RESEARCH COMMUNICATION

Awareness and Possible Treatment Options Toward COVID-19 among Selected Healthcare Professionals in National Capital Region

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ABSTRACT

Background: Since December 2019, SARS-CoV-2, otherwise known as coronavirus disease 2019 (COVID-19), has caused worldwide panic and is now a serious problem. As the situation worsens, the need for an official cure becomes more crucial and different methods are being considered for treating infected COVID-19 patients.

Objectives: This study aimed to emphasize and further elaborate on the existing and possible treatment methods against COVID-19 and assess the awareness of healthcare professionals (doctors, medical technologists, and nurses) on the treatments for COVID-19.

Methodology: The study utilized an exploratory sequential mixed methods design following the treatment and misinformation theories models. The respondents were selected based on inclusion and exclusion criteria and recruited through the snowball sampling technique. The study used an adapted survey questionnaire on the pathophysiology of COVID-19 and possible treatment options. Descriptive statistical analysis for quantitative data and open thematic coding is used in an online qualitative deductive data analysis.

Results: Based on the data, webinars, lectures, and discussions were the primary source of information among healthcare professionals. Most of the respondents showed proficiency with remdesivir among investigational selective medicines. Chloroquine was the top choice among selected repurposed drugs. They were aware of the convalescent plasma therapy that uses antibodies from the blood plasma of recovered COVID-19 patients. They were not aware of the different herbal treatments used to treat COVID-19.

Conclusion: Hence, chloroquine (repurposed drug), remdesivir (investigational drug), and convalescent plasma (adjunctive therapy) are the most well-known treatments for COVID-19. Most of the respondents were aware of the action and side effects of chloroquine, remdesevir, and convalescent plasma therapy.

Keywords: *COVID-19, adjunctive therapy, repurposed drug, investigational drug, herbal, mixed-method study*

Introduction

As of now, alternative treatment methods are performed to combat the SARS-CoV-2 virus. The World Health Organization (WHO) Clinical Management Guidance Document (as of September 24, 2020) states no current evidence of any specific anti-COVID-19 treatment for patients with confirmed COVID-19. Management should include prompt implementation of recommended infection prevention and control measures and supportive management of complications [1]. Due to the novelty of the virus, there is a rapid pace of assessment of treatment viability. An effective short-term strategy should be implemented while waiting for the augmentation of a vaccine. Doctors and scientists use convalescent plasma therapy and clinically used drugs such as chloroquine, favipiravir, remdesivir, ribavirin, sofosbuvir, and other pipeline repurposed drugs and subjected to further clinical testing [2]. The drugs/medications for treatment against COVID-19 are essential to ensure a greater survival rate and shorter hospitalization and convalescent period in those already infected. Therefore, exploring multiple treatment options

available and repurposing some of the available antiviral and antimicrobial agents is of great importance in our medical response to the widespread pandemic [3]. This study aimed to emphasize and further elaborate on the existing and possible treatment methods against COVID-19 and assess the awareness of healthcare professionals (doctors, medical technologists, and nurses) on the treatments for COVID-19.

Methodology

The treatment theory and misinformation theory are the basis for an exploratory sequential mixed methods design characterized by an initial quantitative phase of data collection followed by a qualitative phase. The main variables for this study were the treatment options being evaluated for their viability. At the early stages of treatment research, the goal was to prove that the treatment influences the immediate target. The target is to eliminate the SARS-CoV-2 in the patient's system, which can be accomplished using essential ingredients. There are four (4) main classifications for the ingredients: selected repurposed drugs, investigational drugs, adjunctive therapies, and herbal medicines. The misinformation theory suggests that false information affects the application of the essential ingredients, which, in this case, are the treatment options for COVID-19. Copious amounts of false information can be attributed to numerous fake sources. This false information conditions the general population's knowledge, therefore leading to mistreatment and mishandling of drugs that may be more harmful than beneficial to the individual.

The respondents were selected purposively following inclusion and exclusion criteria. The snowball and/or networking technique was employed to recruit 167 volunteers composed of licensed doctors (67), nurses (80), and medical technologists (20) with at least one year of clinical experience, stationed at their own or practicing at hospitals, clinics, laboratories, and health centers in the National Capital Region (NCR) to answer the quantitative survey. The respondents must also willingly and voluntarily participate in the study. The respondents excluded in the study were non-licensed individuals currently practicing abroad, not in the Philippines during the pandemic, individuals without exposure to COVID19 patients, and those who did not give their consent. There were 15 (five doctors, five medical technologists, five nurses) respondents randomly selected from those who agreed to execute an interview, where data saturation was met. The data-gathering period for the actual study was executed from January to March 2021. The University of Santo Tomas Faculty of Pharmacy Research Ethics Committee approved the implementation of the study. Informed consent was secured after a brief discussion of the purpose, significance, and possible risk to the study. The quantitative survey questions form was created using Google Forms and sent virtually to the respondents. The interviewees were contacted by backtracking their response to the survey question requiring their original Facebook account link or contact number at the start of the survey and were invited for an interview session at a scheduled date and time on account of the respondents' preference. Before starting the session, informed consent protocols and the respondent's consent for recording the whole session were secured. The respondents were given the freedom to withdraw from the study at any time. All the data and information collected during the research were strictly confidential and anonymized. The researchers safely stored all the data collected using their personal secured computers where only the researchers had access to the data. Questions were adapted and modified [4-6], consisting of 42 items covering (A) Demographic characteristics of the study group and contact with COVID-19, (B) Source of information regarding COVID-19, (C) Pathophysiology of COVID-19, and (D) Possible treatment options for COVID-19. The semi-structured open-ended questions were based on the variables specified in the quantitative study. This method asks follow-up questions to obtain more specific or in-depth information. The survey data computed using the frequency distribution descriptive statistics and an open thematic coding were used in an online qualitative deductive data analysis tool for MAXQDA software.

Results

The respondents were mainly 25-34 years of age and had face-to-face interactions with COVID-19 patients and/or samples. They mostly attended lectures/discussions/webinars about COVID-19. Although half of them received adequate information on the COVID-19 treatment options, most medical technologists and nurses relied on their workplace as the primary source of information. Some of the respondents were not well-informed on the molecular structure and action of the COVID-19 virus on the human cell.

The respondents' top three most well-known possible treatments for COVID-19 were remdesivir (79%), chloroquine (73%), and convalescent plasma (65%). On the other hand, medical doctors were also aware of other possible treatments.

As shown in Tables 1 and 2, most respondents were aware of chloroquine's action and side effects and experienced using it as verbalized during the interview. However, three-fifths were not aware of the action of sofosbuvir, two-fifth

Table 1. *Possible Treatment Options for COVID-19 (Quantitative Survey)*

Pathophysiology of COVID-19 (n=167)		**True**	**False**	**I don't know**
The origin of COVID-19 is thought to be from fishes	n	6	157	4
	%	3.6	**94**	2.4
The incubation period of COVID-19 is 2-14 days	n	155	12	
	%	**92.8**	7.2	
COVID-19 has 4 major structural proteins: S, M, N, and E.	n	85	18	61
	%	**51.8**	11	37.2
The virus infects humans by attaching its S (spike) protein to the ACE2 receptors on the alveolar epithelial cells	n	133	8	26
	%	**79.6**	4.8	**15.6**
COVID-19 cannot present itself as asymptomatic	n	10	155	2
	%	6	**92.8**	1.2

Selected Repurposed Drugs (n=167)		**True**	**False**	**I don't know**
Chloroquine is originally an anti-malarial drug, but it can also interfere with a virus' life cycle	n	136	12	19
	%	**81.4**	7.2	11.4
Sofosbuvir's mechanism of action is bonding to the coronavirus RNA-dependent RNA polymerase (Rdrp) to suppress its function leading to virus eradication	n	53	13	101
	%	31.7	7.8	**60.5**
Ribavirin competes for the active site of the virus' Rdrp to suppress coronavirus	n	75	13	79
	%	44.9	7.8	**47.3**
Lopinavir is paired with chloroquine for treating HIV infections	n	56	38	73
	%	33.5	22.8	**43.7**

Lopinavir is paired with chloroquine for treating HIV infections		**Vomiting**	**Diarrhea**	**Rash**	**Shortness of breath**	**All of the above**	**I don't know**
	N	6	12	9	2	116	22
	%	3.6	7.2	5.4	1.2	**69.5**	13.2

Selective Investigational Drugs (n=167)		**True**	**False**	**I don't know**
Remdesivir is a narrow-spectrum drug	n	51	81	35
	%	30.5	**48.5**	21.0
Favipiravir was licensed initially as an anti-influenza drug	n	100	10	57
	%	**59.9**	6.0	34.1
Serious adverse effects, such as multiple-organ-dysfunction syndrome and septic shock, may occur when using remdesivir	n	69	40	58
	%	**41.3**	24.0	34.7
Favipiravir is administered intravenously	n	50	46	71
	%	29.9	27.5	**42.5**

All of the following side effects are associated with Remdesivir, except?		**Elevated liver enzymes**	**Diarrhea**	**Renal impairment**	**Hypo-tension**	**All of the above**	**I don't know**
	N	6	12	9	2	116	22
	%	3.6	7.2	5.4	1.2	**69.5**	13.2

Adjunctive Therapies (n=167)					True	False	I don't know
Hemoperfusion is done to prevent resuscitation				n	64	75	28
				%	38.3	**44.9**	16.8
A cytokine storm is an amplified immune response that causes severe inflammation				n	138	6	23
				%	**82.6**	3.6	13.8
Convalescent plasma therapy uses antibodies from the blood plasma of recovered individuals				n	158	2	7
				%	**94.6**	1.2	4.2
Hemoperfusion is a method wherein large volumes of the patient's blood are passed over an adsorbent surface for the extraction of toxic substances				n	125	20	22
				%	**74.9**	12.0	13.2
Which side effect may be associated with corticosteroids?		**Skin rash**	**Hyper-glycemia**	**Shortness of breath**	**Fatigue**	**All of the above**	**I don't know**
	N	10	51	3	3	86	14
	%	6.0	30.5	1.8	1.8	**51.5**	8.4
Herbal treatment (n=167)					**True**	**False**	**I don't know**
Coconut oil contains lauric acid, which has antiviral properties				n	98	9	60
				%	**58.7**	5.4	35.9
Lauric acid prevents the binding of viral S proteins to their host membranes				n	71	8	88
				%	42.5	4.8	**52.7**
Tawa-Tawa has an antiasthmatic effect in relieving flamed bronchial tubes				n	58	35	74
				%	34.7	21.0	44.3
Kadha is a traditional Indian medicinal drink made with dry ingredients that improve the actions of the immune system				n	31	4	132
				%	18.6	18.6	**79.0**
Which side effect may be associated with Farfarae Flos?		**Skin rash**	**Hyper-glycemia**	**Shortness of breath**	**Fatigue**	**All of the above**	**I don't know**
	N	3	4	18	3	4	135
	%	1.8	2.4	10.8	1.8	2.4	80.8

Answer Key: Pathophysiology - Origin-false; Incubation Period-true; Structural protein -true; Attachment -true; Asymptomatic-false; Chloroquine – true; Sofosbuvir – true; Ribavirin – true; Lopinavir – false; bold: highest percentage of responses per question; Remdesivir – false; Favipiravir – true; Remdesivir2 – true; Favipiravir2 – false; bold: highest rate of responses per question; Hemoperfusion – false; cytokine – true; Convalescent plasma – true; Hemoperfusion2 – true; bold: highest rate of responses per question; Coconut oil – true; Lauric acid – false; tawa-tawa – true; kadha – true; bold: highest rate of responses per question

with ribavirin, and a third with lopinavir. It was mentioned during the interview that they had no experience in using ribavirin and/or sofosbuvir. Medical technologists had shown marginal awareness of the selected repurposed drugs among the healthcare professionals.

Regarding adjunctive therapies, the respondents were more aware of hemoperfusion and corticosteroids but not immunoglobulin therapy. They were also aware of the action of hemoperfusion and convalescent plasma therapy; however, they were unaware in determining the side effects that may be associated with corticosteroids. Only half of the medical technologists were aware of corticosteroids and hemoperfusion among the healthcare professionals.

Regarding selective investigational drugs, the respondents were more aware of the action and side effects of remdesivir than favipiravir. Doctors had experience with remdesivir as a treatment for COVID-19.

Moreover, the respondents were aware of the composition of coconut oil but not fully aware of the molecular action of the content. Also, most of the respondents were not well-informed on the action of the other identified herbal

Table 2. *Themes, Dimensions, and Quotations during Interview Sessions*

Information Dissemination	
Dimensions	**Selected Quotations**
WHO	D02: The World Health Organization is a team, they have a team that really is consistent.. is made up of experts around the world to develop guidance on COVID-19 and together they do a lot of work; they review reports, the studies, the presentations of the countries, they analyze trends, they consult people, so, they get a lot of information, and from these information, we gain new scientific knowledge and they make recommendations. Because they are really working on it. I think they are giving us a lot of good clinical advice on how to handle this pandemic. (TRANSCRIBED INTERVIEW 2, Pos. 41)
Further research	D05: I think they should involve more scientists. I think the base of harvest for information when you come up with protocols for this illness should be very broad. I also feel that all conclusions should be immediately cascaded to practitioners, so that we do not learn of this from backdoor sources. It should be an institutionalized way of disseminating information to those who are treating COVID. Once they find out a drug is proven good, it should be a priority to let doctors in all countries dealing with COVID know this immediately, and make the drug available as soon as they can. Some of the protocols that you'll see for treatment of COVID are hazy and I'm speaking from personal experience from my patients. You want to acquire certain drugs, but they are not available. It's proven to be good but it's not available. It's very frustrating. The other aspect is the diagnosis, it's how the government deals with, I wouldn't want to call it herding, but deals with how to stop community transmission. Today if you go out on the streets, you'll see people not wearing masks congregating. I'm not saying everything is government's work, but I would want to see more government personnel in uniform, be it military or police, to patrol the streets and really seriously deal with the people who are not complying with the protocol and prevention of community transmission. I think the people need to know that the government is really really serious not only in treatment. Treatment is a latter thing, infected na eh, but preventing it in the community, that is where I hope the government will concentrate, because if they're successful there, we will have less admissions to the hospital and less need for medicine. (TRANSCRIBED INTERVIEW 5, Pos. 43)
Challenges in Dealing with Infected Patients	
Dimensions	**Selected Quotations**
Asymptomatic	D05: Well by the word itself, when you say a patient is asymptomatic, he has absolutely no symptoms. None of the sore throat, cough, shortness of breath, anosmia, fever, body aches, diarrhea; none of those and yet there is proof that this patient is infected via RT-PCR. (TRANSCRIBED INTERVIEW 5, Pos. 16)
Symptomatic	And then for symptomatic patients, of course, the usual symptoms for COVID-19 patients are having dry cough, fever, fatigue and uhm... nasal congestions. So, for asymptomatic patients naman, these are individuals or patients that have been tested positive a RT-PCR but hindi pa nag develop yung symptoms. For me, yung asymptomatic patients yan yung mas nakakatakot kasi they can transmit disease kasi COVID-19 is able to be transmitted through aerosols so yung symptomatic patiens they are easier to trace eh. (TRANSCRIBED INTERVIEW MT1, Pos. 18)
COVID-19 Treatments Utilized	
Dimensions	**Selected Quotations**
Repurposed drugs	D03: Hydroxychloroquine is an anti-malarial drug, while lopinavir is for HIV and ribavirin and sofosbuvir are for hepatitis. So, these are all antiviral drugs. With lopinavir and remdesivir being antiretroviral drugs. However, I think that from what I have read in the solidarity trial that was done, hydroxychloroquine and lopinavir or ritonavir, does not have any significant reduction in the mortality of hospitalized COVID patients if you compare it to the usual standard of care. So this recommendation has been accepted by the WHO so it is not anymore used to treat COVID-19. (TRANSCRIBED INTERVIEW 3, Pos. 26)
Investigational drugs	D02: Before I do, may I go back to the investigational drug, Remdesivir? As of October 22, 2020, the remdesivir, which is an antiviral agent, is the only drug approved for treatment of COVID-19. It is indicated as treatment for COVID-19 in disease in hospitalized adults and even children age 12 years and older, who weight atleast 40 kilograms. So, the emergency use authorization or EUA, remains in-placed for treating pediatric patients and adults. So far, this is the only antiviral agent that has been approved for us in treating COVID patients. (TRANSCRIBED INTERVIEW 2, Pos. 27)

Adjunctive therapies	D03: So, the adjunctive therapies that you have mentioned are reserved for moderate to severe COVID-19 infections or patients, especially those who have ARDS or acute respiratory distress syndrome. And it's mainly used to prevent the cytokine storm or the massive influx of inflammatory substances in the lungs. So, the one that you mentioned, corticosteroid, the one that is recommended in the solidarity trial is dexamethasone. In the NIH COVID-19 treatment guidelines, I mean, is dexamethasone, 6 milligrams per day up to 10 days. And it's only reserved for those who are mechanically ventilated or not mechanically ventilated, but they are on supplemental oxygen. So, these are the ones who have dyspnea or who have respiratory distress syndrome. The other treatment that you have mentioned are the anticytokine or the immunomodulatory agents. The one that I know are the monoclonal antibodies, like your interleukin six inhibitors and your interleukin one inhibitors. So, these are approved for cytokine release syndrome that is severe or life threatening, so it's only for moderate to severe COVID-19 infections. And though these are being done only are being given to these patients on a clinical trial basis, so the ones that are being used more or undergoing clinical trial is your interleukin six anti interleukin six receptor, monoclonal antibody like your tocilizumab, your sarilumab and your anti interleukin six monoclonal antibody, like your siltuximab. For the immunoglobulin therapy, it's your IVIG or intravenous immunoglobulin. And it's made from the serum, which is pooled from thousands of healthy donors. So, it's mainly used for primary immunodeficiency syndromes. But in COVID-19 infections, it's utilized for its immunomodulatory effect, or it will suppress the hyperactive immune response that we know of as the cytokine storm syndrome. So those three adjunctive therapies have the same end goal, which is to prevent the cytokine storm syndrome. (TRANSCRIBED INTERVIEW 3, Pos. 30)
Herbal treatments	D02: Well, herbal medicines have long been used to treat infections and viruses such as common cold, Influenza, fever and even Herpes. But some of the problems that are being encountered with these herbs is that many of these remedies are of low quality. They do not pass the FDA approval and if they are not used properly, they could exert side effects and even in COVID, like in COVID, they could boost the immune system even more and lead to a what we call a, cytokine storm or as a super inflammatory condition that could insight or lead to more problems in a person having COVID-19, more complications. (TRANSCRIBED INTERVIEW 2, Pos. 47-48)

treatments, namely, Tawa-tawa and Kadha. They were not also aware of the side effects associated with Farfarae Flos. In terms of its use for COVID-19, most healthcare professionals agreed that there is need to study more herbal medicines as a treatment for COVID-19.

Discussion

In this information age, reliable sources of information are vital to healthcare professionals for improving their preparedness and response [7]. Based on the data, webinars, lectures, and discussions were relied most primarily upon by doctors because the data transmitted are of high quality, trusted, and fact-checked. Government websites, a secondary source of information for doctors, such as the World Health Organization (WHO) and the Center for Disease Control (CDC), are authoritative and credible sources of information, where experts provide a global perspective of the COVID-19 virus [8]. Nonetheless, one of the healthcare professionals suggests the need to increase the involvement of scientists and institutionalized information dissemination. Social media's easy access and ubiquity made the spread and creation of COVID-19 falsehood possible and more effortless, hence the least used platforms. Social media firms are already directing users to the WHO or local health organizations [9].

The pathophysiologic characteristics of COVID-19 were poorly identified early on during the pandemic, rather, sciences focused on the genome sequence to reveal the origin of COVID-19 as reflected that most of the healthcare professionals were not well-informed about the virus' molecular structural proteins. A complete understanding of the origins of COVID-19 will lessen future recriminations and counter the occurrence of conflict [10].

As healthcare professionals, one of the key challenges is dealing with the infected patients while making preventive and protective measures. Accordingly, they also had difficulties tracing asymptomatic patients since they did not exhibit any symptoms. As a response, various COVID-19 treatments were developed and utilized during this crisis such as investigational drugs, repurposed drugs, adjunctive therapies, and herbal treatments. As such, the healthcare professionals seem to have varying experiences and opinions regarding the use of each treatment. Nonetheless, remdesivir seems the most common and considerably most effective among them (Table 2). Remdesivir, a selective investigational drug and a broad-spectrum antiviral, achieved its popularity because it was the first COVID-19 treatment approved by the Food and Drug Administration (FDA) last October 22, 2020 [11]. Remdesivir's popularity among the respondents may

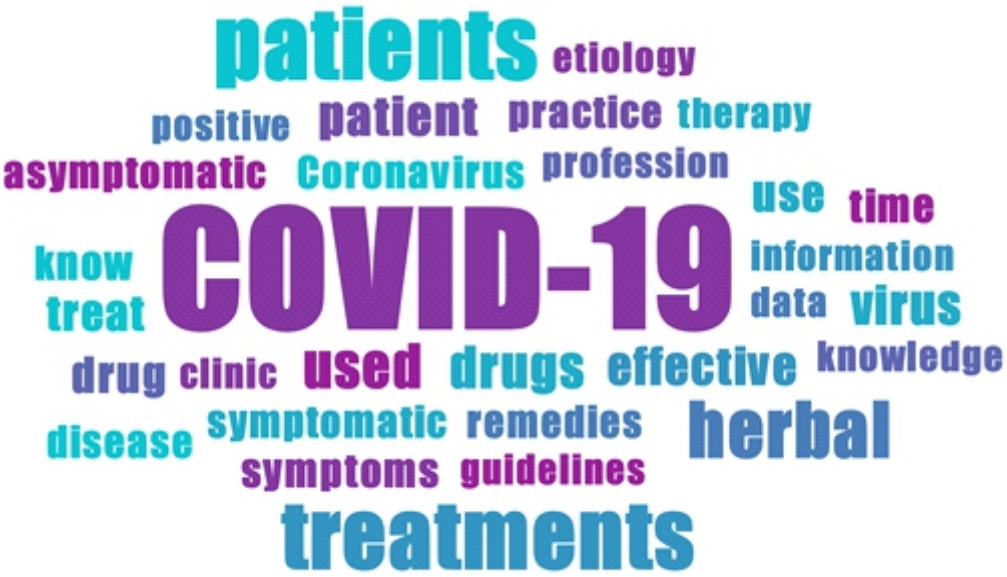

Figure 1. *The word cloud on the healthcare professionals highlights the concepts of COVID-19, patients, herbal, and treatments.*

have been caused by recent news and social media trends, webinars, lectures, and discussions as verbalized, “I've only heard of remdesivir because it's the only FDA drug that I've heard of." – MT1. It is also possible that the healthcare professionals knew about it even before the pandemic since the drug was extensively used due to its wide range of antiviral activity, such as SARS-CoV and MERS-CoV [12]. However, on 20 November 2020, WHO issued a conditional recommendation against remdesivir since their solidarity trial showed that the drug neither reduced the mortality rate nor the time it took COVID-19 patients to recover [13]. There are only two global clinical studies of favipiravir usage in COVID-19 which explains favipiravir's unfamiliarity. However, the FDA released an advisory last June 2020 regarding the use of favipiravir due to its teratogenic and embryotoxic effects observed in animal studies [14].

Early in the pandemic, on 28 March 2020, the FDA allowed chloroquine (selected repurposed drug) under the Emergency Use Authorization (EUA). Chloroquine was highly perceived as one of the most effective treatment options for COVID-19 during the pandemic's early months causing familiarity to healthcare workers. However, the EUA had to be revoked on 15 June 2020, since the drug did not show any benefit for decreasing the mortality rate or speeding recovery in large and randomized clinical trials; risks or side effects like cardiac diseases were likely to occur as well [15]. On the other hand, participants were least familiar with anakinra and sofosbuvir maybe because anakinra is still undergoing phase two clinical trials to test its effectiveness against SARS-CoV-2, while sofosbuvir is currently not listed as a potential option for COVID-19 drug therapy [16]. As for ribavirin, there are no known randomized controlled clinical trials on the drug claiming its effectiveness against COVID-19. However, retrospective studies show that the drug is not associated with improved negative conversion time for SARS-CoV-2 PCR test and reduced mortality rate [17]. Due to the lack of randomized control trials and limited studies for ribavirin and sofosbuvir, association with improved clinical outcomes is minimal. Also, the WHO and CDC do not recommend and promote these drugs as a standard treatment for patients suffering from COVID-19. The lack of awareness regarding sofosbuvir and ribavirin is supported by statements made by medical doctors, “[Sofosbuvir] has been found in studies that they have little or no effect on patients.” – D03, "Ribavirin is an antiviral drug, but I don't know how it's being used." – D01. The randomized clinical trials on the lopinavir drug concluded that it does not significantly affect COVID-19 patients [18]. These findings have led to the minimal use of lopinavir, and research interest has shifted to other candidate drugs.

Most healthcare professionals were aware of the adjunctive therapies being used for COVID-19. A series of case studies have shown passive transfer of COVID-19–neutralizing antibodies through convalescent plasma therapy and proved

to be efficient and safe in patients with protracted COVID-19 diseases presenting with severe humoral immunity impairment. Studies have also shown the effectiveness of convalescent plasma therapy to severe COVID-19 patients [19]. According to the Infectious Diseases Society of America [20], this type of treatment should be limited to clinical trials and be performed on individuals early in the course of COVID-19 infection. This explains many healthcare professionals are studying the emerging information regarding convalescent plasma therapy and its benefits. They mentioned that the mechanism of hemoperfusion significantly improves the condition of a COVID-19 patient due to its anti-cytokine effect [21]. Furthermore, corticosteroids and dexamethasone were mentioned by most healthcare professionals repeatedly. Dexamethasone is a synthetic adrenal corticosteroid with potent anti-inflammatory properties rumored to be effective against COVID-19. However, it was not a definitive cure against it. It was reported that a low-dose regimen of dexamethasone for ten (10) days was found to reduce the risk of death by a third among hospitalized patients requiring ventilation [22].

For instance, the use of herbal treatments, while not necessarily seen as having adverse effects, makes some healthcare professionals wary about its positive effects. Hence, they also express their disbelief in herbal remedies, and this may be so as many healthcare professionals heavily rely on scientific research and proven treatment rather than unproven folklore. As stated by one of the respondents, “We still need a lot of clinical data that would tell us that these herbs are effective." – D02. This suggests that multiple healthcare professionals are skeptical towards herbal treatments without the support of the required data. The combination of self-medication, non-expert consultation, and missing risk awareness of herbal medicine is potentially harmful [23]. Many scientists are still researching potential herbal treatment's efficiency and health benefits, hoping it can supplement modern western medicine.

Conclusion

In this information age, information channels play a vital role in informing and updating healthcare workers. Consequently, the healthcare professionals affirm support for the evidence-based and expert recommendations provided by the World Health Organization. The healthcare professionals seem to have varying experiences and opinions regarding the use of each treatment. Nonetheless, remdesivir (investigational drug) appeared to be the most common and considerably most effective among them followed by chloroquine (repurposed drug) and convalescent plasma (adjunctive therapies). The healthcare professionals were aware of the action and side effects of remdesevir, chloroquine, and convalescent plasma therapy. However, they were not aware of the action of the identified herbal treatment. The findings will elaborate on the validity and viability of the treatment protocols and enable a more efficient and reliable overall healthcare service. Thus, it is highly recommended to evaluate further the mechanism of action of the aforementioned drugs to determine their safety and efficacy on COVID patients.

Acknowledgment

To the Pontifical and Royal University of Santo Tomas, it is an honor to carry the school's name and represent the university with this study. We want to express our appreciation to all survey respondents who shared their knowledge and helped dissimilate our survey. We are also grateful to the interviewees who gave us time to participate in our study out of their busy schedules. Finally, we are extremely grateful to our parents and families for their love, prayers, understanding, and the sacrifices they've made for our future and education.

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