Brief Report

A Brief Report on Telerehabilitation During COVID-19 Outbreak at a Tertiary Care Center in Kerala, India

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ABSTRACT

The unanticipated lockdown following the COVID-19 outbreak significantly impacted the field of rehabilitation, compelling the professionals to switch to tele-mode to continue providing their service without interruption. This article aims to highlight the steps taken to overcome the various challenges that were encountered in this period and to strengthen the opportunities in telerehabilitation services at a tertiary care center in Kerala, India. An average of 1000 clients were served monthly through telerehabilitation in various units at the selected institute during the COVID-19 pandemic. The telerehabilitation services included assessments, intervention, and counseling for clients of all ages with various types of disabilities. A high literacy rate and better access to technology among the general population in Kerala, India were identified as advantages for the rapid implementation of telerehabilitation as a viable form of service delivery.

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Highlights

- This study investigated the challenges encountered to implement telerehabilitation during the COVID-19 pandemic.
- This study demonstrates the steps taken to enhance telerehabilitation services in a tertiary care center.
- Results show telerehabilitation as a feasible form of delivering clinical services.

Plain Language Summary

Telerehabilitation refers to the use of information and communication technologies to provide rehabilitation to patients at home or in other similar environments. In the aftermath of the COVID-19 epidemic, rehabilitation professionals had to shift from the face-to-face method of therapy to telerehabilitation, as it was the first time for most of them. This article discusses the steps taken at a tertiary care center (National Institute of Speech and Hearing [NISH]) in Kerala, India to overcome the barriers and expand the opportunities for telerehabilitation during the COVID-19 outbreak. An average of 1000 clients were monthly served through telerehabilitation at NISH. The feedback collected from the clients and caretakers revealed that the majority of the patients were satisfied with the telerehabilitation provided at the center. Accordingly, telerehabilitation was a feasible strategy during the COVID-19 outbreak to supplement in-person clinical services.

Introduction

The COVID-19 pandemic had a significant impact on people worldwide. By accepting the challenges of technology, most people are adjusting to a new normal. The rehabilitation services were also in a similar scenario of adapting new strategies in the field. The tele-mode of rehabilitation was established around a decade ago in India; however, it reached its pinnacle with the outbreak of COVID-19. Telerehabilitation refers to the use of information and communication technologies to provide rehabilitation services remotely to people in their homes or other environments [1]. Before the outbreak of the pandemic, the experience with telerehabilitation among professionals was limited, making the transition from in-person rehabilitation to telerehabilitation a new experience. The accelerated emergence of telerehabilitation during the COVID-19 pandemic in Kerala was a benefit to professionals as well as to children and adults with special needs in several ways.

Before the COVID-19 outbreak, an average of 1500 clients were provided with on-campus rehabilitation services at the National Institute of Speech and Hearing (NISH) every month [2]. In a relatively short time after the lockdown in March 2020, the majority of the clinical services that were previously offered offline shifted to online mode without any break of services. The online clinical services were offered by different divisions, such as audiology, speech-language pathology, early intervention program, psychology, physiotherapy, and occupational therapy. The telerehabilitation services included assessments, management, and counseling for clients with different disabilities from all age groups. Thereby, telerehabilitation served as a lifeline for individuals with various disabilities during the COVID-19 pandemic. This study aims to highlight the steps taken to overcome the various challenges encountered during the pandemic and to strengthen the opportunities for telerehabilitation services.

Opportunities in the new model

There was a large caseload of new cases awaiting registration, as well as existing cases who were continuing intervention services in NISH. Because the services were available online, they were extended to clients worldwide, expanding the clientele's geographical location. Furthermore, to best meet the needs of children, the parent co-teach program was strengthened with telerehabilitation services, allowing parents of children to gain more confidence in intervening with their children. Telerehabilitation placed the child in the most naturalistic environment possible, allowing for the best opportunities for skill generalization. Furthermore, the parents and caregivers participated in the therapy without interfering with their regular work schedules.

The use of telerehabilitation reduced both the cost and the amount of time spent on traveling. Because telerehabilitation sessions could be accessed from anywhere,

the number of absentees in each intervention unit was significantly reduced. Telerehabilitation prompted the investigation of various online sites for creative activities in therapy.

Raising public awareness about the various disorders and their treatment is one method of preventing the severity of the disability. The departments ran several online public awareness campaigns. Because of the added benefits of attending from the comfort of their home and avoiding the risk of travel, the public showed a high level of interest in these online webinars.

One of the institutions' greatest strengths in providing telerehabilitation services has been its well-developed in-house IT infrastructure. Furthermore, a telerehabilitation unit that was established long before the pandemic aided in determining the know-how of the online mode. When the COVID-19 pandemic lockdown was announced, this allowed services to be easily transferred to the online mode. Furthermore, the faculty which provided telerehabilitation services were already familiar with technology-enhanced classroom learning for higher education teaching activities, such as Google Classroom, and it was not difficult to transfer the skills to student clinicians.

There were a few measures that helped in strengthening the opportunities for telerehabilitation. 1) The literacy rate and the availability of sufficient technology among the common people in the state of Kerala, India was a noted advantage for the rapid implementation of telerehabilitation; 2) Both synchronous and asynchronous modes of teleservices were used to reach the maximum number of clients; 3) The documentation of the assessment and intervention services were carried out online; 4) Monthly feedback was taken from all the clients via Google Form.

Challenges and solutions

Considering the growing caseload, there was no system in place for online payment; therefore, a new online registration and payment gateway accessed via the web portal was implemented. To make materials and activities accessible for telerehabilitation, the majority of the assessment and materials were digitized, and brief webinars were also hosted on designing creative activities by utilizing various online platforms, such as Jam Board, and Google Slides, along with other tools. In addition, consent forms in English and Malayalam that are compatible with telerehabilitation features were developed to obtain consent from clients before providing online clinical services.

Because the institution was using a paid G-suit, it was decided that Google Meet be used as a centralized platform. To ensure privacy and security, faculty members were instructed to use the institutional email address only for public services of any kind. To help people who were unfamiliar with the technology, a video explaining how to install and use Google Meet was created in simple language with audio-visual aid and distributed via Whatsapp.

Even though the professionals could rapidly shift to the online mode, the sudden shift in the delivery mode led to various challenges, and the professionals made a concerted effort to overcome these obstacles by gathering information via various modalities. Professionals could also find and learn more about telerehabilitation through trial-and-error methods. The scarcity of research on telerehabilitation in the Indian context was a significant challenge for professionals. A survey was conducted by NISH among speech-language pathologists in the state of Kerala, India to analyze the current trends in telerehabilitation [3]; accordingly, 72% of the participants implemented telerehabilitation and the professionals emphasized the need for publishing standard guidelines for providing telerehabilitation services. Research on other aspects of telerehabilitation is ongoing to build knowledge and facilitate efficient service.

Study outcome

An average of 1000 clients were served through telerehabilitation at NISH monthly. An average of 500 clients with speech, language, and hearing disorders were served monthly through specialized intervention units, such as units for fluency disorders, speech sound disorders, acquired neuro communication disorders, resonance disorders, voice disorders, autism spectrum disorders, global developmental delay, learning disability, cerebral palsy, child language disorders, pediatric aural habilitation, and augmentative and alternative communications. Similarly, the early intervention program, occupational therapy, physiotherapy, and psychology divisions have served 180, 75, 50, and 75 clients, respectively.

Feedback analysis

A system of collecting feedback from the clients and caretakers was regularly practiced. This feedback system helped to modify the strategies and provide better services to the beneficiaries. A total of 85% of the clients

reported that they were satisfied with the online service delivery methods and 15% preferred in-person services due to various reasons.

Study limitations

No attempt has been made to reach the marginalized population who lack access to technology. The disparity between the exact registration and the number of inquiries was not investigated. Meanwhile, during the lockdown, the professionals providing online services worked from home and the impact of work pressure on professionals providing teletherapy was not studied.

Future research directions

The risk of online security and service to the whole population will remain a challenge for any developing society, such as the state of Kerala, India. Stringent criteria are not used to address privacy concerns and security threats. To achieve a better outcome, more well-defined methods of service delivery must be developed.

Furthermore, research on telerehabilitation needs to be carried out to provide evidence-based practice by standardizing and improving the quality of the services. Additionally, online resources are necessary for the assessment and intervention of disorders and the lack of the availability of such online resources can impede the quality of telerehabilitation. Hence, appropriate modifications to the existing tools/materials or the development of test materials or resources specific to telerehabilitation are required. As telerehabilitation has become the new normal, it is important to train the practicing as well as the upcoming professionals in this domain. The academic curriculum of these professionals should be modified to incorporate evidence-based practices in the field of telerehabilitation. Additionally, the most marginalized populations have limited access to the internet which is a major weakness of the entire program. Proper internet accessibility across the state of Kerala, India at an affordable price will provide equal opportunities for all to utilize the tele-mode of services and will raise the field of telerehabilitation to a new height.

Conclusion

All possibilities of information and communication technology were utilized by professionals to provide the best services to our clients. Telerehabilitation offers numerous potential for enabling beneficial therapeutic experiences and telerehabilitation is a feasible strategy during the COVID-19 pandemic. This could connect the dots in access to rehabilitative services with long-term solutions rather than inconsistent and momentary remedies. It may also pave the way to empower rehabilitation efforts in India in the post-pandemic future.

Ethical Considerations

Compliance with ethical guidelines

There were no ethical considerations to be considered in this research.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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References

[1] Brennan DM, Mawson S, Brownsell S. Telerehabilitation: Enabling the remote delivery of healthcare, rehabilitation, and self management. Studies in Health Technology and Informatics. 2009; 145:231-48. [PMID]

[2] Kerala State Planning Board. Economic review 2019: State planning board, Thiruvananthapuram, Kerala, India. 2022 [Updated 2022 January 11]. Available from: [Link]

[3] Vrinda R, Reni PS. Telerehabilitation in the field of speech-language pathology during pandemic Covid19 outbreak-an analysis in Kerala. Bioscience Biotechnology Research Communications. 2020; [Unpublished]. [DOI:10.21786/bbrc/13.4/99]