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Original Article

Experiences of Speech-Language Therapists Providing Teletherapy to Preschoolers during the COVID-19 Pandemic

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ABSTRACT

Confinement, as a sanitary measure due to the COVID-19 pandemic, has forced school systems around the world to adapt their lessons to the virtual modality. Speech-language therapists working with preschool children who present language disorders have had to modify their usual work methodology to achieve their therapeutic and educational goals. This research sought to describe the perception speech-language therapists had of their experience providing telerehabilitation to preschool children with developmental language disorder during the pandemic. The study design was qualitative with a phenomenological approach. The sample was made up of 10 female speech-language therapists, recruited through convenience sampling, who were interviewed using semi-structured interviews. The data were analyzed phenomenologically, obtaining subcodes, codes, and categories manually. The following thematic categories emerged from the analysis: evaluation of the experience, effectiveness of the virtual intervention, session preparation, and parental participation. The experiences shared during the interviews allowed us to detect critical elements related to the improvised and sudden modality change, the lack of training and/or preparation of the therapists to implement telepractice, resource administration, and a perception of ineffectiveness regarding the intervention. Although virtual interventions have been established as an alternative to in-person intervention, it is concluded that it was not widely accepted among the speech-language therapists interviewed in this research, who deemed this modality demanding and ineffective for such young children. We emphasize the importance of parental and/or caregiver commitment to achieve success during the process of teletherapy.

Keywords:
COVID-19; Speech-Language Pathology; Telerehabilitation; Speech Therapy; Preschool; Specific Language Disorder

Experiencias de fonoaudiólogos/as al realizar telerehabilitación a niños preescolares con trastorno del desarrollo del lenguaje en contexto de pandemia

RESUMEN

El confinamiento como medida sanitaria a causa del COVID-19 ha obligado la adopción de la modalidad virtual en los sistemas escolares del mundo. Los fonoaudiólogos/as que trabajan con niños/as preescolares que presentan alteraciones del lenguaje han debido modificar su metodología de trabajo usual para lograr los objetivos terapéuticos y educativos de los planes de intervención que aplican. En esta investigación se buscó describir la percepción que tienen los fonoaudiólogos/as acerca de la experiencia de realizar telerehabilitación a niños/as preescolares con trastorno del desarrollo del lenguaje en contexto de pandemia. Se diseñó un estudio cualitativo, con enfoque fenomenológico. A la muestra de 10 fonoaudiólogas, reclutadas por conveniencia, se les realizó entrevistas focalizadas semiestructuradas. El análisis fenomenológico de los datos obtenidos se realizó mediante la obtención de subcódigos, códigos y categorías, de forma manual. Del análisis surgen las siguientes categorías temáticas: valoración de la experiencia, efectividad de la intervención virtual, preparación de las sesiones y participación de los padres. Las vivencias expuestas en las entrevistas realizadas permiten señalar elementos críticos relacionados con el improvisado y repentino cambio de modalidad, la escasa formación y/o preparación de las terapeutas para implementar la telepráctica, la administración de recursos y la sensación de infectividad de la intervención. Si bien las intervenciones virtuales se han establecido como una alternativa a lo presencial, se concluye que esta fue poco aceptada entre las fonoaudiólogas entrevistadas, ya que se las considera demandantes y poco efectivas para niños/as tan pequeños/as. Se resalta que el compromiso de los padres, madres y/o cuidadores/as es fundamental para lograr un proceso exitoso.

Palabras clave:
COVID-19; Fonoaudiología; Telerrehabilitación; Terapia del Lenguaje; Preescolar; Trastorno Específico de Lenguaje

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INTRODUCTION

Speech-language therapy is a discipline whose purpose is to study human communication as the main tool for interaction, its disorders, and both diagnostic and therapeutic strategies that enable its rehabilitation (Maggiolo & Schwalm, 2017). One of its fields of action is the work with preschoolers and schoolers presenting disturbances that affect their oral and/or written communication (American Psychiatric Association [APA], 2002, 2018; Torres et al., 2015).

The educational system in Chile includes, among other options, special language schools as an alternative that offers communicative and pedagogical intervention and care to preschoolers with Specific Language Impairment (SLI) *(Planes y programas de estudio para alumnos con trastornos específicos del lenguaje* [Study plans and programs for students with specific language impairment], 2002), currently called Developmental Language Disorder (DLD) (APA, 2018).

DLD refers to a set of difficulties found in the stages of language development that may impact all, one, or some of the components of language. Children with DLD have significant difficulties in their linguistic performance that are not secondary to evident neurological disturbances, hearing loss, extreme environmental deprivations, or low non-verbal intelligence (APA, 2002; Petersen & Gardner, 2011). Decree 170 (*Fija normas para determinar los alumnos con necesidades educativas especiales que serán beneficiarios de las subvenciones para educación especial* [Setting norms to determine which students with special educational needs will benefit from special education subsidies], 2010) establishes that speech-language therapy should be carried out in weekly sessions, individually or in small groups of up to 3 children, lasting 30 minutes each.

As a result of the sanitary measures adopted by the Chilean government due to the COVID-19 pandemic, mentioned in Decree 104 (*Declara Estado de Excepción Constitucional de catástrofe, por calamidad pública, en el territorio de Chile* [Declares a Constitutional Catastrophe State of Exception, due to public calamity, in the territory of Chile], 2020), lessons and therapy sessions (at all educational levels) were carried out entirely online. Implementing this remote modality implied adapting therapeutic strategies to the New Information and Communication Technologies (NICT), which brought forward questions about preparedness and the existing knowledge of digital tools, and how the teaching-learning activities were carried out in the virtual modality (Picón et al., 2020).

Virtual lessons and therapy sessions require both professionals and children to adjust to this modality. Similarly, the family environment must be adapted, especially if the child has difficulties with oral expression (Moreno & Camargo, 2018).

The Organization for Economic Cooperation and Development (OECD, 2020) warns of the risks that arise from suspending in-person lessons, confining children, and social distancing, especially for children coming from vulnerable families. These risks could negatively impact numerous dimensions such as family life, cognitive and socioemotional development, and both mental and physical health. National and international reports (Picón et al., 2020; Riquelme & Raipán, 2021; Sandín et al., 2020) mention that, when it comes to the general population, the pandemic and confinement have affected people's emotional state, which is mainly manifested as stress, hopelessness, depression, anxiety, and sleep disorders. In the context of education, teachers have reported high levels of burnout (Pillaca, 2021) and frustration due to how difficult it was to control the behavior of their students (Gavotto Nogales & Castellanos Pierra, 2021).

The experience with telerehabilitation has been positive at the international level regarding goal achievement. This modality has even been proposed as an acceptable and valid option for treating children with special educational needs (American Speech-Language-Hearing Association, 2019; Bradford et al., 2018; Coufal et al., 2018; Covert et al., 2018; Weidner & Lowman, 2020). However, those experiences happened in contexts different from the COVID-19 pandemic, where general population confinement was required. Therefore, these positive experiences that preceded the pandemic cannot be generalized.

Although virtual speech-language therapy is not new, there is little evidence in Chile of its relevance and implementation, both in school and clinical settings. There is even less information available concerning adverse sanitary contexts such as a pandemic. Thus, it becomes necessary to gather information on the experience of providing speech and language telerehabilitation during the pandemic. Accordingly, this research aims to describe the perception that speech-language therapists from Iquique, Chile have of their experience providing virtual therapy to preschoolers with DLD, in the context of the COVID-19 pandemic. Knowing these experiences will allow the favorable and unfavorable aspects of practicing virtual speech-language therapy to be made visible.

METHOD

This research was framed within the qualitative paradigm, which seeks to understand phenomena from the perspective of the actor and to comprehend the beliefs and motivations behind actions (Beltrán, 2018). The general approach of this study is phenomenological, which means it describes the meaning of a person's or group's lived experiences concerning a concept or phenomenon (Creswell, 2009).

The sample was recruited through snowball sampling, meaning that one participant provided the name of another person, who in turn provided the contact for someone else, and so on (Atkinson & Flint, 2001). We sought a homogeneous sample where the selected subjects had a similar profile, thus allowing the researchers to focus on the central topic (Beltrán, 2018). To this end, the following inclusion criteria were established before conducting the interviews: a) working in special language schools in Iquique and Alto Hospicio, b) having at least 3 years of experience working in the field, c) being between 27 and 35 years old, d) having carried out intervention sessions virtually between 2020 and 2021, and e) having no previous experience in delivering virtual therapy. People who agreed to participate but canceled their interview appointments twice were excluded from the study. Thus, the sample was made up of 10 female speech-language therapists. It was decided to not interview more participants due to data saturation (Hernández et al., 2014).

The data were collected during July, August, and September 2021, using focused and semi-structured qualitative interviews. These included 12 open questions that addressed the experience of speech-language therapists providing telerehabilitation to preschool children with DLD in the context of the pandemic. Four subtopics were considered: Evaluation of the experience, effectiveness of the virtual intervention, virtual session preparation, and parental participation. The interview, being semi-structured, was flexible enough to accommodate other topics that would eventually arise during the interaction (Beltrán, 2018).

The interviews were conducted individually and over the course of only one meeting by speech-language therapists, through Teams or Meet. Each one lasted approximately between 90 and 120 minutes. One subject and two interviewers participated in each interview, where one interviewer played an active role, asking the questions, and the other a more passive role, recording the participant's answers in writing. To later transcribe and analyze the data, all the interviews were recorded, with the consent of the informants, obtaining approximately 12 hours of audio recordings. Subsequently, this was transcribed verbatim into a Word document.

The phenomenological data analysis was carried out following the stages mentioned by Flores, 2009: a) collecting the data; b) organizing the data into units of analysis, c) reviewing the data, readings, and observation records; d) creating codes and subcodes; e) comparing the categories with each other and searching for possible relationships; f) grouping the codes and subcodes into the resulting four thematic categories. The entirety of this process was carried out manually by the researchers, without the support of software, using printed transcripts, markers, and color-coded folders to identify the different categories.

It is important to note that this study was approved by the Scientific Ethics Committee of Santo Tomás University, northern macrozone (code 43-21). Additionally, each participant signed an informed consent, and the research complies with the postulates of the Declaration of Helsinki.

RESULTS

The results of the research are presented below, organized into four thematic categories. Table 1 shows the categories and subcategories that emerged from the analysis.

Table 1. Categories of analysis, codes, and subcodes.

Category	Code	Subcode
Evaluation of the Experience	Positive	Personal organization
		Therapy continuity
	Negative	Negative feelings
		No previous experience
		Prefers in-person sessions
Effectivity of the Virtual Intervention	Effectivity	Evolution
		Phonetic-phonological level
	Difficulties	Internet Connection
		Distractors
Session Preparation	Administrative Aspects	Session planning and duration
		Group therapy
		Sending materials for homework
		Use of personal time
	Technological Resources	Use of personal phone and computer
		Use of PowerPoint
		Use of videos

Parental Participation	Role of Parents during Sessions	Knowledge of their role
		Enabling and Hindering Behaviors
	Communication with the SLT	Times of Communication
		Means of Communication

Note: SLT=Speech-Language Therapist.

Evaluation of the Experience

Most of the informants (8 out of 10) pointed out that providing virtual therapy to such young children was an exhausting challenge since it is not customary to work with this modality in the Chilean educational system. They also mentioned that the most challenging aspect was adjusting to this format having no prior experience or training. This is expressed in the following excerpts.

> "...it has been a personal, physical, technical, and mental challenge to be able to find strategies that attract the attention of children, so it has been an interesting challenge, but physically and mentally very exhausting..." (Informant no. 2).

> "…if I'm being honest, at the beginning it was quite a challenge. The first thing I had to do, in addition to getting acquainted with the apps, was to organize my time. It was a somewhat overwhelming challenge at first because the parents thought they could talk to me at any time. Also, I did not have much knowledge of how to use a computer beyond Word, maybe PowerPoint, but I did not know how to create videos or use animations..." (Informant no. 8).

> "…all of this happened so suddenly, one Friday we end the work week and by Monday we were in quarantine and told to do our things online, it was stressful having to create the activities from scratch, because making a fun PPT with flashy caricatures and effects took me about 5 hours, and those hours were my personal time, I felt overwhelmed because I was not taught how to do virtual therapy at University…" (Informant no. 6).

Only 2 interviewees reported easily adapting to this modality. One of their testimonies can be seen below.

> "...I think it was good, since anyway, I was like, as a professional, looking for different strategies to get results with the children, and also, despite the conditions in which we found ourselves, continuing their speech and language therapy..." (Informant no. 1).

Regarding their preference for a particular format, nine interviewees preferred in-person therapy, for the following reasons: the intervention can be carried out using concrete material, it is possible to shift strategies spontaneously, according to the specific needs of the child during the session, and the virtual modality is more demanding. The following excerpts illustrate these views.

> "…I prefer in-person sessions a thousand times more, you have more control of the situation, the work is more concrete, and one can adapt quicker to what emerges at the moment, perhaps the virtual format works with schoolchildren who already know how to read, but I don't like it for such young children." (informant no. 1).

> "…[virtual therapy] wears you out more, because you use more time, and in person you can do a thousand different things for many days using just a ball, but you cannot use the same PowerPoint twice; you could, but it would have to be a very good PowerPoint, very detailed, and it's not the same as having a toy and using it because if I just want to move a cartoon from one place to another [animations], that takes time. So, adding all these things, I think it is much more demanding than the in-person modality." (Informant no. 6).

As for positive aspects of the virtual modality, four interviewees highlighted the comfort of working from home and being able to better organize their work and connectivity times. These ideas are shown in the following fragments.

> "...self-organization is better in my case, I am more comfortable at home, I manage my time better with the computer because I have fewer distractions, it's you and the screen, that would be the positive part..." (Informant no. °8).

> "…I see the comfort of being in your home as something positive because it saved me the traffic jam on my way there and back, I also think it's really positive that this forced me to rethink how I do therapy, to investigate a little bit more and organize myself better, both my work time and my personal and family time..." (Informant no. 10).

Effectiveness of the Virtual Intervention

All the interviewees reported that children who attended virtual sessions regularly showed better progress than those who, for different reasons, had frequent absences.

> "Those who have joined the sessions and attended consistently have achieved the objectives, but there is also a significant percentage that does not attend therapy consistently and has

not been able to learn what is necessary considering the time we have been meeting." (Informant no. 3).

"…there was always a small group of children (per class) who was frequently absent, that is, they did not log on to the class, mainly because their parents forgot they had a session, so at the end of the year you reassess them and realize that it is precisely those who did not join the sessions who objectively do not show progress, compared to their evaluation in March there was not much difference..." (Informant no. 9).

Seven informants referred that the most difficult contents to intervene were phonetics and phonology. They stated that it was not always possible to guide the children to correctly discriminate and/or produce phonemes. The following extracts illustrate this difficulty.

"...the truth is that there isn't much progress because it is especially difficult to work on the phonetic-phonologic aspect, that's the truth…" (Informant no. 5).

"...but if I want to work on speech, or any sound with the child, the virtual format doesn't help much because there might be audio problems, what the child says might be delayed, or I might not have a good enough angle to see what their tongue is doing, so I have to pay really close attention to auditory cues…" (Informant no. 6).

Similarly, seven interviewees mentioned that most of the children did not have a physical space where they could join the sessions without distractions, which, in their opinion, affected the effectiveness of therapy. This problem is shown in the following comments.

"...there were many connection problems, a lot of noise problems, there were times when there was background noise behind the child because they had no space..." (Informant no. 3).

"...it was frequently the case that they had one computer for everyone, so typically the boy logged on using a phone, in the same room where everyone else was, where his siblings were having classes or were in bed..." (Informant no. 6).

Session Preparation

Concerning the most difficult or demanding aspects of the virtual modality, the planning and organization of objectives and content, as well as the time invested in the sessions, stand out. Nine informants considered that adapting tools and contents to teletherapy and achieving each session's goals required dedicating considerably more time to the task compared to in-person therapy, which shows that in-person sessions are more fluid and dynamic. Furthermore, they highlighted that none of them received formal training to implement this modality and that their work was rather self-taught. The following interview fragments illustrate these opinions.

"...I could use Powerpoint before, but using it for videos or more complex content was extra work. It took me a long time to record and edit videos, for example, because I tried to look for characters that caught their attention …" (informant no. 4).

"…it entailed a personal search, I took some CLAP workshops that I had already taken in person, but this time virtually, mainly to see how the speech therapist worked online, to update my knowledge. But it was challenging to complete them…" (informant no. 3).

All the interviewees used a mixed format for the sessions, that is, synchronous and asynchronous. The synchronous sessions were carried out in groups, where both the speech therapist and 3 preschoolers–accompanied by their respective caregivers–participated virtually, for approximately 30 minutes. The therapist used educational applications, Powerpoint activities shared on the screen, and online games related to the session's objective. The asynchronous activities consisted of preparing guides, capsules, and videos that were sent by email, based on the objectives worked on during synchronous sessions so that the children could reinforce them at home. This use of mixed formats can be observed in the following extracts.

"...we have speech therapy hours, synchronous weekly hours where we comply with what is established by the decree, that is, half an hour in a group of up to 3 children, and asynchronous hours, where they are sent a capsule with information for the week, as well as a work kit..." (Informant no. 8).

"…I work with the children every week using Zoom, in groups made up of 3 children. I work with a PPT and then their parents are sent a short weekly capsule, 2-3 minutes long, to reinforce what was worked on in the session. Some complied and others did not, they did not even look at the material..." (Informant no. 2).

"In my school, we worked with groups of 3 just as it was done in person. The session lasted half an hour, but in reality, time was wasted on the introduction, testing connectivity, and reviewing what they did not reinforce at home, it was frustrating when you realized that all the material you had

prepared and sent home (specific material, guides) had not even been looked at…" (Informant no. 10).

Parental Participation

From what was reported in the interviews, half of the participants perceived that parents and/or caregivers did not fully understand their role during the sessions. Thus, caregivers provided the correct answers or immediately corrected the child if they answered incorrectly, focusing on aspects that were not related to the objective of the session. Moreover, children appeared more nervous and strived to avoid mistakes in the presence of their caregivers. The following fragments illustrate this phenomenon.

"...if we focus on the children who did comply, we can see that even they had a noticeable regression; when in person, they showed greater autonomy and attention. On the other hand, when the parents are there, the children tend (not all of them) to get nervous…" (Informant no. 4).

"...the parents didn't understand that this was a learning process, they thought it was a test, so at the beginning it was very hard to make them understand that they did not have to help their children because in that case, I wouldn't be able to see whether the child was adequately processing the content I provided..." (Informant no. 7).

The means used to communicate with parents, guardians, and/or caregivers were also adapted. Nine interviewees mentioned communicating directly with parents through their personal WhatsApp and that due to this, it was necessary to establish certain rules or boundaries to interact more effectively with children and their parents. The following testimonials exemplify this situation.

"...I had to develop much more patience because interacting so directly with the parents is really stressful, teachers are used to this but the truth is that I didn't have that relationship..." (Informant No. 4).

"I had to get serious and firm regarding my working hours, telling them not to send me assignments at midnight, that I am not available on Sundays; it was exhausting because people think that, because they have your personal number, you are available to them 24/7, and it is not like that" (Informant no. 5).

Finally, all the interviewees mentioned that some parents forgot to attend sessions or were not prepared when doing so. This resulted in using time allocated to therapy to repeat instructions or collect materials. Below are some fragments that depict this situation.

"...there is a 15% or 20% that doesn't care, they don't do the assignments, they don't complete the books, nothing." (Informant no. 5).

"...I would say that 60% of the parents are committed, they do their homework, they join early, they know my name, they show concern when they cannot attend a session, for example, 'Miss, I couldn't be in the class, can I recover the session?', 'Miss, can you move me to the other group, because I can't make it'... but there is a percentage that definitely does not comply..." (Informant no. 7).

DISCUSSION

The results found in this study allow us to interpret the perception of speech-language therapists about their experience providing telerehabilitation to preschoolers with DLD during the pandemic.

The experiences included in this article reveal critical elements related to how sudden and improvised was the change in modality, how insufficiently prepared the therapists were to implement telepractice, the administration of time and resources, and their perception of the ineffectiveness of the intervention. These elements coincide with what is described by Eyzaguirre et al., (2020) regarding the difficulties encountered by teachers in the context of a pandemic.

In their review, Edwards et al. (2012) conclude that telepractice is useful and effective for assessing and treating children and adults with speech and language disorders. Moreover, they assert that outcomes are similar to those observed in in-person therapy. However, the studies they analyzed were not carried out in the context of a pandemic, in other words, during prolonged confinement where all school activities, not only speech therapy sessions, were provided virtually. The findings of this research reveal outcomes that oppose those reported by other studies (Coufal et al., 2018; Covert et al., 2018; Grogan-Johnson et al., 2010). The evidence obtained shows that adapting therapy plans to the virtual modality should meet certain conditions to achieve the objectives of the intervention; otherwise, therapy does not attain its purpose. These conditions were seemingly not met during the pandemic.

Additionally, it is mentioned by the literature that telepractice is more successful when carried out individually (Grogan-Johnson et al., 2010; San Martín & Gutiérrez, 2021), which was not the

case for the participants in this study. This is because the format used for in-person therapy was replicated when moving to virtuality; that is, working with groups of three children.

Virtual therapy implies great responsibility and commitment from parents and/or caregivers to achieve therapeutic objectives. In their study on Chilean schoolchildren, San Martín & Gutiérrez (2021) consider the level of commitment shown by parents during sessions a difficulty. This situation also emerges in the present study, where it is reported that parents show a lack of knowledge regarding their role in each session and the general therapeutic process. Eyzaguirre et al. (2020) mention that when there is no routine imposed by the school and the children are not monitored by teachers, the role of parents and caregivers becomes essential. In addition to the support provided by the establishment, it is necessary that children's learning is supervised by adults, especially in the case of young children (Eyzaguirre et al., 2020).

Several advantages of telepractice have been identified by the literature. Nonetheless, the experiences of the speech-language therapists interviewed in this study contradict the evidence. There is a consensus among them that in-person therapy is the most adequate for younger children. They argue that telepractice requires certain conditions, materials, and support for it to work properly. Furthermore, they emphasize the need to receive training for its implementation and that learning also depends on the competencies of the students (UNESCO, 2020).

This study raises questions that should be addressed in future research to better understand the factors that impact this type of intervention. This is relevant because telerehabilitation will continue to be carried out in normal conditions (Lara-Plaza et al., 2021). Thus, a pivotal area of study would be to investigate the possible factors that influence the outcomes of virtual therapy. Some of them are the characteristics of the educational establishments, both socioeconomic and demographic factors, and the differences between individual and group therapy.

CONCLUSION

Telerehabilitation is not a new modality for the clinical or academic field. However, prior to the COVID-19 pandemic, its practice was scarce in Chile. For this reason, providing virtual therapy to preschoolers with language disorders was considered challenging, exhausting, and barely effective by the speech-language therapists participating in this study. Moreover, their lack of preparation and/or training in the virtual modality directly impacted their work. They report using personal time to transfer their in-person routine to a virtual one since they lacked the tools to sustain and effectively carry out virtual interventions.

Regarding the role played by parents and/or caregivers, it is crucial to create awareness and inform them of how relevant their work is as co-therapists or co-educators, regardless of the format in which the intervention is carried out.

Finally, the challenge for the future is to improve the practice of virtual speech-language therapy for preschoolers with language disorders, so that this type of intervention can contribute to the language development of children with these kinds of difficulties.

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