vaccine, the factors affecting the student’s hesitancy and the reasons that would lead the students to accept COVID-19 vaccination. To date, there has been no prior study among the employee population of local community investigating their vaccine hesitancy towards COVID-19 vaccine. The study is significant in determining the COVID-19 vaccine hesitancy of students at University of Saint Louis Tuguegarao and identify possible relevant interventions to implement to encourage a favorable vaccination coverage

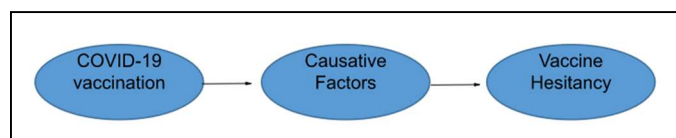


Fig. 1. COVID-19 vaccination and causative factors that triggers vaccine hesitancy

Different causative factors about COVID-19 vaccination can affect the attitudes of employees towards COVID-19 vaccination. Figure 1 shows that causative factors such as misleading views and misinformation could lead to vaccine hesitancy.

## II. METHODS

### A. Research Design

This study used a Descriptive Qualitative research design considering the objective of the researchers to assess and describe COVID-19 vaccine hesitancy among students of University of Saint Louis Tuguegarao

### B. Locale and Respondents

The research was conducted in University of Saint Louis Tuguegarao as it is located at Tuguegarao City, where the most

numbers of the COVID19 cases had occurred in the province of Cagayan.

The respondents were composed of college students of the university. The researchers utilized purposive sampling. Respondents are students who have not yet received any dose of the COVID-19 vaccine as of September 2021. Respondents that were excluded are a.) Students belonging from the School of Health and Allied Sciences Department, b.) If they are scheduled for vaccination when collection of data will commence and when they are diagnosed to be COVID-19 positive when data collection for this study will commence. The sample size of the study is 21 respondents.

### C. Instrument

An interview guide was used to gather data for assessing the COVID-19 vaccine hesitancy of the students. The interview guide consisted a 7-item open-ended questions asking the students about their hesitancy towards the COVID-19 vaccine. The interview guide was only used by the researcher as a guide for the interview and it was not given to the participants. The questions have undergone face validity to ensure appropriateness of questions to the objectives of the study.

### D. Data Analysis

Qualitative data gathered via interview was analyzed using content analysis. The following steps was followed by the researchers in doing content analysis of qualitative data based on Erlingsson & Brysiewicz, 2017:

a) *Transcribing of interview content.* All the verbalizations of the respondents for both interview will be transcribed into textual format. This will facilitate the analysis of the data by the researchers.

b) *Dividing text into meaning units.* The transcribed texts will be read and re-read by the researchers to identify the meanings of the verbalizations of respondents. The impressions of the meanings of the verbalizations will be noted after each time the text is re-read. Divide the whole of the text to smaller units that still represent the entire meaning of the text as whole. These meaning units will then be condensed or shortened ready for the next step.

c) *Formulating codes.* Each condensed meaning unit was given labels or codes which concisely described these meaning units.

d) *Developing categories and themes.* The codes formulated in the previous step were sorted into categories. This was done by appraising the codes and determining which belonged together, combining codes that appear to deal with the same issue/ topic. From the categories, themes were then formulated, which will describe the underlying meaning of the categories formulated.

### E. Ethical Considerations

To conduct the study, the researchers sought approval from the University to implement the study to the participants. The researchers also provided a letter to the administrators of the institution to ask permission for the conduct of the research. The participants were given informed consent to ensure the trust and approval between them and the researchers.

The purpose and aim of the study were introduced to the respondents before the interview. The researchers also explained that participation in the study is purely voluntary. If the respondents chose not to engage in this study, no one would treat them any differently. The study will not affect the respondent's academic standing in the university. Within the study, the researchers have no conflicting interests of any sort, whether personal or proprietary.

The researchers also ensured that the data collected from the research were kept confidential and protected and will only be used for the purpose of the research. The name and information of the participants will remain anonymous if they choose to. This is to guarantee the privacy and security of the participants. Respondents were also given access to the result of the study and were given the freedom to withdraw their participation at any time. Any queries and concerns of the respondents were entertained through the provided contact number of the researchers. The recordings were saved in a dedicated, secure, and password-protected cloud based storage. All data storage was secured and access was restricted to password holders and set to end on a certain date. All data pertaining to individual respondents were documented and were deleted permanently after the final paper is submitted.

Prior to the conduct of the study, institutional research ethical clearance and ethical clearance from the Region 2 Trauma and Medical Center Institutional Review Board (Level II Philippine Health Research Ethics Board accredited) was obtained.

### III. RESULTS

The research identified the students' reasons behind COVID-19 vaccine hesitancy and their motivations for vaccine acceptance. The study revealed two major themes concerning the student's reasons behind vaccine hesitancy namely: Personal Barriers and Familial Barriers to vaccination. Personal barriers to vaccination includes fear of injections, fear of adverse effects of vaccinations, and confinement in their homes. Familial barriers include uncertainty of vaccine effectiveness and uncertainty of vaccine adverse effects.

The study also revealed the factors that would motivate vaccine acceptance namely: Safety from COVID-19 and the mandatory vaccination.

#### A. Personal Barriers to Vaccination

Personal or individual reasons plays an important role in the acceptance or refusal of vaccination. The decision to be vaccinated are influenced by factors basing from the informants' personal knowledge, awareness, perception and experiences about vaccination despite availability of services.

##### a) Fear of Injections

Vaccination is now the world's intervention to combat the COVID-19 pandemic but avoidance of vaccination may limit or delay the success of immunization programs. In the interview, individuals with pronounced fear of needles or injections are more likely to refuse in getting the immunization. The participants anxiety of injection is a contributory factor for

them to be hesitant of vaccine acceptance. Some of verbalizations of the respondents are as follows:

*Student 2: "May takot po ako sa karayom. Nanginginig po ako kapag nakikita ko yung karayom na ituturok." (I'm afraid of needles. I tremble when I see the needle being injected)*

*Student 5: "Yung phobia ko po sa karayom. May takot po kasi talaga ako sa injection kahit dati pa." (My phobia of needles. I'm really scared of the injection even before.)*

*Student 12: "Kung sa iba cliché po yung rason pero takot po ako sa karayom. Lumaki po ako na natatakot sa injections at hindi ko po alam kung paano ito ma-overcome." (If for others the reason is cliché but I'm afraid of needles. I grew up afraid of injections and I didn't know yet how to overcome it.)*

##### b) Fear of Adverse Effects of Vaccination

The fear of adverse effects of vaccination affects the respondents perception about getting vaccinated. And those who have comorbidity fears the possible complications they will experience when they get vaccinated since they are uncertain of what the effects of the vaccine to their disease (like asthma and allergies). Some of verbalizations of the respondents are as follows:

*Student 4: "Yung sakit ko po. Meron po akong sakit tapos hindi pa po kasi ako nakakapapacheckup sa doctor kaya hindi rin po ako nagpapavaccine kasi baka hindi pwede." (My illness. I'm sick and I haven't had a checkup with the doctor yet, so I don't want to take the vaccines yet.)*

*Student 9: "Una na dun yung pangangati siguro kasi may allergy ako sa pagkain lalo na sa shrimp, minsan nga na hindi ko natiis na hindi kumain eh nahirapan akong huminga at sobrang kati ng buong katawan ko. Ang ibibigay lang naman yata kasi kung magpapabakuna ka eh yung antihistamine lang, so baka hindi yun kayang gamutin yung allergy ko. Kaya baka kung magpapaturok ako eh mangangati ako kasi baka kumontra yung vaccine." (First of all, I have an allergy to food, especially to shrimp, I had trouble breathing and my whole body itched a lot. I guess the only thing that will be given to me when I get vaccinated is just antihistamine, so maybe that won't be able to cure my allergy. So maybe if I get vaccinated I'll itch because the vaccine might fight)*

*Student 15: "I am worried that instead of helping the vaccine, it will have a negative effect on my health. I also hear that people get sick after being stabbed, such as dizziness, fever, allergies and most of all, the rumors that it is deadly."*

*Student 17: "May sakit kasi ako na Asthma simula pa noong bata kaya hindi pa kami sigurado kung okay ako sa bakuna ng COVID19. Dadalhin daw muna ako sa Dukto upang ipasuri ng aking magulang upang malaman kung pwede ba ito saakin na iturok." (I've had Asthma since I was a child so we're not sure if I'm*

okay with the COVID19 vaccine. He said that I would be taken to the doctor first to be examined by my parents to find out if it could be injected to me.)

Student 19: "Alanganin parin po ako dahil dun sa mga bali-balita na malakas nga yung side effect nung bakuna po lalo na dun sa mga may sakit na po. Siguro dahil rushed nga ginagawa yung vaccine or ano kaya sadyang natatakot lang po talaga ako nab aka di ko rin kayanin yung bakuna kapag ako na yung tinurukan." (I'm still hesitant because of the rumors that the side effects of the vaccine are strong, especially for those who are already sick. Maybe it's because the vaccine is being made in a hurry or something, so I'm just really scared that I won't be able to handle the vaccine when I'm being injected.)

Student 21: "Undecided lang po talaga ako na magpabakuna kaya more on personal reasons lang din po. Nakakatakot kasi yung sabi-sabi nila na nakakamatay daw yung side effect nung vaccine tapos may mga nakikita pa ako na news sa internet na tinatakbo sa hospital after magpabakuna. Natatakot lang ako na baka magaya din ako." (I'm really undecided to get vaccinated, it's more on personal reasons. It's scary because they say that the side effect of the vaccine is deadly and I see some news on the internet that people are rushed in the hospital after the vaccination. I'm just afraid I might end up like them too.)

### c) Confinement in their Homes

The informants cannot leave their homes and get vaccinated due to quarantine restrictions. The informants also believe that because they do not leave the house, they are not at a very high risk of getting infected with COVID-19, therefore it is not yet completely necessary for them to get vaccinated as they are just staying in their homes. Some of verbalizations of the respondents are as follows:

Student 7: "We don't feel the need of getting one pa po kasi hindi naman kami lumalabas pa ng bahay so we don't feel threatened na may magpositive sa amin. I mean natatakot po kami sa virus and that is why ayaw naming lumabas, kumbaga nakaquarantine po kaming pamilya kaya kahit magpavaccine ayaw na namin kasi risky nga po ang lumabas lalo na po at kasama namin dito yung lolo at lola ko." ("We don't feel the need of getting vaccinated because we haven't been out of the house yet so we don't feel threatened that someone will get positive. I mean we are afraid of the virus and that is why we don't want to go out, we have quarantined ourselves, we don't have vaccination yet because it's risky to go out especially my grandparents are with us here.)

"Delivered po lahat ate. Pinapadeliver nalang po nila mama or di kaya kapag may pumupunta po na kakilala namin mag-grocery eh nagpapasabay nalang po sina mama. Tapos kung may mga importante pong ilalakad sina mama o si papa inutusan po nila yung pinsan ko

na fully vaccinated na tapos binibigyan nalang po nila ng pera. Kasi ang iniisip po nila mama baka kung lalabas po sila eh baka po mahawaan sila tapos mahahawaan na po nila kaming lahat sa bahay." ("Everything is delivered which includes our groceries, or my mom or dad would ask my cousin who is already vaccinated to do task for them because if we leave the house they we might all get infected)

Student 8: "Hindi pa naman po ako lumalabas sa mga matataong lugar, hindi pa po ako pinapayagan nila mommy kaya mas minabuti po namin na wag nalang muna akong magpavaccine kasi andito lang naman po ako sa bahay. Tsaka online class palang din naman po eh kung may kailangan naman po gawin or bayaran sa school sila mommy nalang po ang pumupunta. Tsaka nalang daw po ako magpavaccine kapag kailangan ko na pong lumabas talag pero ngayon na online class lang naman po, hindi po siguro muna." (I haven't gone out in crowded places, my mom haven't allowed me to go out yet so there's no need get vaccinated since I'm just here at home. Besides, there are also online classes, if you need to do something or pay for school, my mom would do it for me. Besides, I said I'll get vaccinated when I really need to go out, but now that it's just online class, maybe its not the time yet.)

### B. Familial Barriers to Vaccination

Familial barriers are factors or reasons that are directly coming from or are greatly influenced by the informants' parents or family members like their immediate relatives or grandparents. The students' decision to refuse the COVID-19 vaccination was greatly influenced by the decision and opinion of the parents.

#### a) Uncertainty of Vaccine Effectiveness

The informant's parents have doubts and are not confident with the effectiveness of the vaccine. Their parents also believe that the vaccines may not be needed anymore because even those who are vaccinated can still contract the disease. They also relayed experiences and information they read in the internet of those who are vaccinated but still get infected of COVID-19. They also expressed concern of how fast the vaccines were developed. Some of verbalizations of the respondents are as follows:

Student 6: "Ayaw po kasi nila mama at papa na magpavaccine kami kasi baka daw po hindi maging maganda yung epekto sa amin. Tsaka yun na nga po diba kapag fully vaccinated ka na pwede ka paring mahawaan ng virus kaya yun din po yung isang rason kung bakit ayaw kong magpavaccine kasi parang useless lang din." (My mother and father don't want us to get vaccinated as it may lead to bad effects for us. And even those who are vaccinated can still be infected by the virus that's the reason why I don't want to be vaccinated since it seems useless.)

Student 7: "First barrier would be family influence po kasi wala pa pong vaccinated dito sa bahay because

*we don't feel the need of getting one pa po." (First barrier would be family influence since there are no vaccinated people in our house because we don't feel the need of getting one.)*

*Student 11: "Actually, family influence po eh. My family doesn't want to get vaccinated because of the news circulating from social media(s) and I was influenced by that din po lalo na at maraming co-morbidities and we have a family history of that." (Actually, it is family influence. My family doesn't want to get vaccinated because of the news circulating from social media and I was influenced by that especially we have family history of co-morbidities.)*

*Student 13: "Kung barriers mo ang tatanungin bakit hindi ako nagpapabakuna, dahil po yun sa family influence at personal na rason ko po. Nababasa ko po na may side effects itong vaccine at natatakot po ako na baka maging worst yung dala nito sa health ko po." (It is because of family influence and personal reason. I have also read that the vaccines have side effects and I am afraid that it can affect my health.)*

*Student 14: "I am a little hesitant to receive the immunization because my parents told me that vaccines are made to lessen the worlds population. During their time, a specific group of people have visited their barrio stating that this are biological weapons and is used to control the burden of escalating population globally."*

*Student 18: "Yung family po namin hindi naman po naniniwala na effective yung vaccine. Sabi nga po nila kayang kaya naman ng katawan labanan yun hindi na po kailangan ng vaccine." (My family does not believe on the effectiveness of the vaccine. They said that our bodies can fight the virus on its own without the need for the vaccine.)*

#### *b) Uncertainty of Vaccine Adverse Effects*

The informants' parents also fear the possible side effects and adverse effects of the vaccine. They also verbalized that they are not sure of the possible effects that they will experience. One informant also verbalized that their family strongly adhere to religious beliefs that introducing such foreign chemicals to the body such as getting vaccinated goes against their religious beliefs because they believe that the body is a temple of God. Some of verbalizations of the respondents are as follows:

*Student 6: "As a believer po, yung family namin, malakas yung paniniwala po namin na dahil merong Jesus Christ sa buhay namin masesave at masesave kami from covid no matter what, kasi He is the best doctor for us." (As a believer, my family believes that Jesus Christ will save us from COVID-19 no matter what as He is the best doctor for us.)*

*Student 8: Sa ngayon po kasi may asthma ako kaya sabi po nila mommy wag daw po muna ako magpavaccine kasi ang hina daw po ng katawan ko. (I*

*have asthma and my mommy said that I should not take the vaccine because I have a weak body.)*

*Student 20: "Si lolo at lola po kasi hindi po talaga sila pumapayag na magpavaccine kaming magkakapatid. Di po kasi sila naniniwala na effective daw po tsaka may sakit po kasi ako sabi nila lola eh baka mas mapalala daw yung side effect nung vaccine dahil sa sakit ko." (My grandparents does not want us to get vaccinated. They don't believe that the vaccine is effective and the side effects might worsen my sickness.)*

#### *C. Motivation for Vaccine Acceptance*

This study revealed that the informants were not completely opposed to getting vaccinated, and the following are the reasons that would greatly motivate them to get vaccinated. Based on the responses of the informants, motivation for vaccine acceptance were subdivided into three (3) sub dimensions, which includes;

##### *a) Safety from COVID-19*

The informants may choose to get vaccinated in order to have protection and immunity against COVID-19. This will also ensure that their family will be protected and to reduce the risk of contracting a more severe form of the disease. Some of the verbalization of the informants were as follows:

*Student 2: "Yung immunity po, naproprotektahan ako sa COVID-19 pati na po yung family ko. Mas safe na rin po lumabas." (It is because of immunity; I am protected from COVID-19 as well as my family. It is also safer to go out.)*

*Student 7: "One advatage siguro ng mga vaccinated is mas lesser yung severity rate and in that case mas lesser din yung possibility nila na mahospital. Lalo na ngayong kumakalat ang omicron variant, ang bilis nagkakahawaan. Kaya sa mga araw araw lumalabas at kailangan magtrabaho malaking tulong talaga sa kanila ang vaccine kung tutuusin. Hindi naman po kasi lahat eh tulad sa amin na andyan na lahat ng kailangan namin kaya hindi na namin kailangan pang lumabas, mas madami talaga sa community yung kailangang maghanap buhay to provide their needs especially in this trying times na ang baba ng ekonomiya ng bansa dahil sa lockdowns na nangyayari." (One advantage for those who are vaccinated is the lesser severity rate and in that cases, they will have lesser possibility also to be hospitalized especially with the new variant, Omicron in which it is infectious. So for those who are going out every day and those who works, being vaccinated is a big help.)*

*Student 14: "Basing on the news that I have watched, the COVID19 shots will help boost my immune system to fight from the attacked of this infectious disease. If people are protected, it will allow us to resume many activities and everything would be back to normal in the future."*

*Student 15: "Sabi ng Department of Health (DOH) na kapag nagkaroon daw tayo ng bakuna laban sa COVID19 ay makakasiguro na may panlaban tayo sa sakit na dulot nito. Ang bakuna daw yung tutulong para mapanatiling ligtas ang mga tao lalong-lalo na at patuloy parin ang dumadaming kaso na nagdudulot ng pagkamatay dahil sa sakit." (The Department of Health (DOH) says that when we have a vaccine against COVID19 we can be sure that we have a protection to the disease. They also stated that vaccine helps people becomes safe.)*

*Student 16: The benefits of having the vaccine would give me immunization against the virus and can probably help lessen the increasing number of COVID19. Also if people are vaccinated our economic activity will continue providing jobs for those people who lost their work during the pandemic.*

#### b) Mandatory Vaccination

The informants mentioned that they will get vaccinated when the institution mandates that all students must be vaccinated in order to attend face-to-face classes. The informants do not feel the need to get vaccinated yet because there is no indication of full-blown face-to-face classes. Also, they verbalized that they will be vaccinated in order to be exempt from quarantine's restrictions on movement. Their belief is that by getting vaccinated, they will be able to visit certain establishments, as well as travel to local and international destinations that require proof of vaccination for admission. Some of the verbalizations of the informants were as follows:

*Student 6: "Siguro as a student icoconsider ko pong magpavaccine sa opening ng face to face classes kung mandatory po na dapat nakavaccine lahat kasi sa hirap ng buhay ngayon gusto ko na din gramaduate on time, sana hindi na madagdagan ng taon pa para mas lesser yung gastos sa tuition lalo na sa internet ganun. Ah yun din po sigurong pag tratravel ko kasi maggagaling pa po ako ng isabela to tuguegarao kung magkakaroon na ng face to face classes, kailangan ko yung vaccination card to avoid other disturbances pa po. Hassle po kasi talaga kung kada pupunta ako ng Tuguegarao eh kukuha po ako ng travel pass at heath certificatesa barangay, sayang po yung time." (As a student, I would consider being vaccinated if there will be a formal announcement of having face-to-face classes and if the university will make vaccinations mandatory to all students especially in this difficult situation, I want to graduate on time. Also, vaccination card is needed whenever I travel from Isabela to Tuguegarao and I will opt to be vaccinated in order to avoid disturbances when travelling. It is considered hassle everytime I will travel to Tuguegarao wherein travel pass and health certificates from barangay are needed.)*

*Student 14: "When I received the COVID19 vaccine I will be able to attend school again through face-to-*

*face and will not settle in learning virtually. I also think, if I am fully immunized I will be able to travel again with my family on holidays and do activities that we usually do as a family like swimming, road trips, watching cinemas, eating outside and have bonding together."*

*Student 15: "Kailangan daw ng vaccination para makapasok sa mga ibat-ibang establimento at kakailanganin daw din ito kapag bibisita sa ibang lugar gamit ang vaccination card. Magagamit din ito pag ako ay papasok ulit sa school kasi isa daw ito sa mga kwalipikasyon ng CHED para sa aming mga mag-aaral." (Vaccination card is needed to enter different establishments and even when going out to visit other places. It is also needed when school will reopen as it is one of the required qualifications of CHED)*

## IV. DISCUSSION

### A. Personal Barriers to Vaccination

Individuals who have needle phobias were twice as likely to report being COVID-19 vaccination reluctant — that is, they would postpone or avoid getting vaccinated (While, Alison 2021). Phobias are often believed to be the result of either a traumatic occurrence or acquired behavior from childhood. However, some individuals feel that needle phobia is genetic, and hence something you receive from birth (Cirino, 2018).

Unmanaged needle phobia is extremely stressful for those who suffer from it, and it can impact health-care decisions. Some individuals who want the COVID-19 vaccine have avoided the series of doses due to needle phobia, which is a fear of needles or injections (Rowello, 2021). It's not only the COVID-19 vaccine that people may avoid due to a fear of needles. Fear of needles can prevent people from receiving other important medical interventions such as immunizations, blood tests, contraceptive injections, surgical operations, and other medical interventions (Sierzega, 2021).

Vaccine hesitancy is somewhat higher among young individuals. However, it is not only vaccine skepticism that is prevalent in these populations; injection phobias are also prevalent. Though not the only factor, OCEANS-III reveals that injection phobias contribute to greater rates of vaccine hesitation in this group (Freeman, 2021)

Vaccination, despite being acknowledged as one of the most effective public health strategies, is viewed as harmful and unneeded by a rising number of people (Laberge et al., 2018). In the study of (Azarpana et al., 2021) shows that vaccine reluctance has been a rising public health challenge in recent years. Concerns about vaccine safety and Adverse Effects are the most important reasons contributing to vaccine hesitancy.

People's anxieties are exacerbated by their mistrust of the vaccination and the government. Many others said they were doubtful if the vaccine would work or that they didn't think they needed it (Beaumont, 2021). Hesitancy to get vaccinated by covid-19 vaccine is characterized primarily by pessimism about vaccine benefits, fears about possible unknown effects and

worries about underlying diseases like allergies to foods (Rief et al., 2021).

Every location where other people are increases the likelihood of COVID-19 transmission. As a result, self-quarantining now has the potential to significantly reduce the number of COVID-19 cases in our community. In addition, individual citizens have been permitted to decide whether or not to get vaccinated (Riva et al., 2020). Other individuals are now afraid to leave their homes because of their confinement in their homes. Some individuals and families prefer to stay at home rather than go out (Miguel, 2021). Fear of going out due mainly to being infected by the COVID 19 has been one factor for people's hesitation to be vaccinated (Furthy et al., 2021).

### *B. Familial Barriers to Vaccination*

The study of Zhang et. al. (2020) suggested that social media has greatly influenced the perception of parents regarding vaccine uptake of the family. This study was also supported by Migrino et. al (2020) study stating that the reasons behind the perception of parents and families towards vaccine uptake was negative information from media, beliefs that the vaccine were not effective and were not safe. A compounding factor is that vaccine-hesitant parents tend to be more susceptible to media reports, whether verified or not, and they frequently rely on the Internet as their source for vaccination information. Vaccine efficacy, safety as well as vaccine advice and media coverage have been shown to influence pandemic vaccine choices of families. A number of parents claimed that the virus is a biological weapon intended to manipulate human genetic material through vaccination and that the threat posed by COVID-19 is exaggerated. (Yilmaz, 2021). From that perspective, this study is consistent with previous research.

Our study found that parent's uncertainty towards vaccine adverse effects is a factor that influences the student's vaccine acceptance. A prior study found that parents of children with chronic conditions lacked a high level of willingness to help their children. These findings may reflect parental concerns regarding the use of vaccinations in immunocompromised children, and the public, particularly those at high risk, needs more information about the COVID-19 vaccines. The parents may be unwilling to have their children vaccinated due to some safety and side effect concerns related to the COVID 19 vaccine being newly released (Yilmaz, 2021). Wan's study (2021) also stated that perceived vaccine risk significantly affects parents' intention to vaccinate their children. Concern about side effects was an important factor in parents opting to consider the COVID-19 vaccine for their children.

### *C. Motivation for Vaccine Acceptance*

Despite the fact that governments around the world expect vaccination to reduce the spread of COVID-19, some people may be concerned about the effectiveness of COVID-19 vaccine in reducing the risk of COVID-19 infection, as well as their own capacity to get COVID-19 vaccination (Wang et al., 2021).

The rejection of the COVID-19 vaccine may prolong the pandemic's duration by reducing the chance of herd immunity. In late 2020 and early 2021, COVID-19 vaccinations were

approved for use in the general population across different countries and approved vaccinations are subjected to the FDA's standard process for determining the quality, safety, and efficacy of medical products (Food and Drug Administration, 2021). Authorized COVID-19 vaccines have been shown to be safe and efficacious in preventing severe disease and death, and it is clear that vaccine supply will continue to increase globally (World Health Organization).

The most frequently reported motivation for vaccination was the desire to protect family members. A higher perceived risk of getting infected with COVID-19 was observed to boost COVID-19 vaccination uptake likelihood (Biswas et al., 2021). This study was also supported by Abuown et al., stating that safety concerns, as well as uncertainties about the availability of trial data and vaccination efficacy, were the main reasons for vaccine rejection.

Our study found that students do not feel obliged to be vaccinated because there is no indication that they will be able to attend face-to-face classes, but if the institution makes vaccination a mandatory, they will choose to get vaccinated.

Vaccination is critical in protecting and saving the lives of people. Mandatory vaccination is necessary because vaccination has a major effect in our fight against COVID and in our economy and health (Galvez, 2021). Policy interventions, such as immunization requirements for school entry, have contributed to high vaccine coverage and record or near-record lows in the levels of vaccine-preventable diseases. Herd immunity, induced by high vaccination rates, has played an important role in greatly reducing or eliminating continual endemic transmission of a number of diseases, thereby benefiting the community overall in addition to the individual vaccinated person (Omer et al., 2009).

In many places of the world, COVID vaccinations are already a prerequisite for public life and according to the Inter-Agency Task Force for the Management of Emerging Infectious Diseases, there were protocols for fully vaccinated people who wanted to travel within the Philippines such as for interzonal travel, the inter-agency task force said a COVID-19 domestic vaccination card or a certificate of quarantine completion would count as alternatives to a testing requirement which local governments can require.

## V. CONCLUSION

Vaccine hesitancy threatens to impair the effectiveness of COVID-19 immunization efforts. Ensuring appropriate population acceptance of COVID-19 immunization will include tackling increased vaccine reluctance among a pandemic-weary society. Public health scientists should carefully assess the need for targeted interventions with university students since altering attitudes early in life may be more beneficial. Educational programs are undoubtedly critical in igniting an adequate awareness among people and communities about the need for preventative behaviors as both a right and responsibility.

## VI. RECOMMENDATIONS

The following suggestions for improving this study are based on the results of the researchers. The research is confined



to the community around the University of Saint Louis Tuguegarao, and hence the conclusions are limited to this demographic. The duration of the study is also limited as the pandemic is still ongoing. Thus, limiting the number of participants and data gathered.

The study was limited by the fact that it was done after the initiation of COVID-19 immunization. As a result, it may have underestimated the initial vaccination hesitancy of individuals who later changed to the vaccine acceptance group and were vaccinated.

The university must continue to educate and raise awareness to enhance student knowledge about the COVID-19 vaccine and to teach vaccine counseling skills. Focus should be on making interventions that discusses COVID-19 vaccination and promoting official sources of information to counter apprehension generated through untrusted sources of information.

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