

# The Rise of Telemedicine in the Philippines during COVID-19: A Systematic Review of Utilization Trends and Patient Outcomes

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**ABSTRACT.** The study discussed the telemedicine trends in the Philippines during the COVID-19 pandemic from 2019 to 2023. Determining the frequency of use of telemedicine, the factors that influenced its use before and during the COVID-19 pandemic, and the effects of telemedicine in improving the healthcare system in the Philippines. A systematic review was conducted using thematic analysis and the PRISMA checklist. The results presented a pattern indicating that teleconsultation usage corresponded to increased COVID-19 cases. Furthermore, telemedicine utilization surged from March 2020 to March 2022, with video consultations increasing from 5 to 495 monthly visits between 2019 and 2022. The study concluded that it was driven by increased mobile phone usage, improved patient satisfaction, government support, and increased video consultations, offering alternative healthcare delivery. Future studies should include more regions and timeframes to comprehensively present telemedicine trends in the Philippines.

## 1.0. Introduction

Telemedicine was first used in the Philippines with the establishment of the National Telehealth Center (NTHC) of the National Telemedicine Service Project in 1998 (Juban et al., 2022). This project aimed to link specialists at the Philippine General Hospital with physicians in rural areas. Telemedicine is the distant provision of medical care and remote patient consultation. It is the electronic transmission of medical data from one location to another to enhance patient health. Telehealth or telemedicine, as indicated by numerous experts, including healthcare specialists, can enhance a nation's healthcare system. Telemedicine applications include wireless tools, email, two-way videos, smartphones, and other telecommunications technology.

Healthcare specialists in various fields, such as psychiatry, neurology, radiology, pediatrics, internal medicine, family medicine, and occupational medicine, have devised online consultation or telemedicine as an alternative approach for patient consultation and guidance (Wicklund, 2020). Telemedicine aims to address the demands of healthcare consumers and offers the potential

to improve healthcare delivery. It contributes to initiatives significantly enhancing healthcare quality by increasing accessibility and efficiency (Alvandi, 2017). Telehealth in the Philippines started as a response to the demands of doctors working in rural and distant regions of the country for professional help in dealing with complex challenges (Magtubo et al., 2018). Telemedicine was important in improving healthcare in the Philippines. However, it was not widely recognized as a healthcare delivery method due to technological requirements, cyber security, government policies, medical regulations, and ethical standards (Dela Cruz & Tolentino, 2021).

In early 2020, the Philippines experienced a surge in COVID-19 cases, prompting the strict enforcement of Enhanced Community Quarantine measures to control escalating cases of the disease (Amit et al., 2021). Hence, certain hospitals prioritized COVID-19 patients, isolating them from general medical services for the public's safety (Ohannessian et al., 2020). Telemedicine proved an advantageous alternative to the standard patient-doctor appointment during the COVID-19 pandemic (Cordero, 2022). The COVID-19 pandemic has directed a new era of healthcare progress centered on telemedicine (Jin et al., 2020). It emphasized the need for further research to determine the best practices for deploying telemedicine resources.

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Additionally, telemedicine tools present significant opportunities to provide high-quality medical care when on-site access is limited (Abdel-Wahab et al., 2020). To make telemedicine sustainable, safe, and widespread, several factors must be addressed, including adequate training for patients, providers, and health workers, as well as protocolization of triaging, proper documentation guidelines, data protection, confidentiality measures, and secure data sharing practices (Siraj et al., 2021). Furthermore, telemedicine applications can play a vital role in educating and training healthcare professionals, supporting research endeavors, and enhancing access to clinical trials. Rapid technological advancements have the potential to establish telemedicine as a sustainable healthcare delivery method, particularly for patients facing barriers to accessing care (Jin et al., 2020).

Telemedicine has become more widely employed since the COVID-19 pandemic, but it cannot be utilized for all healthcare needs and cannot completely replace in-person physical examinations (Jin et al., 2020). Mobile phones, signals, the internet, transportation, and caretaker availability remain problematic. According to a study by Almeida et al. (2022), a sizable portion of the respondents may not have been aware of telehealth or the services that go along with it before responding to the online survey.

This study assessed telemedicine trends in the Philippines during the COVID-19 pandemic. Studying telemedicine trends is essential for optimizing healthcare delivery, improving access, reducing costs, and ensuring that telemedicine continues to evolve to benefit patients and healthcare providers. It encourages society to adapt to changing technology and patient needs, such as more options to access healthcare and regulatory environments, ultimately leading to better healthcare delivery.

## 2.0. Framework of the Study

The study used a screening method to remove insignificant articles. Key ideas were grouped, arranged, and cited in a single document to ensure a smooth flow and accuracy. This study aimed to

address this gap by reviewing the procedures for conducting literature reviews.

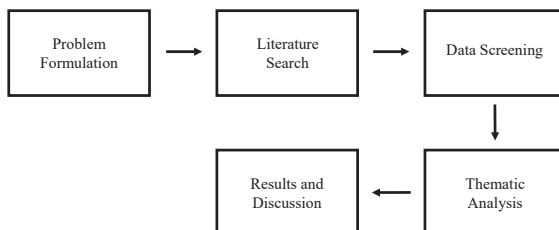
Figure 1 shows the steps followed by the researchers: (1) *Problem Formulation*, the researchers looked for relevant issues during the pandemic; (2) *Literature Search*, the researchers gathered related articles with the topic (3) *Data Screening*, the researchers used an inclusion and exclusion criteria, and utilized the PRISMA checklist to assess further and improve the quality of the selection process; (4) *Thematic Analysis*, which explains the systematic method of organizing and categorizing data, grouping codes into themes and defining them (Dawadi, 2020); (5) *Results & Discussion*, the researchers presented the analyzed data.

## 3.0. Methodology

*Research Design.* The study on telemedicine in the Philippines during the COVID-19 pandemic used a qualitative research approach, which involved looking at non-numerical and numerical data to understand how often telemedicine is used. Qualitative research explores different aspects based on researchers' observations, recognizing that reality is subjective and dynamic (Wilson et al., 2021). This study, structured as a qualitative systematic review, gathered information from research papers, journal articles, and relevant literature sources. Systematic reviews ensure a thorough analysis of trustworthy and pertinent findings (Munn et al., 2018). The research followed specific criteria and used a comprehensive process to extract and synthesize evidence-based literature and practices (Pierce, 2023). *Search Strategies.* To ensure the credibility of the selected references, the researchers used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist to improve the quality of the review process. There are 61 articles labeled as 52 databases, consisting of scholarly studies, such as peer-reviewed articles and credible sources, and nine registers that refer to ongoing research and unpublished articles (Tryphosa, 2023). Before the screening process, 11 articles were eliminated, leaving 50 to be retrieved. Thirty-four studies were assessed for eligibility. However, 16 papers were excluded due to their generic focus and addressed subject matter, and five were excluded due to their location. After the assessment, the researchers utilized 13 articles.

*Exclusion and Inclusion Criteria.* Inclusions highlight vital traits, whereas exclusion filters out confounding and irrelevant factors. These criteria ensure the data fit the research focus and maintain quality and accuracy

Figure 1  
Framework of the Study



(Nikolopoulou, 2023). The researchers included articles published from 2016 to 2023, with a seven-year range, to ensure the validity of the articles and attain studies that encompassed the scope of the study. The geographic location of the study and the type of article, namely, original research papers and journal articles, were also included in the inclusion criteria. The study’s exclusion criteria included the relevance of the article’s data, the language used in writing the article, and the presented results. Articles that emphasized topics outside the scope of the research, and studies that provided inadequate information and evidence were excluded.

*Data Extraction and Analysis.* The study utilized Google Sheets to organize the collected references and Google Docs to present the findings, incorporating graphic organizers for clarity. Employing thematic analysis, the researchers examined the data on telemedicine during the COVID-19 pandemic in the Philippines and screened 13 research publications and journal articles. They coded the data using keywords, created themes by grouping related codes, and reviewed and revised them for accuracy. The identified themes encompassed telemedicine’s frequency of use, trends, limitations, impacts, and future. Data on these themes were gathered from various sources,

were utilized only to assist the researchers in terms of unity, coherence, and organization of the content and were not applied in writing the paper.

#### 4.0. Results and Discussion

##### Telemedicine’s Frequency of Use

The frequency of telemedicine use before the pandemic is shown in Table 1. Leochico et al. (2022) utilized Google Trends to examine the online interest patterns of respondents, with no specified sample sizes mentioned. “Telepractice” did not yield sufficient search data. Furthermore, Del Castillo et al. (2022) study did not specify the patients’ sample size, indicating that before the COVID-19 pandemic, the average telemedicine usage was five visits per month. Additionally, Ang-Muñoz et al.’s (2022) study of 205 healthcare practitioners indicated that only 19 percent of healthcare providers at the University of the Philippines College of Medicine had utilized and gained experience in telemedicine between 2017 and 2019 before the pandemic. Telemedicine was still not recognized, as the number of consumers was minimal, as Telehealth is not widely known in the Philippines (Leochico et al., 2022; Del Castillo et al., 2022; Ang-Muñoz et al., 2022).

**Table 1**  
Telemedicine’s Frequency of Use Before the Pandemic

SAMPLE SIZE	RESPONDENTS	TYPE OF SURVEY USED	TIME FRAME	FREQUENCY (%)	AUTHOR
N/A	N/A	Google Trends	2019	0 - Telepractice	Leochico et al. (2022)
N/A	Patients	N/A	2019	5 visits per month	Del Castillo et al. (2022)
205	Health practitioners	UTAUT TRI 2.0	2017 to 2019	39 (19%)	Ang-Muñoz et al. (2022)

Note: Technological Readiness Index (TRI); Unified Theory of Acceptance and Use of Technology (UTAUT)

including the Journal of the International Society for Telemedicine and eHealth. The researchers ensured a comprehensive approach with 13 diverse articles, enabling a thorough exploration of the complexities and patterns in the evolving landscape of telemedicine during the pandemic.

*Ethical Considerations.* The researchers ran the research paper using plagiarism tools to ensure they had not plagiarized any references. Moreover, all the information gathered from the articles was paraphrased to prevent plagiarism. Proper references, accreditation, and in-text citations were provided to acknowledge the original authors of the journals, articles, and research papers utilized in the study. The researchers did not fabricate or include any misleading or biased information. Lastly, AI tools

During the peak of the COVID-19 pandemic in the Philippines, significant studies conducted by Del Castillo et al. (2022) and Leochico et al. (2022) inferred that the increase in telemedicine frequency of use coincides with the escalating COVID cases as cities implemented stricter policies to reduce the spread of COVID-19 and alleviate the strain on the healthcare system. The pandemic became a way for telemedicine to emerge from telephone to video consultations. It has enhanced healthcare delivery during the pandemic, preventing patients from acquiring the SARS-CoV-2 virus (Macariola et al., 2021; Noceda et al., 2023). With this, telemedicine’s usage and interest surged as consumers and healthcare providers adapted to the new way of providing healthcare services without exposure to COVID-19.

In addition, the COVID-19 pandemic has also catalyzed the advancement of telemedicine and increased the distribution of telemedicine programs in the Philippines (Del Castillo et al., 2022).

Table 2 shows the frequency of telemedicine use according to the surveys and research conducted. Leochico et al. (2022) utilized Google Trends to assess online interest in telerehabilitation with an average of 100 searches. The study results convey an increase in interest during March 2020, when COVID-19 was announced, and lockdowns were declared in the Philippines. As shown in the study by Del Castillo et al. (2022), 55.1 percent of the patients utilized video consultations every month from 2020 to 2022. The peak occurred during the pandemic, notably in October 2020, comprising 10.9 percent of the total video consultations. In January 2021, there was a notable surge, marking a 54.5 percent increase compared with the preceding year. The study by Noceda et al. (2023) showed the most significant increase, and the survey results demonstrated that out of 200 patients, 58.0 percent strongly agreed to use telemedicine services again, as their experiences with telemedicine were positive.

It can be implied that the COVID-19 pandemic affected the frequency of telemedicine use as the

barriers that previously hindered its utilization (Ong et al., 2022). This suggests that telemedicine has increased access to healthcare services and bridged the country's healthcare system gaps. The study's researchers have concluded that the sample size sees the benefit, purpose, contribution, and overall understanding of why telemedicine is being utilized; they would have a positive implication for adopting the technology (Ong et al., 2022).

According to Alvandi (2017), the introduction of mobile phones increased the utilization of telemedicine. This enhanced societal efficiency and connectivity, leading to patient satisfaction. Telemedicine provides secure remote healthcare, reduces the potential for exposure to virus transmission, manages long-term care, and offers doctors and patients convenient access to health information without constant office visits. Moreover, the studies of Arcellana-Nuqui et al. (2016) and Magtubo et al. (2018) show the introduction of telehealth in the Philippines, which assists patients through digital communication. In addition, Magtubo et al. (2018) state that implemented bills acknowledge the pivotal role of telehealth in disaster management and provide the government with the authority and resources to incorporate telehealth into existing

**Table 2**  
Telemedicine's Frequency of Use During the Pandemic

SAMPLE SIZE	RESPONDENTS	TYPE OF SURVEY USED	TIME FRAME	FREQUENCY (%)	AUTHOR
N/A	N/A	Google Trends	2020 to October 2020	100 - Telerehabilitation	Leochico et al. (2022)
12, 378	Patients	SYD Telemedicine Satisfaction Survey	March 1, 2020, to March 31, 2022	495 per month	Del Castillo et al. (2022)
200	Patients	TUQ	July to November 2021	166 (58.0%)	Noceda, et al. (2023)

Note: SeeYouDoc (SYD); Telehealth Usability Questionnaire (TUQ)

number of COVID-19 cases rose and the usage of telemedicine peaked. The increase in telemedicine use during the COVID-19 pandemic can be attributed to several factors. First, heightened awareness of telehealth options resulting from extensive public health campaigns and the need for safe healthcare access played a pivotal role in boosting its frequency of use. Second, improved regulatory support for remote healthcare services, such as policy changes facilitating telemedicine reimbursement, contributed to the increase in telemedicine adoption, as it removed

disaster management programs.

Table 3 presents the most significant factors that influence the utilization of telemedicine. According to Haleem et al. (2021), telemedicine improves healthcare by enabling remote care, reducing in-person visits, and enhancing access and information sharing. Telemedicine allows continuous patient care, provides a high degree of medical care, and ensures the confidentiality of patient data exchanged through telemedical devices. Jin et al. (2020) and Noceda

et al. (2023) reported similar findings regarding variables influencing telemedicine utilization. Safety and communication, enabling doctors to treat patients while reducing the risk of COVID-19 transmission, utilizing software for remote consultations that involve the use of technology platforms that enable healthcare professionals to interact with patients remotely, and limiting the number of in-person exams, such as reducing face-to-face appointments, are the primary factors that affect usage and satisfaction. The effective use of remote consultation software enhances healthcare accessibility and convenience, offers cost savings, and improves the continuity of care. Limiting in-person examinations optimizes resources, reduces infection risks, and focuses on preventive care. Striking a balance between virtual and in-person care and considering patient preferences and diagnostic needs is crucial for overall satisfaction and healthcare efficacy. Ong et al. (2022) stated that usage behavior significantly influences users' perceptions of telemedicine acceptability and intention to use it, implying that prior experience with telemedicine increases adoption likelihood, while those without experience may not be adept at using such an approach.

As emphasized by Haleem et al. (2021), telemedicine offers significant healthcare delivery advantages, including remote patient care, reduced reliance on in-person appointments, improved healthcare access, and enhanced information sharing for better overall quality. It reduces the need for traditional face-to-face appointments and offers virtual alternatives that provide more flexibility for individuals. This addresses geographical challenges and ensures healthcare access for diverse populations. In addition, telemedicine promotes better collaboration among healthcare professionals by enhancing information sharing through electronic health records and digital platforms. In essence, it marks a significant shift towards a healthcare system that is more adaptable, accessible, and knowledge-driven. Factors influencing telemedicine utilization and satisfaction include safety, effective communication, remote consultations, and limited physical examinations, as indicated by Jin et al. (2020) and Noceda et al. (2023). Prior experience and expectations also significantly affect acceptance, according to Ong et al. (2022). Telemedicine shows significant acceptance potential, contingent on its effective implementation and promotion in the Philippines and other developing nations. The

success of telemedicine in the Philippines and other developing nations depends on addressing infrastructural issues, promoting digital literacy, and implementing supportive policies. Investments in reliable internet, education on telehealth benefits, and clear regulations are crucial, according to a study by Noceda et al. (2023). Collaboration between sectors and ongoing research will enhance the scalability and effectiveness of telehealth services.

**Trends of Telemedicine**

**Table 3**  
Factors that Influence the Utilization of Telemedicine

FACTORS	IMPLICATION	AUTHOR
Enhances healthcare delivery	<ul style="list-style-type: none"> <li>Enables remote patient consultation</li> <li>Reduces reliance on in-person appointments</li> <li>Improves access to health care services</li> <li>Fosters information sharing</li> </ul>	Haleem et al. (2021)
Prioritizes safety and effective communication	<ul style="list-style-type: none"> <li>Reduces the risk of COVID-19 transmission</li> <li>Limits physical exams</li> <li>Enables consultations from across the country</li> </ul>	Jin et al. (2020) and Noceda et al. (2023)
Usage behavior strongly influences the intention to use	<ul style="list-style-type: none"> <li>Enables experienced users to be more inclined to adopt it.</li> </ul>	Ong et al. (2022)
People are optimistic about its benefits	<ul style="list-style-type: none"> <li>Affects usage behavior because of performance and effort expectancies</li> </ul>	

Figure 2 presents the studies by Del Castillo et al. (2022), Plantado et al. (2023), and Leochico et al. (2022). Del Castillo et al. (2022) studied Filipino satisfaction with telemedicine from March 1, 2020, to March 31, 2022. The results showed a notable increase in video consultations during the pandemic, with an average of five monthly visits in 2019, surging to 495 from 2020 to 2022. These consultations were predominantly facilitated through the SeeYouDoc app, with 1,258 (66.4 percent) occurring from March to December 2020, 524 (27.6 percent) from January to December 2021, and 114 (6.0 percent) from January to March 2022. Additionally, another study by Plantado et al. (2023) reported that 271 queries were received from March 20, 2020, to May 31, 2020, with 178 (69.8 percent) related to COVID-19. Leochico et al. (2022) conducted a study that revealed a shift in online search trends for “telehealth” and “telemedicine” in March 2020, signifying a significant increase in interest and search activity compared to the relatively lower and more stable trends observed over the previous 16 years.

Telemedicine trends in the Philippines during the COVID-19 pandemic have shown observable patterns. Various studies have suggested that telehealth has

improved a country’s healthcare provisions during the COVID-19 pandemic (Macariola et al., 2021). The research studies utilized a variety of models and tools, such as the UTAUT2 model (Unified Theory of Acceptance and Use of Technology), which assessed factors affecting technology adoption, the TUQ questionnaire (Telehealth Usability Questionnaire) for measuring technology usability, Google Trend analysis to understand online search trends, and a six-item SYD (SeeYouDoc) telemedicine satisfaction survey questionnaire to gauge user satisfaction with telemedicine services. Del Castillo et al. (2022) recorded the highest number of video consultations in 2020 in October (Figure 2). Based on these studies, telemedicine peaks were observed when the number of COVID-19 cases increased. The peak in video consultations occurred in January 2021, when video consultations increased by approximately 54.5 percent; however, a significant decrease was observed after January 2021 (Figure 2). Since the onset of the COVID-19 pandemic, telemedicine has experienced considerable growth, enabling patients to access healthcare services from remote locations and reduce the risk of viral transmission (Del Castillo et al., 2022). Furthermore, Leochico et al. (2022) recorded 45 teleconsultations in July 2019, which increased to 191 in March 2020 (Figure 2). Their findings stated that the pandemic seemed to have catalyzed the increased interest and awareness of healthcare providers and consumers regarding the potential for remote or virtual access to healthcare and rehabilitation services, regardless of the terms used.

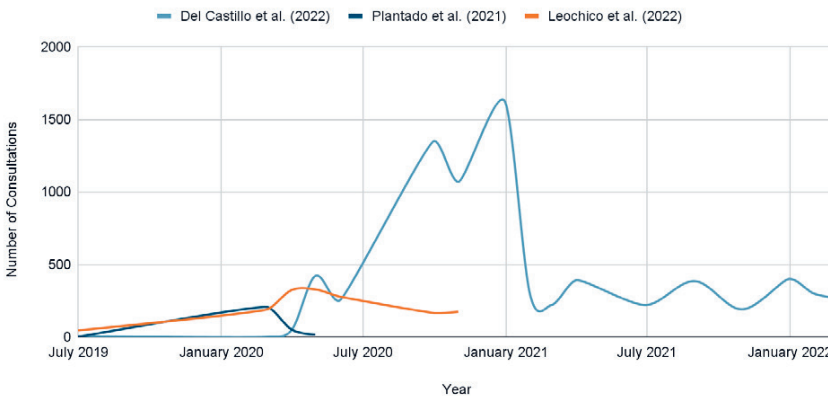
barriers to telemedicine, which are presented here according to the results of the referenced research papers. Ang-Muñoz et al. (2022), Noceda et al. (2023), and Leochico et al. (2020) agree that data privacy, poor internet connectivity, and other technological barriers are the most prevalent limitations and barriers to telemedicine. In addition, Leochico et al. (2020) and Ang-Muñoz et al. (2022) agree that a lack of telehealth policies, knowledge, and experience are barriers to telemedicine.

The common limitations of telemedicine mentioned by Ang-Muñoz et al. (2022), Noceda et al. (2023), and Leochico et al. (2020) are data privacy or security issues, poor internet connectivity, and other technological barriers. In a study by Noceda et al. (2023), perceived poor quality of care and service, as well as perceived high costs of telemedicine, were barriers to the implementation of telemedicine in the Philippines. The inherent constraints of telemedicine in diagnosing and treating patients, the perceived elevated expenses, particularly in mental health conditions, and challenges related to inadequate connectivity and other technological issues all hindered the adoption and contentment with telemedicine. Furthermore, Leochico et al. (2020) and Ang-Muñoz et al. (2022) stated that the lack of telemedicine laws and policies, telemedicine experience, and knowledge and skills were also barriers to telemedicine. The most often addressed issues in the included studies by Leochico et al. (2020) were concerns about data privacy, a lack of knowledge and skills required for e-health, and stakeholders’ lack of acceptability of telehealth. The most significant organizational factors were the absence of national e-health policies or laws, a health information systems framework, governance,

**Limitations and Impacts of Telemedicine**

Table 4 displays the perceived limitations and

**Figure 2**  
Trends of Telemedicine



Note: In correspondence to the selected studies, each line represents the changes in video consultation frequency before and during the pandemic

and data privacy measures, which accounted for the highest percentage (42 percent) of citations of identified barriers. According to at least ten studies, the internet ranked as the top hurdle to telehealth in the Philippines among all individual variables in all categories.

According to Del Castillo et al. (2022), the COVID-19 pandemic has inspired the rapid construction and dissemination of telemedicine services in the Philippines. Video consultation services were adopted, as the study showed, and they were still being used after the country eased lockdown measures, indicating that virtual consultation met the need for healthcare among Filipino patients. Private organizations, including digital health companies, health insurance providers, and private hospitals, can profit from this demand for virtual care services. According to Jin et al. (2020), the COVID-19 crisis and other recent external influences have reduced in-person interactions among people, making telemedicine a necessary solution to bridge this gap. Telemedicine safeguards immunocompromised patients against infectious diseases and provides access to specialists nationwide. Moreover, according to Haleem et al. (2021), telemedicine is often

the need for in-person referrals, shortening specialist response times, and eliminating unnecessary travel. Telemedicine is particularly valuable in cases where doctors can diagnose conditions, track patient progress, and offer guidance.

The results are remarkably similar to studies conducted in other nations, suggesting a consistent pattern across many countries. Gajarawala and Pelkowski (2021) identified limitations in telemedicine, including challenges in conducting thorough physical examinations, potential technical issues, security risks, and regulatory obstacles. Virtual providers lack the advantage of a complete patient history and physical examination for accurate diagnosis and treatment. The telehealth field has also experienced a crisis with legal and regulatory complexities marked by significant variations in rules and guidelines.

Table 5 presents the impacts of telemedicine from the studies of Jin et al. (2020), Del Castillo et al. (2022), and Haleem et al. (2021). Both Haleem et al. (2021) and Jin et al. (2020) generally agree that telemedicine is a convenient mode of healthcare delivery for patients and healthcare specialists. Del Castillo et al. (2022) also stated that virtual consultations address a healthcare need for Filipino patients.

Similarly, Bali (2018) found that barriers, such as geographical constraints, limited availability, affordability issues, and cultural acceptability, hinder access to healthcare in developing countries. These challenges affect women, children, the elderly, and the physically disabled. Telemedicine in developing nations is deemed unsatisfactory and characterized as being in a crisis stage.

Ravindrane and Patel (2022) and Omboni et al. (2022) showed similarities in the impact of telemedicine. Telemedicine

reduces the risk of viral transmission by reducing in-person interaction. It also improved healthcare access to remote and rural areas, allowing patients to receive consultations in the comfort of their homes and reduce travel. Telemedicine helps to prioritize and allocate resources efficiently, enabling the conservation of medical supplies.

**5.0. Conclusion**

Telemedicine usage in the Philippines surged, peaking in October 2020, and increasing in January

**Table 4**  
Limitations of Telemedicine during the Pandemic

Limitations and Barriers	References
Perceived poor quality of care and service	Noceda et al. (2023)
Perceived high costs	
Lack of acceptance of telehealth among stakeholders	Leochico et al. (2020)
Lack of knowledge and skills in telehealth	Leochico et al. (2020) Ang-Muñoz et al. (2022)
Lack of national telehealth policies or laws	
Lack of Telemedicine Experience	
Data privacy or security issues	Ang-Muñoz et al. (2022) Noceda et al. (2023) Leochico et al. (2020)
Poor internet connectivity	
Technological barriers (e.g., gadget availability, technical difficulties, etc.)	

considered a disruptive innovation that utilizes various electronic communication methods, such as teleconferencing, image sharing, and remote patient monitoring, to serve patients at a distance. Doctors can employ automation to deliver high-quality care, which requires improved IT support and new file management techniques. Virtual appointments enable primary care physicians to seek expert advice by sending medical data, such as exam reports, history, and images, for review. The specialist can respond electronically or arrange virtual meetings, reducing

**Table 5**  
Impacts of Telemedicine

Impacts	References
<ul style="list-style-type: none"> <li>▪ Telemedicine eliminates the risk of infectious diseases for immunocompromised patients and allows them to see a variety of specialists nationwide.</li> <li>▪ Patients who miss or forget appointments can access care via telemedicine, reducing missed opportunities and improving clinic efficiency.</li> <li>▪ Remote patient monitoring is set to become a significant advancement in telemedicine, allowing patients to wear devices that send real-time data to their devices.</li> <li>▪ The COVID-19 pandemic has accelerated the progress of healthcare delivery systems, with telemedicine being a key focus.</li> </ul>	Jin et al. (2020)
<ul style="list-style-type: none"> <li>▪ Virtual consultations address a healthcare need among Filipino patients.</li> </ul>	Del Castillo et al. (2022)
<ul style="list-style-type: none"> <li>▪ Telemedicine is valuable in linking clinicians with patients to ensure they make long-term lifestyle changes.</li> <li>▪ Telemedicine eliminates the burden of patient check-in and concentrates on higher-value tasks.</li> <li>▪ Telemedicine expands access to underserved areas, making it easier for them to schedule and hold appointments.</li> <li>▪ Patients with reduced mobility get doctors' opinions and prescriptions, which they need more quickly.</li> <li>▪ Telemedicine reduces global travel for doctors and patients, improving access to appropriate healthcare for each individual.</li> </ul>	Haleem et al. (2021)

2021, which coincided with the increase in COVID-19 cases. Telemedicine usage in the Philippines has increased significantly, primarily due to mobile phone usage, improved patient satisfaction, and government support for disaster management. Telemedicine trends in the Philippines have experienced a significant increase during the COVID-19 pandemic, with video consultations increasing from five monthly visits in 2019 to 495 trips between 2020 and 2022. The pandemic has impacted primary healthcare in the Philippines. Telemedicine's future depends on technology advancements, patient cooperation, and addressing health disparities. It offers a simple registration process, allowing healthcare professionals to focus on critical in-person situations, thus benefiting patients and medical staff. Despite these challenges, telemedicine is a practical option for those facing obstacles to traditional care, driving a shift towards virtual solutions.

**6.0. Directions for Future Research**

This study specifically focused on data from the Philippines from 2019 to 2023. Therefore, it is recommended that the scope of the study be broadened to include both locations and timelines to encompass a more diverse and significant dataset. Additionally, it is advisable to compare global outcomes to comprehensively evaluate the various factors influencing telemedicine use and its effectiveness in healthcare delivery.

**7.0. Declaration of Conflict of Interest**

The authors declare no conflicts of interest.

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