

CASE STUDY

TELE THERAPY- AN INNOVATIVE WAY OF TREATMENT IN THE FIELD OF OCCUPATIONAL THERAPY IN PAKISTAN


*Syeda Zeenat Fatima Rizviⁱ***Correspondence**Syeda Zeenat Fatima Rizviⁱ**ABSTRACT**

Teletherapy is an emerging and enlarging tool for having treatment in occupational therapy in rehabilitation sciences among occupational therapists all over the world mainly in Pakistan, especially during the era of COVID-19. A lot of studies have been done already highlighting the paramount of teletherapy around the world but it is a new rising mode of treatment in Pakistan coming to light. Therapists and Patients throughout the country making the most of this treatment way respectively and hence this method of treatment while using of technologies is highly being appreciated.

The aim of this study is to foster and encourage the use of this technology in third-world countries like Pakistan. It is the most used treatment tool during COVID-19 among occupational therapists all over the country and is highly appreciated in order to cut-down the negative circumstances of a one-to-one session in which therapist and patient is in highly close contact to each other. This course of action has advocate the on-going rehabilitation treatment and has kept away people from COVID-19 expansion to the most extent.

In this study, a 5years old boy was included with an under-diagnostic process within the umbrella term of genetic disorder. Having genetic disorder, his sessions were taken in tele-clinic using video call technology during COVID-19. In this process, AOTA Occupational Therapy Tele-Health Decision Guide, AOTA Occupational Profile Template, AOTA Advisory Opinion for the Ethics Commission Teletherapy, i-PiCS-Internet-Based Parent-Implemented Communication Strategies Program, and modeling strategy were followed.

The Ziauddin University is on the list of I4OA, I4OC, and JISC.

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Conflict of Interest: The author (s) have no conflict of interest regarding any of the activity perform by PJR.

Keywords: Teletherapy, occupational therapy, i-PiCS, COVID-19, rehabilitation, allied health.

Introduction

Teletherapy is the most leading way of treatment during the era of COVID-19 in the field of medicine but for the Rehabilitation, it is not a new procedure around the world. Especially, in Pakistan, most of the health workers are using this way of treatment now-a-days. Among them, Occupational Therapists are not left behind using it. Occupational therapists along with their clients are adhering advantages from teletherapy sessions. It is indeed promoting work-from-home to the professionals all over the world aiming not to accept any hurdle and keep on providing therapy services. Occupational therapists are very much concerned with children's occupational repertoires, healthy daily routines, optimized learning opportunities, functional physical skills, and positive mental health^{1,4,12}. This practice is greatly being observed in Pakistan among Occupational Therapists. Recently, occupational therapists are engaged with parents and care-givers to provide them support and encouragement in achieving and maintaining their self-esteem and well-being taking the utilizing of teletherapy. Occupational therapists throughout, promoting occupational balance and satisfaction in occupational repertoires and activity participation^{1,4,12}. The current means of therapy treatment using up-to-date technology bringing advancements in the field of allied health sciences. It is a rise of new area of health care in which medical practitioners, hospitals, health centers, financial and medical insurance experts cooperate together in a digital environment in order to improve fairness and clarity in distribution of medical services and the quality of these services as well as reducing the costs of services^{2,3}. The use of technologies now, putting in the great potential and bringing about the change in the quality and effectiveness of work done by medical organizations^{2,3}. In the era of COVID-19, many people faced the issues regarding unemployment, no means of transportation including closed public transport as for some this was the only means to carry their sick ones to rehab institutions, and deficits in availability of PPEs to health workers. These were those highlighted problems that reduced the burden. Caretakers easily with the help of their therapists performed therapies using virtual technology.

Framework

In this study, the analysis of therapy limitations facing by occupational therapists in their field-work during this COVID-19 period are presented and the capability about the role of teletherapy in the field of occupational therapy as taking as a means of communication to our patients and promoting patient-centered care. This will be very helpful to the patients living far and wide places also in urban areas where they are having a complete internet and technology access. A virtual assessment was done initially with a question answering session with the attendant accompanying in filling out the concern assessment forms while applying possible assessment tools and then making of treatment plan on the basis of assessment notes. These steps require parental training foremost where parents needed to be guided and instructed about the teletherapy treatment protocols and the objectives of treatment plan and procedure. For this, i-PiCS-Internet-Based Parent-Implemented Communication Program⁴ and modeling strategy were followed. Both the therapist and the client was having suitable internet connection whether Wi-Fi or cellular data package. These two means of internet connections were used throughout the sessions. While the device that supported the videoconferencing was smart phone on both the sides. The cellular data package used was having 4G (Fourth Generation) mobile data technology. After end of every session, the attendant was asked about the feedback regarding therapist's teachings and the points or instructions delivered during therapy. Attendant was also asked about the queries and questions if having like how did you find the session today? Did you get each instruction and every steps of exercises easily? How is your child performing at home after therapy sessions? Did you get my new home plan easily? Have you found the asked therapeutic material? How much teletherapy sessions are going helpful to you? Is your child increasing his muscular strength? Have you noticed an increase in his potential level? Would you like to follow more teletherapy sessions ahead? The response given by attendant was mentioned as notes in the feedback form as supportive statements. Therapist, in every session, bucked up and praised well the client's performance and boosted his energy level by positive appreciative sentences. During every teletherapy sessions the therapist kept on identifying client's performance and lacking to his mother (the attendant). The therapist showed and shared pictures to his mother about activities to buy and also new steps of exercises to follow. Pictorial presentation also given. The time duration of per session was 30 minutes per day while five sessions per week taken. Telehealth has been slowly gaining traction as a service delivery model across healthcare professions worldwide^{5,14}. The role of teletherapy thus is a vital part in health-care system which is considered to be a safe and time-saving yet effecting mode of therapy^{6,7,8}.

Limitations

Therapist and the client had to face some unexpected technical issues in getting internet connectivity many times during sessions. Some attendants got COVID-19 due to which they got quarantine and teletherapy session got hampered meanwhile. In-availability of therapy equipment also hindered the therapy.

Methodology

It is a qualitative research design and a descriptive type of case study.

Case Study

Case study is about a little boy of 5 years old having genetic disorder (diagnosed status is under-consideration), who is remarkably working well, receiving occupational therapy in COVID-19 period over 4 months through teletherapy. His previous history includes no neck control due to macrocephaly and that so on delay in his milestones in rolling, sitting, kneeling, standing, and walking. All of his milestones he achieved after getting enrolled into one-to-one occupational therapy sessions 6 years back through BOBATH techniques and Neuro-Developmental Therapy-NDT. Now in the COVID-19 period, his complaints were frequently fall and to and flow motion of the body while in moving or in rest both. He was also feeling lethargic while doing any of his activities. He was taken into teletherapy sessions where his parents were guided about the protocol and instructed well how to operate the technical program. His session was followed under HIPAA protocol- Google MEET application and ZOOM were used but initially, to have a pilot training session WhatsApp video-calling was used. He was virtually assessed and found to have declined in gross motor skills, his body was in continuous swinging pattern in standing, and he was having pain in squatting, sitting and standing himself. He needed maximum assistance every time and active eyes over his movements. He was having problem in fine motor activities like beading, tracing, matching, his hands were shaky. He was also found to have declined in calf muscles for which he was always complaining about pain. His treatment planned was followed with lower limb strengthening ROM exercises and activities that include flexion extension of lower limb, hands and feet on the floor like a cat (cat position) and knees not touching the floor, deep squatting position, and then jump like a frog in order to encourage forceful throw off his body by his legs while maintaining body equilibrium and spatial awareness, standing on the inclined stander, one leg weight bearing, jumping on the trampoline with the assistance, jumping off the floor cushion, throwing volleyball over the head while standing, beading activities, tracing dotted lines and cutting the dotted vertical and horizontal lines for eye-hand coordination. These exercises helped him in boosting his motivation level and improving in his gross and fine motor activities. He also showed remarkable improvement in stability against fall. Parents were found to be satisfied in achieving progress in his gross and fine motor skills and also were delighted to have found strength against fall. This created a huge difference in child's own confidence and physical well-being.

The i-PiCS Program

The Internet-Based Parent-Implemented Communication Strategies Program.

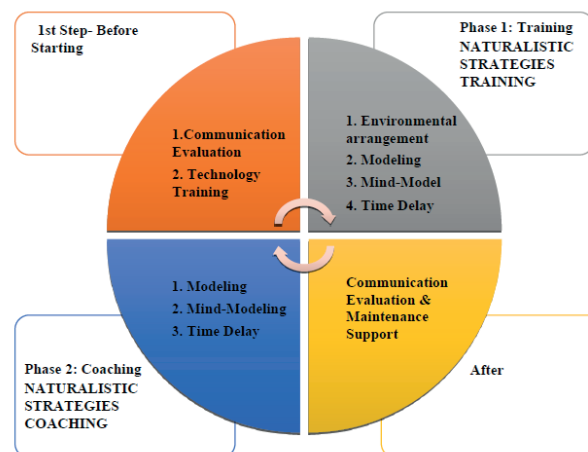


Fig.1: i-PiCS Program

Result

The child performed so well in the teletherapy sessions upon following instructions and commands given by the therapist which ultimately showed up the significant improvement in his gross motor activities as well as fine motor skills. It also helped him improving his eye hand coordinated skills. Every virtual session meant him a new level of excitement which made him improved in his own occupational activities. The main marked result was the lowest counting of his falls which boosted up his confidence in proceeding ahead.

Conclusion

Teletherapy is a useful technological tool that is pretty effective in having therapy at home in the presence of therapist virtually. It gives incontestability for the effective implementation of occupational therapy using teletherapy for the betterment of patient's condition and thus having variation in treatment tools. It also paves the way for learning and getting knowledge about the use of modern technologies in the field of therapy.

Ethical Considerations

Client's privacy was highly considered. All the information regarding patient that obtained is kept confidential.

Reference

- [1] Brown T, Lynch H. Remote learning, telehealth, tele-early intervention, school-based telerehabilitation: The impact of the Covid-19 pandemic on children's occupational repertoires and routines. *Australian Occupational Therapy Journal*. 2022; 69(2):113-116.
- [2] Kirubel Biruk and Eden Abetu, Knowledge and Attitude of Health Professionals toward Telemedicine in Resource-Limited Settings: A Cross-Sectional Study in North West Ethiopia. Volume 2018, Article ID 2389268, p.1: (4-9).
- [3] Kirubel Biruk and Eden Abetu, Knowledge and Attitude of Health Professionals toward Telemedicine in Resource-Limited Settings: A Cross-Sectional Study in North West Ethiopia. Volume 2018, Article ID 2389268, p.1: (9-10).
- [4] Brown T, Lynch H. Remote learning, telehealth, tele-early intervention, school-based telerehabilitation: The impact of the Covid-19 pandemic on children's occupational repertoires and routines. *Australian Occupational Therapy Journal*. 2022; 69(2):113-116.
- [5] Dahl-Popolizio S, Carpenter H, Coronado M, Popolizio N, Swanson C. Telehealth for the Provision of Occupational Therapy: Reflections on Experiences During the COVID-19 Pandemic. *International Journal of Telerehabilitation*. 2020; 12(2):77-92.
- [6] Fioratti I, Fernandes LG, Reis FJ, Saragiotto BT. Strategies for a safe and assertive telerehabilitation practice. *Brazilian journal of physical therapy*. 2021 Mar; 25(2):113.
- [7] Fioratti I, Fernandes LG, Reis FJ, Saragiotto BT. Strategies for a safe and assertive telerehabilitation practice. *Brazilian journal of physical therapy*. 2021 Mar; 25(2):113.
- [8] Fioratti I, Fernandes LG, Reis FJ, Saragiotto BT. Strategies for a safe and assertive telerehabilitation practice. *Brazilian journal of physical therapy*. 2021 Mar; 25(2):113.
- [9] Bolt M, Ikking T, Baaijen R, Saenger S. Occupational therapy and primary care. *Primary Health Care Research & Development*. Cambridge University Press; 2019;20:e27.
- [10] Sarsak H. Telerehabilitation services: a successful paradigm for occupational therapy clinical services? *International Physical Medicine & Rehabilitation Journal*. 2020; 5(2).

- [11] Manganello J, Gerstner G, Pergolino K, Graham Y, Falisi A, Strogatz D. The relationship of health literacy with use of digital technology for health information: implications for public health practice. *Journal of public health management and practice*. 2017 Jul 1;23(4):380-7.
- [12] Rettinger L, Klupper C, Werner F, Putz P. Changing attitudes towards teletherapy in Austrian therapists during the COVID-19 pandemic. *Journal of Telemedicine and Telecare*. 2021; 1357633X2098603.
- [13] Brown T, Lynch H. Remote learning, telehealth, tele-early intervention, school-based telerehabilitation: The impact of the Covid-19 pandemic on children's occupational repertoires and routines. *Australian Occupational Therapy Journal*. 2022; 69(2):113-116.
- [14] Dahl-Popolizio S, Carpenter H, Coronado M, Popolizio N, Swanson C. Telehealth for the Provision of Occupational Therapy: Reflections on Experiences During the COVID-19 Pandemic. *International Journal of Telerehabilitation*. 2020; 12(2):77-92.
- [15] Zahoransky M, Lape J. Telehealth and Home Health Occupational Therapy: Clients' Perceived Satisfaction With and Perception of Occupational Performance. *International Journal of Telerehabilitation*. 2020; 12(2):105-124.
- [16] Carrington M, Shahidul Islam M. The Use of Telehealth to Perform Occupational Therapy Home Assessments: An Integrative Literature Review. *Occupational Therapy in Health Care*. 2022; 1-16.

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