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Ready Intern One: The Experiences of Students on Virtual Pharmacy Internship During the Covid-19 Pandemic in the Philippines

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A B S T R A C T

The impact of the COVID-19 pandemic has brought up a complex mixture of opportunities and threats in education worldwide. It has forced academic institutions to online modalities including pharmacy internship. This research aims to determine interns' experiences, barriers and challenges, ways of overcoming and future reforms on virtual pharmacy internships. A qualitative study of conventional content analysis type was conducted in 2022 at selected Schools of Pharmacy in the Philippines. Purposive sampling technique was used to include 13 participants in a semi-structured virtual interview using online video conferencing applications such as Zoom and Google Meet. Data were analyzed using thematic analysis. There were 16 themes identified. Ample time for self-learning, utilizing innovative learning methods and strategies, and developing essential knowledge and skills for pharmacy practice were the interns' experiences. However, they also encountered challenges like difficulty in academic adaptability during their virtual pharmacy internship. Despite that, self-sufficiency and various forms of support enabled the interns to overcome the challenges and barriers. Finally, the interns gave recommendations that may help in the enhancement of virtual pharmacy internships. Therefore, the findings of this study will be beneficial in adding new perspectives, helping understand how to meet the needs of an internship, and improving the delivery of virtual pharmacy internships in the future.

Keywords: virtual internship, virtual pharmacy internship, pharmacy interns, experiences of pharmacy interns

1. Introduction

The impact of the COVID-19 pandemic has brought up a complex mixture of opportunities and threats in medical and pharmacy education worldwide [1]. Lockdowns and movement restrictions caused most institutions worldwide to close, which posed a great challenge because it can significantly affect the performance and competency of students who are planning to become future healthcare professionals [1]. In addition, there is also insufficient information regarding experiences from virtual pharmacy internships due to limited studies conducted and made available [2]. This can supposedly help the academe and the students themselves improve and adapt to the new approach of their internship program.

In Nigeria, the need to practice social distancing and the need to abide strictly implemented lockdown policies significantly affect internships, clinical rotations, and graduation of pharmacy and medical students [1]. As a result, e-learning in modern education has been encouraged and the interns are forced to remain at home until the pandemic ends [1]. Interns were then reported to have faced a dilemma because some schools, including them, have trouble adapting to the e-learning method [1]. Nevertheless, some institutions such as the University Pharmacy in the Federal University of Santa Catarina, Brazil have still enabled continued access in medical and experiential learning to pharmacy interns but with changes and adjustments in their routines so that they can practice social distancing [3]. Although they were also affected by this paradigm shift of learning, students still developed skills from their new internship setup [3].

In the Philippines, the continuous surge of COVID-19 cases has led the pharmacy interns to experience pharmacy internships in their residences [4]. In the middle of the pandemic, the Commission on Higher Education (CHED) issued the Joint Memorandum Circular No. 2021 - 001 in February 2021, discussing the restricted face-to-face classes for higher education schools [5]. However, the Pharmacy program was not included. In another memorandum, CMO No. 5 series of 2021 released last April 2021, limited face-to-face internship for experiential pharmacy practice has already been implemented as long as institutions follow the set guidelines, which involve campuses being under low-risk areas with strict monitoring from CHED Regional Offices [4]. However, COVID-19 cases are increasing daily in the country due to new viral strains appearing [6]. The limited face-to-face internships will still not be enforced if the institutions already have a low-risk quarantine status. Thus, virtual pharmacy internships are still practiced for the time being.

Therefore, the limited literature about the interns' experiences in their virtual pharmacy internship across the nation is the reason that prompted the researchers to fill the literature gap on this particular area of interest. The conduct of this study can shed light on the lived experiences of pharmacy interns on virtual internships. Identifying their experiences is vital because there is still no assurance when the COVID-19 pandemic will be over and when the pharmacy internship program in all schools will ultimately return to the traditional face-to-face setup. Interns themselves encountered first-hand how the pandemic affected their education; thus, extracting information from them will be helpful for the academe to formulate more ways to improve the conduct of the virtual internship program in their respective schools. It includes methods such as utilizing various online platforms, pre-recorded lectures, videos, simulation cases, online evaluation activities, and many more [7].

The findings of this study provide indispensable facts about the experiences of the pharmacy interns on virtual internships during the COVID-19 pandemic in the Philippines. Thus, this study benefits the pharmacy interns by meeting the need for an internship and enabling them to become competent future pharmacists, which will also benefit the community. Further, this study benefits the clinical instructors, school, and pharmacy administration as a reference point for effectively conducting virtual internships to meet the demands and expectations of pharmacy student interns and construct effective techniques for delivering virtual internships. Lastly, future researchers benefit from this study as a guide and reference tool for future research on virtual pharmacy internships. The researchers aimed to conduct this study because it benefits many individuals by providing additional knowledge and a deeper understanding of the lived experiences of pharmacy interns on virtual internships during the COVID-19 pandemic in the Philippines.

2. Methods

2.1 Research Design

This study used a qualitative phenomenological design. The researchers conducted in-depth interviews with the participants. According to Creswell, the prime goal of a qualitative phenomenological study is to interpret the essence of a particular phenomenon [8]. A phenomenological study focuses on the meaning of an experience, narrative, or behavior [9]. In this study, the phenomenological study design was utilized to determine the experiences of the interns, challenges encountered during the virtual internships, and ways of overcoming the challenges experienced with this kind of set-up. The philosophical theory applied in this phenomenological study is the transcendental phenomenology of Edmund Husserl concerning experiences and a method to classify and analyze phenomenological data [10]. According to Moerer-Urdahl and Creswell, transcendental phenomenology focuses on the entirety of the experience, seeks the gist of experiences, and views experience and behavior as a unified and inseparable relationship of subject or object [10]. The philosophy of Transcendental phenomenology was used in this study because it gave the researchers a systematic and rational outcome that has shown an essential explanation of the experience of the pharmacy interns in their virtual internship.

2.2 Sampling Technique / Design

The researchers used the purposive sampling technique to select the participants based on this study's inclusion and exclusion criteria. Purposive sampling is a method that relies on the researcher's judgment when selecting members of the population to take part in the study [11]. In this study, the researchers dealt with the experiences of pharmacy student interns in their virtual internships. Thus, purposive sampling was used in this study because it allowed the researchers to extract a lot of information from their acquired data and helped them obtain specific information from a small sample representing the whole population. There were a total of 13 participants interviewed which comprised of four pharmacy interns from Luzon, two pharmacy interns from Visayas, and seven pharmacy interns from Mindanao. According to Creswell, five to 25 participants are ideal for the phenomenological study [12]. Moreover, the principle of data saturation was applied in determining and justifying the final sample size for the study. Data saturation identifies when a study's data is sufficient to produce a solid and reliable knowledge of the topic under study [13].

2.3 Population

The COVID-19 pandemic has changed the whole world. All of the universities and colleges worldwide have made interventions to continue giving education to their students. The Philippines is not excluded from this phenomenon as the country is keeping up with the help of the technological advancements available to provide online classes to students from urban to rural areas despite the pandemic. The target population was fourth-year virtual pharmacy interns in the Philippines to allow the researchers to study their virtual pharmacy internships.

2.3.1 Inclusion Criteria

The participants included in this study were enrolled as fourth-year pharmacy interns in the Philippines during the school year 2021–2022 in the first semester. They have completed at least the first semester of a virtual pharmacy internship program, having a final grade reflected in their report cards at their respective schools, and were regular students in the Philippines. The participants were either Filipino nationals or international students, male or female. They were 20 years old or older. Fourth-year repeating students were included, provided they took their repeat subject before their internship. Thus, the failed subject did not interfere and simultaneously occurred with the ongoing virtual internship. "Second courses," or those who took up a bachelor's degree, graduated or shifted, and then enrolled in BS Pharmacy and were now interns, were also included in the study.

2.3.2 Exclusion Criteria

The participants excluded from this study were those non-enrolled fourth-year pharmacy students who discontinued or withdrew from their enrollment and did not finish the first semester. Irregular students, specifically those who still need to retake their failed subjects but are supposed to be fourth-year students, will be barred from participating in the study. Students who are still taking subjects from their previous college semesters and transferees, particularly those who transferred during their ongoing virtual internships, were also excluded.

2.4 Locale of the Study

The research was conducted in the Philippines, choosing schools from the three islands—Luzon, Visayas, and Mindanao—that met the criteria of having been able to conduct a virtual pharmacy internship. The researchers chose the Philippines as the place of implementation since it is timely and relevant to study the undergoing virtual pharmacy internship in this country. The researchers' mentor helped communicate with the Deans of Pharmacy and identify the pharmacy schools conducting virtual pharmacy internships during the COVID-19 pandemic.

2.5 Instrument

The researchers conducted this study to improve the virtual internship of pharmacy students in the Philippines during the COVID-19 pandemic through their lived experiences. First, the participants were asked if they were willing to participate or not in the study. Once the participant agreed to participate in the study, an in-depth interview was conducted, which lasted for 20–30 minutes. Some interviews reached around 40 minutes. In addition, a semi-structured questionnaire containing 11 open-ended questions was validated by three (3) credible validators before it was used for the interview. Furthermore, electronic devices such as laptops, desktops, and cellphones were used to capture, record, and document the interview. In addition, for the actual interview, the researchers used online video-conferencing applications such as Google Meet or Zoom, whichever was available to the participant.

2.6 Data Collection Procedure

The researchers gathered and conceptualized interview guide questions related to the topic of interest and performed the validation and reliability testing by three credible research questionnaire validators to ensure a smooth flow during the interview. The thesis proposal was presented before a panel, and revisions were made based on their suggestions and corrections. The revised paper was submitted to the Institutional Ethics Review Committee for ethics review and approval. Then, a permission letter to conduct the study was sent to various colleges or university schools in the Philippines with a Bachelor of Science in Pharmacy course. In line with this, there were schools identified from Luzon, Visayas, and Mindanao.

Once approved, the informed consent was sent to the Deans of Pharmacy to assure them that the researchers would keep the confidentiality of their students. The informed consent discussed their roles in the study, the reason for selecting participants, potential risks and benefits, protection of their privacy if they wish to participate in the study, and assurance that confidentiality will be maintained. The informed consent also clearly stated that the participants have the right not to join the study and withdraw from the study's conduct if they felt uncomfortable. After thoroughly evaluating the informed consent, the Dean of Pharmacy disseminated it to their students for a specific school. Then, if their students were willing to participate in the interview, they reached out to the principal investigator of this study via email. Consequently, upon receiving the participant's emails, the researchers asked for their names, Facebook Messenger names, and email addresses as long as the interns agreed to give them their contact information. The participants' contact information was only used for research purposes, and the Deans of the Pharmacy did not have access to the names of the participants and their contact information to protect the confidentiality of participants.

There were 13 participants, four from Luzon, two from the Visayas, and seven from Mindanao. These participants were chosen based on those who fit the inclusion criteria set by the researchers. A purposive sampling technique was used in recruiting the specific target participants. Purposive sampling is a non-probability sampling technique in which the researchers rely on their judgment in selecting participants. Moreover, the principle of data saturation was also applied to determine and justify the final sample size for the study.

Upon gaining full consent from the participants, they were given a brief orientation about the research study and the processes involved during the interview. This was to make it more apparent to the participants what the study was about and what the interview covered. Furthermore, this was done to ensure that the participants fully understood the purpose of the research and their involvement in the said study. The researchers also let the participants state whether they approved of participating or would like to withdraw from the data gathering before the in-depth interview was conducted. Then, the researchers led them into a one-on-one interview where one researcher acted as the interviewer. The whole interview took place over two weeks. It was conducted via online video conferencing technologies such as Google Meet, Zoom, or other similar platforms available to the participants.

Debriefing by a guidance counselor or psychologist was not done because the research did not involve sensitive topics. However, the participants were allowed to ask questions and raise concerns regarding the interview. Additionally, after the interview, the researchers informed the participants that they could access their records and data. They also had access to the study results. It was done by a formal letter stating the request to acquire their records, data collected, or results of this study, which was sent to the email address of the study's principal investigator. Only the participants from various schools were given access to the results of this study.

The interns were scheduled each day based on the participants' availability. The participants' questions were focused on their experiences in the virtual pharmacy internship program, specifically on their preparations, challenges, ways of overcoming those challenges, and recommendations. It allowed the

researchers to deeply understand the participants' experiences regarding their virtual pharmacy internship during the COVID-19 pandemic. Before the interview, the participants were asked for their permission to record the interview as part of the ethical protocol.

Once the interviews with all the participants were done, the researchers gave them a token of appreciation. The token of appreciation was not revealed during the brief orientation portion or before the conduct of the interview to avoid biases. After that, the researchers, together with a credible transcriber, transcribed and translated the interviews. As well as working with an analyst on thematic analysis, they discussed and analyzed the study's findings using thematic analysis. Lastly, the researchers presented the research paper before a panel of evaluators and made final revisions based on the suggestions and corrections.

2.7 Limitations of the Study

The general intent of this study was to identify the lived experiences of the pharmacy interns in their virtual internships. The study aimed to identify the experiences of the pharmacy interns, the challenges and barriers experienced, their coping mechanisms, and their recommendations for the virtual internship program. The target participants of this study were fourth-year-level pharmacy interns who have undergone virtual internships. The research took place in the Philippines. Furthermore, the researchers had only selected participants from Philippine pharmacy schools, specifically from the three island groups—Luzon, Visayas, and Mindanao.

The study, specifically the data gathering period, was conducted from January 2022 to May 2022. The target population was virtual pharmacy interns—those enrolled in a virtual internship program during the COVID-19 pandemic all over the Philippines. The study was conducted in a qualitative, non-experimental research design. Therefore, there were no variables in this study.

It specified that the findings might not apply to other virtual internship programs from a different course or to individuals who were enrolled in a virtual pharmacy internship program but not during the COVID-19 pandemic. Additionally, the study did not cover supposed fourth-year pharmacy interns who were not enrolled in the virtual internship program of their respective schools.

2.8 Data analysis

The researchers, guided by a credible analyst, used thematic analysis to analyze the qualitative data from the in-depth interviews. The thematic analysis involved identifying, analyzing, and reporting themes within data [14]. Furthermore, since the researchers were working with verbal data gathered from interviews, the data needed to be transcribed into a written form before proceeding to the actual analysis. A professional transcriber transcribed the verbal data for the researchers. After having the transcription, the non-English data from the interview transcript was translated into the English language. Once transcription and translation were done, the following steps were performed:

The first was to familiarize the data. The researchers had done a repeated reading of the transcript and some note-taking to gain familiarization with the entire data set [14].

The second was to generate initial codes. The researchers systematically analyzed the entire data set, identified and extracted interesting details relevant to the research questions, and organized or coded these data into meaningful groups [14].

The third was to search for themes. The researchers sorted the different codes into possible themes and gathered all the codes that fit within each identified theme [14]. The coding used qualitative data analysis software, NVivo, to analyze the text, audio, video, and picture data, such as interviews [15].

The fourth was to review the themes. The researchers had gone through all the data extracts in each theme and checked if they were coherent and if the individual themes matched together and formed a coherent whole. If the initial theme seemed inappropriate or the extracted data did not fit a specific theme, the researchers either modified the theme, created a new theme, removed the theme, or placed the extracted data in another existing theme where it fitted [14].

The fifth was to define and name the themes. The researchers created a detailed analysis for each theme by organizing the gathered data extracts per theme that followed a coherent and consistent narrative flow. Additionally, each theme was further refined to ensure that none overlapped. During this step, the researchers also finalized the titles of the themes [14].

Lastly was to produce a report. The researchers created an analytic narrative write-up of the thematic analysis of the central research questions. The write-up contained the final themes, with each theme having sufficient data extracts that supported its prevalence [14].

2.9 Ethics Consideration

The conduct of research required not only expertise and diligence but also honesty and integrity. Thus, ethical considerations were made to ensure that the participants' rights were protected and an ethical study was attained. Specific rights were observed, such as the rights to self-determination, anonymity, confidentiality, and informed consent to maintain ethical standards.

Manti and Licari (2018) defined the consent form as a participant's voluntary agreement to participate in a study after receiving all necessary information. Informed consent was given to the participants through email. The email explained their roles, the reason for participant selection, potential risks and

benefits, and privacy protection if they chose to participate in the study. Thus, the participants could decline or withdraw from the research without penalty.

Participants were given information regarding the study's objective, the procedures for gathering data, and assurances that there would be no associated risks or expenses. The researchers were appreciative of any voluntary cooperation. Consequently, the researchers gave P100.00 worth of load to the participants as a token of appreciation for their involvement when the data collection was completed. However, participants were not informed beforehand that a token of appreciation was given to avoid biases during the interview.

Throughout the study, anonymity and confidentiality were maintained. Anonymity was ensured by not revealing the participant's identity, including the participant's name, and by using numbers as representation instead.

The researchers asked for the permission of the participants to record the entire interview as part of the documentation and ethical purposes. The information provided by the participants was not publicly reported in a way that identified the participants [17]. The researchers allowed the participants to access their records to verify their accuracy and preciseness. Only the participants from various schools had access to the results of this study. The participants can access the study by submitting a formal letter stating their request, which will be sent to the email address of the principal investigator. Confidentiality was also practiced in this study by keeping the data collected privately. The researchers had their gadgets such as laptops, cellular phones, tablets, and computers that were protected with passwords which made them not accessible by anyone. In addition, data collected from the participants were kept on a flash drive that will be deleted when the study is completed.

Participants were subjected as autonomous agents in maintaining the ethical principle of self-determination. Manipulation of design and method, including data, was not done. Researchers kept and assessed the collected data and were impartial with their preferences. Information about the researchers was provided in case of questions or complaints. To ensure that the ethical procedures were followed, the researchers secured approval from the ethical committee of San Pedro College, Davao City, Philippines.

3. Results

The gathered data from the participants was organized and analyzed to formulate themes from their responses during the interview. In addition, the researchers generated the main themes based on the answers they had given. The main themes were:

3.1 Ample time for self-learning

The first theme that was evidently shown in the data was the experiences of pharmacy interns who had ample time for self-learning. This can be seen from the significant statements of the participants. This is supported by the following verbatim:

"Academically, I have more time to study and relearn the lectures because I have the ample time to review and rewatch it again and again." - Participant 2

"For the most part of it, I think I really learned a lot. It's kind of a convenient since classes are only synchronous. You get to choose when you want to study, when you want to perform tasks that were given to you - as long as you finish them on time. There's only a little pressure involved. You're not getting pressured to do a lot of things at once." - Participant 6

"Learn what is not given to you but learn to be flexible and take advantage of the time. You can go to sleep if there's no internet connection. Or do self-study and write notes if you have obtained a copy of the lessons. This will optimize your time and accomplish other tasks. Making the things that you need to accomplish to keep you on track." - Participant 7

These statements from participant 2, participant 6, and participant 7 show that the pharmacy interns had ample time to study during the virtual pharmacy internship since they were given recorded lectures and handouts that they could use for reviewing. In addition, the pharmacy interns also had the opportunity to optimize their time in doing the tasks assigned to them. As a result, the pharmacy interns felt less pressure to study their lectures and complete their tasks because they had enough time to do it.

3.2 Utilizing innovative learning methods and strategies

This theme suggests that the virtual training of pharmacy interns during the COVID-19 pandemic involved the various learning methods and strategies the pharmacy schools and internship preceptors conducted to deliver learning activities and for performance assessment purposes. This is supported by the following verbatim:

"We also do presentations. But, most of the time, we are bombarded with videos like pharmacist-patient situational case studies. We also had case studies, cleaning of bio-ref. To sum it up, we had return demos; case studies where we pretend as pharmacists and give recommendations to patients; we had quizzes; and, group work like return demos about inhalers and on how to attach dermal patch." - Participant 4

"In the community pharmacy, we have the mydispense. So, they are going to give us a case, ang then we have to face the patient and give counselling – of whether or not the drug should be given to the patient. You really have to explain bit for bit everything that's happening in mydispense… Webinars,

oral recitations, classes, OSCE, examinations, return demos, those are the things that you are going to experience in online internship. Group performances, reporting is basically just like an online class." - Participant 7

"Yes, we had quizzes, assessments, and return demos which I think we did only once. Most of the time, we were confined to webinars because I think that's the only thing they can provide during the pandemic that limits people's mobility." - Participant 11

"The third project we had with them is a research project. They told us that they know we weren't able to perform hands-on experiment with the research. So, they said that we're going give you an opportunity that you're going to be designing a research. It was like a research proposal. The research was about the plants in the Philippines, and then you're going to choose from those for the research… It was really like a research proposal and then you defend it." - Participant 12

The following statements show the innovative learning methods and strategies employed during the virtual pharmacy internships, which include direct instruction (lectures and webinars), summative assessments (quizzes, examinations, case study analysis, research), formative assessments (recitation and reporting), and lastly performance-based assessments (simulation activities and return demonstrations).

3.3 Develop essential knowledge and skills for pharmacy practice

This theme indicates that the virtual internship benefits the interns' knowledge and skills development, which are essential for pharmacy practice. This is supported by the following verbatim:

"First, the public health internship introduced me to the regulations. We were taught on how to register a certain food, drug or cosmetic product, on how to verify a product through the FDA portal, and on how to register if you plan to establish a local pharmacy. We were also introduced on the registration process of a certain product to get CPR or Certificate of Product Registration." - Participant 1

"Like in pharmacovigilance, I have learned a lot about GVP, GxP. GMP, dispensing, patient counselling, inventory, procurement, production planning. All those things." - Participant 9

"Aside from medication counseling, we have prescription reading. Of course, prescription reading is also a skill. I think that's one. And then, preparation of suspension, we have to perform a return demo on that. The activity you can do virtually is actually limited, so, counselling, dispensing of medication. With the dispensing of medication, you can't do that face-to-face, so we did it virtually. And then prescription reading, suspension and breaking of ampoules." - Participant 10

"In community internship, we were taught about handling patient counselling, patient medication profile, and basic pharmacy operations. The highlight was on how to start a certain community drugstore - which was invested by and established by our preceptor in 2020. They shared how they started from choosing a location, what they invested, and the details on their filing/application to the FDA." - Participant 11

"I think, in doing multitasking. The knowledge I acquired includes about the manufacturing procedures and how to produce their products. We were able to visualize the procedures through the videos they provided." - Participant 12

The statements did not explicitly state, but it is still evident that the participants had an opportunity to interact with others and learn how to communicate with them in one way or another. Moreover, through their preceptors' various activities, the participants acquired knowledge and skills in health promotion, patient counseling, basic community pharmacy operations and services, good manufacturing practices, product registration, inventory management, and patient care management, among others.

3.4 Insufficient experiential learning and application of theoretical knowledge

The fourth theme is about the insufficient experiential learning and application of theoretical knowledge by the pharmacy interns during the virtual internship. The following statements support this theme:

"The learning experience was okay. Yes, I have learned a lot, but it was really different learning in actual experience than just through imagination. That's what is difficult in virtual internship. Yes, there were videos provided, but it's different if it's you who is performing it." - Participant 2

"As much as part of my experience, it's really disappointing. I was disappointed because the concepts of how we are applying the online internship is like an online class with a lot of webinars, with a little bit of assessments. Those assessments are purely based on academics only. So, there's really not… no skill if you're really not applying any skill practice except for some return demos, objective and structured clinical exams and recitations." - Participant 7

One of the bad thing about the online internship is we did not get the practical experience that we would normally get in face-to-face internship. So, what I mean by this is we didn't get the experience of manually doing inventory stuff, getting to see like how preparations are made, things like that. So, I think that's one of the downsides of the online internship – we didn't get to experience all the practical parts. - Participant 8

Based on the statements by participant 2, participant 7, and participant 8, it is shown that there was insufficient experiential learning because they cannot perform the activities in person. Consequently, they could not correctly and fully apply their knowledge and skills in practice because the virtual pharmacy internship became just like a webinar. Indeed, the pharmacy interns were not able to experience pharmacy practices practically.

3.5 Personal distress toward the well-being of interns

The fifth theme deals with personal distress experienced by the participants. It can be seen in the following significant statements.

"Let's say in a facility like where there is a face-to-face internship like the public health. You can really focus because you are inside the facility, or you are inside the working place. It's different when you're at home doing your internship. You always have the tendency to feel lazy and you can lie down anytime you want. Long period of screentime, facing your laptop. Is very tiring. You will get eyes strain, headaches due to the radiation. The focus is less." - Participant 1

"My body weight swelled from 49 kilos before the pandemic to 59 kilos. I was diagnosed with hormonal imbalance which resulted to 2-3 weeks delayed menstrual period. I get sick easily. I was super stressed that time. I developed acid reflux. My eyeglasses prescription went high. I was diagnosed with vertigo. My health problem affected a lot." - Participant 2

"Socially, I isolated myself to everyone even with my college friends. I want to do things on my own because I feel like I will bother them -they also have their struggle during this time, so I isolated myself and do things on my own. Emotionally, maybe the feeling of not doing my best, not doing everything I can, compared to when the pandemic did not happen yet." - Participant 10

The statements stated by participants 1, 2, and 10 indicate the personal distress they experienced during their virtual pharmacy internship. The participants struggled with health-related issues such as eyestrain, headaches, decreased focus and concentration, acid reflux, vertigo, and hormonal imbalance, of which stress might be one of the factors. They also tried isolation due to their choice of self-resilience rather than communicating with others. It is because others were also struggling. In addition, they experienced a feeling of dissatisfaction with their performance during and before the pandemic. These challenges affected their learning and experiences during their virtual internship.

3.6 Heavy academic workload clashing in hectic schedule

The sixth theme expresses the interns' heavy workload, which clashed with their busy schedule. This can be seen in the following significant statements.

"We usually have exams at the end of the week which is like a simulation to test important things that we have learned in our previous years. It was difficult for us, graduating students, because we do this along with our virtual internship. We have to endure the deadlines and the exams each week. Our manufacturing internship which we are currently doing right now, have activities plotted in a timetable. It was stressful that you must comply the requirements and activities of the internship while reviewing for the boards." - Participant 11

"Yes, because you have to face the requirements of our virtual internship with our exams. Our exams are like a pre-test for the board exam. We need to double our efforts because we have activities to complete in our virtual internship while at the same time we need to study for our weekly exams."- Participant 3

The statements given by participant 3 and participant 11 explained the heavy workload they were experiencing involving complying with internship requirements, studying for exams, and reviewing for their boards. These also interfered with their schedules, making their virtual internship difficult due to difficulties in managing their time efficiently. As a result, they made strenuous efforts to comply with all of their tasks.

3.7 Difficulties in academic adaptability

This theme expresses the participants' difficulties in academic adaptability. This can be seen in the following significant statements.

"On the academic aspect, the activities we had in virtual internship was super informative. However, I prefer to have an actual experience than just reading or just imagining things. It was a bit difficult for me to take to heart what have been learned and apply it first-hand. Not by knowledge but also by heart." - Participant 2

"For the experience, I think the whole experience wasn't really complete in a sense that we're only experiencing it in front of our laptops. Basically, we don't get to grasp the skills that we should be learning during the internship because we only had to hear it or we only had to see it. In most of them, they only had like virtual tools of their plans, step by step process of how they do stuff but then at the end of the day, you don't really fully absorb it. Because you're not there, you're just seeing it through the lens of someone who's working there. And most of the time, I think it's not that complete." - Participant 6

"As much as part of my experience, it's really disappointing. I was disappointed because the concepts of how we are applying the online internship is like an online class with a lot of webinars, with a little bit of assessments. Those assessments are purely based on academics only. So, there's really not… no skill if you're really not applying any skill practice except for some return demos, objective and structured clinical exams and recitations." - Participant 7

The statements given by participant 2, participant 6, and participant 7 mentioned how difficult they adapted to their virtual internship. They felt disappointed that they had not fully experienced the face-to-face setup in which they could have learned and applied their practical skills and knowledge. Moreover, they also discussed their online setup experiences, including webinars, return demonstrations, objective and structured clinical exams and recitations, and assessments that could have been more favorable if performed physically.

3.8 Poor social communications and feedback

The theme of poor social communication and feedback is shown in the following statements:

"Generally, I don't like virtual. I really look for company/peers. In face-to-face, you can directly talk with your friends, not like in virtual that you still have to send a message via chat to them. You won't receive any response immediately." - Participant 4

"...you submit an essay, your journal for the day – this is what I did with online internship. They're not really going to give you feedbacks" - Participant 7.

"First, the internet connectivity…Second is the not so helpful groupmates…It was a bit difficult in starting a relationship with them, familiarizing them – in relation to making effort for the group activity or projects. Even though I would want to take charge, I'm anxious doing it because I may sound bossy. What we do is just type and send the messages, so you won't know how your group mates reciprocate those messages - if it sounds bossy or not." - Participant 11

These statements from participant 4, participant 7, and participant 11 clearly show that the interns experienced poor social communication and feedback during their virtual pharmacy internship since they had limited interactions with their friends, unlike the face-to-face set-up, and they received no feedback from their professors when it comes to their submitted requirements. The different attitudes of the interns also led to a difficulty in establishing collaboration during their group tasks or activities. Indeed, these problems have contributed to their challenges in communicating with their professors and co-interns.

3.9 Unconducive learning environment and issues with online resources

This theme discusses the unconducive learning environment and issues with online resources, which were determined as barriers and challenges to the virtual pharmacy internship. This can be seen from the significant statements of the participants.

"The barrier is the availability of the equipment like the drier and weighing equipment. It was a disadvantage to the students who do not have the equipment…In terms of accessibility of information, there are materials online that you can find but will require payment." - Participant 1

"Super slow internet connectivity during bad weather conditions is a negative factor especially during exams…With recordings, we usually have problem with the audio. One time, a video lecture with a very bad audio quality was provided." - Participant 2

"...But when you're at home, my responsibilities are divided. I have to look after my pets, sometimes I have to wash the dishes and I need to be a student at the same time." - Participant 5

"Learning environment, that barrier experienced is that, literally, due to the noise I've been hearing, I cannot hear well." - Participant 10

The statements by participants 1, participant 2, participant 5, and 10 reveal that the interns experienced an unconducive learning environment and issues with online resources during their virtual internship. In terms of resources, the interns had problems acquiring some E-learning materials because they needed to purchase them online. Some videos had poor audio quality when they were given recorded video lectures. Slow internet connection and power interruptions were the barriers during the virtual internship. Also, the availability of medical equipment in their homes was a problem, especially in simulation activities for laboratory classes or requirements. Meanwhile, an unconducive learning environment was evident as the interns experienced external noises and temptations while having classes, and they had a conflict between class and chores. Indeed, the following statements of the interns proved that they had experienced barriers during their virtual pharmacy internship.

3.10 Self-support as a way to cope with the challenges experienced

The pharmacy interns were able to cope with the challenges and barriers they experienced during the virtual pharmacy internship through self-support.

"Those barriers I've experienced, I've only learned to live with it…" - Participant 10

"I do self-motivation because no one's around to motivate me. Avoid procrastination so that you will finish all things you need to work on." - Participant 13

"When you are an intern, you are one step close of getting your license. Be serious and professional about it… Make sure that at the end of the day, you learn something. At the end of the day, you can articulate what were taught, its details, etc. Develop and appreciation for that." - Participant 11

"Second, be mindful of everything – the dates and deadlines and remind yourself about these schedules. You can input them to your calendar." - Participant 11

"Maybe, diligence for the part of the students. When you do it then it becomes a habit, I think everything else becomes easier especially when it comes to studying. Even though whether that's virtual or not." - Participant 6

"First of all, if ever my … call to God for help." - Participant 3

"Actually, when I have emotional (inaudible 00:21:34), specially when I am having anxiety, my mom and I just talk about it. I just pray to God, talk to my mom and my most trusted friends." - Participant 3

"For example, you can't do anything if there's power interruption or no internet connection. It's not on our hand. You can travel to Davao City but it would be a burden financially. During the pandemic, we are all financially burdened, in my situation. If it happens, then I go to sleep, then I go to rest." - Participant 7

"Sometimes, I watch movies or sing karaoke as my stress reliever." - Participant 3

"I try to do reading. So I'd say, we should start reading, not novels. If I were to tell what genre, probably the psychological genre. So one thing would be to start reading with Atomic Habits, that book, and then go on with your habits." - Participant 5

"During exams, we make sure to take and save screenshots as evidence that we did answer the exam. One of our classmate failed in one of our exams because he can't provide an evidence that he took the test. Always secure evidence, that's how we overcome this challenge." - Participant 2

"As I've said, in terms of technical difficulties, I just purchased them. I always have a backup data for cases of unstable internet connectivity."- Participant 9

Participant 7 revealed numerous uncontrollable events and stressors that the participants were unable to manage; stressors and conditions were inherent in the course and virtual environment. The statements from participant 10 revealed that the participants addressed the pandemic issue by acknowledging and accepting the virtual environment. Participant 2, participant 6, participant 9, participant 11, and participant 13 remained motivated in light of their graduation and goals. Motivated by the proponent's enthusiasm, they strived to adapt to the situation by being organized and managing their time wisely. Moreover, participant 3's another way to get through the difficulties experienced during the pharmacy internship was to ask for divine guidance. Rather than stressing, participants 3, 5, and 7 engaged in hobbies and recreational activities that helped them reduce stress. In addition, they are taught to provide learning-related resources to supplement the materials required to gain access to learning in the event of technological issues. Participants acquired self-discipline and organizational skills. As a result, it enabled them to complete their internship successfully.

3.11 Various support given to interns

This theme is shown in the data as various support given to interns. This can be seen from the significant statements of the participants.

"Family support, yes, I can also rant with them, especially about the expenses. Also, they are very supportive. For example, when I say to be quiet, they follow. It's because, it adds to trigger stress. Like you have presentation, and your background is too noisy. Those are the types of support my family gives me. And of course financial support." - Participant 9

"With family, I do not really do as much household chores because they know I'm still studying. And there's food already prepared when I'm at home." - Participant 7

"With tangible support, of course, that's the part where my family takes place. They provide me cellphone, food. That's what makes us happy, with just having food beside us while we are on our zoom meeting. And of course, those sweet nothings like flowers and the likes, I have experienced that. Then that comforts me." - Participant 10

Family and friends were two sources of social support. Participants 7, 9, and 10 families assisted by minimizing the participants' environmental stress through minimizing the noise and domestic responsibilities. In addition to providing material help (gadgets and food), participants' families also provided some emotional support through words of affirmation and reassuring actions.

"Same thing with our class, we're always encouraging each other. Like if we're having a hard time, we just encourage each other." - Participant 8

"On the academic support, of course my co-interns. They always support me in the activities, we share information." - Participant 13

"As for emotional support, I was very lucky to have friends both inside and outside the program. We could all talk to each other with whatever we are experiencing. Since not only pharmacy is doing the virtual internship, we get to compare what they're doing with what we had. We get to share experiences and I think it's a very a great deal of emotional support." - Participant 6

The material and emotional support of the interns was given by their families, and the majority of the emotional support received by participants 6, 8, and 13 came from their peers. It is because there were issues that only a peer could understand. Participants typically vent to their peers about their frustrations and provide each other with moral and physical assistance.

"Our Dean is very supportive. They gave us words of affirmation. There are those times that they would just meet us virtually to ask us if we are okay, how are we coping up, what are we doing right now, and the likes. Our dean is very much caring for us to the point that she would actually meet us one by one during the evaluation and would personally ask us how are you, are you doing well?" Participant 10

"... In our manufacturing internship, our preceptor shared to us USP-NF online access. It was like our benefit in enrolling to the manufacturing internship program. For me, it was a great deal." - Participant 11

"The preceptors motivates us to listen and try to absorb the lessons." - Participant 11

"In terms of the school, they provided a pocket Wi-Fi to the students, to those who are eligible – they had this criterion like if you're not that well-off if financially capacitated." - Participant 9

"They also provided a tablet to all students in the University of Makati. I think it's very good, but I have not picked-up mine yet." - Participant 9

"With the school, they were always there to respond to our questions. They never left the students hanging, they always got our back. During our internship with Herbanext, there was one topic we didn't understand. The Department itself reached out to the company and relay our comments and questions." - Participant 2

"And then for emotional support, our school was very open in terms of mental health. But we students are not open to open-up to the institution. So, it was not really a support for me." - Participant 9

During the virtual internship, participant 9 shared that their school sponsors interns who were financially unable to supply pocket WiFi and electronic devices. Some schools provided mental assistance to students by providing a safe area to discuss their difficulties and concerns, which was not as beneficial for others due to awkward situations, according to participant 9. According to participant 2, their department assisted them in communication with the preceptors. Participants 10 and 11 appreciated their deans' regular monitoring and affirming comments and their preceptors' efforts. Support received from the institution somehow eased the stress that the participants felt.

3.12 Proper Scheduling and Communication between Preceptor and Student Intern

This theme is supported by the following statements of the Pharmacy interns:

"They should [the organizers] also organize their activities." - Participant 1

"So, I guess for future interns, I will recommend for them to always check changes in the schedules, so they know what's happening." - Participant 6

"…be mindful of everything – the dates and deadlines and remind yourself about these schedules. You can input them to your calendar." - Participant 11

"Consultation with the students and the preceptors is very important. This will help craft a more interesting and effective activities because it was based on a collective effort of the preceptors and students." - Participant 11

According to some participants, well-organized activities and involving students in planning schedules, such as voicing concerns before planning a schedule and having a consultation, would be a great help to have a feasible schedule. Those were some of the participant's recommendations for improving virtual pharmacy internships.

3.13 Affective preceptor and eclectic teaching

The theme shows the recommendations of the interns, which are to have an affective preceptor and a preceptor who practices an eclectic way of teaching in order to conduct the virtual pharmacy internship more efficiently.

"Recommend better ways and approaches, different methods of teaching that will also suit to the needs and situation of the students." - Participant 2

"I think leniency on the part of accepting requirements -to be open with accepting late submissions since the situation is very volatile and then we don't when you internet connection gets cut off or when you can't attend your class. Since everything you have to do is via online, I think leniency long in the part of the school to be open to the request of the students, especially when their excuses are valid." - Participant 6

"My recommendation is give the students more time to absorb, to experience and to apply the lessons." - Participant 2

"One of the suggestions I have is for one to try and limit the assignments." - Participant 8

"I think we all would have appreciate it if the preceptors were a bit more enthusiastic." - Participant 8

"I would like to suggest a more interactive setting. I like interactive presentations. For example, you can ask the students to type 'FF' if you follow or 'G' if you can now proceed with the discussion. More questions. A lot of students will participate using these methods". - Participant 4

According to some participants, preceptors who were approachable, understanding, enthusiastic, and passionate were likely appreciated by student interns. Preceptors dedicated to teaching, who explained the concepts thoroughly and made the presentation more interactive, and who are knowledgeable and knew how to catch the students' attention were essential in a successful Virtual Pharmacy Internship based on the recommendation of most of the participants.

3.14 Provide resources and appropriate learning materials

The theme shows that providing resources and appropriate learning materials for the interns are essential during their virtual pharmacy internship. This can be seen from the significant statements of the participants. The following statements support this theme:

"In general, I appreciate the efforts of the school, PPGP and the Herbanext. They really did their best to put us in a contextual situation on what we should be experiencing in a face-to-face internship." - Participant 2

"I would like to suggest a more interactive setting. I like interactive presentations. For example, you can ask the students to type 'FF' if you follow or 'G' if you can now proceed with the discussion. More questions. A lot of students will participate using these methods. Unlike doing straight presentations, the momentum of students to learn will be lost, it won't work. You should look for creative forms of presentations that will invest the interest of your students." - *Participant 4*

"They should let the students check all things taught to them for validation. What's good being practiced this time is that we are also provided by the link and source of documents. Give more emphasis on our possible career path. It will help if they highlight fields that are in-demand , and the value why we chose those fields." - *Participant 11*

The participants emphasized that practical-based videos on medicine compounding and highlighting the lesson about career paths and more relatable assignments would be helpful to their virtual pharmacy internship. Moreover, making the modules more up-to-date, accurate, and understandable would assist the interns undergoing the virtual pharmacy internship.

3.15 Constructive evaluation and sharing of experiences and feedback

The theme shows that constructive evaluation and feedback of the preceptors and sharing of experiences among the interns would be helpful in making the virtual pharmacy internship more structured.

"As a student, what I can contribute most is my honest evaluation with my overall experience with the virtual internship. I am that type of person who voice out my concern during a situation or circumstance." - Participant 1

"Recommend better ways and approaches, different methods of teaching that will also suit to the needs and situation of the students." - Participant 2

"I think the thing there is to really just open… more open communication and also... well we do this anyway with our preceptor and our coordinators for the internship. So, they always ask us once a month what our suggestions are, what they can improve on? I think the key for contributing to the online internship is to try not to sugarcoat any comments or suggestions." - Participant 8

"You have to voice out your concerns. That's one thing you can contribute as a pharmacy intern." - Participant 10

"I think that is to share what I've learned, seen and experienced." - Participant 11

Almost all participants mentioned recommendations, honest comments, and thoughts about the overall performance of the Virtual Pharmacy Internship to the preceptors, coordinators, and admins would significantly help strengthen the Virtual internship further.

3.16 Teacher skill development

The theme shows the recommendation of the participants for the preceptors to develop better techniques or approaches in the delivery of the discussions.

"To suggest also some strategies in teaching online. Recommend better ways and approaches, different methods of teaching that will also suit to the needs and situation of the students". - Participant 2

"If you're not a good speaker, if you don't have something to share on like you're knowledgeable about something, then you can't catch the attention of the students." - Participant 5

One of the participants stated that skill enhancement by implementing some strategies on teaching and better ways to approach the situation of Virtual Pharmacy Internship would help the student intern to understand its lesson further. It would make the preceptor an effective mentor.

4.Discussion

The information gathered from the pharmacy interns through in-depth interviews has helped the researchers understand their virtual internship experiences during the COVID-19 pandemic in the Philippines. Thematic analysis was utilized to determine the common experiences across all participants and reported as essential themes.

The first objective is to determine the experiences of pharmacy interns during the virtual pharmacy internship. The virtual pharmacy internship allowed the students to have ample time for self-learning. There is the accessibility of instructional and learning materials, all posted online, thus giving students more time to study, relearn the lectures, and do the assigned activities at their own pace. Raza et al. (2021) stated that students could access their learning materials anytime and anywhere without going to on-site schools or work areas [18].

Moreover, the virtual internship allows students to manage their time doing online tasks while still having enough time for other chores and responsibilities. Students develop learning autonomy and become self-directed learners. The findings of O'Hare and Girvin (2018) imply that e-learning meets this criterion and that, compared to more traditional teaching techniques, e-learning provides greater convenience and the ability to be self-directed and self-paced [19].

The new normal in online learning and training must have an appropriate learning approach to maintain pharmacy education and skills even through a virtual pharmacy internship. Here in the Philippines, different innovative methods and strategies of delivering virtual pharmacy internships during the COVID-19 pandemic were used, which are evident in the various activities performed and undertaken by the interns, such as having webinars, online lectures, quizzes, examinations, case study analysis, research projects, recitations, reporting, simulation activities, and return demonstrations. Virtual internships include real-life assessments conducted through virtual simulations [20]. Educators can modify and develop strategies to teach their students and give proper assessments and feedback regarding their academic performance [21].

According to the study by Lucas et al. (2019), integrating simulation in healthcare and pharmacy schools can be done with the use of online platforms such as YouTube educational resources, video game-like dispensing simulators, and role-plays involving standardized, live or virtual patients to improve the counseling skills of the students [22]. Moreover, higher education institutions such as the University of the Philippines-Manila and Taylor's University-Malaysia gave virtual simulations, case presentations, and assessments for students to practice their skills in developing pharmaceutical care plans [23]. Faculties at the University of Wisconsin–Madison School of Pharmacy developed virtual Introductory Pharmacy Practice Experience and Advanced Pharmacy Practice Experience rotations where students underwent virtual tours and used video technology to learn about the distribution process, review and practice concepts, and speak with practitioners [24].

Through virtual internships, the pharmacy interns were able to develop essential knowledge and skills for pharmacy practice, which can be supported by a study by Coleman and Smith in 2019, where virtual laboratory training and simulation were found beneficial for the knowledge and skills development of the students [25]. It has been acknowledged for offering great opportunities to practice and enhance communication skills [26]. It can also support improving professional development's cognitive processes and social aspects [27]. Moreover, as stated by Ruggiero and Boehm (2016), through virtual internships, students were provided with opportunities where they could be able to apply to the workplace their expertise and theoretical background to create new knowledge and skills together with their mentors and academic clients [28].

However, the participants also experienced insufficient experiential learning and application of theoretical knowledge during the virtual pharmacy internship because they could not do the activities on-site physically. This is evidently significant, as Lalish et al. (2021) stated that the students found the online setting convenient, but they missed acquiring skills in a hands-on situation [29]. According to Hora et al. (2021), interns who participate in virtual internships may miss out on learning essential "soft skills" because they are not physically or socially connected in a professional setting [2]. Lastly, as Bayerlein and Jeske (2018) mentioned, due to the shift from traditional internships to virtual internships, students will not be able to learn or acquire the skills and knowledge necessary for their future work performance since there is no physical assistance [30].

The study's second objective is identifying the barriers and challenges the interns have experienced during the virtual pharmacy internship. The interns struggled with personal distress regarding their well-being. According to a study by Duraku & Hoxha (2020), one of the increasing concerns of students on the transition to online learning involves fear, disappointment, insecurity, exhaustion, anxiety, and other health issues [31]. The stress and pressure from the shift affected the interns' health, impacting their learnings and experiences [31]. These emotions and sentiments targeted their emotional, mental, and physical well-being, contributing to the health-related issues they experienced. In addition, isolation from the threat of COVID-19 also led interns to further detach from their peers, thus neglecting their sense of belonging. This phenomenon was explained in a study by Lalish et al. (2021) that the sense of belonging is vital for students' well-being when adapting to the virtual set-up [29].

Excessive workload also posed a challenge due to lack of time. The lack of time to manage all academic workloads can be explained by Barakat et al. (2021), which reported that it is one of the barriers to virtual training or virtual classes [32]. There was insufficient time for interns to comply with all their internship requirements and review their exams and board exams simultaneously.

Interns also had a problem adapting during their virtual internships. Their dissatisfaction from not witnessing the whole on-site internship experience affected their way of adjusting to the virtual set-up [29]. Lalish et al. (2021) explained that students' perspectives towards virtual learning include the convenience of the situation but also the difficulties in adapting because face-to-face experiences are still more advantageous [29]. Doubt and uncertainty for the future also arose because interns felt they did not perform well enough due to the limited online experience. The feeling of not being good enough is explained by Bugis (2021), that this sentiment affected their attitudes and perceptions towards learning during the pandemic [32].

According to Bayerlein and Jeske (2018), virtual internship graduates should critically possess and develop effective online communication skills to present ideas and concepts in a computer-mediated environment [30]. However, interns revealed that they had experienced problems with their co-interns and professors regarding social communication and feedback during the virtual internship, as stated in the excerpts presented in the previous chapter. As Yang (2012) emphasized, communication is the first hurdle in pharmacy students' virtual internships because it can result in misinformation, confusion, and delays in work if there is a lack of communication between the site supervisor and intern [34]. Indeed, the statements of the interns showed that they had limited interactions and/or did not have frequent engagements with their classmates, which made it difficult for them to collaborate in group activities. Also, they had limited chances to talk with their preceptors, resulting in not receiving feedback after submitting their requirements. With this barrier, both parties should maintain consistent and open communication via various channels to give feedback and exchange ideas [34]. Additionally, interns should be actively prepared for virtual internships to possess a sense of responsibility, be diligent in meeting deadlines through proper time management, and be excellent communicators [36].

In a virtual internship setup, an intern should be comfortable communicating via online, phone, and webinar environment [37]. It means that one should have a conducive learning environment and have access to online resources during their virtual internship, but the statements of the interns revealed the opposite. Online education is based on technology, and so several technical problems are identified which are similar to what Ali et al. (2021) presented in their studies, such as faults in the Learning Management System (LMS), unstable internet connection, technical challenges with 'live' online

teaching sessions, and failure of the academic staff to use technology effectively [38]. Similarly, a study in Pakistan reported that these technological problems coexist with a lack of access to online resources, which were all required for professional development, and some of the causes for the inability of students to obtain and sustain online internships, training, and jobs [39]. In terms of online resources, there is an emergence of a financial crisis due to additional costs for access to online learning materials and resources [40]. According to a study that Barakat et al. (2021) has cited, the lack of a suitable or quiet place during the virtual training, access to technical support, and lack of time were second to the most critical barriers to learning with the lack of eye contact during virtual training as the number one [32].

The third objective of the study is to determine how pharmacy interns overcome the obstacles and difficulties encountered during their virtual internships. During the virtual set-up, the students acquired the self-support necessary to overcome these obstacles and difficulties. Due to the COVID-19 pandemic, most nations implemented movement restriction policies, resulting in a temporary suspension of face-to-face teaching methods and a shift to online [23]. The unexpected change impacted the learners and interns. A study conducted in Saudi Arabia to determine the impact of the COVID-19 pandemic on internships at health organizations revealed that interns were disappointed when their internships were postponed due to the pandemic [33]. Nevertheless, some interns who participated in virtual internships are pleased that their training continued without interruption [7].

As the online setup phase of the internship progressed, the interns faced numerous obstacles. The interns were determined to have a positive attitude to overcome the obstacles. The intern's optimistic outlook can pique their interest in internship activities. Positive thinkers and experiences are more likely to utilize instructional games [41]. In addition, during the internship, interns developed the self-motivation necessary to overcome obstacles and acquire knowledge during the virtual internship. When students participate in an internship, they are better prepared for the demands of their future workplace [30]. Since there will be no face-to-face interactions with their supervisors, interns in virtual internships should possess technical proficiency and self-motivation [30]. Apart from themselves, preceptors and professors also motivate interns. The findings of the study by Barakat et al. (2021) indicated that during a virtual-based pharmacy training module, preceptors had a positive impact on their students by recognizing their role as trainers, integrating therapy knowledge into patient care, and assisting them in achieving the training's objectives [32].

During the virtual internship, interns establish a routine, such as being organized and focused and practicing soft skills to remain productive. An intern would develop cognitive learning outcomes because interns must develop well-rounded, independent work and problem-solving skills and self-directed learners [35]. Teng et al. (2021) also reported that virtual internships could improve soft skills such as time management, self-discipline, and decision-making because interns can work independently and self-sufficiently [37, 19]. In addition, interns are concerned about falling behind in their studies due to the barriers. This pandemic's growing ambiguity is the most significant source of fear [43]. When technical issues arise, they learn to adapt and be ready by having a screenshot of their work or output. Moreover, they engage in recreational activities to relieve stress, seek divine guidance, supplement the necessary materials for technological issues, and provide learning-related resources.

There are uncontrollable situations that are inclined in the virtual internship and the course that every student experiences, yet the interns receive various forms of support from the people surrounding them. The interns' families are worried because they have shown symptoms of anxiety brought about by the shift from traditional education to virtual education [31]. They are aware of the interns' stress during the virtual internship and become their central support system. They provide for the basic needs of the interns. Emotionally, they help the interns cope through sweet gestures. Although household chores are also one of the stressors during a virtual internship, the family members adjust to the situation by deducting duties and reducing other stressors.

Students' competitiveness has decreased due to distance learning and social separation [44]. During their time together, the interns become each other's support systems by lending a hand and offering encouragement and words of affirmation. Friends within or outside the department provide interns with moral support in their unique style.

As virtual internships increasingly emerge as the new modality of the traditional face-to-face internship, financial issues also arise due to higher charges for access to online learning materials and resources [40]. However, some institutions financially help students by providing pocket Wi-Fi and gadgets. It is in line with the cash grants memorandum of the Commission on Higher Education 2018 on Doctor of Medicine students in states and universities [45].

Enhancing communication skills via different platforms is one of the preparations interns should have [37]. This skill is essential to having confidence in communication with the preceptors, co-interns, and professors. As Yang emphasized, communication is one of the barriers during a virtual internship [34]. It was stated in their reflection paper that misinformation, confusion, and delays in work are the result of a lack of communication between supervisors and interns [34]. But there are situations where the faculty becomes the medium for the interns to communicate with their supervisors or preceptors.

The students were inspired to engage during times of crisis due to the adaptation and resilience of their faculties [35]. Words of affirmation and positive support from the faculties boosted their hopes and eagerness to finish the virtual internship successfully. According to a study entitled "Effects of Business Internships on Students, Employers, and Higher Education Institutions: A Systematic Review," having committed professors who supervise and provide adequate requirements to improve internships are two other indicators that can boost the positive effects of internships [46]. The positive attitude of the preceptors towards the interns is an essential predictor of an effective internship.

The fourth objective of the study is to offer the recommendations of the student interns for future amendments to the virtual pharmacy internship setup. Based on the recommendations of the interviewed student interns, self-improvements should be observed to grasp the fundamental aim of the virtual pharmacy internship. Due to the pandemic, the face-to-face classes to virtual class shift has caused a tremendous change in the setup of the

students and the preceptors; thus, the planned activities were one of the areas of concern. Every activity created for the online internship was new. Therefore, the student interns recommend that they be involved in planning and organizing the deadlines for activities and the schedule-setting of the discussions to ensure adequate time for all the requirements and tasks for the virtual pharmacy internship.

In addition, the student interns suggest that the preceptors should be more affective and eclectic–meaning leniency should be offered to the student intern no matter how prepared for the online internship with all the needed resources, his circumstance or geography might be the problem. Moreover, it was suggested that the preceptors give the interns ample time to absorb the theoretical and practical lessons.

Meanwhile, online resource materials should also be considered. The instructional materials should be up-to-date, engaging, understandable, not highly technical, relatable, and relevant. Moreover, as the online internship continues to progress during the pandemic, this experience may pave the way for future alterations in the curriculum should it be possible that the same circumstance happens once again. With this, the student interns recommend that there should be a reflective evaluation and sharing within the organizing body and constructive feedback given to improve the current curriculum further. Lastly, the online setup made it difficult for students, preceptors, and the organizing body to effectively teach the lessons through video calls and presentations. Therefore, the students suggest that the preceptors should find ways to interactively and effectively give practical lessons to the students.

4.1 Conclusion

This study's findings and discussions demonstrate that the interns' virtual pharmacy internship experiences are varied. Some of the experiences are positive, while others are barriers and challenges. The pharmacy interns' positive experiences include having enough time for self-learning, learning innovative methods and strategies, and developing essential knowledge and skills for pharmacy practice. However, the interns also have negative experiences such as having insufficient experiential learning and application of theoretical knowledge; personal distress; heavy academic workload; difficulties in academic adaptability; poor social communication and feedback; and having an unconducive learning environment and issues with online resources. Throughout these negative experiences, the interns overcame them by having self-support and various forms of support given to them. Lastly, the interns recommend new techniques to help improve the delivery of the virtual pharmacy internship, such as having an effective and eclectic preceptor, providing resources and appropriate learning materials, and communicating and planning schedules between preceptor and intern. Therefore, this study's generated themes will be beneficial in improving and giving a new perspective on the actual situation during the virtual pharmacy internship.

4.2 Recommendations

This study aimed to determine students' experiences in their virtual pharmacy internship during the COVID-19 pandemic in the Philippines. One-on-one, in-depth interviews were conducted, and thematic analysis was performed to develop themes describing the participants' experiences. The researchers recommend the following to future researchers who want to pursue this study with a broader scope.

Future researchers may conduct additional research and make improvements to incorporate more relevant literature and studies to support the study. They may set an equal or, if not a well-represented number of target participants from Luzon, Visayas, and Mindanao to get a sufficient representation of experiences from each island group in the Philippines. Still, do observe data saturation in determining and justifying the final sample size for the study. Introducing additional concepts can aid the data analysis and strengthen the credibility of the research. Lastly, it is recommended that future researchers focus on a particular field or type of Experiential Pharmacy Practice (EPP) to obtain more guided and specific information from the participants.

Based on the recommendations given by the participants, having an effective and eclectic preceptor, providing resources and appropriate learning materials, and communicating and planning schedules between preceptor and intern will be beneficial for improving the delivery of virtual pharmacy internships.

Acknowledgements

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