Assessing Student Pharmacists' Performance and Preparedness in Remote Patient Medication Counseling

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Abstract

This study aimed to assess student pharmacists' performance and preparedness in remote patient medication counseling. This utilized explanatory sequential mixed-method design and action research. Since the pandemic, students cannot be exposed to patients in-person without properly following health protocols. Therefore, remote counseling was integrated into the pharmacy informatics course where at the end of all modular topics, enrolled students experienced delivering pharmaceutical care to actual patients even physically separated through utilizing online platforms. The United States Pharmacopeia Medication Counseling Behavior Guidelines (USP-MCBG) questionnaire was used to assess the students' counseling skills. All components assessed by the patients and students were scored "Excellent", but communication garnered the highest mean score (0.98 ± 0.05 and 0.96 ± 0.11) followed by needs assessment (0.93 ± 0.09 and 0.86 ± 0.13), precautions and warnings (0.91 ± 0.14 and 0.86 ± 0.19), and management and treatment (0.87 ± 0.14 and 0.86 ± 0.19). No statistically significant differences exist between the student pharmacists' performance and preparedness in the four components ($p\leq0.05$). The experience required dedicated preparation and organization but was successful in demonstrating overall patient and student self-actualization and positive feedback.

Keywords: patient medication counseling, remote counseling, counseling skills, pharmacy informatics

Introduction

As a result of the global pandemic caused by COVID-19, higher education has been affected at a global level and more specifically in the Philippines, wherein mid-March the state of alarm was declared, with the state and university academic authorities decreeing that, for the remainder of the 2019–2020 academic year, teaching and learning processes would be carried out on a flexible learning mode (FLM). Consequently, the means for their development through information and communication technologies (ICT) have been incorporated. Although the teaching and learning processes in higher education were already in continuous evolution in relation to the influence of technology on the incorporation of emerging methodologies, the truth is that due to the confinement caused by the coronavirus, it seems the full use of ICTs in methodological adaptation has been enforced and its inclusion accelerated, as a test of organizational preparedness and readiness; and fostered a process of transformation also accelerated to a digitalized university through online processes with new pedagogical models and learning environments. In this way, all these transformations have become a more sustainable model of education. In line with the new normal educational processes and health protocols of the University of Makati, which is also anchored on the mandate of the Commission on Higher

Education to decongest classrooms and adopt the flexible learning modality as the most rational alternative to full residential (face-to-face) learning, the College of Allied Health Studies-Center of Pharmacy (COAHS-COP) is hereby guided by these processes and protocols. Also, the College has set implementing guidelines for the category of Students Based on Internet Connectivity, Faculty Profiling along Flexible Learning Capacity and Capability, Monitoring the Attendance and Accomplishment of Teachers in a Remote Teaching and Learning Environment, Course Content focusing on Essential Outcomes, Faculty Development Support, Creation of Learning Packets or Modules, Orientation Seminars for faculty and students, and Internship/Related Learning Experience (RLE) and Laboratory Courses. Lecture and Laboratory/competency-based Courses shall also follow the FLM. Blended learning (25%F2F & 75% remote learning) delivery is preferred once minimal face-to-face is allowed based on CHED Advisory No. 7. The lecture and laboratory courses must be very closely integrated in terms of essential outcomes, such that, for example, the activities in the Laboratory may already serve/s as assessment task/s for the entire course, and pre-lab post-lab discussions shall already serve as modules in the lecture and integration of lecture and laboratory courses is highly encouraged. Teaching allied health programs which are considered to be skills-based programs is very crucial especially in flexible learning mode given that students must receive a successful actual learning experience to be able to gain competencies required in healthcare settings (CHED, 2020; Johnson et.al., 2021 and COAHS FLM Manual, 2021).

Faculty members face important challenges in the process of adapting learning models to satisfy new demands in teaching students in the flexible learning mode. It must be considered that quality teaching and learning processes in higher education are practically unthinkable without the use of technology, especially because of its impact on the development of the skills and abilities needed for the 21st century most especially in time of pandemic. ICTs are already part of the teaching of higher education to integrate formal learning contexts, being used by students in support of their formation. In its continuous scientific and pedagogical actualization, university education must master the new methodologies and the importance of ICT requires a responsibility, and it is up to the faculty members to preserve, improve and update the levels of digital competence for the progress of the teaching and learning processes. The digital transformation in higher education has experienced a set of important changes, stimulated by technological and social trends towards digitalization to adapt to the changes imposed by new technologies and by the pandemic, its acceptance in this educational field is related to a change of paradigm in an interconnected environment that allows digital learning, which implies focusing the formative interest on the students and their learning experiences. With that, faculty members have integrated a variety of virtual learning with the use of various technologies into their instruction. They must be creative and explore ways how to engage the students both in the lecture and laboratory.

Effective integration of technology in education must involve the combining of pedagogical skills, subject content, and technology in a particular educational ecosystem where the educational process takes place (Johnson et.al., 2021). The involvement of faculty members in the curriculum change has been a challenge for professional and teaching development. The adaptability of the professions in the face of an unprecedented pandemic has been made possible in many ways by the ability to communicate, learn and act through the use of technology. Given the limitations imposed, a number of different training approaches have emerged to help address the needs of the faculty members; alongside virtual online preparation such as the use of virtual

reality technology-based instructions which are considered to increase the student's engagement and performance, a personalized learning experience that directly supports teachers' pedagogical practice is provided. Digital pedagogy is characterized by strengthening the development of competencies in the field of technological entrepreneurship, it implies a renewal of the methodological approach that reflects the challenges of the digital era. Its success needs the commitment of students and it needs to be digitally dynamic by offering everything: personalized comments from teachers, discussion forums, tests with immediate feedback, and lessons with reading materials. In addition to the constant challenge for allied health faculty members to discover new methods in order to involve students and increase the effectiveness of the learning process, the active methodology must focus on student understanding, motivation, and participation from a constructivist perspective to enhance learning in order to learn competence and problem-solving skills, with teachers mediating the learning process so that students develop their own knowledge (Curtin et.al., 2011; McDowell et.al., 2016; Liaw et.al., 2016; Dow et.al., 2016; Taglierir et.al., 2017; Lee et al., 2018; Shin et.al. 2018; and Mospan & Gillete, 2020).

As technology becomes more ubiquitous throughout education, institutions of professional healthcare learning are incorporating various tools for students to utilize. A 2011 survey of 89 pharmacy schools in the United States reported the use of some forms of technology ranging from lecture capture and presentation software to videoconferencing and social media. In a study conducted by Johnson et.al., 2021, schools reported 100% use of technology for course management purposes, 79.8% use of technology for electronic testing, and 58.4% use of technology for experiential education programs. Similarly, a 2015 review of the available literature also detailed a large variety of technology being used in schools of pharmacy for improving patient care. Schools of pharmacy are embracing technology, and their students are as well. A survey in 2016 of 431 pharmacy students found that students preferred a blended approach to learning and not an online-only or lecture-only approach. These studies represent the desire of pharmacy schools and students to utilize technology in traditional and nontraditional educational settings. In accordance with the pertinent provisions of Republic Act (RA) No. 7722, otherwise known as the "Higher Education Act of 1994", and Republic Act No. 11469, otherwise known as the "Bayanihan to Heal as One Act", in accordance with relevant IATF Resolutions, and CMO No. 04 s. 2020 "Guidelines on the Implementation of Flexible Learning" and Joint Memorandum Circular CHED-DOH "Guidelines on the Gradual Reopening of Higher Education Institutions (HEIs) for Limited Face-to-Face Classes During COVID-19 Pandemic" and, by virtue of the Commission en banc Resolution No. 003, series of 2021 dated January 12, 2021, the Commission on Higher Education (CHED) hereby adopts and promulgates the following guidelines on the Conduct of Experiential Pharmacy Practice of Pharmacy Students during Pandemic Period, to be implemented by public and private HEIs offering Bachelor of Science in Pharmacy Program (Monaghan et.al., 2011; Salter et.al., 2014; Smith & Benedict, 2015; Hamilton et.al., 2016; and CHED, 2021).

Pharmacy Informatics is a course in the Bachelor of Science Program that is offered to BS Pharmacy students with second-year standing (done with first-year academic units) and is composed of a total of 3 units (2 units lecture, 1 unit laboratory). This course covers the various methods of gathering and using drug and health-related information from various electronic and non-electronic sources using different websites, search engines, and mobile applications. It focuses on the use of information technology and drug information to optimize medication use. The goal is that at the end of the course, the students will be able to use and integrate data and

apply the information, knowledge, and technology in the medication use process for the purpose of improving health outcomes. During the face-to-face set-up, pharmacy informatics students managed drug treatment and other drug queries of actual patients by applying all that they have learned from the course as part of their culminating activity aside from the technology expo. Since the pandemic, students enrolled in the course in the second semester of AY 2020-2021 cannot be exposed to actual patients. Therefore, virtual patient counseling was integrated into the course – where at the end of all modular topics, students have to undergo Virtual Patient Counseling whereby the students (student pharmacists) and patients (actual patients with or without health conditions) are physically separated and the experience is enhanced through utilizing online platforms such as google meet, FB-messenger, and zoom.

This study aimed to assess the students' performance and preparedness in remote counseling as integrated into the OBTL Plan of the Course Pharmacy Informatics. Specifically, it sought to answer the following questions:

1. What is the sociodemographic profile of the patients in terms of:
   a. Age
   b. Sex at birth
   c. Marital Status
   d. Highest Educational Background
   e. Occupation
   f. Health Condition
2. What is the student pharmacists' performance in remote counseling as assessed by patients and student pharmacists in terms of:
   a. Needs Assessment
   b. Precautions and Warnings
   c. Management and Treatment
   d. Communication
3. Is there a significant difference in the student pharmacists' performance in remote counseling as assessed by patients and student pharmacists in terms of:
   a. Needs Assessment
   b. Precautions and Warnings
   c. Management and Treatment
   d. Communication
4. Is there a significant difference in the student pharmacists' performance in remote counseling as assessed by patients when they are grouped according to:
   a. Age
   b. Sex at birth
   c. Marital Status
   d. Highest Educational Background
   e. Occupation
   f. Health Condition
5. What is the level of preparedness of the student pharmacists in remote counseling based on the scores given by patients and student pharmacists themselves and its significant difference in terms of:
   a. Needs Assessment

b. Precautions and Warnings
c. Management and Treatment
d. Communication
6. What are the themes from the interview extract of the patients and student pharmacists based on their remote counseling experience?

This study tested the following hypotheses:
1. There is no significant difference in the student pharmacists' performance in remote counseling as assessed by patients and student pharmacists in terms of Needs Assessment, Precautions and Warnings, Management and Treatment, and Communication.
2. There is no significant difference in the student pharmacists' performance in remote counseling as assessed by patients when they are grouped according to their socio-demographic profile.
3. There is no significant difference as to the level of preparedness of the student pharmacists in remote counseling based on the scores given by patients and student pharmacists themselves in terms of Needs Assessment, Precautions and Warnings, Management and Treatment, and Communication.

Methodology
Study site
The study was conducted in the National Capital Region, Philippines, between February and March 2021.

Research Design and Selection of Participants
Mixed method design, particularly explanatory sequential design, and practical action research was utilized in this study. Non-probability sampling, specifically purposive and convenience sampling were used. All enrolled students in the Pharmacy Informatics in the Second Semester of the Academic Year 2020-2021 are required to complete a remote medication counseling experience with an actual patient for at least 7 days, 1-1.5 hours a day. Due to the limitations brought by the pandemic, actual patients were considered eligible to be part of the study given that he/she is residing in the Philippines, with an existing health condition, and/or with a drug query. Additionally, willing to take part in the remote counseling process and must be able, capable, and reachable online.
Prior to the commencement of the remote counseling, students together with their professor and the researcher need to seek permission first from the patients. Each of the patients was provided with explanations of the purpose of the remote counseling experience and asked for their consent to participate through an electronic Informed Consent Form (e-ICF) (Appendices I and II). Only when they were willing to proceed were they involved in the remote counseling process. Further, students need to complete a remote counseling process adopted from the United States Pharmacopeia (USP) Medication Counseling Behavior Guidelines (MCBG). To ensure that no patient will be harmed in this activity, the process was video recorded, and all counseling points given by the student pharmacists are well-documented and validated by registered pharmacists.

Research Instrument

Following the remote counseling completion, students and their patients were asked to complete a questionnaire (Appendices III and IV) administered online (through google forms) evaluating their performance and preparedness during their Remote Counseling experience. The questions used in the study were divided into 2 parts: (1) patients' sociodemographic profile and (2) Virtual Medication Counseling Assessment consisting of 34 questions, each of which the students' performance was evaluated as "Not Done" which is 0 and "Done" represented by 4-point Likert scale (0.1-0.25 – Poor, 0.26-0.50 – Unsatisfactory, 0.51-0.75 – Satisfactory, and 0.75-1.00 – Excellent). The Remote Patient Medication Counseling Assessment was divided into four components: (a) Needs assessment (questions 1-9): This section addresses medication information transfer, during which the pharmacist provides the patient with basic, brief information about the safety and proper use of the medication, (b) Precautions and warnings (questions 10-17) This part concerns about medication information exchange, during which the pharmacist provides information, and responds to the patient's questions and concerns about medication side effects, drug interactions, safety, and precautions, (c) Management and Treatment (questions 18-28): This section concerns about medication education, during which the pharmacist provides the patient with detailed information about the appropriate use of the medication in an interactive manner, and (d) Communication (questions 29-34): This section addresses medication counseling, during which the patient has an open, detailed discussion with the pharmacist regarding any medication-related problems. Thus, the maximum score that an individual can give would be 34 which can be interpreted for the purpose of this study as 0 – Not Prepared, 1-8.5 – Developing Preparedness, 8.6-17 – Approaching Preparedness, 17.1-25.5 – Somewhat Prepared, 25.6-34 – Prepared. Further, qualitative data were also gathered to support the quantitative results by asking the student pharmacist and their patients for their feedback about their Remote Counseling experience.

The USP-MCBG was used to assess the counseling delivered by the student pharmacists. It is a flexible tool that can be changed in several ways without diminishing its credibility or stability (Layqah, L. 2018). The questionnaire was translated into Filipino and validated by an expert (Appendix V), and tested for reliability by carrying out a pilot test on a sample of 15 participants who share the same characteristics as the study respondents but did not participate in the actual study. Results were analyzed by Cronbach's alpha using SPSS version 26.

Data Collection

Data were collected online. Quantitative data were collected with the use of a questionnaire. The questionnaire was made brief and easily accessible to patients with the use of google forms. Qualitative data were collected through an in-depth online interview with the respondents.

Ethical statement

The study was conducted in accordance with the guidelines of the Declaration of Helsinki and the International Conference on Harmonization Good Clinical Practice Guideline.

Data Analysis

Data were presented as mean±SD for all quantitative variables and as percentages and frequencies for the categorical variables. ANOVA test was used to assess the statistical

significance between the results of the student pharmacists and patients. P-values less than 0.05 were considered statistically significant. For the qualitative data, significant statements of the patients and student pharmacists were tabulated and clustered into themes following the steps in Colaizzi Thematic Analysis. The themes formulated were validated by both patients and student pharmacists.

Results and Discussion

After collecting data and analyzing them, the researchers found the following:

The Cronbach's alpha for all 34 items was found to be 0.995. The factor loading for the four components ranged from 0.891 to 0.999. This indicates that the tool was appropriately valuable for data gathering and analysis.

Sociodemographic profile of the patients

Out of the 35 patients who participated in the remote counseling experience, only 29 patients have given their consent to participate in this study which gives a response rate of 83% (29/35). (For details, see Table 1)

Sex at Birth

Most patients who participated in the remote patient counseling are female (18, 62.1%) versus male (11, 37.9%). In an article written by Haynie (2015) published in the US and World Report News, in the world of online learning female students. At the undergraduate level 70% of online students were female and among graduate students, 72% were female. Moreover, females use social media less than men for business reasons, whereas women use social media to share more personal information than men, revealing more about personal lives. Females are more vocal, expressive, and willing to share (Brandwatch, 2015; and Friedman & Moody, 2021). These articles justify why females are more engaged in this activity than males.

Age

The patients who participated in the remote patient medication counseling are from the age brackets as follows, from highest to lowest: 18-34 y/o (55.2%), 35-50 y/o (17.2%), and 51-69 y/o = 70 and older (13.8%). This is actually expected especially since the platform to be used is online. According to the study conducted by Greenwood, et.al. (2016), 18-29 y/o are more engaged with the use of technology and with the use of social media. Moreover, in an article written by Bueno & Pacis (2020), they reported that people around the world turned to their smartphones, laptops, and other devices while strict lockdowns limited movement outside. The Philippines itself recorded the highest (64%) of internet users aged 16-64 who report spending more time on social media. Given that remote patient counseling requires the use of a device with internet connectivity, patients who are able (knows how to operate technology) and capable (own a technology with internet connectivity) can qualify to be part of the said activity.

Marital Status

The marital status of the patients are as follows, from highest to lowest: Single (17, 58.6%), Married (11, 37.9%), and Widowed (1, 3.4%). According to studies, single people have a scientifically proven advantage over the other marital status category. Single have more time

compared with the others (Nomaguchi & Bianchi, 2004; and DePaulo, 2011). Although, unmarried individuals have reduced access to resources that may affect health care utilization than those who are married and may engage in riskier health-related behaviors. Further, previous research suggests that being married is predictive of better health status, this concept implies a protective role of a strong social relationship that may result in better health because spouses (especially women) function as care takers, providing physical and emotional support (Pandey et al., 2019).

Educational Attainment

The highest educational background of the patients are as follows, from highest to lowest: College undergraduate (13, 44.8%), Highschool graduate (7, 24.1%), College graduate (4, 13.8%), Elementary graduate (3, 10.3%), and Elementary undergraduate = Technical Vocational (1, 3.4%). There is a growing body of research that has been exploring the influence of education on health. Even in highly developed countries like the United States, it has been observed that adults with lower educational attainment suffer from poor health when compared to other populations while adults with higher educational attainment have better health and lifespans compared to their less-educated peers. The health effects of education are at the grass roots-creating better overall self-awareness on personal health and making healthcare more accessible (Zajacova and Lawrence, 2018; and Raghupathi and Raghupathi, 2020). It is then clear in this study that most patients participated were those who are not college graduate and are actually in need of this service.

Occupation

The patients' occupation are as follows, from highest to lowest: None (68.9%), Housewife (3, 10.3%), BPO Agent (2, 6.9%), and OFW = Auditor = Retired Teacher = Crew (1, 3.4%). This is supported by the results in socio-demographic profiles according to age and educational background. It is well known that average health and life expectancy display a clear gradient by occupation, and many studies have documented strong associations between occupational characteristics and health (Ravesteijn et al., 2017).

Health Condition

Most of the patients are healthy but have asked a drug query (12, 41.4%) to the student pharmacist, followed by patients with the following health conditions, from highest to lowest: Hypertension (HTN) (4, 13.8%), Allergy = Asthma (2, 6.9%), and Type 2 Diabetes = Tuberculosis = Epilepsy = Kidney stones = Dysmenorrhea = Hyperthyroidism = HTN & Gastric acidity = HTN & Diabetes = HTN & Allergy (1, 3.4%). Based on the result that the student pharmacists have handled easy to complex patients as per their needs and health conditions. According to the Philippine Statistics Authority (2020 & 2021), the top three causes of death in the country from January to June of 2021 were ischaemic heart diseases, cerebrovascular diseases, and neoplasms. Incidentally, these were also the leading causes of death in the same period in 2020 with some deviations in the ranking. During the first half of 2021, ischaemic heart diseases were the leading cause of death with 56.76 thousand cases or 18.7 % of the total deaths in the country. This indicated an increase of about 17.4 % from the 48.34 thousand deaths or 16.7 % of the total deaths in the first six months of 2020. On the other hand, cerebrovascular diseases, now came in second with 30.80 thousand deaths (10.2% share) from being third in the previous year's ranking.

This showed an increase of 0.7 % from the 30.59 thousand cases (10.6% share) in the same period in 2020. Neoplasms, commonly known as "cancer" were the third leading cause which accounted for 27.34 thousand deaths (9.0% share) of the total. Deaths due to diabetes mellitus (19.80 thousand or 6.5% share), which ranked fourth in 2021, had an increase of 10.2 %. Meanwhile, deaths due to COVID-19 virus identified recorded 17.16 thousand cases (5.7% share) from January to June 2021 from 1.23 thousand cases (0.4% share) in the same period in 2020, making it the fifth leading cause of death for that period.

Table 1: Sociodemographic profile of the patients (n=29)

Sociodemographic Characteristic	Category	n	%
Sex at birth	Male	11	37.9
	Female	18	62.1
Age (based on Pew Research Center)	18-34 (Millennial)	16	55.2.2
	35-50 (Gen X)	5	17.2
	51-69 (Boomer)	4	13.8
	70 and older (Silent)	4	13.8
Marital Status	Single	17	58.6
	Married	11	37.9
	Widowed	1	3.4
Educational Attainment	Elementary undergraduate	1	3.4
	Elementary graduate	3	10.3
	Highschool graduate	7	24.1
	College undergraduate	13	44.8
	College graduate	4	13.8
	Technical vocational graduate	1	3.4
Occupation	None (no work, student)	20	68.9
	Housewife	3	10.3
	BPO Agent	2	6.9
	OFW	1	3.4
	Auditor	1	3.4
	Teacher (retired)	1	3.4
	Sales crew	1	3.4
Health condition	HTN	4	13.8
	DM Type 2	1	3.4
	TB	1	3.4
	Allergy	2	6.9
	Asthma	2	6.9
	Epilepsy	1	3.4
	Kidney stones	1	3.4
	Dysmenorrhea	1	3.4
	Hyperthyroidism	1	3.4
	HTN + Gastric acidity	1	3.4
	HTN + DM	1	3.4
	HTN + Allergy	1	3.4
	Drug Query (claimed to be healthy)	12	41.4

Legend: BPO – Business Process Outsourcing, OFW – Overseas Filipino Worker, HTN – Hypertension, DM – Diabetes Mellitus

Student Pharmacists' Performance

For the researcher to be able to know how the students would rate their performance in the remote counseling experience the same tool administered to the patients was administered to them for their self-assessment. The student pharmacists were told to be honest with how do they perceived their performance after the activity. Out of 35 student pharmacists, 27 have given their consent and participated in the study which gives a response rate of 77% (27/35).

Needs Assessment

Overall, the patients scored the student pharmacists' performance in the remote counseling under the component Needs Assessment as "Excellent". Based on the result the student pharmacists were able to perform the basics of counseling under needs assessment such as the introduction of self, providing privacy when counseling the patient, and trying to find out if the patient is on any other medications at the moment (1.00±0.00), followed by present facts and concepts about the patient's medications in a logical order (0.97±0.19), verify the name of the patient (0.96±0.19), review the prescription/case note prior discussion with the patient and explain the purpose of the discussion (0.93±0.26), find out if the patient has a family history of any chronic diseases (0.86±0.35), and find out if the patient has any drug or food allergies (0.76±0.44). On the other hand, the student pharmacists scored themselves from "Satisfactory" to "Excellent" as to the sub-components under Needs Assessment. Specifically, 7 out of 9 sub-components were scored as "Excellent" which are, present facts and concepts about the health condition of the patient (1.00±0.00), introduce self as a healthcare provider, reviewing the patient's prescription, and find out if the patient is taking any other medications at the moment (0.96±0.19), verify the name of the patient (0.93±0.27), provided privacy during discussion, and explain the purpose of the activity to the patient (0.85±0.36); while they scored themselves as "Satisfactory" in asking the patient about others drugs they are taking and their allergies (0.66±0.48), and medical history taking (0.59±0.50). Overall, the student pharmacists scored their performance under the Needs Assessment component as "Excellent". (For details, see Table 2)

Table 2: Mean Scores of the Student Pharmacists' Performance on Needs Assessment

Item	Patients' Assessment (n=29) Mean±SD	Student Pharmacists' Self-Assessment (n=27) Mean±SD
1. The student pharmacist introduce himself as a health care professional (or student pharmacist) before he discussed it with the patient.	1.00±0.00	0.96±0.19
2. The student pharmacist verifies the name of the patient, to find out if the patient was the owner of the prescription or case file.	0.96±0.19	0.93±0.27
3. The student pharmacist provides privacy during his discussion with the patient.	1.00±0.00	0.85±0.36
4. The student pharmacist reviews the prescription/case note prior to his discussion with the patient.	0.93±0.26	0.96±0.19

5.	The student pharmacist explains the purpose of the discussion to the patient.	0.93±0.26	0.85±0.36
6.	The student pharmacist tries to find out if the patient is on any other medications (at the moment).	1.00±0.00	0.96±0.19
7.	The student pharmacists present facts and concepts about the medications of the patient in a logical order.	0.97±0.19	1.00±0.00
8.	The student pharmacist finds out about the patient's family history of any chronic diseases like diabetes or hypertension.	0.86±0.35	0.59±0.50
9.	The student pharmacist finds out if the patient has any drug or food allergies.	0.76±0.44	0.66±0.48
	Composite Mean	**0.93±0.09**	**0.86±0.13**

Legend: 0- Not Done, 0.1-0.25 – Poor, 0.26-0.50 – Unsatisfactory, 0.51-0.75 – Satisfactory, and 0.76-1.00 – Excellent

Precautions and Warnings

Overall, the patients scored the student pharmacists' performance in the virtual counseling under the component Needs Assessment as "Excellent". Based on the result the student pharmacists were able to perform the subcomponents under precautions and warnings such as, to explore any potential problems associated with the patient's medication, to discuss any significant side effects of the patient's medication, and to discuss any drug-drug, drug-disease, or drug-food interactions of the patient's medications (1.00±0.00), help the patient generate solutions to some potential problems of his/her medication (0.97±0.19), tell the patient to prevent and/or manage side effects of his/her drugs if they occur (0.90±0.31), tell the patient the activities to avoid when he/she is on medications (0.83±0.38), warn the patient not to take any drug, alcohol or herbal products concurrently with his/her medications (0.79±0.41), and explain to the patient in precise terms what to do when he/she misses a dose (0.76±0.43). On the other hand, the student pharmacists scored themselves "Excellent" for almost all the sub-components under Precautions and Warnings, except for, explain to the patient in precise terms what to do when he/she misses a dose, which they scored "Satisfactory". (For details, see Table 3)

Table 3: Student Pharmacists' Performance on Precautions and Warnings

	Item	Patients' Assessment (n=29) Mean±SD	Student Pharmacists' Self-Assessment (n=27) Mean±SD
10.	The student pharmacist explores any potential problems associated with the patient's medications, (e.g. affordability).	1.00±0.00	0.93±0.27
11.	The student pharmacist discusses any significant side effects of your medications with the patient.	1.00±0.00	0.96±0.19
12.	The student pharmacist warns the patient not to take any drug, alcohol, or herbal products concurrently with his/her medications.	0.79±0.41	0.78±0.42
13.	The student pharmacist discusses any drug-drug,	1.00±0.00	0.93±0.27

	drug-disease or drug-food interactions of your medications with the patient.		
14.	The student pharmacist explains to the patient in precise terms what to do when he/she misses a dose.	0.76±0.43	0.59±0.50
15.	The student pharmacist tells the patient the activities to avoid when he/she is on medications.	0.83±0.38	0.85±0.36
16.	The student pharmacist helps the patient generate solutions to some of the potential problems of his/her medication.	0.97±0.19	0.89±0.32
17.	The student pharmacist tells the patient how to prevent and/ or manage side effects of his/her drugs if they occur.	0.90±0.31	0.93±0.27
	Composite Mean	**0.91±0.14**	**0.86±0.19**

Legend: 0- Not Done, 0.1-0.25 – Poor, 0.26-0.50 – Unsatisfactory, 0.51-0.75 – Satisfactory, and 0.76-1.00 – Excellent

Management and Treatment

The patients scored the student pharmacists from "Satisfactory" to "Excellent" as to the sub-components under Management and Treatment. Specifically, 9 out of 11 sub-components were scored as "Excellent", which are, gives the patient the opportunity to ask questions or express opinions, ensures that the patient understands the advice given by asking him/her to repeat them, and maintains control and direction when conversing with the patient without distraction (1.00±0.00), emphasizes to the patient the need to complete the medication (0.9±70.19), asks good open-ended questions (0.93±0.26), tells the patient when to come back a for check-up and to refill his/her medications, and asks if the patient needed additional information (0.90±0.31), assists the patient in developing a plan to incorporate his/her medication regimen into his/her daily routine (0.83±0.38), and explains how, when, and how long the patient would use his/her medications (0.76±0.44); while 2 out of 11 were scored as "Satisfactory" by the patients, these are, discusses to the patient the storage conditions and other ancillary instructions of his/her medications and tells the patient how long the drug would take to start showing effects (0.66±0.48). Overall, the patients scored the student pharmacists' performance under the Management and Treatment component as "Excellent". The student pharmacists scored themselves from "Unsatisfactory" to "Excellent" as to the sub-components under Management and Treatment. Specifically, 8 out of 11 sub-components were scored as "Excellent" which are, emphasizes the need for the patient to complete his/her medications, give the patient an opportunity to ask questions or express his/her opinions, find out if the patient understands the advice given by asking him/her to repeat them and maintain control and direction of the conversation with the patient without distractions (1.000.00), assist the patient in developing a plan to incorporate his/her medication regimen into his/her daily routine (0.96±0.19), ask the patient if he/she needed additional information and ask good open-ended questions to the patient (0.89±0.32), tell the patient when to come back for a check-up and to refill his/her medications (0.85±0.36), while scored themselves as "Satisfactory" in the following: explain how, when, and how long the patient would use his/her medications (0.74±0.45), and tell the patient how long it would take before his/her drugs start showing effects (0.56±0.51). And lastly, they scored themselves as "Unsatisfactory" in discuss with the patient the storage conditions and other ancillary instructions of his/her medications (0.48±0.51). Overall, the student pharmacists

scored their performance under the Management and Treatment component as "Excellent". (For details, see Table 4)

Table 4: Student Pharmacists' Performance on Management and Treatment

	Item	Patients' Assessment (n=29) Mean±SD	Student Pharmacists' Self-Assessment (n=27) Mean±SD
18.	The student pharmacist discusses the storage conditions and other ancillary instructions of your medications with the patient.	0.66±0.48	0.48±0.51
19.	The student pharmacist tells the patient how long it would take before his/her drugs start showing effects.	0.66±0.48	0.56±0.51
20.	The student pharmacist tells the patient when to come back for a check-up and to refill his/her medications.	0.90±0.31	0.85±0.36
21.	The student pharmacist emphasizes the need for the patient to complete his/her medications.	0.97±0.19	1.00±0.00
22.	The student pharmacist assists the patient in developing a plan to incorporate his/her medication regimen into his/her daily routine.	0.83±0.38	0.96±0.19
23.	The student pharmacist explains how, when, and how long would the patient use his/her medications.	0.76±0.44	0.74±0.45
24.	The student pharmacist gives the patient an opportunity to ask questions or express his/her opinions.	1.00±0.00	1.00±0.00
25.	The student pharmacist tries to find out if the patient understands the advice, he gave by asking him/her to repeat them.	1.00±0.00	1.00±0.00
26.	The student pharmacist asks the patient if he/she needed additional information.	0.90±0.31	0.89±0.32
27.	The student pharmacist maintains control and direction of having conversations with the patient without distractions.	1.00±0.00	1.00±0.00
28.	The student pharmacist asks good open-ended-questions to the patient (i.e. questions beginning with 'why', 'how', 'when', and 'where')	0.93±0.26	0.89±0.32
	Composite Mean	**0.87±0.14**	**0.86±0.19**

Legend: 0- Not Done, 0.1-0.25 – Poor, 0.26-0.50 – Unsatisfactory, 0.51-0.75 – Satisfactory, and 0.76-1.00 – Excellent

Communication

Considering that patients and student pharmacists are more comfortable with the traditional

way of patient counseling, both the patients and students have given a score of "Excellent" in all the sub-components under Communication. (For details, see Table 5)

The ability to communicate effectively is an essential skill for a pharmacist (Jin. H.K. et al., 2019). In where, student pharmacists are trained as it has been incorporated into the pharmacy curriculum.

Table 5: Student Pharmacists' Performance in Communication

Item		Patients' Assessment (n=29) Mean±SD	Student Pharmacists' Self-Assessment (n=27) Mean±SD
29.	The student pharmacist provides the patient with accurate information.	0.90±0.31	0.89±0.62
30.	The student pharmacist tells the patient the name and indications of his/her medications.	1.00±0.00	0.89±0.62
31.	The student pharmacist maintains the following communication skills:		
	(i) good eye contacts	1.00±0.00	1.00±0.00
	(ii) audible voice, tone, and good pace	1.00±0.00	1.00±0.00
	(iii) good posture and gestures	1.00±0.00	1.00±0.00
	(iv) adequate space	1.00±0.00	1.00±0.00
	Composite Mean	**0.98±0.05**	**0.96±0.11**

Legend: 0- Not Done, 0.1-0.25 – Poor, 0.26-0.50 – Unsatisfactory, 0.51-0.75 – Satisfactory, and 0.76-1.00 – Excellent

Significant Difference in the Overall Mean Scores of the Student Pharmacists' Performance

Communication is the component that has the highest mean score from both patients and student pharmacists (0.98±0.05 and 0.96±0.11) with a qualitative interpretation of "Excellent", while Management and Treatment (0.87±0.14) for patients and Needs Assessment (0.86±0.13) for student pharmacists have the least mean score. Overall, there is no significant difference between the patient and student pharmacists' overall mean scores in the four (4) components (For details, see Table 6).

Aside from the theoretical knowledge learned from Pharmacy Informatics, the student pharmacists have applied in this activity all the concepts that they have learned from the minor and major courses they have finished such as Filipino 1 & 2, Purposive Communication, Dispensing 1 (Dispensing Process, Reading and Interpreting the Prescription and other Medication orders), Pharmacology 1, and Interpersonal and Interprofessional Communication Skills, which made them excel more in the communication component (Excellent) over the other components (Unsatisfactory to Excellent). As to management and treatment, student pharmacists still need a long way to practice and gain skills in providing patients with detailed information about the appropriate use of the medication in an interactive manner using online platforms. As to the precautions and warnings, student pharmacists have to improve on explaining to the patients in precise terms what to do when he/she misses a dose. Moreover, the student pharmacists still have skills to improve as to the needs assessment component such as asking the patient about other drugs they are taking and their allergies, and medical history taking.

According to Fox et al., (2011) the results of the medication usage process, or the outcomes related to medications for their patients, are directly within the control of pharmacists. In order for student pharmacists to comprehend the pharmaceutical use process and take part in its ongoing improvement, they need to be given sufficient educational context. This includes using a scientific method to comprehend the efficacy and safety of technology for the administration of medications. Student pharmacists must also understand how health information technology is affecting a global healthcare delivery system because pharmaceutical usage systems function as components within broader health information technology platforms. Further, according to the American Society of Health-System Pharmacists (ASHP), pharmacists are uniquely qualified to play a key role in medical informatics due to their special knowledge, skill, and responsibility. Pharmacists must use their understanding of information systems and the medication-use process to improve patient care by ensuring that new technologies result in safer and more effective medication use as governments and the health care community develop strategic plans for the widespread adoption of health information technology (ASHP, 2007). Thus, student pharmacists must be taught with skills and taught on how appreciate their future role as a pharmacist and a pharmacy informaticist in medical informatics using new technologies efficiently and effectively.

Table 6: Significant Difference in the Overall Mean Scores of the Student Pharmacists' Performance on Remote Counseling

Components	Patients' Overall Assessment (n=29) Mean±SD	Student Pharmacists' Overall Self-Assessment (n=27) Mean±SD	F-value	P-value
Needs Assessment	0.93±0.09	0.86±0.13	1.057	0.386
Precautions and Warnings	0.91±0.14	0.86±0.19	0.211	0.954
Management and Treatment	0.87±0.14	0.86±0.19	0.232	0.917
Communication	0.98±0.05	0.96±0.11	0.397	0.534
Overall Mean	**0.92±0.08**	**0.88±0.09**	**2.077**	**0.186**

Legend: 0- Not Done, 0.1-0.25 – Poor, 0.26-0.50 – Unsatisfactory, 0.51-0.75 – Satisfactory, and 0.76-1.00 – Excellent
P-values less than 0.05 were considered statistically significant

Significant differences in the Patient Assessment Mean Scores of the Student Pharmacists' Performance when grouped according to their socio-demographic profile

There are no significant differences in the patients' assessment mean scores of the student pharmacists' performance as to the age, sex at birth, marital status, educational attainment, occupation, and health condition of the patients. (For details, see Table 7)

The findings reveal that patients' sex at birth, age, marital status, educational attainment, occupation, and health condition are not significantly related to the student pharmacists' performance in the remote patient medication counseling, suggesting that these sociodemographic characteristics are not determinants of the student pharmacists' performance.

Table 7: Significant differences in the Patient Assessment Mean Scores of the Student Pharmacists' Performance when grouped according to sociodemographic profile

Sociodemographic Variables	F value	P value
Age	1.519	0.228
Sex at birth	0.000	0.987
Marital Status	0.264	0.770
Educational Attainment	2.353	0.073
Occupation	0.723	0.654
Health Condition	0.978	0.506

Legend: P-values less than 0.05 were considered statistically significant

Level of Preparedness of the Student Pharmacists and its Significant Differences

Based on the results, student pharmacists are "prepared" in all four components as scored by the patients and the student pharmacists. The mean±SD are as follows: Needs Assessment (8.41±0.78 and 7.78±1.15), Precautions and Warnings (7.24±1.15 and 6.85±1.49), Management and Treatment (9.59±1.52 and 9.37±1.36), and Communication (5.90±0.31 and 5.78±0.64). There are no significant differences in the patient and student pharmacists' overall mean scores in the four (4) components as to the preparedness of the student pharmacists in remote counseling. (For details, see Table 8)

Even there is no significant difference detected between the patient and student pharmacists' overall mean scores in the four (4) components as to the preparedness of the student pharmacists in remote counseling, it can be observed that patients scored the student pharmacists higher compared with the student pharmacists' self-assessment scores. The findings somewhat reveal that the patients are more confident with the student pharmacists' skills that they were with their counseling skills. Although student pharmacists were taught in some of their major courses as incorporated in the pharmacy curriculum, the findings suggests that student pharmacists must also be trained regularly to increase not only their counseling skills, but also a training that will have a significant impact on their attitude and boost their confidence as a preparation for their experiential pharmacy practice (Chen et al., 2015; and Jin, et al., 2019).

Table 8: Level of Preparedness of the Student Pharmacists on Virtual Patient Counseling

Components	No. of Items	Obtainable Score	Patients' Assessment (n=29) Mean±SD	Student Pharmacists' Self-Assessment (n=27) Mean±SD	F-value	P-value
Needs Assessment	9	0-9	8.41±0.78	7.78±1.15	1.597	0.189
Precautions and Warnings	8	0-8	7.24±1.15	6.85±1.49	1.036	0.464
Management and Treatment	11	0-11	9.59±1.52	9.37±1.36	0.769	0.673
Communication	6	0-6	5.90±0.31	5.78±0.64	0.151	0.999

Student Pharmacists' Total Level of Preparedness	**34**	**0-34**	**31.14±3.76**	**29.78±4.64**	**0.978**	**0.506**

Legend: (0-9) 0 – Not Prepared, 0.1-2.25 – Developing Preparedness, 2.26-4.50 – Approaching Preparedness, 4.60-6.75 – Somewhat Prepared, 6.78-9 – Prepared; (0-8) 0 – Not Prepared, 1-2 – Developing Preparedness, 3-4 – Approaching Preparedness, 5-6 – Somewhat Prepared, 7-8 – Prepared; (0-11) 0 – Not Prepared, 1-2.75 – Developing Preparedness, 2.76-5.5 – Approaching Preparedness, 5.6-8.25 – Somewhat Prepared, 8.26-11 – Prepared; (0-6) 0 – Not Prepared, 1-1.5 – Developing Preparedness, 1.6-3 – Approaching Preparedness, 3.1-4.5 – Somewhat Prepared, and 4.6-6 – Prepared; and (0-34) 0 – Not Prepared, 1-8.5 – Developing Preparedness, 8.6-17 – Approaching Preparedness, 17.1-25.5 – Somewhat Prepared, 25.6-34 – Prepared; P-values less than 0.05 were considered statistically significant

Qualitative Feedbacks

Positive and negative experiences were extracted from the qualitative feedback verbalized by both patients and student pharmacists during the interview. (For details, see Appendices VI-VII)

The formulated themes were positive and negative experiences that revolve around the three (3) domains of learning, to wit: Cognitive: mental skills (Knowledge), Affective: growth in feelings or emotional areas (Attitude or self), and Psychomotor: manual or physical skills (Skills).

For the positive experiences of the patients, they shared that student pharmacists were knowledgeable and good researchers (Knowledge); good conveyors of information/good communicators, well-organized and good listeners (Skills); and respectful, reliable, understanding, emphatic, and empowered (Attitude). Further, patients were satisfied, grateful, and happy with their remote counseling experience. They mentioned that they appreciate the pharmacy profession and believed that the student pharmacists are ready to become future pharmacists. The only negative experience one of them shared is the feeling of awkwardness especially during the first few days of the remote counseling experience.

For the student pharmacists, the positive experiences they have realized are that they were good researchers (Knowledge); good conveyors of information/good communicators, good listeners, observants, and well-organized (Skills); and reliable/trustworthy, emphatic, proactive, can work with grace under pressure, and empowered (Attitude). Further, they verbalized that they felt satisfaction, happiness, and excitement during and after the remote counseling experience. They appreciate the experience since it served as a training ground for them that boosted their confidence, self-esteem, and self-worth. There are however negative experiences that the student pharmacists want to address to further improve themselves such as some of them being anxious during the course of the activity, lacking confidence, missed to convey important information, and needing more practice.

Conclusions

The remote counseling practice of the student pharmacists was found to be "Excellent" by both the patients and student pharmacists, in which the Communication component garnered the highest mean score. Though all four components were scored as excellent, there are still counseling skills of the students that must be improved such as in Needs Assessment: asking the patient about other drugs they are taking and their allergies, and medical history taking; in Precautions and Warnings: explain to the patient in precise terms what to do when he/she misses a dose; and in Management and Treatment: explain how, when, and how long the patient would use his/her

medications, tell the patient how long it would take before his/her drugs start showing effects, and discuss with the patient the storage conditions and other ancillary instructions of his/her medications. Based on the acquired scores in preparedness using the USP-BMCG, the student pharmacists were "Prepared" to conduct counseling skills in a remote setting. Moreover, based on the qualitative feedback from both patients and student pharmacists, the remote counseling experience helps boost the students' confidence, communication skills, and better appreciation of remote counseling.

In this study, the following was accomplished:

1. The socio-demographic profile of the patient-respondents was determined with the use of a questionnaire, then frequency and percentile were computed using SPSS v.26.
2. The student pharmacists' performance in remote counseling was assessed by patients and student pharmacists in terms of Needs Assessment, Precautions and Warnings, Management and Treatment, and Communication with the use of the USP-MCBG Questionnaire. The data gathered were treated using descriptive statistics.
3. The significant difference in the student pharmacists' performance in remote counseling as assessed by patients and student pharmacists in terms of Needs Assessment, Precautions and Warnings, Management and Treatment, and Communication were tested using ANOVA.
4. The significant difference in the student pharmacists' performance in remote counseling as assessed by patients when they are grouped according to their socio-demographic profile was tested using ANOVA.
5. The level of preparedness of the student pharmacists in remote counseling based on the scores given by patients and student pharmacists themselves and its significant difference in terms of Needs Assessment, Precautions and Warnings, Management and Treatment, and Communication were determined based on the USP-MCBG maximum score and then tested for the significant difference using ANOVA.
6. The themes from the interview extract of the patients and student pharmacists based on their remote counseling experience were determined through an in-depth interview and were analyzed using Colaizzi's method.

This research, therefore, proves that the null hypotheses presented in this study are all to be accepted which are: there is no significant difference in the student pharmacists' performance in remote counseling as assessed by patients and student pharmacists in terms of Needs Assessment, Precautions and Warnings, Management and Treatment, and Communication, that there is no significant difference in the student pharmacists' performance in remote counseling as assessed by patients when they are grouped according to their socio-demographic profile, and that there is no significant difference as to the level of preparedness of the student pharmacists in remote counseling based on the scores given by patients and student pharmacists themselves in terms of Needs Assessment, Precautions and Warnings, Management and Treatment, and Communication. Moreover, the findings in this study suggest the need for continuous training and development for student pharmacists in the management and treatment component. Further, to create training sets for student pharmacists as to the other types of telepharmacy such as inpatient (remote order-entry review), remote dispensing (retail/outpatient/discharge), and IV admixture, aside from remote counseling.

Recommendations

The researchers recommend the following:

1. The findings of this study can be a call for future research that should focus on a nationwide remote counseling practice in different pharmacy schools, not limited to Pharmacy Informatics Course, but also to other courses such as Medication Counseling 1 and 2, and in the Experiential Pharmacy Practice (EPP). Another potential area is to investigate the recent pharmacy schools' curricula modifications on medication counseling. As well as provide students with effective counseling skills to improve patient comprehension of their condition and optimal use of their medications.

2. The findings of this study can contribute to the pool of pharmacy research concerning remote patient medication counseling and other related research that focuses on improving pharmacy education aided by technology.

3. The following were identified as limitations of the study, thus can be considered for future research, however, these limitations are not likely to have greatly affected the overall result of this study:

    a. To conduct a pre- and post-evaluation to get baseline data from the patients and student pharmacists as to their performance and preparedness;

    b. To add more sub-components in Communication such as skills that a student pharmacist must possess in communicating to patients in an online set-up;

    c. To specify the health condition of the patients to be handled by the student pharmacists to create and plan a targeted approach in the medication counseling process;

    d. To increase the number of days of student pharmacists-patient engagement to build trust and ensure safety towards the medication counseling process in an online set-up; and

    e. To conduct the same study in the different areas of the EPP with the student pharmacists, patients and preceptors as the respondents.

Conflict of Interest

The author declares no conflict of interest.

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For the Patients

College of Allied Health Studies – Center of Pharmacy
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Title of Research Project: Assessing Student Pharmacists' Performance and Preparedness in Remote Patient Medication Counseling
Name of Researcher: Asst. Prof. Estela P. De Vera
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PLEASE READ THIS DOCUMENT CAREFULLY. YOUR SIGNATURE IS REQUIRED FOR PARTICIPATION. YOU MUST BE AT LEAST 18 YEARS OF AGE TO GIVE YOUR CONSENT TO PARTICIPATE IN RESEARCH.

INVITATION TO PARTICIPATE AND DESCRIPTION OF THE RESEARCH PROJECT

Your participation in this research is voluntary, and you have the right to withdraw at any time, without prejudice, should you object to the nature of the research. You are entitled to ask questions and to receive an explanation after your participation.

Description of the Study: This study aims to assess student pharmacists' performance and preparedness in remote patient medication counseling. This will utilize explanatory sequential mixed-method design and action research. Since the pandemic, students cannot be exposed to patients in-person without properly following health protocols. Therefore, remote counseling will be integrated into the pharmacy informatics course where at the end of all modular topics, enrolled students experienced delivering pharmaceutical care to actual patients even physically separated through utilizing online platforms. Due to the limitations brought by the pandemic, actual patients were considered eligible to be part of the study given that he/she is residing in the Philippines, with an existing health condition, or with a drug query. Additionally, willing to take part in the remote counseling process and must be able, capable, and reachable online. Further, student pharmacists need to complete a remote counseling process adopted from the United States Pharmacopeia (USP) Medication Counseling Behavior Guidelines (MCBG). To ensure that no patient and student pharmacist will be harmed in this activity, the process will be video recorded, and all counseling points given by the student pharmacists are well-documented and validated by registered pharmacists.

Nature of Participation: If you agree to participate in this study, you will be:
(1) *Enrolled as a patient in the remote patient medication counseling*
In the Remote Patient Medication Counseling, you will be receiving counseling via g-meet, FB-messenger or zoom. This will be facilitated by a student pharmacist and supervised by a registered pharmacist. The counseling will focus on four (4) components, namely: (a) Needs assessment: This section addresses medication information transfer, during which the pharmacist provides the patient with basic, brief information about the safety and proper use of the medication, (b) Precautions and warnings: This part concerns about medication information exchange, during which the pharmacist provides information, and responds to the patient's questions and concerns about medication side effects, drug interactions, safety, and precautions, (c) Management and Treatment: This section concerns about medication education, during which the pharmacist provides the patient with detailed information about the appropriate use of the medication in an interactive manner, and (d) Communication: This section addresses medication counseling,

during which the patient has an open, detailed discussion with the pharmacist regarding any medication-related problems.

The remote counseling will last for at least 7 days, 1-1.5 hours a day. Further, the student pharmacist and the researcher will explain the procedures in detail to you before you begin with the remote counseling.

(2) *Administered with a questionnaire through google forms (could be answered using a smartphone, tablet, or computer)*. In the first part of the questionnaire your personal information such as your name (optional), age, sex at birth, and highest educational attainment, occupation, and health condition will be asked. In the second part, (upon completion of the remote counseling) you will assess the performance and preparedness of the student pharmacist who facilitated the remote counseling. This consists of 34 questions, of which the student pharmacist performance will be evaluated as "Not Done" which is 0 and "Done" represented by 4-point Likert scale (0.1-0.25 – Poor, 0.26-0.50 – Unsatisfactory, 0.51-0.75 – Satisfactory, and 0.75-1.00 – Excellent) in the four (4) components: Needs assessment (questions 1-9), Precautions and warnings (questions 10-17), Management and Treatment (questions 18-28), and Communication (questions 29-34). Thus, the maximum score that you can give would be 34 which can be interpreted for the purpose of this study as: 0 – Not Prepared, 1-9.5 – Developing Preparedness, 9.6-19 – Approaching Preparedness, 20-28.5 – Somewhat Prepared, 28.6-38 – Prepared.

(3) *Interviewed by the researcher*. Qualitative data will also be gathered to support the quantitative results by asking for your feedback about your remote counseling experience.

Duration: This study will take about 7 hours and 40 minutes to 11 hours and 30 minutes of your time to complete. The remote counseling will last for at least 7 days, 1-1.5 hours a day. The questionnaire will take 10-15 minutes to answer. The interview will take 30-45 minutes to complete.

Possible Risks:
a) When (undergoing the remote counseling, filling out the questionnaire and undergoing the interview), you may (come across an experience or question) that you find unpleasant, upsetting, or otherwise objectionable. For instance, (being uneasy or uncomfortable with the remote counseling and/or a few of the questions may cause you to think about negative emotional states). Discuss this to the researcher during the debriefing. In any case, that you will be needing assistance with this, an expert will be on stand-by to help you.
b) You will be asked to provide confidential information about yourself.

Possible Benefits: When your participation is complete, you will be given an opportunity to learn about this research, which may be useful to you in understanding more about remote patient medication counseling.

Voluntary Participation: Your participation in this research is entirely voluntary. If you decide to withdraw from the study or decline to answer any specific questions, you may do so without penalty. All information will be kept strictly confidential and used only for this study. None of your responses can be linked directly to you. All measures will be made to protect the confidentiality of the information submitted by the participants.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you decide. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: All information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will appear in any report or publication of the research. Your data will be safely stored in an online cloud storage and only the researcher will have an access to this information. The data will be destroyed after the study by deleting it permanently from the online cloud storage. Confidentiality will be provided to the fullest extent possible by law.

Conflict of Interest: The author declares no conflict of interest.

Questions About the Research: If you have questions about the research in general or about your role in the study, please feel free to contact Asst. Prof. Estela P. De Vera either by mobile phone at (+63) 956-760-0078 or by e-mail (estela.devera@umak.edu.ph).

Participant's Consent and Signature:

As written above, you confirm that you have read and understood the following information. You have noted that:

- □ My participation in this activity is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty. If I decline to participate or withdraw from the study, no one will be told.
- □ I understand that my participation involves being enrolled in the Remote Patient Medication Counseling, administered a questionnaire, and be interviewed by the researcher. The duration of this study will last for 7 hours and 40 minutes to 11 hours and 30 minutes, and will be video recorded (for the remote counseling and interview). If I don't want to be video recorded, I will not be able to participate in the study.
- □ I understand that the researcher will not identify me by name in any reports using information obtained from the remote counseling and that my confidentiality as a participant will remain secure. Subsequent use of records and data will be subject to standard use policies which protect the anonymity of individuals and institutions.
- □ I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in the remote counseling.
- □ I understand that I can contact the researcher if I have any concerns about the ethical conduct of this research.
- □ I have given a copy of this consent form.

By signing this form, I am attesting that I have read and understand the information above and I freely give my consent to participate in this study.

Signature: _____

Date Reviewed and Signed: _____

INFORMED CONSENT FORM
For the Student Pharmacists

College of Allied Health Studies – Center of Pharmacy
University of Makati
J.P. Rizal Extn., West Rembo, Makati City,
National Capital Region, Philippines, 1215

Title of Research Project: Assessing Student Pharmacists' Performance and Preparedness in Remote Patient Medication Counseling
Name of Researcher: Asst. Prof. Estela P. De Vera
Mobile Number: (+63) 956-760-0078

PLEASE READ THIS DOCUMENT CAREFULLY. YOUR SIGNATURE IS REQUIRED FOR PARTICIPATION. YOU MUST BE AT LEAST 18 YEARS OF AGE TO GIVE YOUR CONSENT TO PARTICIPATE IN RESEARCH.

INVITATION TO PARTICIPATE AND DESCRIPTION OF THE RESEARCH PROJECT

Your participation in this research is voluntary, and you have the right to withdraw at any time, without prejudice, should you object to the nature of the research. You are entitled to ask questions and to receive an explanation after your participation.

Description of the Study: This study aims to assess student pharmacists' performance and preparedness in remote patient medication counseling. This will utilize explanatory sequential mixed-method design and action research. Since the pandemic, students cannot be exposed to patients in-person without properly following health protocols. Therefore, remote counseling will be integrated into the pharmacy informatics course where at the end of all modular topics, enrolled students experienced delivering pharmaceutical care to actual patients even physically separated through utilizing online platforms. Due to the limitations brought by the pandemic, actual patients were considered eligible to be part of the study given that he/she is residing in the Philippines, with an existing health condition, or with a drug query. Additionally, willing to take part in the remote counseling process and must be able, capable, and reachable online. Further, student pharmacists need to complete a remote counseling process adopted from the United States Pharmacopeia (USP) Medication Counseling Behavior Guidelines (MCBG). To ensure that no patient and student pharmacist will be harmed in this activity, the process will be video recorded, and all counseling points given by the student pharmacists are well-documented and validated by registered pharmacists.

Nature of Participation: If you agree to participate in this study, you will be:
(1) *Enrolled as a student pharmacist in the remote patient medication counseling*
In the Remote Patient Medication Counseling, you will facilitate a counseling via g-meet, FB-messenger or zoom that will be supervised by a registered pharmacist. The counseling will focus on four (4) components, namely: (a) Needs assessment: This section addresses medication information transfer, during which the pharmacist provides the patient with basic, brief information about the safety and proper use of the medication, (b) Precautions and warnings: This part concerns about medication information exchange, during which the pharmacist provides information, and responds to the patient's questions and concerns about medication side effects, drug interactions, safety, and precautions, (c) Management and Treatment: This section concerns about medication education, during which the pharmacist provides the patient with detailed information about the appropriate use of the medication in an interactive manner, and (d) Communication: This section addresses medication counseling, during which the patient has an open,

detailed discussion with the pharmacist regarding any medication-related problems.

The remote counseling will last for at least 7 days, 1-1.5 hours a day. Further, the researcher will explain the procedures in detail to you before you begin with the remote counseling.

(2) *Administered with a questionnaire through google forms (could be answered using a smartphone, tablet, or computer)*. Upon completion of the remote counseling, you will assess your performance and preparedness as a student pharmacist in facilitating the remote counseling. This consists of 34 questions, of which the student pharmacist performance will be evaluated as "Not Done" which is 0 and "Done" represented by 4-point Likert scale (0.1-0.25 – Poor, 0.26-0.50 – Unsatisfactory, 0.51-0.75 – Satisfactory, and 0.75-1.00 – Excellent) in the four (4) components: Needs assessment (questions 1-9), Precautions and warnings (questions 10-17), Management and Treatment (questions 18-28), and Communication (questions 29-34). Thus, the maximum score that you can give would be 34 which can be interpreted for the purpose of this study as: 0 – Not Prepared, 1-9.5 – Developing Preparedness, 9.6-19 – Approaching Preparedness, 20-28.5 – Somewhat Prepared, 28.6-38 – Prepared.

(3) *Interviewed by the researcher*. Qualitative data will also be gathered to support the quantitative results by asking for your feedback about your remote counseling experience.

Duration: This study will take about 7 hours and 40 minutes to 11 hours and 30 minutes of your time to complete. The remote counseling will last for at least 7 days, 1-1.5 hours a day. The questionnaire will take 10-15 minutes to answer. The interview will take 30-45 minutes to complete.

Possible Risks:
a) When (undergoing the remote counseling, filling out the questionnaire and undergoing the interview), you may (come across an experience or question) that you find unpleasant, upsetting, or otherwise objectionable. For instance, (being uneasy or uncomfortable with the remote counseling and/or a few of the questions may cause you to think about negative emotional states). Discuss this to the researcher during the debriefing. In any case, that you will be needing assistance with this, an expert will be on stand-by to help you.
b) You will be asked to provide confidential information about yourself.

Possible Benefits: When your participation is complete, you will be given an opportunity to learn about this research, which may be useful to you in understanding more about remote patient medication counseling.

Voluntary Participation: Your participation in this research is entirely voluntary. If you decide to withdraw from the study or decline to answer any specific questions, you may do so without penalty. All information will be kept strictly confidential and used only for this study. None of your responses can be linked directly to you. All measures will be made to protect the confidentiality of the information submitted by the participants.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you decide. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: All information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will appear in any report or publication of the research. Your data will be safely stored in an online cloud storage and only the researcher will have an access to this information. The data will be destroyed after the study by deleting it permanently from the online cloud storage. Confidentiality will be provided to the fullest extent possible by law.

Conflict of Interest: The author declares no conflict of interest.

Questions About the Research: If you have questions about the research in general or about your role in the study, please feel free to contact Asst. Prof. Estela P. De Vera either by mobile phone at (+63) 956-760-0078 or by e-mail (estela.devera@umak.edu.ph).

Participant's Consent and Signature:

As written above, you confirm that you have read and understood the following information. You have noted that:

- □ My participation in this activity is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty. If I decline to participate or withdraw from the study, no one will be told.
- □ I understand that my participation involves being enrolled in the Remote Patient Medication Counseling, administered a questionnaire, and be interviewed by the researcher. The duration of this study will last for 7 hours and 40 minutes to 11 hours and 30 minutes, and will be video recorded (for the remote counseling and interview). If I don't want to be video recorded, I will not be able to participate in the study.
- □ I understand that the researcher will not identify me by name in any reports using information obtained from the remote counseling and that my confidentiality as a participant will remain secure. Subsequent use of records and data will be subject to standard use policies which protect the anonymity of individuals and institutions.
- □ I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in the remote counseling.
- □ I understand that I can contact the researcher if I have any concerns about the ethical conduct of this research.
- □ I have given a copy of this consent form.

By signing this form, I am attesting that I have read and understand the information above and I freely give my consent to participate in this study.

Signature: _____

Date Reviewed and Signed: _____

QUESTIONNAIRE
For the Patients

Part I: Sociodemographic Profile

Name (optional): _____

Sex at birth:
( ) Male
( ) Female

Age:
( ) 18-34
( ) 35-50
( ) 51-69
( ) 70 and older

Marital Status:
( ) Single
( ) Married
( ) Widowed

Highest Educational
Attainment:_____

Occupation:

_____

Health condition:

_____

Part II: Survey questions evaluating student performance and preparedness in remote patient medication counseling (Puumalainen et al., 2005; and Offor & Enato, 2011) (Mga tanong sa survey na sinusuri ang pagganap ng mag-aaral sa panahon ng karanasan sa remote counseling (Puumalainen et al., 2005; at Offor & Enato, 2011)
*Based on the United States Pharmacopeia Medication Counseling Behavior Guidelines (USP-MCBG) questionnaire

	Not Done	Poor	Unsatisfactory	Satisfactory	Excellent
(1) Did your student pharmacist introduce himself as a health care professional (or pharmacist) before he discussed with you? (Nagpakilala ba ang iyong estudyanteng parmasyutiko bilang isang propesyonal sa pangangalagang pangkalusugan (o estudyanteng parmasyutiko) bago siya nakipag-usap sa iyo?)					
(2) Did your student pharmacist verify your name, to find out if you were the owner of the prescription or case file before you? (Na-verify ba ng iyong					

estudyanteng parmasyutiko ang iyong pangalan, upang malaman kung ikaw ang may-ari ng reseta o file ng kaso na nauna sa iyo?)					
(3) Did your student pharmacist provide privacy during his discussion with you? (Nagbigay ba ng praybasi ang iyong mag-aaral na parmasyutiko habang nakikipag-usap siya sa iyo?)					
(4) Did your student pharmacist review your prescription / case note prior to his discussion with you? (Sinuri ba ng iyong mag-aaral na parmasyutiko ang iyong reseta / tala ng kaso bago siya makipag-usap sa iyo?)					
(5) Did your student pharmacist explain the purpose of the discussion with you? (Ipinaliwanag ba ng iyong estudyanteng parmasyutiko ang layunin ng talakayan sa iyo?)					
(6) Did your student pharmacist try to find out if you were on any other medications at the moment? (Sinubukan ba ng iyong mag-aaral na parmasyutiko na alamin kung mayroon kang ibang mga gamot sa ngayon?)					
(7) Did your student pharmacists present facts and concepts about your medications in a logical order? (Nagpakita ba ang iyong mga mag-aaral na parmasyutiko ng mga katotohanan at konsepto tungkol sa iyong mga gamot sa lohikal na pagkakasunud-sunod?)					
(8) Did your student pharmacist find out if you have history of any chronic diseases like diabetes or hypertension in your family? (Nalaman ba ng iyong estudyanteng parmasyutiko kung					

mayroon kang kasaysayan ng anumang malalang sakit tulad ng diabetes o hypertension sa iyong pamilya?)					
(9) Did your student pharmacist find out if you have any drug or food allergies? (Nalaman ba ng iyong estudyanteng parmasyutiko kung mayroon kang anumang allergy sa gamot o pagkain?)					
(10) Did your student pharmacist explore any potential problems associated with your medications, (e.g. affordability)? (Ginalugad ba ng iyong mag-aaral na parmasyutiko ang anumang mga potensyal na problema na nauugnay sa iyong mga gamot, (halimbawa, affordability?)					
(11) Did your student pharmacist discuss any significant side effects of your medications with You? (Tinalakay ba ng iyong estudyanteng parmasyutiko ang anumang makabuluhang epekto ng iyong mga gamot sa iyo?)					
(12) Did your student pharmacist warn you not to take any drug, alcohol or herbal products concurrently with your medications? (Binalaan ka ba ng iyong mag-aaral na parmasyutiko na huwag uminom ng anumang gamot, alkohol, o mga produktong herbal na kasabay ng iyong mga gamot?)					
(13) Did your student pharmacist discuss any drug-drug, drug-disease or drug-food interactions of your medications with you? (Tinalakay ba ng iyong mag-aaral na parmasyutiko ang anumang pakikipag-ugnayan ng gamot-gamot, sakit-droga, o gamot-					

pagkain ng iyong mga gamot sa iyo?)					
(14) Did your student pharmacist explain to you in precise terms what to do when you miss a dose? (Ipinaliwanag ba sa iyo ng iyong estudyanteng parmasyutiko sa mga tiyak na termino kung ano ang gagawin kapag napalampas mo ang isang dosis?)					
(15) Did your student pharmacist tell you the activities to avoid when you are on your medications? (Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko ang mga aktibidad na dapat iwasan kapag ikaw ay umiinom ng iyong mga gamot?)					
(16) Did your student pharmacist help you generate solutions to some of the potential problems of your medication? (Tinulungan ka ba ng iyong mag-aaral na parmasyutiko na bumuo ng mga solusyon sa ilan sa mga potensyal na problema sa iyong gamot?)					
(17) Did your student pharmacist tell you how to prevent and/ or manage side effects of your drugs if they occur? (Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko kung paano maiwasan at/o pamahalaan ang mga side effect ng iyong mga gamot kung mangyari ang mga ito?)					
(18) Did your student pharmacist discuss the storage conditions and other ancillary instructions of your medications with you? (Tinalakay ba ng iyong estudyanteng parmasyutiko ang mga kondisyon ng imbakan at iba					

pang mga karagdagang tagubilin ng iyong mga gamot sa iyo?)					
(19) Did your student pharmacist tell you how long it would take before your drugs start showing effects? (Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko parmasyutiko kung gaano katagal bago magsimulang magpakita ng mga epekto ang iyong mga gamot?)					
(20) Did your student pharmacist tell you when to come back for check-up and to refill your medications? (Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko parmasyutiko kung kailan babalik para sa isang check-up at muling punan ang iyong mga gamot?)					
(21) Did your student pharmacist emphasize on the need for you to complete your medications? (Binigyang-diin ba ng iyong estudyanteng parmasyutiko ang pangangailangan mong kumpletuhin ang iyong mga gamot?)					
(22) Did your student pharmacist assist you in developing a plan to incorporate your medication regimen into your daily routine? (Tinulungan ka ba ng iyong estudyanteng parmasyutiko sa pagbuo ng isang plano upang isama ang iyong regimen ng gamot sa iyong pang-araw-araw na gawain?)					
(23) Did your student pharmacist explain how, when and how long you would use your medications? (Ipinaliwanag ba ng iyong estudyanteng parmasyutiko kung paano, kailan, at gaano katagal					

mo gagamitin ang iyong mga gamot?)					
(24) Did your student pharmacist give you an opportunity to ask questions or express your opinions? (Binigyan ka ba ng iyong estudyanteng parmasyutiko ng pagkakataong magtanong o magpahayag ng iyong mga opinyon?)					
(25) Did your student pharmacist try to find out if you understand the advice, he gave you by asking you to repeat them? (Sinubukan ba ng iyong estudyanteng parmasyutiko na alamin kung naiintindihan mo ang payo, na ibinigay niya sa iyo sa pamamagitan ng paghiling sa iyo na ulitin ang mga ito?)					
(26) Did your student pharmacist ask you if you needed additional information? (Tinanong ka ba ng iyong estudyanteng parmasyutiko kung kailangan mo ng karagdagang impormasyon?)					
(27) Did your student pharmacist maintain control and direction of your conversations without distractions? (Napanatili ba ng iyong estudyanteng parmasyutiko ang kontrol at direksyon ng iyong mga pag-uusap nang walang nakakagambala?)					
(28) Did your student pharmacist ask good open-ended-questions (i.e. questions beginning with 'why', 'how', 'when', and 'where'? (Nagtanong ba ang iyong estudyanteng parmasyutiko ng magagandang open-ended-questions (halimbawa, mga tanong na nagsisimula sa 'bakit', 'paano',					

'kailan', at 'saan'?)					
(29) Did your student pharmacist provide you with accurate information? (Binigyan ka ba ng iyong estudyanteng parmasyutiko ng tumpak na impormasyon?)					
(30) Did your student pharmacist tell you the name and indications of your medications? (Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko ang pangalan at mga indikasyon ng iyong mga gamot?)					
(31) Did your student pharmacist maintain the following communication skills (Napanatili ba ng iyong estudyanteng parmasyutiko parmasyutiko ang mga sumusunod na kasanayan sa komunikasyon): (i) good eye contacts? (magandang pagtingin sa mata?) (ii) audible voice, tone and good pace? (naririnig na boses, tono at magandang bilis?) (iii) good posture and gestures? (magandang tindig at kilos?) (iv) adequate space between him and you? (sapat na espasyo sa pagitan mo at niya?)					

APPENDIX IV
QUESTIONNAIRE
For the Student Pharmacists

Survey questions evaluating student performance and preparedness in remote patient medication counseling (Puumalainen et al., 2005; and Offor & Enato, 2011) (Mga tanong sa survey na sinusuri ang pagganap ng mag-aaral sa panahon ng karanasan sa remote counseling (Puumalainen et al., 2005; at Offor & Enato, 2011)
*Based on the United States Pharmacopeia Medication Counseling Behavior Guidelines (USP-MCBG) questionnaire

	Not Done	Poor	Unsatisfactory	Satisfactory	Excellent
(1) Did you introduce yourself as a health care professional (or student pharmacist) before you discussed with your patient?					
(2) Did you verify your patient's name, to find out if he/she was the owner of the prescription or case file before your patient?					
(3) Did you provide privacy during your discussion with your patient?					
(4) Did you review your patient's prescription / case note prior to your discussion with him/her?					
(5) Did you explain the purpose of the discussion with your patient?					
(6) Did you try to find out if your patient is on any other medications at the moment?					
(7) Did you present facts and concepts about your patient's medications in a logical order?					
(8) Did you find out if your patient has history of any chronic diseases like diabetes or hypertension in his/her family?					
(9) Did you find out if your patient has any drug or food allergies?					
(10) Did you explore any potential problems associated with your patient's medications, (e.g.					

affordability)?					
(11) Did you discuss any significant side effects of your patient's medications with him/her?					
(12) Did you warn your patient not to take any drug, alcohol or herbal products concurrently with him/her medications?					
(13) Did you discuss any drug-drug, drug-disease or drug-food interactions of your patient's medications with him/her?					
(14) Did you explain to your patient in precise terms what to do when he/she misses a dose?					
(15) Did you tell your patient the activities to avoid when he/she is on medications?					
(16) Did you help your patient generate solutions to some of the potential problems of his/her medication?					
(17) Did you tell your patient how to prevent and/ or manage side effects of his/her drugs if they occur?					
(18) Did you discuss the storage conditions and other ancillary instructions of your patient medications with him/her?					
(19) Did you tell your patient how long it would take before his/her drugs start showing effects?					
(20) Did you tell your patient when to come back for check-up and to refill your patient's medications?					
(21) Did you emphasize on the need for your patient to complete his/her medications?					
(22) Did you assist your patient in developing a plan to incorporate his/her medication regimen into					

his/her daily routine?					
(23) Did you explain how, when and how long your patient would use his/her medications?					
(24) Did you give your patient an opportunity to ask questions or express his/her opinions?					
(25) Did you student pharmacist try to find out if your patient understands the advice, you gave by asking him/her to repeat them?					
(26) Did you ask your patient if he/she needed additional information?					
(27) Did you maintain control and direction of your conversations with your patient without distractions?					
(28) Did you ask good open-ended-questions (i.e. questions beginning with 'why', 'how', 'when', and 'where') to your patient?					
(29) Did you provide your patient with accurate information?					
(30) Did you tell your patient the name and indications of his/her medications?					
(31) Did you maintain the following communication skills: (i) good eye contacts? (ii) audible voice, tone and good pace? (iii) good posture and gestures? (iv) adequate space between you and your patient?					

ENGLISH – FILIPINO TRANSLATION OF THE QUESTIONNAIRE

Survey questions evaluating student performance during the Virtual Counseling experience (Puumalainen et al., 2005; and Offor & Enato, 2011) (Mga tanong sa survey na sinusuri ang pagganap ng mag-aaral sa panahon ng karanasan sa Virtual Counseling (Puumalainen et al., 2005; at Offor & Enato, 2011)	
English	Filipino
1. Did your student pharmacist introduce himself as a health care professional (or pharmacist) before he discussed with you?	Nagpakilala ba ang iyong estudyanteng parmasyutiko bilang isang propesyonal sa pangangalagang pangkalusugan (o estudyanteng parmasyutiko) bago siya nakipag-usap sa iyo?
2. Did your student pharmacist verify your name, to find out if you were the owner of the prescription or case file before you?	Na-verify ba ng iyong estudyanteng parmasyutiko ang iyong pangalan, upang malaman kung ikaw ang may-ari ng reseta o file ng kaso na nauna sa iyo?
3. Did your student pharmacist provide privacy during his discussion with you?	Nagbigay ba ng praybasi ang iyong mag-aaral na parmasyutiko habang nakikipag-usap siya sa iyo?
4. Did your student pharmacist review your prescription/case note prior to his discussion with you?	Sinuri ba ng iyong mag-aaral na parmasyutiko ang iyong reseta / tala ng kaso bago siya makipag-usap sa iyo?
5. Did your student pharmacist explain the purpose of the discussion with you?	Ipinaliwanag ba ng iyong estudyanteng parmasyutiko ang layunin ng talakayan sa iyo?
6. Did your student pharmacist try to find out if you were on any other medications at the moment?	Sinubukan ba ng iyong mag-aaral na parmasyutiko na alamin kung mayroon kang ibang mga gamot sa ngayon?
7. Did your student pharmacists present facts and concepts about your medications in a logical order?	Nagpakita ba ang iyong mga mag-aaral na parmasyutiko ng mga katotohanan at konsepto tungkol sa iyong mga gamot sa lohikal na pagkakasunud-sunod?
8. Did your student pharmacist find out if you have history of any chronic diseases like diabetes or hypertension in your family?	Nalaman ba ng iyong estudyanteng parmasyutiko kung mayroon kang kasaysayan ng anumang malalang sakit tulad ng diabetes o hypertension sa iyong pamilya?
9. Did your student pharmacist find out if you have any drug or food allergies?	Nalaman ba ng iyong estudyanteng parmasyutiko kung mayroon kang anumang allergy sa gamot o pagkain?
10. Did your student pharmacist explore any potential problems associated with your medications, (e.g. affordability)?	Ginalugad ba ng iyong mag-aaral na parmasyutiko ang anumang mga potensyal na problema na nauugnay sa iyong mga gamot, (hal. affordability?
11. Did your student pharmacist discuss any	Tinalakay ba ng iyong estudyanteng

significant side effects of your medications to you?)	parmasyutiko ang anumang makabuluhang epekto ng iyong mga gamot sa iyo?
12. Did your student pharmacist warn you not to take any drug, alcohol, or herbal products concurrently with your medications?	Binalaan ka ba ng iyong mag-aaral na parmasyutiko na huwag uminom ng anumang gamot, alkohol, o mga produktong herbal na kasabay ng iyong mga gamot?
13. Did your student pharmacist discuss any drug-drug, drug-disease, or drug-food interactions of your medications with you?	Tinalakay ba ng iyong mag-aaral na parmasyutiko ang anumang pakikipag-ugnayan ng gamot-gamot, sakit-droga, o gamot-pagkain ng iyong mga gamot sa iyo?
14. Did your student pharmacist explain to you in precise terms what to do when you miss a dose?	Ipinaliwanag ba sa iyo ng iyong estudyanteng parmasyutiko sa mga tiyak na termino kung ano ang gagawin kapag napalampas mo ang isang dosis?
15. Did your student pharmacist tell you the activities to avoid when you are on your medications?	Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko ang mga aktibidad na dapat iwasan kapag ikaw ay umiinom ng iyong mga gamot?
16. Did your student pharmacist help you generate solutions to some of the potential problems with your medication?	Tinulungan ka ba ng iyong mag-aaral na parmasyutiko na bumuo ng mga solusyon sa ilan sa mga potensyal na problema sa iyong gamot?
17. Did your student pharmacist tell you how to prevent and/ or manage the side effects of your drugs if they occur?	Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko kung paano maiwasan at/o pamahalaan ang mga side effect ng iyong mga gamot kung mangyari ang mga ito?
18. Did your student pharmacist discuss the storage conditions and other ancillary instructions of your medications with you?	Tinalakay ba ng iyong estudyanteng parmasyutiko ang mga kondisyon ng imbakan at iba pang mga karagdagang tagubilin ng iyong mga gamot sa iyo?
19. Did your student pharmacist tell you how long it would take before your drugs start showing effects?	Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko parmasyutiko kung gaano katagal bago magsimulang magpakita ng mga epekto ang iyong mga gamot?
20. Did your student pharmacist tell you when to come back for a check-up and to refill your medications?	Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko parmasyutiko kung kailan babalik para sa isang check-up at muling punan ang iyong mga gamot?
21. Did your student pharmacist emphasize the need for you to complete your medications?	Binigyang-diin ba ng iyong estudyanteng parmasyutiko parmasyutiko ang pangangailangan mong kumpletuhin ang iyong mga gamot?
22. Did your student pharmacist assist you in developing a plan to incorporate your	Tinulungan ka ba ng iyong estudyanteng parmasyutiko sa pagbuo ng isang plano upang

medication regimen into your daily routine?	isama ang iyong regimen ng gamot sa iyong pang-araw-araw na gawain?
23. Did your student pharmacist explain how, when, and how long you would use your medications?	Ipinaliwanag ba ng iyong estudyanteng parmasyutiko kung paano, kailan, at gaano katagal mo gagamitin ang iyong mga gamot?
24. Did your student pharmacist give you an opportunity to ask questions or express your opinions?	Binigyan ka ba ng iyong estudyanteng parmasyutiko ng pagkakataong magtanong o magpahayag ng iyong mga opinyon?
25. Did your student pharmacist try to find out if you understand the advice, he gave you by asking you to repeat them?	Sinubukan ba ng iyong estudyanteng parmasyutiko na alamin kung naiintindihan mo ang payo, na ibinigay niya sa iyo sa pamamagitan ng paghiling sa iyo na ulitin ang mga ito?
26. Did your student pharmacist ask you if you needed additional information?	Tinanong ka ba ng iyong estudyanteng parmasyutiko kung kailangan mo ng karagdagang impormasyon?
27. Did your student pharmacist maintain control and direction of your conversations without distractions?	Napanatili ba ng iyong estudyanteng parmasyutiko ang kontrol at direksyon ng iyong mga pag-uusap nang walang nakakagambala?
28. Did your student pharmacist ask good open-ended-questions (i.e. questions beginning with 'why', 'how', 'when', and 'where'?	Nagtanong ba ang iyong estudyanteng parmasyutiko ng magagandang open-ended-questions (halimbawa, mga tanong na nagsisimula sa 'bakit', 'paano', 'kailan', at 'saan'?
29. Did your student pharmacist provide you with accurate information?	Binigyan ka ba ng iyong estudyanteng parmasyutiko ng tumpak na impormasyon?
30. Did your student pharmacist tell you the name and indications of your medications?	Sinabi ba sa iyo ng iyong estudyanteng parmasyutiko ang pangalan at mga indikasyon ng iyong mga gamot?
31. Did your student pharmacist maintain the following communication skills: (i) good eye contacts? (ii) audible voice, tone and good pace? (iii) good posture and gestures? (iv) adequate space between him and you?	Napanatili ba ng iyong estudyanteng parmasyutiko parmasyutiko ang mga sumusunod na kasanayan sa komunikasyon: (i) magandang pagtingin sa mata? (ii) naririnig na boses, tono at magandang bilis? (iii) magandang tindig at kilos? (iv) sapat na espasyo sa pagitan mo at niya?

Validated by:

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QUALITATIVE FEEDBACK OF THE PATIENTS

Patients' Qualitative Feedback

Patient No.	Significant Statements	Themes	Sub-themes	Targeted Component/s
1	Maganda yung 41ap ag41 daloy ng usapan tungkol sa gamot na aking iinumin. Dahil dito, ang aking karamdaman ay gumaling at nasabi niya lahat ng mahahalang impormasyon tungkol sa gamot na iyon at ako ay nasiyahan dahil alam ko na rin kung paano ito iinumin at mairerekomenda itong estudyante sa isang botika at maituturing na isang huwarang parmasyotiko at maraming matututunan sa kanya. Maraming salamat po!	Positive	Appreciation of the Profession Good Conveyor of Information Grateful	Needs Assessment Management and Treatment Communication
2	Naging maayos ang aming talakayan tungkol sa aking katanungan patungkol sa mga gamot ko. Naipaliwanag niyang 41ap ag ang bawat gamit ng mga gamot ko.	Positive	Well-organized Good Conveyor of Information	Needs Assessment Management and Treatment Communication
3	Ang masasabi ko sa akong student pharmacist ay magalang siya makipag-usap sa akin, malumanay.Hindi ako nahirapang magtanong sa kanya at nasagot niya naman ang katanungan ko. Mapagpasasensya siya kahit di ako gaano nakakapagsalita ng mabilis sa Tagalog dahil matanda na ako at galing pa ako sa 41ap ag4141. Magaling siya may nakikita akong potential at alam Kung mai improve pa niya ang kanyang kakayahan bilang Isang student pharmacist.	Positive	Respectful Good Conveyor of Information Good Communicator Readiness/ Ready to be a professional pharmacist	Communication
4	Maayos at magaling makipag	Positive	Respectful	Communication

	usap, maayos din po mag assist mahinahon at malinaw ang pag tatalakay niya.		Good Conveyor of Information Good Communicator	
5	maayos at malinaw ang kanyang pagpapaliwanag sa gamot na aking iniinom at nakapagbigay ng mga karagdagang kaalaman tungkol sa gamot.	Positive	Good Communicator	Needs Assessment Precautions and Warnings Management and Treatment Communication
6	Malinaw at maayos niyang naipahayag ang mga impormasyong dapat malaman tungkol sa ano ang maaaring gawin sa paginom ng maintenance na gamot ng nanay	Positive	Good Communicator Good Conveyor of Information	Needs Assessment Precautions and Warnings Management and Treatment Communication
7	ang kaniyang performance ay maihahalintulad na sa professional pharmacist	Positive	Readiness/Ready to a professional pharmacist	n/a
8	Sobrang napaintindi at napaliwanag ng maayos ang dapat gawin at bawat epekto ng tinutukoy na gamot. Madaling kausap at iniintindi ang kalagayan ng pasyente.	Positive	Good Communicator Good Conveyor of Information Understanding	Needs Assessment Precautions and Warnings Management and Treatment Communication
9	Siya ay maayos, magalang at klaro magsalita. Nakatulong ang kanyang mga payo at suhestiyon ukol sa aking mga karamdaman at sa mga maari kong gawin upang mapabuti ang aking	Positive	Good Communicator Readiness/ Ready to a professional pharmacist	Needs Assessment Precautions and Warnings Management and

				Treatment
	pakiramdam. Siya ay mala eksperto na sa kanyang ginagawa.		Good Conveyor of Information	Communication
			Respectful	
10	Ang galing niya at nakatulong talaga siya sakin ang galing niya at madaling intindihin ang kanya mga pinapaliwanag	Positive	Good Conveyor of Information	Needs Assessment
				Precautions and Warnings
			Good Communicator	Management and Treatment
			Knowledgeable	Communication
11	Maayos na naiparating ng student pharmacist sa kanyang pasyente ang mga nararapat gawin at i-konsumong gamot para sa karamdaman nito	Positive	Good Conveyor of Information	Needs Assessment
				Precautions and Warnings
				Management and Treatment
				Communication
12	Naging maayos at malinaw ang paguusap 43ap ag at naipaliwanag niya yung mga mahahalagang impormasyon tungkol sa gamot na iinumin ko. Short discussion lang pero concise. Mahinahon din sya makipagusap at naramdaman ko yung care niya sakin as her patient.	Positive	Good Communicator	Needs Assessment
			Good Conveyor of Information	Precautions and Warnings
			Emphatic	Management and Treatment
				Communication
13	Maayos at malinaw na naipaliwanag ang mga bagay sa talakayan at pag uusap kaugnay 43ap ag inom ng mga tamang gamot. Kasama na ang paglikom at pagbibigay ng tamang impormasyon tungkol sa dapat at hindi dapat gawin, 43ap ag inom ng gamot at tamang paraan ng pag inom ng mga ito. Nagbahagi din siya ng mga	Positive	Good Conveyor of Information	Needs Assessment
			Reliable	Precautions and Warnings
				Management and Treatment
				Communication

	impormasyong talaga 44ap ag makatutulong sa akin kaugnay sa tamang pag inom ko ng aking mga gamot.			
14	Maganda ang kanyang pagpapaliwanag at malinaw ang mga impormasyon na kanyang binigay saakin bilang kanyang pasyente	Positive	Good Communicator Good Conveyor of Information	Needs Assessment Communication
15	Very comfortable kausap yung student pharmacist at naexplain naman nya clearly lahat ng dapat kong malaman	Positive	Good Communicator Good Conveyor of Information	Needs Assessment Communication
16	Bihasa	Positive	Readiness/Ready to be professional pharmacist	n/a
17	Sa pagbibigay niya ng impormasyon ito ay kumpleto at maayos. Napapanatili ko ang aking sarili na maging aktibo sa pakikinig dahil nagagawa niya ang kanyang gampanin bilang isang pharmacists.	Positive	Empowered Good Listener Good Conveyor of Information	Needs Assessment Precautions and Warnings Management and Treatment Communication
19	Natulungan niya akong masagot ang tanong ko tungkol sa gamot	Positive	Good Conveyor of Information	Needs Assessment Communication
20	Siya ay magaling magpaliwinag ng mga kailangan at dapat alamin ng isang pasiyente.	Positive	Good Conveyor of Information Readiness/Ready to be a professional pharmacist	Needs Assessment Communication
21	Wala naman at maayos ang kanyang interview sa akin.		Good Communicator	Communication
23	She did an excellent job in providing the information I needed.	Positive	Good Conveyor of Information Reliable	Needs Assessment Precautions and Warnings Management and

				Treatment
				Communication
24	She did her research well	Positive	Well-organized	Communication
			Good researcher	
			Good Conveyor of Information	
25	Nasagot ang mga katanungan na kinakailangan.	Positive	Good Communicator	Needs Assessment
				Precautions and Warnings
			Good Conveyor of Information	
				Management and Treatment
				Communication
26	Masaya akong makita na ang anak ko ay marunong na mag konsulta sa pasyente, masaya ako na kahit alam ko na mayroon pang dapat siya na matutunan pa ay 45ap ag ko kung gaano siya kasayang alukin ako kung gusto ko bang maging pasyente niya. Nasagutan niya din naman ng tama ang mga tanong ko, at mangilan ngilan na sagot niya ay sinabi din sa akin ng 45ap ag ko noong ako ay nag pa check up.	Positive	Happy	Needs Assessment
			Satisfied	Precautions and Warnings
			Readiness/Ready to be a professional pharmacist	Management and Treatment
				Communication
			Good Conveyor of Information	
27	Ang student pharmacist na nakatalakay ko ay maasahan at may kaalaman ukol sa aking kondisyon, masasabi ko rin na siya'y magaling 45ap ag paliwanag lalo na sa gamot na aking iniinom.	Positive	Reliable	Needs Assessment
			Good Conveyor of Information	Precautions and Warnings
			Good Communicator	Management and Treatment
				Communication
28	Nakakatuwang malaman na sa ganyang edad may alam at abilidad sila upang tumulong sa	Positive	Readiness/ Ready to be a professional	Communication

	iba.		pharmacist	
29	OK LANG	Positive	Satisfied	n/a
29	AWKWARD LANG NG KONTI	Negative	Awkwardness	n/a

Summary - Patients' Qualitative Feedback

Themes	Positive	n	Negative	n
Knowledge	Knowledgeable	1		
	Good researcher	1		
Skills	Good conveyor of information/ Good	34		
	communicator	2		
	Well-organized	1		
	Good listener			
Attitudes	Respectful	3		
	Reliable	3		
	Understanding	1		
	Emphatic	1		
	Empowered	1		
Others	Readiness as a future	7	Awkwardness	1
	pharmacist	2		
	Satisfied	1		
	Appreciation of the	1		
	profession	1		
	Grateful			
	Happy			

QUALITATIVE FEEDBACK OF THE STUDENT PHARMACISTS

Student Pharmacists' Qualitative Feedback

Student Pharmacist No.	Significant Statements	Category	Sub-category	Targeted Component/s
1	Napakagandang karanasan Ito upang mahasa ako sa pakikipagkomunikasyon sa actual patient	Positive	Training Ground Preparedness/ Preparation as a future pharmacist Appreciation of the Virtual (Remote) Patient Counseling experience	Communication
2	Masarap sa pakiramdam lalo't na mam yung patient mo is nagtatanong about sa condition niyan sobrang saya makatulong kahit sa maliit na bagay	Positive	Self-worth	Needs Assessment Communication
3	Sa virtual counselling na ito, bilang isang student pharmacist natutunan ko kung paano makipagtalakay sa pasyente nang maayos at 47ap ag ukol sa mga katanungan patungkol sa gamot at kalusugan. Natutunan kong maging mapanuri at organisado sa mga detalyeng sasabihin ng pasyente at mga impormasyong dapat kong ihain sa kanya upang masagot ko ito ng tama at simple. Isa pa sa aking realisasyon ay ang pagiging tapat, at ang kakayahan ko na ibigay ang nararapat 47ap ag – aalaga sa	Positive	Observant Well-organized Trustworthy Appreciation of the Virtual Patient Counseling	Communication

	pasyente maging sa gamot, kalusugan, o tiwala ay mga 48ap ag4848ic upang maging ako ay isang 48ap ag at magaling na student pharmacist ngayon, at isang rehistradong pharmacist sa hinaharap.			
4	Mahalagang tamang impormasyon ang ibibigay sa mga pasyente at ang hustong pagsasaliksik ang kailangan upang maibigay ang mga dapat na impormasyon tungkol sa gamot ng pasyente. Actually, kilala ko po yung mother ng pasyente at Alam ko po yung history ng mga karamdaman ng family nila nanay. Nasa lahi na po nila ang diabetic. But in her case ayaw nia po talaga uminom ng maintenance na gamot para sa diabetes nia Kahit sinabihan na siya ng doctor. Ang dahilan nia po kasi ayaw nia daw ng mga chemicals sa katawan mas gugustuhin nia nalang daw po mag herbal. I already explained her the importance of taking medication specially the maintenance pero matigas po ulo ni nanay ayaw nia po talaga. I advise them to consult the physician para maresetahan ng ibang Drug na pwede sa condition nia pero ayaw narin po ni nanay. As of now po, her family ensures na namemaintain yung sugar level ni nanay sa katawan. Nag beblender po sila ng	Positive	Good Researcher Reliable Know your patient Family Involvement in managing the patient's health	Needs Assessment Precautions and Warnings Management and Treatment Communication

	ampalaya juice at iniiwas narin po si nanay sa mga soda, beers and to much rice. Yung sugat po ni patient sa binti ay magaling na. Yung numbness naman po pa minsan minsan nalang daw.			
5	Naging 49ap ag49 ang 49ap ag49 resulta ng activity at natutunan ko kung paano ang flow ng pagdidiscuss ng impormasyon ukol sa gamot at sa mga related facts nito. Nagkaroon ng pagkukulang tulad ng pagsabi sa pasyente kung saan ilalagay ang gamot at kung ano ang mga maaring asahan 49ap ag-inom nito. Sa kalahatan, isa po itong magandang pagkakataon upang mahasa ang pagkalap 49ap ag ng impormasyon ukol sa mga gamot at sa kung paano 49ap ag ito tatalakayin sa aming pasyente.	Positive	Good Researcher Good Conveyor of Information Good Communication Reliable Trustworthy Appreciation of the Virtual Patient Counseling	Needs Assessment Precautions and Warnings Management and Treatment Communication
6	Nakakaramdam po ng kaba sa una,	Negative	Lack of Confidence	
6	pero habang tumatagal yung pakikipagusap sa pasyente, unti unti pong nawawala at nagiging komportable na sa pkikipagusap. Masarap din po sa feeling na natutulungan mo yung patient regarding sa questions or requests nila.	Positive	Boosts Confidence Comfortable Boosts Self-esteem	Needs Assessment Precautions and Warnings Management and Treatment Communication
7	Masasabi na tunay na isang napakagandang karanasan ng activity na to, dahil dito, na-assess ang aming kaalaman tungkol sa pagbibigay ng mga tamang	Positive	Boosts Self-Confidence Better Self Appreciation of	Needs Assessment Precautions and Warnings

	impormasyon sa kondisyon ng isang pasyente maging ang tamang mga paraan at mga nararapat gawin sa pagcoconduct ng patient counselling.		the Virtual Patient Counseling	Management and Treatment Communication
8	Nagkaroon ako ng pagkakataong maghanap ng tamang impormasyon at nanigurado akong tama ang ibinanggit kong mga gamot at impormasyon nito upang makasiguradong magging maayos na ang kalagayan nga psyente.	Positive	Good Researcher Reliable Credible Good Conveyor of Information	Needs Assessment Precautions and Warnings Management and Treatment Communication
9	Bilang isang student pharmacist na nakisalamuha sa aking pasyente, masasabi ko na dapat detalyadong isalaysay ang mga sagot sa katanungan ng pasyente upang mas maintindihan nila ito. Pati na rin sa pagkuha ng iba't ibang impormasyon patungkol sa pasyente at sa kanyang mga gamot na iniinom. Maigi rin at dapat lang na tanungin ang pasyente kung malinaw ba ang pagkakaintindi nila sa mga impormasyong inilahad mo pati na rin ang pagsasalaysay niya nito sa ito pabalik.	Positive	Good Researcher Reliable Good Conveyor of Information	Needs Assessment Precautions and Warnings Management and Treatment Communication
10	Ang nagtanong sa akin ay hindi pasyente mismo kundi yung apo niya lang pero malapit lang ang bahay niya sa lola niya kaya masasabi niya rin agad yung mga tinanong niya sa akin at nagbigay din ako ng written answer para maging notes din nila. Ang pakikisalamuha	Positive	Good Communicator Good listener Family involvement in managing patient's heath	Needs Assessment Precautions and Warnings Management and Treatment Communication

	ko sa nagtanong ay maayos at wala 51ap ag 51ap ag51 problema. Pagkatapos niya magtanong 51ap ag51 masaya ako kase alam kong matutulungan ko yung lola niya 51ap ag inom niya ng gamot kahit regular naman ang pagpunta niya sa hospital.		Happy	
11	Nakakakaba dahil baka mali ang nasabi o kulang	Negative	Lack of Confidence	n/a
11	pero masayang experience.	Positive	Happy	n/a
12	Masaya makipag-usap sa pasyente. Maganda sa pakiramdam na nakakatulong at may naiaambag ako sa buhay ng ibang tao. Nakakaexcite rin na maaari kong gawin yun nang mas maayos sa mga susunod pang taon. Masaya akong nakikisalamuha sa mga pasyente.	Positive	Satisfied

Boosts Self-esteem

Excitement

Happy | Needs Assessment

Communication |
| 13 | Ang masasabi ko po ay magandang way po ito para makapagsimula or 51ap ag5151ice papo 51ap ag ang pagkakaron ng patient-pharmacist interaction. Magiging susi din po ito para mas maideliver 51ap ag ng maayos po ang patient-counselling. | Positive | Preparedness/ Preparation as a future pharmacist Training Ground

Appreciation of the Virtual Patient Counseling

Better Self | n/a |
| 14 | May ilang mga importanteng katanungan ang nalimutan ibigay sa pasyente. Maiging nakakapag-practice sa ganitong paraan. | Negative | Missed to convey some important information

More practice | Communication |
| 15 | Maganda sa pakiramdam na na-apply ang aking mga natutunan at nakatulong sa | Positive | Boosts Self-Confidence | Needs Assessment |

			Boosts Self-esteem	Precautions and Warnings
	pagbigay ng impormasyong pangkalusugan sa aking nanay, kung saan mayroon siyang gamot na iniinom at ako ay nakatulong upang mainam niyang mainom ito at mabigyan ng sagot ang kanyang mga tanong ukol sa kanyang medikasyon. Marami pa akong dapat matutunan 52ap ag konsulta ng pasyente, at gusto ko pang mapabuti sa kasanayang ito.		Satisfied	Management and Treatment Communication
16	Na-experience ko na 52ap ag52 pala mag bigay impormasyon sa iyong pasyente at dahil dun nakakatulong ka sa mga taong nangangailangan ng impormasyon sa kanyang gamot. Naramdaman ko ang aking simpatya sa aking pasyente at natuto ako ng mga paraan upang madalian hanapin ang kinakailangan ng aking pasyente.	Positive	Emphatic Good Listener Good Conveyor of Information Good Researcher Reliable	Needs Assessment Precautions and Warnings Management and Treatment Communication
17	mahirap ngunit dapat ay maayos tayong makikitungo sa ating pasyente	Positive	Empowered Better Self	n/a
18	I feel proud kasi 52ap ag ko na proud si mama na kaya ko nang mag counsil ng patient na e share ko na kila mama kung ano yung mga natutunan ko at nakakatulong ako para maging ok yung health ng family ko.	Positive	Boosts Self-esteem Boosts Self-Confidence Satisfied	Needs Assessment Communication
19	Isang magandang experience tong virtual patient counselling dahil para siyang mini training ground sa kung 52ap ag talaga ang meron sa real	Positive	Appreciation of the Virtual Patient Counseling Training Ground	n/a

			Preparedness/ Preparation as a future pharmacist	
20	Masaya akong gawin ang mga ganitong 53ap ag dahil nahahasa ang aming kakayahan at kaalaman patungkol sa aming mga pinagaralan. Naaasess ko rin ang sarili ko kung ano pa dapat iimprove pagdating sa paggawa ng mga Patient counseling.	Positive	Better Self Boosts Self-esteem Boosts Self-Confidence	n/a
21	Ang karanasang ito ay nagsilbing aral sa akin at praktis narin upang maihanda ko ang aking sarili sa hinaharap kapag ako ay kinakailangan ng makipagpanayam sa isang totoong pasyente bilang isang tunay na Pharmacist. Sa gawaing ito ay napag-alaman ko pa na kailangan alamin nating maigi ang mga hakbangin sa pakikipagpanayam sa mga pasyente upang maging maayos ang daloy ng usapan at maipahatid natin sa kanila ang tamang impormasyon na kinakailangan nilang malaman tungkol sa gamot na kanilang iniinom.	Positive	Appreciation of the Virtual Patient Counseling Preparedness/ Preparation as a future pharmacist Training Ground	Needs Assessment Communication
22	Natutunan ko kung paano makapag bigay impormasyon bilang isang pharmacist sa sistematikong pamamaraan	Positive	Goo Conveyor of Information Preparedness/ Preparation as a future pharmacist	Communication
23	nararapat lamang na sundin ang tamang proseso ng pagbibigay ng gamot, kaalaman ukol rito, tama and wastong pag aabiso sa	Positive	Reliable Good Researcher Proactive	Needs Assessment Precautions and Warnings

	pasyente ukol sa kanyang naturang medikasyon upang maiwasan ang anumang pangyayari na maaaring magdulot ng masamang epekto sa lahat ng ito...			Management and Treatment

Communication |
| 24 | at first po nakakahiya bc di pa po sanay | Negative | Lack of Confidence | n/a |
| 24 | pero nung nakakailang take na po, umokay naman po, 54ap ag54 mas comfy gawin, mas umayos po yung pag ccounsel. I realized how important it is to counsel the patient, how much more we can help them to achieve better outcome. | Positive | Better Self

Boosts Self-Confidence

Emphatic | Communication |
| 25 | Sa ngayon ay wala pa akong totoong pasyente na na naeencounter | Negative | Lack of Exposure | n/a |
| 25 | pero mga sample patient na kaming nacocounsel sa aming mga activities na ginagawa, masasabi ko na mas nadagdagan ang aking kaalaman 54ap ag counsel ng pasyente pagkatapos magsagot rito | Positive | Appreciation of the Virtual Patient Counseling

Reliable | n/a |
| 26 | In being a student pharmacist, conducting the information provision made me realize various things. I am actually pressured when it is announced that we have to do it on actual patient. I do not know if I would be successful in proper and right questioning. | Negative | Lack of Confidence

Anxious | n/a |
| 26 | But, I realized that being pressured should not matter in this context, I should think about my patient and what can I give to him rather than being pressured of not | Positive | Better Self

Boosts Self-Confidence

Boosts Self- | n/a |

			esteem	
	doing well. I believe that if I put my mindset into helping someone, the pressure within me slowly fades. All in all, I am very happy with my experience and I am looking forward to conduct a face-to-face interaction. I am thankful for all the knowledge that I have gained in this course because it really honed me to become successful in this task.		Grace under pressure

Preparedness/ Preparation to be a future pharmacist | |
| 27 | nakakakaba at di pa ako gaano kacomfident | Negative | Lack of Confidence | n/a |
| 27 | pero I good start po | Positive | Preparedness/ Preparation to be a future pharmacist | |

Summary - Student Pharmacists' Qualitative Feedback

Themes	Positive	n	Negative	n
Knowledge	Good researcher	6		
Skills	Good conveyor of information/ Good communicator	7	Lack of confidence	5
		2	More practice	1
	Good listener	1	Missed	1
	Observant	1	conveying important information	
	Well-organized			
Attitudes	Reliable/Trustworthy	9		
	Emphatic	2		
	Proactive	1		
	Grace under pressure	1		
	Empowered	1		
Others	Boosts confidence/Boosts self-esteem/Better self/Self-worth	20	Anxious	1
		11	Lack of exposure	1
	Training ground/preparation as a future pharmacist	8		
	Appreciation of the remote			

counseling experience	4
Training ground	3
Satisfied	3
Happy	4
Family involvement in	2
managing patient's health	1
Excitement	