

Covid-19 Vaccination of College Students in a State University in the Philippines

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Abstract— The COVID-19 pandemic has caused global disruptions which affected almost everyone in all sectors including education. Vaccination is believed to be one of the solutions to end the pandemic and is also considered a significant factor to re-open universities for limited in-person classes. This descriptive research aimed to determine the COVID-19 vaccination status of college students at Sorsogon State University in the Philippines. An online survey through the use of Google Form was utilized to determine the COVID-19 vaccination status of 177 third-year college students and identify the brand of vaccines, their mode of access to vaccines, and the reasons why they decided to be vaccinated. Findings revealed that the majority of the students are fully vaccinated. Some students have received at least one dose of the vaccine and few students were unvaccinated. They were vaccinated with Sinovac, Pfizer, Moderna, AstraZeneca, and Janssen. Most of the students accessed the vaccines through the scheduled vaccination in their respective barangays. They decided to be vaccinated for their safety and protection, in preparation for the limited face-to-face classes, for travel purposes, and compliance to work requirements. The Sorsogon State University community may encourage unvaccinated students through the conduct of massive information dissemination drive on vaccines and vaccination.

Keywords— COVID-19 Vaccination, Sorsogon State University, Sorsogon, Higher Education, Philippines.

I. INTRODUCTION

The COVID-19 pandemic has affected every human being in the world and caused disruptions in every aspect of people's lives. It brought major and unprecedented changes in various sectors including the field of education. This pandemic was caused by a novel coronavirus in 2019 which started at Wuhan City, Hubei Province of China. A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans (World Health Organization, 2021). The virus is known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the disease it causes is called coronavirus disease 2019 or COVID-19 (Mayo Foundation for Medical Education and Research, 2021).

The COVID-19 disease (COVID-19) is an infectious disease. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment (World Health Organization, 2021). However, some people especially those who are older, have underlying diseases and other vulnerable people may become seriously ill and require medical attention. That's why governments all over the world have imposed restrictions, lockdowns, travel bans, suspension of mass gatherings, and the like to prevent further transmission of the deadly virus.

On March 11, 2020, the World Health Organization Director-General announced that the outbreak could be characterized as a pandemic due to the rapid increase in the number of cases outside China. In the Philippines,

the first COVID-19 case was confirmed on January 30, 2020, in a 38-year-old woman who arrived from Wuhan (Duddu, 2020). Since then, there was a rapid increase in the number of COVID-19 cases in the country. On March 7, 2020, the Department of Health confirmed the local transmission of COVID-19 in the Philippines. With this, President Rodrigo Duterte on March 8, 2020, declared a state of public health emergency throughout the country through Proclamation No. 922. Hence, all government agencies in the Philippines have taken measures and actions to combat the various threats of COVID-19 in the entire country.

The Department of Health has issued several guidelines and advisories to be implemented in the workplace and in the public to prevent further transmission of the virus. People are advised to wear face masks, face shields, and personal protective equipment. Social distancing measures were also crafted and implemented all over the country. Mandatory quarantine measures and COVID-19 testing protocols were also implemented. Work-from-home arrangements and online learning modalities were also introduced.

However, the threats of COVID-19 continue and the need for the safety and protection of everyone is the highest priority. Hence, vaccination is deemed very much important to curtail and hopefully end this pandemic. According to El-Elimat (2021), vaccines are effective interventions that can reduce the high burden of diseases globally. COVID 19-vaccines are effective

and can reduce the risk of getting and spreading the virus that causes COVID-19 and can also help children and adults from getting seriously ill even if they do get COVID-19 (Centers for Disease Control and Prevention, 2021).

According to the World Health Organization or WHO (2021), there are several COVID-19 vaccines validated for use by WHO or given Emergency Use Listing (EUL), and the first mass vaccination program started in early December 2020. In addition, the WHO (2021) mentioned that several different types of potential vaccines for COVID-19 have been developed, including inactivated or weakened virus vaccines, protein-based vaccines, viral vector vaccines, and RNA and DNA vaccines. At present, several COVID-19 vaccines have obtained WHO EUL namely: Pfizer, AstraZeneca, Janssen, Moderna, Sinopharm, Sinovac, Biotech, and Sputnik V. These vaccines were also approved for utilization by the Philippine's Food and Drugs Administration.

Vaccines are a technology that humanity has often relied on in the past to bring down the death toll of infectious diseases (Our World In Data, 2021). However, according to WHO (2021), it's not vaccines that will stop the pandemic, it's vaccination. Hence, everyone must be given fair and equitable access to vaccines to protect their people. As of 6 December 2021, a total of 7,952,750,402 vaccine doses have been administered worldwide (World Health Organization, 2021).

Republic Act No. 11525 or the COVID-19 Vaccination Act of 2021 was signed by President Duterte on February 26, 2021, to expedite the vaccine procurement and administration process and provide funds for the implementation (Department of Health, 2021). On March 1, 2021, the Philippine government started distributing the first shots of a coronavirus vaccine (Tomacruz, 2021). Dr. Gerardo Legaspi, director of the University of the Philippines-Philippine General Hospital was the first to get the vaccine (Tomacruz, 2021). As of December 6, 2021, a total of 92, 752,986 doses were administered in the Philippines (Department of Health, 2021). Efforts were made to encourage people to get vaccinated. Incentives and other rewards were crafted to get everyone's cooperation and participation in the COVID-19 vaccination program of the country.

Sorsogon State University (SorSU), the former Sorsogon State College (SSC) was converted into a state university under Republic Act No. 11088. It is one of the many state universities in the country that was heavily affected by this pandemic. At present, SorSU is still implementing the flexible learning system to continue

teaching and learning during this time of pandemic. On the other hand, the Commission on Higher Education and the Department of Health issued Joint Memorandum Circular No.2021-001 on the gradual re-opening of campuses of HEIs for limited face to face classes during the pandemic for specific programs that require hands-on experience.

These programs include medicine, nursing, medical technology, physical therapy, midwifery and public health. On September 21, 2021, Executive Secretary Salvador Medialdea issued the authority for face-to-face activities in the following areas: Engineering and Technology programs, Hospitality/ Hotel and Restaurant Management, Tourism/ Travel Management, Marine Engineering, and Marine Transportation (Commission on Higher Education).

The Sorsogon State University is also considering the limited face-to-face classes in the coming school year. But the Commission on Higher Education (CHED) stated on December 1, that only fully vaccinated students could join limited face-to-face classes (Magsambol, 2021).

CHED Commissioner Prospero De Vera stated that the decision to limit the participation of face-to-face learning in college only for fully-vaccinated instructors and students is not discriminatory but a means to protect the vaccinated faculty and students," (Philippine News Agency, 2021). With this, there is a need to conduct a study on the vaccination status of SorSU students that will serve as guide for the policy makers of the university in coming up with guidelines and decisions on the implementation of limited face-to-face classes in the coming academic years.

II. OBJECTIVES OF THE STUDY

The main purpose of the study is to determine the COVID-19 vaccination status of college students in a state university in Sorsogon. Specifically, it aimed to determine the COVID-19 vaccination status of students, identify the brand of vaccines, and their mode of access to vaccines. The feedback of students on vaccination and the reasons why they decided to be vaccinated are also gathered.

III. METHODOLOGY

Research Design

The descriptive research was utilized to determine the COVID-19 vaccination status of college students in Sorsogon State University through the conduct of an online survey.

Respondents

This study involved 177 third-year Bachelor of Technology students of Sorsogon State University who were chosen through stratified random sampling from seven enrolled sections this school year 2021-2022. The respondents were Electrical, Food Service Management, Welding and Fabrication, Garment, Civil, and Electronics Technology majors. Figure 1 presents that 54% of the respondents are female while 46% are male.

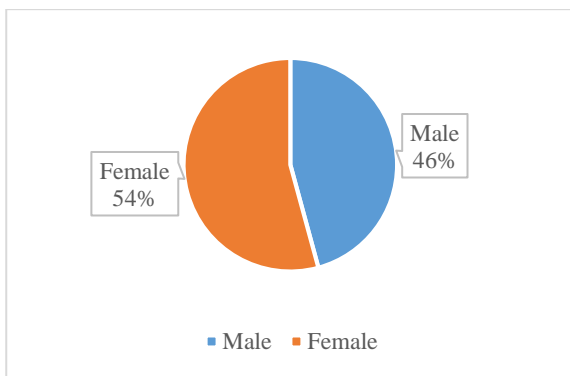


Figure 1: Respondent’s Profile in Terms of Sex

In terms of age, 44% of the respondents are 21 years old while 26% of them are 20 years old. In addition, 18% of the respondents are 22 years old, 5% of them are 23 years old, and 4% of them are 24 years old. Meanwhile, 3% of the respondents are 25 years old and only 1% of them are above 25 years old.

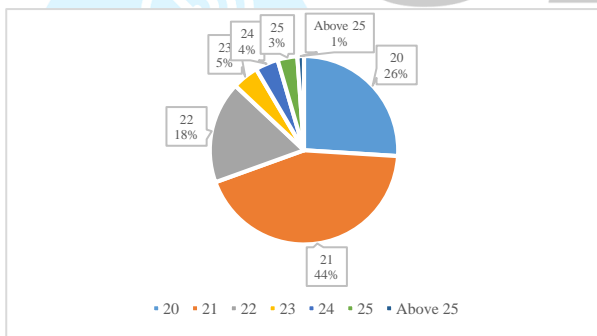


Figure 2: Respondents Profile in terms of Age

It should be noted that this sample does not represent the entire population, but it is considered acceptable to demonstrate the purpose of this study. The authors do not intend to generalize the results but to determine the COVID-19 vaccination status of selected students and their feedback on vaccination during this time of the pandemic.

Data Collection

The data were collected using an online survey method through Google Form from December 2 to 6, 2021. The link to the form was sent through the Facebook group

chat of the students. The university, through its Interim Guidelines for SSC RDE Projects in the new normal, has identified online survey through the use of Google Form as one of the approaches in implementing researches during this time of pandemic. The online survey in this study consisted of questions on the following: (1) profile of the respondents in terms of age and sex, (2) vaccination status, (3) vaccine brands, and (4) mode of access to vaccines. The online survey also included open-ended questions regarding the importance of vaccines and the reasons why they decided to be vaccinated.

Data Analysis

The statistical tool used in the study was mainly descriptive. Frequency count and percentages were the statistical tools used in analyzing the profile of the respondents and their vaccination status. The frequencies and percentages results have been transformed in graphical form for the pictorial representation of the results of the online survey. Meanwhile, the feedback of respondents regarding the importance of vaccines and the reasons for getting vaccinated were analyzed qualitatively.

IV. RESULTS AND DISCUSSION

A. COVID-19 Vaccination Status of College Students

Figure 3 presents the vaccination status of the respondents. The vaccination status in this study is categorized into fully vaccinated, at least one dose, and unvaccinated. Based on the survey, 100 respondents, or 56% are fully vaccinated.

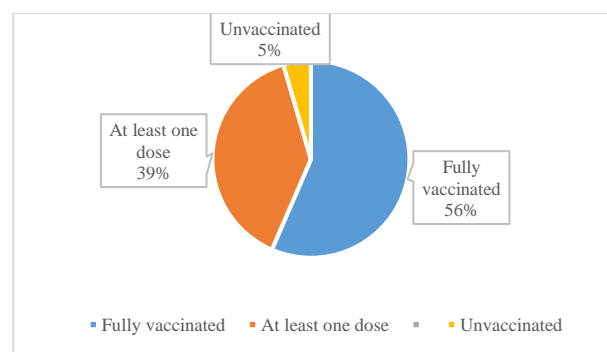


Figure 3: COVID-19 Vaccination Status of College Students

A fully vaccinated person has received either a single-dose vaccine or both doses of a two-dose vaccine (New York Times, 2021). COVID-19 vaccination is a safer way to help build protection and once fully vaccinated, people can start doing more (Centers for Disease

Control and Prevention, 2021). One of the fully vaccinated respondents mentioned that:

“Kung sakaling tamaan ako ng Covid-19 or sino man sa loob ng aming bahay ay hindi kami mababahala sa malalang pwedeng mangyari saamin” (If Covid-19 hits me or anyone in our house, we won't have to worry about what could happen to us.)”

Another fully vaccinated respondent wrote the importance of vaccination:

“Kailangan nating magpabakuna upang magkaroon tayo ng proteksiyon laban sa COVID-19 at para maibalik na din sa normal ang ating bayan,” (We need to get vaccinated so that we can have protection against COVID-19 and so that our country can return to normal.)

Meanwhile, 69 respondents or 39% have received at least one dose of a vaccine. Eight respondents or 5% are unvaccinated. One of the unvaccinated respondents wrote:

“Kakagaling ko lang po kasi sa sakit kaya hindi po muna ako nagpabakuna pero pag ok na po ako at malakas na ulit magpabakuna din po talaga ako” (I just recovered from an illness so I didn't get vaccinated first but when I'm ok and strong again I'll definitely get vaccinated).

Another unvaccinated respondent wrote:

“Ayaw ko magpabakuna dahil sa posibleng negatibong epekto nito” (I don't want to be vaccinated because of the possible negative effects).

Another unvaccinated respondent mentioned that:

“Ayaw po ng pamilya ko na magpabakuna ako dahil baka malala yung epekto sa akin ng vaccine” (My family doesn't want me to get vaccinated because the vaccine might have a bad effect on me).

This study revealed that the majority of the respondents are fully vaccinated. They intentionally get vaccinated for their safety and protection. They are aware of the benefits of being vaccinated. However, few respondents were unvaccinated. They were hesitant to get the vaccine because of the possible negative effects to them. Although a safe and effective vaccine holds the greatest promise for resolving the COVID-19 pandemic, hesitancy to accept vaccines remains common (Kaplan and Milstein, 2021).

B. Brand of COVID-19 Vaccines Administered to the Students

Figure 4 shows the brand of COVID-19 vaccines administered to the respondents. Sixty-three respondents or 37% received Sinovac. Fifty-five respondents or 32% received the Pfizer vaccine. Twenty-five respondents or 15% received the Moderna vaccine. While 23 respondents or 14% received AstraZeneca and three respondents or 2% received Janssen. The remaining 5% were those who did not receive yet any brand of vaccine.

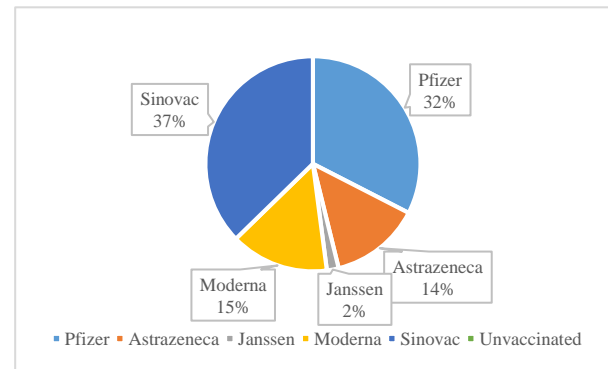


Figure 4: Brand of COVID-19 Vaccines Administered to the Students

The study revealed that there are five brands of vaccines that were administered to the students. These are Sinovac, Pfizer, Moderna, AstraZeneca, and Janssen. The Sinovac vaccines were granted by Philippine Food and Drug Administration (FDA) EUA (Emergency Use Authorization) approval on February 22, 2021, and use inactivated virus as the technology platform (Department of Health, 2021). Pfizer and Moderna vaccines were also granted EUA approval on January 14, 2021 and May 5, 2021, respectively. Pfizer and Moderna vaccines use an mRNA technology platform (Department of Health, 2021). Meanwhile, the AstraZeneca and Janssen vaccines were also granted EUA approval on January 28, 2021, and April 19, 2021, respectively. Both use viral vector (non-replicating) technology platforms (Department of Health, 2021).

Regardless of the brand, vaccines are proven to protect an individual from severe illness brought by the COVID-19 virus. DOH reiterated that all COVID-19 vaccines issued with Emergency Use Authorization (EUA) by the Philippine Food and Drug Administration (FDA) are safe and effective (Department of Health, 2021). Safe and effective vaccines are important tools in combination with other measures to protect people against COVID-19, save lives and reduce widescale social disruption (World Health Organization, 2021).

C. Students' Access to COVID-19 Vaccines

Figure 5 shows how the students accessed the COVID-19 vaccines. It can be noted that 78 respondents or 46% were vaccinated through appointments or schedules in their respective barangays. Twenty-three respondents or 14% got their vaccines through appointments or

schedules in other rural health units. Meanwhile, 58 respondents or 34% obtained their vaccines through walk-in in any vaccination site, and 6% or 10 respondents got their vaccines through the vaccination schedule of Sorsogon State University. The remaining 5% were those who did not receive yet any brand of vaccine.

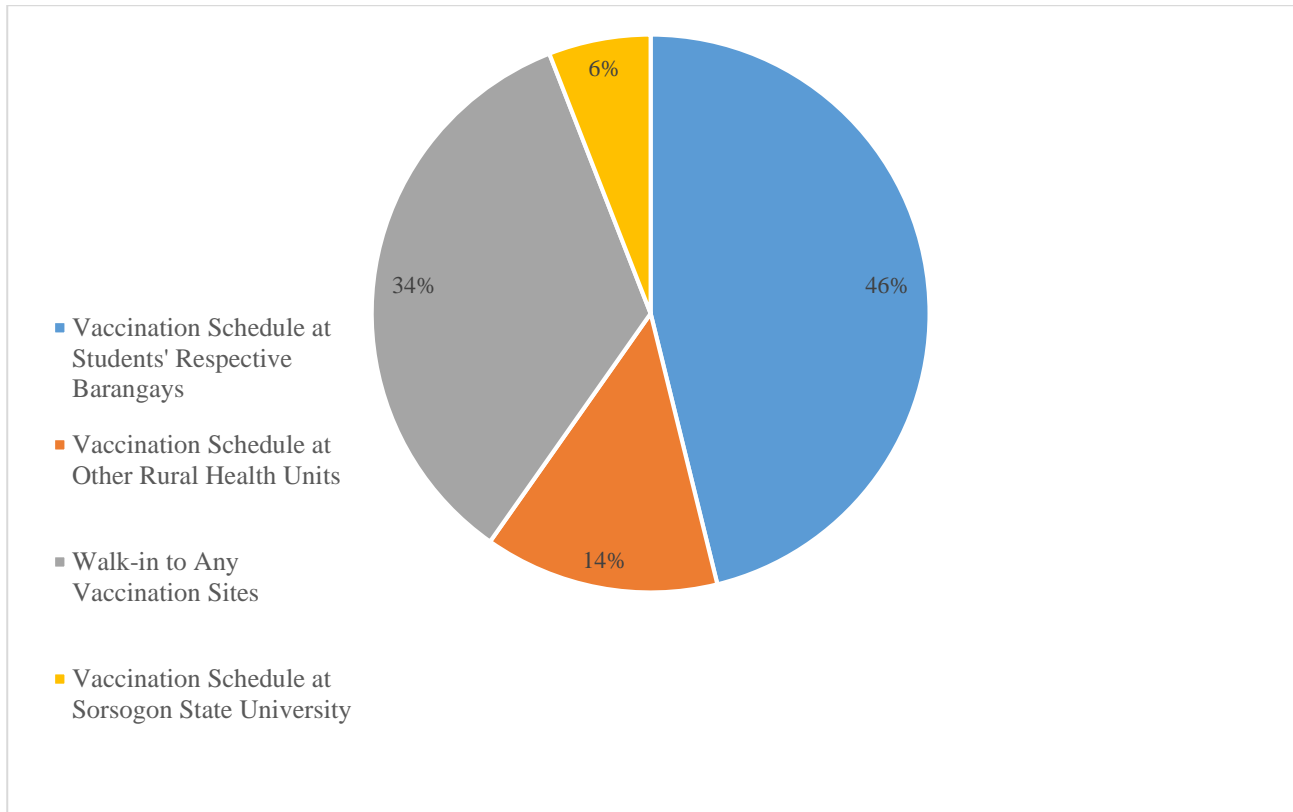


Figure 5: Students' Access to COVID-19 Vaccines

The result implies that the most common way of accessing COVID-19 vaccines by the students is through the Rural Health Units (RHUs) of the local governments. The health personnel of the RHUs are tasked to implement activities on vaccine administration. On the other hand, some students visited as walk-in clients in any vaccination site to get vaccinated. Very few respondents participated in the vaccination schedule of Sorsogon State University.

D. Reasons for Getting the Vaccines

The respondents' reasons for getting vaccinated were categorized into four namely: for safety and protection, in preparation for the upcoming limited face to face classes, for travelling purposes and work requirement.

For Safety and Protection

Majority of the respondents believe that COVID-19 vaccines are effective and offer protection to the

vaccinated individuals. Some respondents wrote the following reasons:

“Nagpabakuna ako upang makaiwas sa mas malalang epekto ng COVID at upang maprotektahan ko ang aking sarili at ibang tao sa pagkakalat nito” (I got vaccinated to prevent the more serious effects of COVID and to protect myself and other people from its transmission).

“Para makaiwas magkaroon ng sakit na kumakalat ngayon o mas kilala sa COVID-19, at hindi lang para sa sarili ko kundi para sa buong pamilya ko at sa mga taong araw-araw kong nakakasalamuha” (To avoid getting the disease that is spreading now which is better known as COVID-19, and not just for myself but for my whole family and the people I meet every day).

“Nagpabakuna ako kasi kailangan para sa kaligtasan ko, hindi lang para sa akin kundi para sa kaligtasan ng lahat. Pero kahit my bakuna tatablan ka pa rin ng virus kaya sumunod sa mga protocol” (I got vaccinated

because it is necessary for my safety not only for myself but for the safety of everyone. But even with vaccine, you will still be infected with the virus, so follow the protocols).

“Upang maprotektahan at makaiwas laban sa mga kumakalat na virus , at upang bumalik na sa dati ang lahat na nakasanayang gawin” (To protect and steer against the spread of viruses, and to return to normal all that we used to do).

“Para magkaroon ng sapat na proteksyon laban sa Covid 19 Virus , at sa layuning makiisa sa isinusulong ng pamahalaan katuwang ang iba pang sektor ng gobyerno sa "RESBAKUNA" (In order to have adequate protection against the Covid-19 Virus, and to join the government's efforts in collaboration with other government sectors in "RESBAKUNA" program).

In preparation for the upcoming limited face to face classes

The Commission on Higher Education (CHED) stated on December 1, that only fully vaccinated students could join limited face-to-face classes (Magsambol, 2021). The respondents are also aware that one of the requirements to join the limited face-to-face classes is that the students are fully vaccinated. This was revealed in their responses to the survey. Respondents wrote the following reasons:

“Nagpabakuna ako dahil kailangan sa darating na pasukan sa Sorsogon State University at kailangan ng mga estudyante na magpabakuna para maging ligtas sa kumakalat na sakit” (I got vaccinated because it is necessary for the upcoming in-person classes at Sorsogon State University and students need to be vaccinated to be safe from the spread of the disease).

“Labag man sa aking puso at kalooban, nagpabakuna ako para makaattend ng face to face class na malapit nang maganap” (Even if it's against my will, I got vaccinated to attend a face-to-face class that was about to take place.)

“Pinili ko na lng magpa bakuna kasi need yun para maka attend ng limited face to face , at para na din sa pagsunod sa requirements sa pag klase” (I chose to get vaccinated because I need it to be able to attend a limited face-to-face, and also to follow the class requirements).

“Dahil po kakailanganin ito sa darating na face to face classes na ang lahat ng estudyante ay bakunado. Dahil po mas magandang mag aral kapag face to face upang lubos na maintindihan and leksyon. At isa pa po, sabi

hindi daw maaaring lumabas kapag walang bakuna lalo na sa mga pampublikong lugar” (Because it will be necessary for the coming face-to-face classes that all students are vaccinated. Because it is better to study face to face to fully understand the lesson. And one more thing, others said it is not possible to go out without vaccination, especially in public places).

“Dahil sa kailangan para makasabay sa face-to-face classes” (Because of the need to keep up with face-to-face classes).

Traveling purposes

Travelling to other places has been largely affected by this pandemic. Border control measures both locally and internationally were strictly implemented. Travel bans and other restrictions were done to avoid further transmission of the COVID-19 virus.

But a year after coronavirus restrictions were first imposed, the Philippines has been opening up tourism destinations to help drive local travel (Rappler, 2021). The respondents are aware that once fully vaccinated, traveling will be a lot better this time. Some of the respondents wrote:

“Para makapunta ako sa mga department store, mall, friends and family na nasa malayong lugar” (So that I can go to department stores, malls, friends and family that are far away).

“Kailangan ang bakuna kasi nirerequire na para sa sa pag travel” (The vaccine is needed because it is already required for travel")

“Minsan kasi kailangan na ang vaccination card para sa pagtravel” (Sometimes you need a vaccination card for travel")

In the Province of Sorsogon, fully vaccinated and asymptomatic tourists need not present negative test results but a vaccination card or certificate and a confirmed reservation from a tourist establishment. This is based on Executive Order No. 29-2021. Furthermore, returning residents don't need to undergo quarantine or RT-PCR Testing for as long as the household members are fully vaccinated.

Work Requirement

Vaccination cards and certificates are now being required for work. Some of the respondents are working students. They wrote:

“Kailangan po magbakuna kasi hinihingi na rin sa trabaho” (You need to get vaccinated because it is also required at work).

“Kailangan po sa trabaho kaya ako nagpabakuna” (I need it for my job so I got vaccinated).

V. CONCLUSIONS AND RECOMMENDATIONS

Based on the findings, the researchers conclude that majority of the college students surveyed are fully vaccinated. There were some students who have received at least one dose of the vaccine and a few students were unvaccinated. They were vaccinated with Sinovac, Pfizer, Moderna, AstraZeneca, and Janssen. Most of the students accessed the vaccines through the scheduled vaccination in their respective barangays. They decided to be vaccinated for their safety and protection, in preparation for the limited face-to-face classes, for travel purposes, and for compliance with work requirements. The students are also aware of the importance of vaccines.

The Sorsogon State University community may encourage unvaccinated students through the conduct of massive information dissemination drive on vaccines and vaccination. Also, the SorSU officials may continue working with the local government units to facilitate more vaccination activities. Since the sample of the study is limited, future research may be conducted to determine the vaccination status of more students from other courses and year levels.

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