Parent Perspectives on Digital Speech Therapy: A Preliminary Study

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***Abstract*—Speech and language difficulties are among the most common developmental challenges experienced by autistic children, often affecting communication, social participation, and academic functioning. Consistent and intensive speech-language intervention is critical for improving communication outcomes; however, many families face barriers that limit regular therapy attendance, including travel constraints, scheduling conflicts, and limited therapist availability. Digital therapy materials have emerged as a potential solution to support home-based follow-up and reinforce therapeutic goals between clinical sessions. The present study aimed to explore parent perspectives on the use of digital therapy materials for home-based speech and language intervention in autistic children. A cross-sectional survey design was employed to collect responses from parents of children receiving speech-language therapy. The survey examined parents' access to digital therapy resources, willingness to use such tools, and barriers to attending therapy sessions. The findings indicated that although only 36% of parents had previously used digital therapy materials, 61% expressed willingness to adopt these resources if they were made available and supported by clinicians. Parents also identified practical barriers that limited consistent therapy participation. The results suggest that structured, clinician-guided digital therapy materials may serve as valuable complementary tools to extend therapy beyond clinic settings and enhance parent involvement in intervention. Integrating digital resources with traditional therapy approaches may improve accessibility, increase practice opportunities, and support communication development in autistic children.**

***Index Terms*—speech-language therapy, autism, digital intervention, parent-mediated therapy, home-based intervention.**

I. INTRODUCTION

Speech and language delays are among the most common developmental concerns in early childhood and can significantly affect a child's ability to communicate, interact socially, and participate effectively in learning environments. Early communication difficulties may impact language development, social engagement, and overall functional participation in everyday activities. Epidemiological studies indicate that developmental language and communication challenges occur across a range of developmental conditions, including autism, where communication impairments represent a core diagnostic feature (American Psychiatric Association, 2013; Maenner et al., 2023). Early identification and timely intervention are therefore critical for supporting communication development and improving long-term outcomes for children with speech and language delays.These communication difficulties can significantly affect a child's ability to interact socially, participate in academic environments, and engage meaningfully in everyday activities (Tager-Flusberg & Kasari, 2013). Consequently, early identification and intervention are widely recognised as essential for improving developmental and communication outcomes for autistic children (Zwaigenbaum et al., 2015).

Speech-language therapy plays a central role in supporting communication development in autistic children. Intervention typically targets multiple domains including speech sound production, receptive language, expressive language, and pragmatic communication skills (Paul, Norbury, & Gosse, 2018). Research in speech-language pathology consistently demonstrates that the intensity and frequency of

practice are key determinants of successful intervention outcomes, particularly in motor-based speech and language learning (Maas et al., 2014; Roberts & Kaiser, 2011). Motor learning principles emphasize the importance of repeated practice in establishing accurate and stable speech production patterns while also supporting language learning, processing, and the strengthening of neural pathways involved in speech motor control (Maas et al., 2014; Guenther, 2016).

Despite the importance of intensive intervention, many families encounter barriers that limit consistent participation in therapy programs. Common challenges include limited availability of trained therapists, travel distance to therapy centres, financial constraints, parental work commitments, and competing family responsibilities (Pickard, Kilgarriff-Foster, & McLeod, 2009; Thomas-Stonell et al., 2010). These constraints may reduce therapy frequency and, consequently, the effectiveness of the intervention.

To address these challenges, researchers have increasingly explored parent-mediated intervention approaches, in which caregivers are trained to support therapy goals within everyday routines. Parent involvement enables children to practice communication skills within natural environments such as the home and community, thereby increasing therapy intensity beyond clinic-based sessions (Roberts & Kaiser, 2011; Oono, Honey, & McConachie, 2013). Evidence suggests that parent-implemented interventions can improve language development, social communication, and the generalisation of learned skills in children with developmental disorders (Kasari et al., 2015).

Advances in digital technology have further expanded opportunities for supporting therapy outside traditional clinical settings. Digital therapy resources may include instructional videos, interactive worksheets, mobile applications, teletherapy platforms, and structured home practice guides designed to help parents implement therapy strategies independently (Hall et al., 2020; Camden & Silva, 2021). These tools allow therapists to extend intervention beyond clinic visits while enabling parents to reinforce therapy goals in everyday learning environments.

The integration of digital technologies into healthcare services has accelerated in recent years, particularly with the growth of telehealth services. Digital health interventions have been shown to improve accessibility of therapy services, parent engagement, and continuity of care between therapy sessions (Hall, Boisvert, & Steele, 2020; Camden & Silva, 2021). Digital therapy materials can also provide structured guidance through video demonstrations, step-by-step instructions, and progress monitoring tools that help parents implement therapeutic activities at home (Fleming et al., 2017).

However, the successful implementation of digital therapy programs depends on several important factors. Research indicates that usability and accessibility strongly influence parent engagement with digital interventions (Camden & Silva, 2021). Key considerations include ease of use, accessibility of technology, clarity of instructional materials, availability of clinician guidance, and parental confidence in implementing therapy strategies. Parents who feel confident and supported in using digital therapy tools are more likely to engage consistently in home-based intervention activities (Hall et al., 2020).

Despite increasing interest in digital health technologies, relatively little research has examined parent perspectives on the use of digital therapy materials for home-based follow-up in speech and language intervention. Understanding parent attitudes toward these tools is critical for designing digital therapy programs that are both clinically effective and practical for families.

Therefore, the present study aimed to explore parent perspectives on the use of digital therapy materials for home-based follow-up in speech and language intervention for autistic children. Specifically, the study addressed the following objectives:

1. To examine parent access to digital therapy materials
2. To understand parent willingness to use digital therapy tools
3. To identify barriers to attending regular therapy sessions
4. To explore the potential role of digital materials in supporting home-based therapy.

To investigate these objectives, a structured research methodology was employed.

II. METHODOLOGY

A cross-sectional survey design was used to collect data on parent perspectives regarding digital therapy materials used for home follow-up. The study included 41 parents or caregivers of children receiving speech therapy services. Participants were recruited through clinical networks and parent groups associated with speech therapy services.

Children receiving therapy presented with a range of developmental conditions, including speech delay, autism, and developmental language difficulties.

Data were collected using an online questionnaire. The survey questions were developed based on interviews with parents and speech-language therapists, along with a review of relevant literature.

The survey included multiple-choice questions designed to assess:

- child age group
- primary diagnosis
- prior use of digital therapy materials
- willingness to use digital resources
- barriers to attending therapy sessions.

Participation in the survey was voluntary, and responses were collected anonymously.

III. RESULTS

Age Distribution

The age distribution of children receiving speech-language therapy is presented in Table 1.

Table 1. Age Distribution of Children

Age Group	Number	Percentage
0–3 years	13	31.7%
4–6 years	23	56.1%
7–10 years	5	12.2%

As shown in Table 1, the majority of children receiving therapy were between 4–6 years of age (56.1%), followed by 0–3 years (31.7%) and 7–10 years (12.2%). This distribution reflects the developmental period during which speech and language concerns are most frequently identified and referred for intervention, as early childhood is a critical window for the detection of communication delays and initiation of speech-language therapy (Paul, Norbury, & Gosse, 2018; Zwaigenbaum et al., 2015).

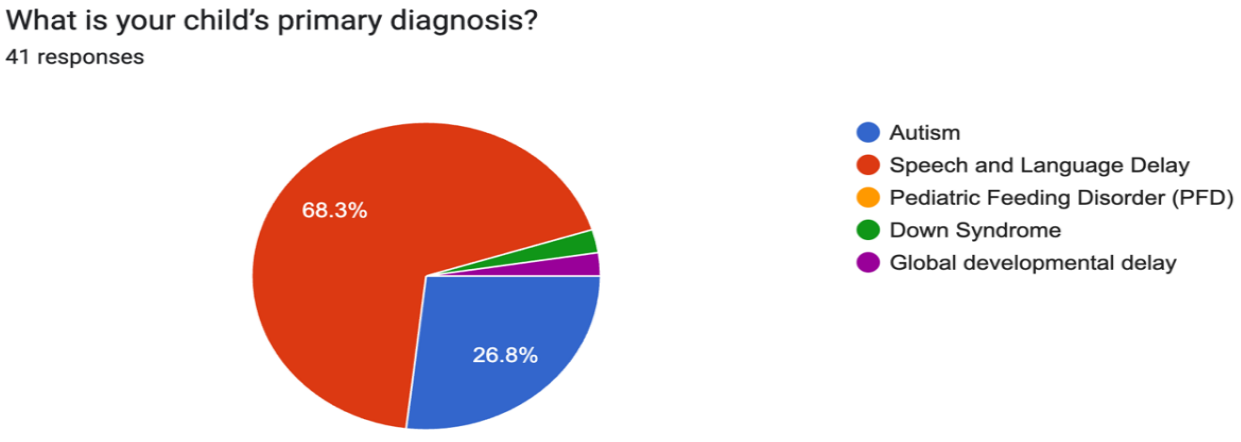
Primary Diagnosis

The distribution of primary diagnoses is presented in Table 2.

Table 2. Diagnosis Distribution

Diagnosis	Number	Percentage
Speech and Language Delay	28	68%
Autism Spectrum Disorder	11	27%
Down Syndrome	1	2%
Global Developmental Delay	1	2%

As shown in Table 2 and Figure 1, speech and language delay was the most frequently reported diagnosis, accounting for 68% of the participants.



This was followed by a diagnosis of autism (27%), while Down syndrome and global developmental delay each represented 2% of the sample.

Use of Digital Therapy Materials

Participants were asked whether they had previously used digital therapy materials for home practice.

Table 3. Use of Digital Therapy Materials

Response	Number	Percentage
Yes	15	36.6%
No	26	63.4%

The results show that most parents had not yet explored digital therapy tools for home practice.

Willingness to Use Digital Therapy Resources

Parents were asked whether they would be willing to use digital therapy materials if provided by clinicians.

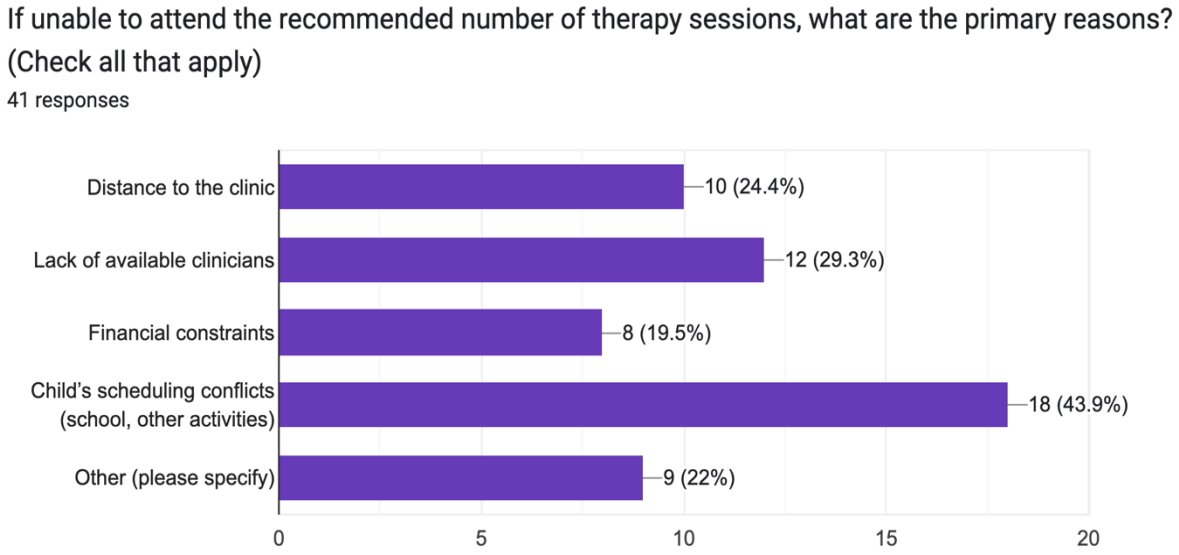
Table 4. Parent Willingness to Use Digital Therapy

Response	Number	Percentage
Yes	25	61%
Unsure	13	32%
No	3	7%

The findings indicate that a majority of parents are open to using digital therapy resources, even though many have not previously used such tools.

Barriers to Therapy Attendance

Parents reported several challenges affecting their ability to attend therapy sessions consistently. These included - time constraints, travel distance to therapy centres, limited appointment availability and other commitments.



These barriers highlight the need for additional strategies to support therapy continuity outside clinic settings.

IV. DISCUSSION

The findings of this study provide valuable insights into parent perspectives on the use of digital therapy materials for speech and language intervention. One key observation is the gap between parent willingness to use digital tools and their actual usage. While only 36% of parents reported having previously used digital therapy materials, 61% expressed willingness to adopt such resources if they were made available. This suggests that parents are open to integrating digital tools into therapy routines but may lack access to structured and clinician-guided resources. Previous research has similarly indicated that parent engagement with digital therapy tools increases when these resources are designed with clear guidance and professional support (Hall, Boisvert, & Steele, 2020; Camden & Silva, 2021).

Another important finding relates to the barriers parents face in attending therapy sessions regularly.

Practical challenges such as travel time, scheduling conflicts, and limited therapist availability may reduce therapy frequency. These findings are consistent with earlier studies reporting that logistical and socioeconomic barriers often limit consistent access to speech-language therapy services (Pickard, Kilgarriff-Foster, & McLeod, 2009; Thomas-Stonell et al., 2010). Digital therapy materials may help address these challenges by allowing parents to reinforce therapy goals within the home environment and increase opportunities for practice between therapy sessions.

However, digital resources should not replace direct clinical intervention. Rather, they should function as complementary tools that extend therapy beyond clinic visits. Research in telepractice and digital health interventions supports the integration of technology as a supplement to clinician-led therapy, particularly for enhancing therapy intensity and continuity of care (Hall et al., 2020; Camden & Silva, 2021).

Parents participating in the study also indicated a preference for structured guidance from clinicians when using digital therapy materials. This finding aligns with research suggesting that parent confidence and adherence to home-based interventions increase when digital resources include clear instructions, visual demonstrations, clinician support, and progress monitoring features (Fleming et al., 2017; Roberts & Kaiser, 2011). When effectively designed and integrated with professional guidance, digital therapy tools can empower parents to play an active role in supporting their child's communication development and reinforce therapeutic learning in everyday contexts.

V. CLINICAL IMPLICATIONS

The results of this study have several implications for speech-language therapy practice.

Therapists may consider incorporating digital therapy materials to:

- increase therapy intensity
- provide structured home practice activities
- support parent involvement in intervention
- reduce the impact of logistical barriers to therapy attendance.

Clinician-designed digital therapy platforms could play an important role in improving access to intervention services.

Limitations

The study had several limitations. The sample size of the preliminary study was relatively small and limited to a specific population of parents already engaged in therapy services. Future research should include larger sample sizes and investigate the effectiveness of digital therapy programs on child communication outcomes.

VI. CONCLUSION

Digital therapy materials have the potential to significantly enhance speech-language intervention by extending therapy opportunities beyond clinic settings. Although many parents have not yet used digital therapy tools, the majority demonstrate willingness to adopt such resources.

Integrating clinician-guided digital therapy materials with traditional intervention models may improve therapy accessibility, increase practice opportunities, and support communication development in children with speech and language disorders.

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