



STUDENT CLINICIAN'S KNOWLEDGE AND PERCEPTION ABOUT TELE THERAPY

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ABSTRACT The onset of the Covid-19 pandemic has brought drastic change in service delivery among the rehabilitation professionals. Schools for children with special needs and educational and rehabilitation institutions, are offering tele services as an alternative service delivery model, to meet the needs of the individuals with disabilities. Tele-therapy is the application of telecommunications technology to the delivery of speech language pathology and audiology professional services at a distance by linking clinician to client or clinician to clinician for assessment, or intervention. For many clients, clinicians, and student clinicians, this may be their first experience with tele-therapy. Student clinician's play a very important role as they are directly involved in providing therapeutic services through the online mode. The clinician's knowledge, resources and perceptions are key factors determining the outcomes of therapeutic services. The current study aimed to understand student clinician's knowledge, and perceptions about tele-therapy. The results revealed that most clinicians felt confident and knowledgeable about teletherapy. Majority of the clinicians reported that they were able to achieve the goals set for the clients through tele-therapy. But when asked about their preferences, the results were mixed, with some clinician preferring face to face session and others teletherapy, and also over the use of digital material vs flashcards. Most clinicians reported of holding the child's attention to be one of the major challenges in teletherapy. Some of the other barriers were network connectivity and lack of parental involvement. They also reported that adults with communication disorders benefit the most and individuals with hearing impairment benefit the least from tele-therapy.

KEYWORDS : Tele Therapy, Student clinician, Speech Therapy

INTRODUCTION

Since the outbreak of corona virus in the year 2019, the entire world has come to a standstill, and rehabilitation services are no exception. Until the COVID-19 breakdown, speech and language therapeutic services were provided through the traditional face-to-face mode. But the current pandemic situation requires that we maintain social distance, thus the speech language pathologist have chosen the telemode of therapy. Despite the fact that Teletherapy appears to be a novel way for everyone, speech and language therapists have adapted quickly to online mode of therapy. The majority of client assessments and speech-language therapy sessions are now being conducted through the online mode across several countries. As, the pandemic may continue for years, it's critical to understand the perspectives of speech and language therapists who provide online services.

Through the online mode of service delivery, in institutional setups the student clinicians get to interact directly with the parents. These pave way for them to perceive their problems better, and they also play a role in choosing goals for the child along with the parent. They also have a key role in counseling the parents to keep them motivated during the teletherapy sessions.

An earlier study by Lam JHY et al., 2021 assessed the student's perception about tele practice during the pandemic and concluded that even though they rated it to be highly effective, they reported it to be less effective than face to face therapies. Thus, though tele therapy has its own limitation it is an acceptable and alternate service delivery option in this pandemic situation. CasselSG et al., 2016 reported a high level of satisfaction and improved familiarity with the use of tele practice in a pilot project among SLP students. To date there are no known studies in India, assessing the student clinician's knowledge and perceptions regarding tele practice.

OBJECTIVES OF THE STUDY

- To understand the student clinicians' perceptions, knowledge and preferences in tele therapy.
- To understand the type of clients with communication disorder who would benefit the most and least through tele therapy in the perception of student clinicians

METHODOLOGY

The study was approved by the institutional ethical committee. This study aimed to find out the perception of student clinicians towards tele therapy through a survey method. This survey included a total of 11 questions, divided into four sections. The first section consisted of seven questions that targeted the student clinician's knowledge,

preferences, and perceptions towards Tele therapy, and participants were asked to choose from a Likert scale (5 point scale). The first section involved questions like:

- The level of confidence and knowledge about providing tele therapy
- Preference of digital material over the traditional therapy material
- Engaging the client for the therapy session in online versus traditional therapy
- Communication with the parent and family members in online therapy compared to teletherapy
- The comparison of prognosis of client is online versus traditional therapy
- Level of distraction of clients in online versus traditional therapy
- The level to which the student clinicians enjoy tele therapy

The second section consisted of two questions examining the student clinicians' perceptions of the most and least benefited group of clients through tele therapy. The third section consisted of a question about the major barriers that affect tele therapy according to student clinicians. The fourth section focused on their perceptions regarding the prognosis of clients receiving tele therapy. A questionnaire was developed using the template available in Google forms and the link was shared through electronic media. The questionnaire took approximately ten minutes to complete.

The sample design used in the study was purposive sampling. A total of 48 students pursuing bachelors in speech and language pathology at a National institute in Chennai, served as subjects. Prior to the commencement of the study, a brief description about the study and its objectives was provided to the participants along with the link to the survey. Participants were also informed that participation in the study was entirely voluntary, that their responses would be kept confidential, and that they might leave the study at any time. They were also informed that the information they provide would be utilized solely for research.

STATISTICAL ANALYSIS

The data was assessed through the descriptive analysis method. As a first step the responses in the first section were converted into scores. The responses were scored as

- Strongly Disagree – 1
- Disagree – 2
- Neutral – 3
- Agree – 4

- Strongly Agree – 5

Then the mean score and standard deviation was calculated for each question for the total sum of all the responders. The standard deviation with the low cut off and high cut off helped us to group the participants into three categories as students having low level, moderate level and high level of satisfaction with tele therapy respectively. The data from the other sections were analyzed through pie charts and graphs.

RESULTS AND DISCUSSION

Section1: Preferences and Perceptions of Student Clinicians on aspects of Tele-Therapy

- On analysis through a descriptive method, we found that a total of 66.6% of participants had reported to be fairly satisfied with tele-therapy, 20.83% were very satisfied and comfortable and only 12.5% reported to be less satisfied / comfortable in providing teletherapy.

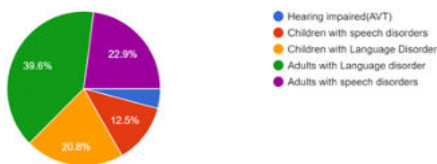
The table showing the mean scores, standard deviation and level of satisfaction for each question separately and in total.

LEVEL OF SATISFACTION	PERCENTAGE OF PARTICIPANTS						
LOW	12.5%						
MODERATE	66.6%						
HIGH	20.83%						

	Confidence and Knowledge	Preference of digital material	Engaging client	Communication with family	Prognosis	Level of Distraction	Student enjoyment	Total
MEAN	3.90	3.19	3.04	3.29	2.67	4.25	2.92	23.25
SD	0.75	1.14	1.20	1.03	0.98	0.81	0.87	3.62
LOW CUT OFF	3.14	2.04	1.84	2.28	1.69	3.44	2.04	19.65
HIGH CUT OFF	4.6	4.24	4.24	4.32	3.57	5.06	3.72	26.85

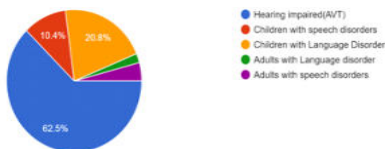
Table 1: The table used for analysis - The mean scores, standard deviation and the range is given in the table

Section2: Group of Clients with communication disorders who benefitted the most and least from tele therapy in student clinicians' perspective
Client who benefitted the most:



Graph1: The pie chart shows the distribution of clients who benefit the most from tele therapy according to student clinicians

Client who benefitted the least



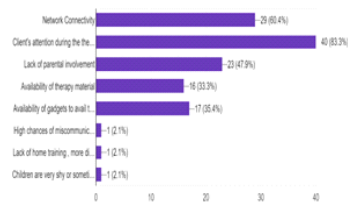
Graph 2: The pie chart shows the distribution of clients who benefit the least from tele therapy according to student clinicians

It is clearly seen from the above pie chart that students perceived adults with language disorder to benefit the most from tele therapy. It is collectively seen that adults benefit better from tele therapy as compared to children. The differences could be attributed to factors such as longer attention span and better cognition (except intellectual disability) among adults, which would in turn help them in understanding and learning even using digital materials in the online mode.

In the case of least benefitted groups, we see that most students have stated individuals with hearing impaired. This may be attributed to

differences in recorded (digital) voice versus live voice, and also in the clinician's difficulty in the judging the child's perception of sounds. Issues with internet connectivity may in turn make it even more challenging for children with hearing impairment to understand speech and benefit from the online mode.

Section 3 : Major barrier in Tele-therapy as perceived by student clinicians

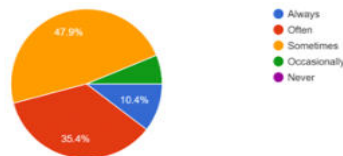


Graph 3: The bar graph describes the barriers in tele therapy

The client's attention is reported as the major challenge (83.3%) by the majority of the students. Engaging young children and especially with disabilities such as Autism Spectrum Disorder, and Attention Deficit Hyperactivity Disorder can be challenging. These children may need more hands-on material and objects to manipulative in order to learn effectively as versus digital picture material. These children may also need direct modeling and hand over hand prompting which may not be possible in the online mode.

Another, major barriers reported were internet connectivity issues (60%). This is particularly a problem, in rural areas. It is detrimental to have good internet connectivity at both ends in order to conduct teletherapy smoothly. Students perceived the lack of parental involvement (23.47%) as the next major barrier in tele-therapy. Teletherapy particularly with young children involves parental coaching and consistent home therapy. Parental motivation and active parental involvement are essential to the success of teletherapy, especially with young and severely disabled children. Availability of gadgets to avail therapy 35.4% and availability of therapy materials 33.3% were also reported as barriers.

Section 4: Student's perception of prognosis in tele therapy



Graph 4: The pie chart shows the distribution of prognosis of client

- Majority (47.9%) of participants felt that they are able to achieve the goals that were set for the clients only sometimes. This may be due to the barriers of the tele-therapy discussed above. On the other hand, considerable amount (35.4%) of people has said that they were able to attain the goals often. It must be keenly noted that even though tele-therapy has its own limitations and barriers none of the participated have said that they were never able to attain the goals that were set for the clients. This can be taken as a positive sign to continue tele-therapy in this pandemic situation.
- To support our findings, a systematic review of the use of telehealth in speech, language and hearing sciences conducted by Molini-Avejonas DR et al., 2015 concluded that telehealth procedure had advantages over the non-telehealth alternative approach (85.5%). Even though there were some barriers such as technology, training, regulation, acceptance and recognition of the benefits of teletherapy, it is evident that adaptation to teletherapy is essential. Johnsson et. al (2019), has concluded that excluding the barriers of the teletherapy it is evident that teletherapy is the best mode of service delivery for geographically isolated regions.

IMPLICATIONS: In spite of differences in their preferences, and with shorter duration of experience in tele-therapy the student clinicians were able to achieve goals set for the clients. With young children, holding the child's attention over the entire session is challenging. Active parental involvement through structured parental

coaching and providing therapeutic material for use at home can help in overcoming these challenges. In addition, children with hearing impairment may benefit from a hybrid approach, with a combination of real time and store-forward approach along with active parental guidance. With pandemic continuing, and tele-therapy being the best service delivery model, it is important the clinician work closely with the family as a team. Creating more effective digital therapy material would also increase the efficacy of teletherapy in the future. Awareness among the parents about teletherapy and their cooperation would encourage students to actively engage in tele therapy sessions. Conducting workshops or lectures by trained professionals to the student clinicians would enhance their knowledge about tele therapy and can make them to perform better.

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