



PERCEPTIONS OF CAREGIVERS ON TELEREHABILITATION OF SPEECH AND LANGUAGE THERAPY SERVICES IN SRI LANKA

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The rise of technological advancements has made a background to integrate the services with technology. As a result, telerehabilitation of communication skills is prominent among Speech and Language Therapy Clinicians. The peak of telerehabilitation was observed with the restrictions for social gatherings during the COVID-19 pandemic. Therefore, this study was conducted to identify the facilitations required by the patients during telerehabilitation of communication skills by a Speech and Language Therapy clinician in Sri Lanka from the perspective of caregivers. “Mixed-methods Design” was used with a hundred and seven participants ($n=107$). Through the purposive sampling technique, the sample population was selected from the two public and six private sector institutions that have used telerehabilitation for the rehabilitation of communication skills. The caregivers of the patients were targeted as the sample population. The data was collected through a semi-structured questionnaire with open-ended questions and the data was subjected to a thematic analysis to identify the themes under the objectives: to identify the benefits of using telerehabilitation for the rehabilitation of communication skills in Sri Lanka, to identify the barriers in using telerehabilitation for the rehabilitation of communication skills in Sri Lanka and to identify the areas to improve current telerehabilitation practices to support the service recipients in Sri Lanka. Percentages and frequencies were used to quantitatively state the responses under the themes. Time effectiveness was significant among the majority of participants (81.3%). Internet connection issues during the sessions were reported by seventeen ($n=17$) participants. Moreover, most of the participants (50.5%) have requested to conduct awareness programmes on telerehabilitation and thirty-seven ($n=37$) participants have requested training programmes before the sessions. Therefore, telerehabilitation is a feasible mode for the rehabilitation of communication skills.

Keywords: Telerehabilitation, Caregivers, Speech and Language Therapy, Sri Lanka

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INTRODUCTION

The advent of telerehabilitation is more prominent with technological advancement. The service delivery through telecommunication devices was introduced in the 1970s to the world (Shirzadfar, 2017). In the pre-pandemic era, the predominant method of service delivery in Sri Lanka was the conventional mode of face-to-face interactions (Somaratna, 2023). Also, the telerehabilitation of communication skills was present in the pre-pandemic stage in Sri Lanka (Kulatunga et al., 2020). The emergence of the COVID-19 pandemic gave a vision for Speech and Language Therapy (SLT) clinicians to identify the importance of telerehabilitation of communication skills for an uninterrupted service provision (Kwok et al., 2022). The need for social distancing and the restrictions on physical gatherings necessitated the rapid adoption of alternative methods to meet service provision demands (Herningtyas, 2024). Therefore, telerehabilitation practices were increased during the pandemic.

Three primary modalities of telerehabilitation for practitioners are: synchronous, asynchronous, and hybrid (American Speech-Language-Hearing Association, n.d.). Synchronous modality involves real-time interaction between the healthcare service provider and the service recipient using audio and/or video connection through a telecommunication device. However, in asynchronous modality, captured information such as images, videos, or data is exchanged between the healthcare service provider and the recipient. The hybrid approach integrates elements of both synchronous and asynchronous methods. An interaction between the healthcare service providers and service recipients occurs during telerehabilitation of communication skills (Asadzadeh & Kalankesh, 2021; Beheshti et al., 2022). The patient population becomes the service recipients while the caregivers always assist the non-independent patients (Kaan et al., 2010). Therefore, this study was conducted to identify the perceptions of caregivers on telerehabilitation of SLT services in Sri Lanka.

The transition to telerehabilitation of communication skills by an SLT clinician represented a novel experience for most Sri Lankans. The development and adaptation of new digital platforms and tools were required to suit an online environment for telerehabilitation. Also, the service recipients have to adjust to receiving the services via technology. The expertise of the healthcare service providers assisted in eliminating various obstacles with the new adaptation for the virtual healthcare service (Hah et al., 2019). Despite these challenges, the pandemic period witnessed a surge in the use of telerehabilitation in clinical practice (Strand & Watanabe, 2024). This rapid transition highlighted the potential of digital platforms to deliver the services of an SLT clinician remotely. The increased reliance on telerehabilitation during the pandemic also created a strong background for new research.

The general objective of this study is, to identify the facilitations required by the patients during telerehabilitation of communication skills by an SLT clinician in Sri Lanka from the perspective of caregivers. To achieve the general objective three specific objectives were derived: ¹to identify the



benefits of using telerehabilitation for the rehabilitation of communication skills in Sri Lanka, ²to identify the barriers to using telerehabilitation for the rehabilitation of communication skills in Sri Lanka, and ³to identify the areas to improve current telerehabilitation practices to support the service recipients in Sri Lanka. Understanding the perspectives of service recipients from the perspective of caregivers is crucial, as the feedback can provide valuable insights into the strengths and weaknesses of current practices and assist in designing more user-friendly and impactful programs.

METHODOLOGY

This study gained ethical clearance from the Faculty of Medicine, University of Kelaniya in 2021. Since the caregivers of non-independent patients play a crucial role in telerehabilitation, the caregivers of the patients were targeted as the sample population who can evaluate telerehabilitation (Gately et al., 2022). Caregivers were selected from two public and six private sector institutions which used telerehabilitation for SLT services in Sri Lanka. A total of hundred and seven (n=107) participants were selected for the study through the purposive sampling technique.

The hundred and seven participants were contacted via phone and shared the information sheet, consent form and semi-structured questionnaire respectively in a Google form. Along with the informed consent of the participants, the data collection was initiated with the semi-structured questionnaire. The semi-structured questionnaire with open-ended questions was finalized with a Delphi panel of experts that included six SLT clinicians with more than five years of experience.

The responses of the caregivers to the open-ended questions were categorized according to the themes that were identified through thematic analysis. The themes were based on the benefits, barriers and areas to improve the current telerehabilitation of SLT services. After the thematic analysis of data, the frequencies and the percentages of the responses for each theme were calculated and the responses were presented in quantities. Therefore, this study was conducted with a “Mixed-methods Design”, since it can provide a clear and detailed understanding of the findings of the study (Wasti et al., 2022).

RESULTS AND DISCUSSION

The socio-demographic data of the one hundred and seven (n=107) participants has been presented in Table 01.

Table 01: Socio-demographic data of the caregivers who participated in the study

Socio-demographic data of the caregivers	Variables	Frequency (n)	Percentage (%)
Gender of the caregivers	Female	50	46.7
	Male	57	53.3
Relationship of the caregivers to the patient	Sibling	7	6.5
	Parent	8	7.5
	Life partner	30	28.0
	Child	62	57.9
The educational level of the caregivers	Grade 01 – Grade 05	1	0.9
	Grade 06 – Grade 11	35	32.7
	Grade 12 – Grade 13	42	39.3
	Graduates	29	27.1
Occupational status of the caregivers	Unemployed	31	29.0
	Employed	76	71.0



Socio-demographic data of the caregivers	M (Mean)	Minimum	Maximum
Monthly income (Rs.)	70,755.701	25,000.00	250,000.00
Age of the caregiver (Years)	42.69	20	79
Distance to the SLT clinic (Km)	20.66	8	100

The benefits of using telerehabilitation with an SLT clinician for the rehabilitation of communication skills have been mentioned in Table 02.

Table 02: Benefits in using telerehabilitation for the rehabilitation of communication skills in Sri Lanka

Benefits	Number of reported caregivers	Percentage of reported caregivers	The reported benefits experienced by the caregivers when using telerehabilitation services
Time-effectiveness	87	81.3	“It saves the time of travelling.” (Participant No. 103)
Cost-effectiveness	61	57	“It saves money.” (Participant No. 28)
No transportation difficulties	34	31.8	“I do not have transportation difficulties” (Participant No. 02)
No or minimal physical discomfort	30	28	“Not tired” (Participant No. 60)
Effective mode of service receiving	23	21.5	“It brings results as same as in-person sessions” (Participant No. 101)
Effective in caretaking	21	19.6	“It helps me to fulfil my duties.” (Participant No. 09)
Assists in providing the services continuously without a physical gathering	12	11.2	“Continuously it helps us to get the services” (Participant No. 66)

The barriers experienced by the caregivers when using telerehabilitation for SLT services have been mentioned in Table 03. Moreover, the respective barriers are related to the facilities or resources available to caregivers to conduct telerehabilitation services. During telerehabilitation, caregivers have to supply their facilities or resources. With that background, the following barriers have been reported by the caregivers.

Table 03: Barriers in using telerehabilitation for the rehabilitation of communication skills in Sri Lanka

Barriers	Number of reported caregivers	Percentage of reported caregivers	The reported barriers experienced by the caregivers when using telerehabilitation services
Size of the screen	36	33.6	“Having a small screen in my phone.” (Participant No. 43)
Low-quality cameras of the devices	19	17.8	“The camera of my phone is not powerful enough” (Participant No. 45)
Environmental sounds	17	15.9	“Hard to participate in the session with the noises” (Participant No. 92)
Issues in the internet connection	17	15.9	“I don’t have a strong internet connection” (Participant No. 07)



Difficult to assess/ treat all medical conditions	10	9.3	“I was informed to participate in some in-person sessions” (Participant No. 29)
Disrupted supply of electricity	8	7.5	“I have to face power cuts during the sessions” (Participant No. 74)
Technical problems	8	7.5	“Sometimes my phone is getting stuck” (Participant No. 93)

Table 04 provides suggestions to improve telerehabilitation services in the Sri Lankan clinical context from the perspective of caregivers. These suggestions would be beneficial when addressing the problems faced by the caregivers during the telerehabilitation practice.

Table 04: Suggestions to improve telerehabilitation for the rehabilitation of communication skills in Sri Lanka

Suggestions	Number of reported caregivers	Percentage of reported caregivers	Suggestions proposed by the caregivers
Increasing the awareness of telerehabilitation	54	50.5	“Conducting awareness programs on online services” (Participant No. 68)
Conducting training programs prior to telerehabilitation process	37	34.6	“Training programs on using online services will be helpful for us” (Participant No. 51)
Ensuring background light level in the setting of the caregiver	18	16.8	“Conducting the session during the daytime. Then the clinician can see us clearly” (Participant No. 12)
Using a computer	16	15	“Computers are easy to handle during the session” (Participant No. 34)
Enabling a stable internet connection	14	13.1	“Need to have a good internet connection.” (Participant No. 21)
Using an environment with less/ or no noise	8	7.5	“Good to have a quiet environment.” (Participant No. 19)
Charging the device before the session	6	5.6	“Using a charged device” (Participant No. 88)

CONCLUSIONS/RECOMMENDATIONS

The findings of this study are expected to contribute to improve the telerehabilitation of communication skills by an SLT clinician in Sri Lanka. It can be used by educators, trainers, and policymakers to ensure the quality of telerehabilitation services. Mainly, eliminating the barriers and improving the practice of telerehabilitation through the suggestions derived from the caregivers will increase the feasibility of delivering healthcare services through e-mode. As the world continues to navigate the post-pandemic landscape, the insights gained from this study will be instrumental in shaping future telerehabilitation services in Sri Lanka.

In conclusion, telerehabilitation has emerged as a vital component of service dissemination in Sri Lanka, especially during the COVID-19 pandemic. However, the significance of the usage of telerehabilitation wanes with the re-adopting to the conventional modes of practice. Therefore, this study seeks to explore the experiences and suggestions of caregivers to enhance the effectiveness of telerehabilitation practices. Along with this background, this study will assist in improving the telerehabilitation of SLT services in Sri Lanka.



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