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Research Article

Families' Experiences in the Virtual Hanen *More Than Words* Program During the COVID-19 Pandemic

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ABSTRACT

Purpose: The COVID-19 pandemic required most pediatric rehabilitation programs to shift to a virtual delivery format without the benefits of evidence to support this transition. Our study explored families' experiences participating virtually in *More Than Words*, a program for parents of autistic children, with the goal of generating new evidence to inform both virtual service delivery and program development.
Method: Twenty-one families who recently completed a virtual *More Than Words* program participated in a semistructured interview. The interviews were transcribed and analyzed in NVivo using a top-down deductive approach that referenced a modified Dynamic Knowledge Transfer Capacity model.
Results: Six themes capturing families' experiences with different components of virtual service delivery were identified: (a) experiences participating from home, (b) accessing the *More Than Words* program, (c) delivery methods and program materials, (d) the speech-language pathologist–caregiver relationship, (e) new skills learned, and (f) virtual program engagement.
Conclusions: Most participants had a positive experience in the virtual program. Suggested areas for improvement included the time and length of intervention sessions and increasing social connections with other families. Practice considerations related to the importance of childcare during group sessions and having another adult to support the videorecording of parent–child interactions. Clinical implications include suggestions for how clinicians can create a positive virtual experience for families.
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Autistic preschool children often require support for developing joint attention and social communication skills (Girolametto et al., 2007). Communication challenges can lead to increased stress for the family as they struggle to understand the needs and wants of their child (Bonis, 2016), and parents often seek speech-language pathology services to support their young child's communication development. Studies from around the world have reported that speech-language therapy is the most commonly accessed intervention for young autistic children (Denne et al., 2017; Hume et al., 2005; Salomone et al., 2016). Parents who access speech-language services commonly identify language and social communication skills as priorities for therapy (Pituch et al., 2011).

While evidence has shown that children make gains in high-intensity early interventions, long waitlists and limited resources have meant that children do not typically get the timely services or evidence-based intervention dose they require (McGill et al., 2020). Including parents in interventions is recommended as best practice (Zwaigenbaum et al., 2015). Parent-mediated interventions help to address the lack of available individual high-intensity clinical services by supporting parents to implement strategies with their children more often and in meaningful everyday contexts (McConachie & Diggle, 2007). In speech-language parent training programs, parents learn to adjust their interactions to facilitate children's communication, and this approach

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has been associated with improvements in children's language and social communication skills (Oono et al., 2013) and decreases in parents' stress and anxiety (Hume et al., 2005; Noyan et al., 2020). One well-known parent training program for parents of autistic preschoolers is *More Than Words–The Hanen Program for Parents of Children with Autism Spectrum Disorder and Social Communication Difficulties* (Sussman et al., 2016).

The *More Than Words* Program

The Hanen Centre, based in Toronto, Ontario, Canada, is an internationally recognized, not-for-profit charitable organization that has developed multiple training programs for parents of young children with communication difficulties. One program, *More Than Words,* provides parents of autistic preschoolers with strategies to support their child's communication, play, and social skill development. The program can only be delivered by a speech-language pathologist (SLP) who has completed training with The Hanen Centre. As part of the 13-week program, parents and caregivers attend an orientation session, a preprogram consultation appointment, eight 2.5-hr group training sessions (eight families per group), and three individual video feedback sessions. At the pre-program consultation appointment, the SLP conducts an informal assessment of the child's communication, observes a parent–child interaction, and the parent(s) and the SLP codevelop communication goals based on the child's stage of communication. The Hanen Centre has recognized and named four developmental stages of communication through which children become progressively more intentional and independent communicators (Own Agenda, Requester, Early Communicator, Partner). Parents learn about the stages and identify the stage that best represents their child. The group sessions are not organized by stage; instead, they are heterogenous and usually include families of children from some or all four stages. As a result, parents learn how to apply communication facilitation strategies with children at each stage. Parents learn strategies to target goals that aim to support extended and enjoyable communicative interactions with their child, and to target their child's social communication goals within these interactions. Group sessions include interactive presentations, video examples, group discussions, opportunities for practice, and the development of individualized home plans. The one-on-one video feedback sessions allow parents the opportunity to demonstrate skills using the facilitation strategies they have learned with their children (e.g., interpreting what the child has communicated or imitating the child's actions and sounds) while the SLP records the interactions. The parent and the SLP then view the videos together, and the SLP helps the parent to reflect on their implementation of the strategies and how the child responded. The parent and the SLP then jointly formulate a plan with defined goals to continue supporting the child's social communication development (Sussman et al., 2016). The *More Than Words* program is led by an SLP with special training and certification from The Hanen Centre. In addition to the 13-week program, there is also a 6-week Hanen-approved adapted program that centers may offer when time and funding are limited. In this shortened adapted program, a preprogram consultation is required, and parents must receive at least five group sessions and one video feedback session (Sussman et al., 2016).

Research specific to Hanen's *More Than Words* in-person program includes one randomized controlled trial that reported positive effects on parents' responsiveness and children's social communication skills; however, gains in social communication skills were specific to children who had low object interest before starting the program (Carter et al., 2011). These results differ from two previous studies that reported improved language and social communication skills for all children whose families participated in the program (Girolametto et al., 2007; McConachie et al., 2005;). Other reported benefits for parents include parental responsiveness, self-efficacy, and reduced stress (Girolametto et al., 2007; McConachie et al., 2005; Noyan et al., 2020). The literature on parents' experiences participating in *More Than Words* in-person suggests parents valued the program, especially as a first place to begin intervention, and specifically, the individualized feedback sessions, which were viewed as critical to their learning (Patterson & Smith, 2011). Parents also identified areas for improvement, including support for navigating program content (e.g., more clinician modeling and hands on practice), incorporating more time for discussion between participants, and providing additional individualized time with the SLP (Patterson & Smith, 2011).

The virtual *More Than Words* program replicates the format and content of the in-person program, except it is delivered virtually using videoconferencing software. Prior to the COVID-19 pandemic, The Hanen Centre was in the process of piloting an online version of the *More Than Words* program to allow more families access to the program. Although there was an opportunity to collect feedback informally from families and clinicians regarding the virtual program, it had to be launched before any independent empirical research was conducted to ensure the program was accessible during the COVID-19 pandemic.

Evidence for Virtual Programs

The literature on engagement in synchronous virtual meetings suggests that participation levels remain high

and may even increase when compared to in-person delivery due to factors such as scheduling, convenience, and anonymity (D. W. Stewart & Shamdasani, 2017). Professionals delivering services also need to be adept at using a virtual interface, and professional training is often needed in this regard (Abrams & Gaiser, 2017; Abrams et al., 2015).

Several studies have investigated parents' experiences with virtual SLP-led services. In one study on virtual speech-language pathology services for children living in rural Australia, five parents perceived services as practical, convenient, and supportive of children's development but identified issues with technology and lack of regular communication with the SLP as barriers to full participation (Fairweather et al., 2016). Other barriers that have been identified include participants having limited knowledge of how to use the videoconferencing platform; poor Internet access and connectivity; and participants not being positioned in front of the camera, making it difficult to be seen by the clinician (Molini-Avejonas et al., 2015).

Outcomes of virtual SLP services have also been examined. Wales et al. (2017) conducted a systematic review and reported improvements for school-age children who accessed speech and language services in-person versus virtually. Evidence for virtual SLP-led services and virtual parent training programs for autistic children has also been reported and suggests that children and parents can make gains in virtually delivered programs (Bearss et al., 2018; Sutherland et al., 2018). To maximize the potential for effectiveness, it is recommended that virtual training programs: (a) target parents, (b) use a coaching approach, (c) focus on improving children's function, (d) last more than 8 weeks, and (e) are offered at least once per week (Baharav & Reiser, 2010; Camden et al., 2020). These recommended features are all included in the virtual *More Than Words* program. Although there is evidence about child and parent outcomes of virtual programs, there is a lack of research integrating parents' and caregivers' voices regarding their experiences in virtual programs in the literature.

Results from one recent study on the virtual delivery of *More Than Words* to 11 mother–child dyads reported that parents improved their responsiveness and children made gains in their social communication skills (Garnett et al., 2022b). Additionally, parents reported high levels of satisfaction with the virtual program and greater confidence in interacting with their children and setting goals to support their communication. While this study provided some preliminary evidence to support the use of the virtual *More Than Words* program and provided families' general comments on their experiences, additional evidence is needed to understand the specific facilitators and barriers experienced by families participating in the program virtually.

This Study

It is important to contextualize this study because it occurred during the COVID-19 pandemic in Ontario, Canada (February to August 2021). Sampling was purposeful and related to the context of the Hanen *More Than Words* program's rapid pivot to virtual synchronous delivery so that service delivery of the program could be maintained. This study addressed the research question: What are the facilitators and barriers from parent/caregiver perspectives who are engaging and learning via virtual synchronous delivery of the *More Than Words* program during COVID-19? We focused specifically on facilitators and barriers because implementation research has recommended that identifying these factors early can inform future advantageous changes that could have positive benefits (Graham et al., 2006). While these factors were identified during the COVID-19 pandemic, it is expected that there would be general implementation recommendations for future virtual synchronous delivery of the *More Than Words* program even outside of pandemic times.

Method

Ethics Approval

Research ethics approval for this study was obtained from Western University's Research Ethics Board (approval number: 116702).

Participants

Twenty-one parents and caregivers ranging in age from 23 to 58 years participated in this study. For one family, both caregivers had participated in the program and, therefore, both wanted to participate in the interview; however, we only collected demographic information for the primary caregiver. Participants included mothers (n = 18), a father (n = 1), a grandparent (n = 1), and an aunt (n = 1) who lived in Canada and had recently participated in the virtual *More Than Words* program. Participants were in either the full 12-week program or a Hanen-approved adapted 6-week program. Most participants used a laptop computer to access the program (n = 12, 57%), with the rest using a mobile phone (n = 4, 19%), tablet (n = 3, 14%), or desktop computer (n = 2, 10%). In terms of self-rated ability to use the videoconferencing software required for the program, only three participants (14%) self-identified as being a beginner, with the majority being intermediate (n = 8, 38%) or advanced (n = 8, 38%) users. Participants came from diverse communities and backgrounds and were supporting a diverse group of

children. The children ranged in age from 18 to 54 months. Fourteen children had a diagnosis of autism at the time of caregiver–child participation. Others had social communication concerns or were suspected of being on the autism spectrum but had not yet received a formal diagnosis. Additional demographic characteristics of interview participants and their children are presented in Table 1.

Table 1. Characteristics of interview participants and their child.

Characteristics	Number (%) of participants
Gender identity of adult participants	
Female	20 (95%)
Male	1 (5%)
Sex of child participants	
Female	4 (19%)
Male	17 (81%)
Participants' ethnic or cultural background (could select more than one)	
Arab/West Asian	1 (5%)
Black	1 (5%)
White	15 (71%)
First Nations	1 (5%)
Metis	1 (5%)
South East Asian	1 (5%)
Other	4 (19%)
Total family income	
Less than $20,000	2 (10%)
$40 000 to $59,000	3 (14%)
$60 000 to $79,999	7 (33%)
$80 000 to $99,999	1 (5%)
More than $100,000	8 (38%)
Community size	
Small population center (population between 1,000 and 29,999)	5 (24%)
Medium population center (population from 30,000 to 99,999)	3 (14%)
Large urban population center (population over 100,000)	13 (62%)
Adult participants' highest level of education	
Some high school credits	1 (5%)
High school certificate or diploma	2 (10%)
Apprenticeship, trades or college certificate, diploma	7 (33%)
University degree	11 (52%)
Technology used to access program	
Mobile phone	4 (19%)
Tablet	3 (14%)
Laptop computer	12 (57%)
Desktop computer	2 (10%)
Rated ability to use videoconferencing software required for program	
Beginner	3 (14%)
Intermediate	8 (38%)
Advanced	8 (38%)
Expert	2 (10%)

Theoretical Framework

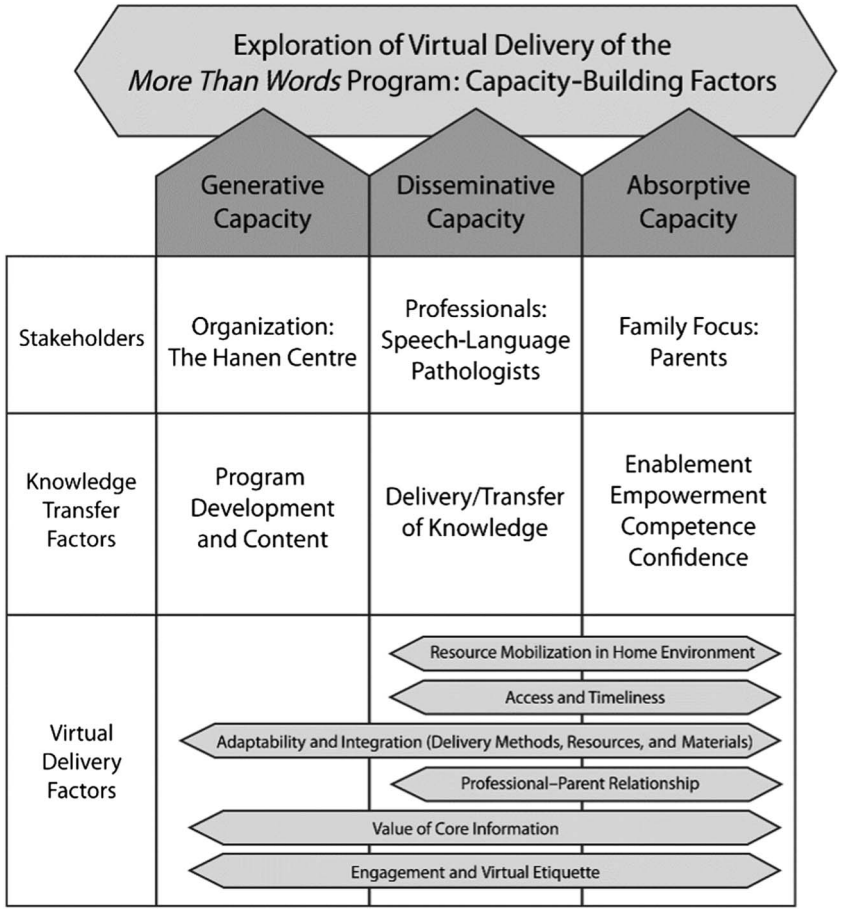
The Dynamic Knowledge Transfer Capacity Model

The Dynamic Knowledge Transfer Capacity Model (Parent et al., 2007) provides a useful framework for investigating the specific factors that may influence the learning and the adoption of program contents, such as the family's engagement in the virtual *More Than Words* program. Within the framework, a service must possess four capacities for successful knowledge transfer. Specifically, programs must be (a) generative—include the creation of knowledge, services, and technologies; (b) disseminative—facilitate the adaption, translation, and diffusion of knowledge to build commitment from participants; (c) absorptive—recognize the value and application of new knowledge and apply it; and (d) adaptive—ensure adjustment and improvement (Parent et al., 2007). The framework was modified to only consider the generative, disseminative, and absorptive capacities of the virtual *More Than Words* program (see Figure 1) as only the first three capacities are central to the model (Parent et al., 2007), and the adaptive capacity was not directly related to our research question. The adaptive capacity will, however, be addressed in future work using the results from this study.

The model also considers the assets needed to create new knowledge and the activities most often associated with each of the model's capacities (Parent et al., 2007). For the purposes of this project, we identified end users (The Hanen Centre, SLPs, and parents/caregivers) as assets, and we identified activities associated with each capacity that we judged to be important for knowledge transfer for this project (program development and content, delivery of knowledge, and family enablement and empowerment). A third layer, virtual delivery factors, was added as the program under investigation was virtual in nature, and knowledge transfer was likely to depend on factors related to virtual program delivery (see Figure 1).

The hypothesized list of virtual factors associated with end users and activities that were likely to affect knowledge transfer was generated based on a review of the literature related to factors impacting the delivery of virtual services (e.g., Baharav & Reiser, 2010; Glista et al., 2021; McConnell et al., 2013; Weidner & Lowman, 2020). Six factors were identified: (a) Resource Mobilization in the Home Environment, (b) Access and Timeliness, (c) Adaptability and Integration (Delivery Methods, Resources, and Materials), (d) Professional–Parent Relationship, (e) Value of Core Information, and (f) Engagement and Virtual Etiquette. These virtual factors spanned across more than one capacity (in some cases) and were,

Figure 1. Modified Dynamic Knowledge Transfer Capacity model (Parent et al., 2007).



therefore, represented as continuous rather than within discrete capacities in our modified model (see Figure 1).

Procedure

SLPs in Canada who were running a virtual *More Than Words* program were asked to share a recruitment flyer with potential participants. To help with participant recruitment, B.J.C. and J.O.C. gave a presentation to Hanen SLP members who had completed *More Than Words* training to inform them of the study. Other SLPs in Canada who were trained to deliver the *More Than Words* program were notified about the study through contacts with community partners and referrals from The Hanen Centre. Interested families completed an online survey to share their contact information with the research team. The research team followed up to provide information about the study, obtain consent, and schedule the virtual interview. Prior to their scheduled interview, participants completed an online demographic survey in research electronic data capture (Harris et al., 2009), a secure data collection system on a secure server housed at the University of Western Ontario. The purpose of the demographic survey was to collect information describing participant characteristics (e.g., age, gender, and comfort with technology).

The individual virtual semistructured interviews were completed using Zoom videoconferencing software after participants had completed their virtual *More Than Words* program. The first author (L.D.) conducted all interviews. Prior to conducting the interviews, the first author (L.D.) reviewed the methodology for qualitative interviewing, received training from experienced qualitative researchers (S.M., M.S.), and conducted and received feedback on a trial interview. An interview guide was created with input from the entire research team, and it included open-ended questions and prompts regarding various aspects of the families' experiences with the virtual program. Examples of interview questions include: "What are some of the benefits you feel that you or your family experienced being part of the virtual *More Than Words* program? What are some of the not-so-positive things you experienced?" (see Supplemental Material S1 for the

complete interview guide). The interviews were recorded using the audio-record feature on Zoom. Upon completion of the interview, the Zoom software provided an automatic transcript of the audio recording. These transcripts were then anonymized and corrected by undergraduate and graduate research assistants. Prior to analysis, the first author (L.D.) reviewed all transcripts to ensure accuracy. The transcripts were then imported into NVivo Qualitative Data Analysis Software (QSR International, 2014) for analysis.

Data Analysis

The demographic data were analyzed descriptively. Analysis of the interview data was done using a Codebook Thematic Analysis approach that is a structured, pragmatic approach to coding and analysis that has an underlying philosophy of Reflexive Thematic Analysis (Braun & Clarke, 2022). Our multi-disciplinary team, which included researchers with experience in virtual care, education, health, speech and language science, and hearing science, worked collaboratively throughout the analysis process. We used a two-prong approach to develop the initial codebook. First, an inductive approach was used to explore and become familiar with the data. Secondly, we used a top-down deductive approach where codes were created that aligned with the six virtual delivery factors associated with knowledge transfer in the modified Dynamic Knowledge Transfer Capacity model and our research questions. Five team members (L.D., M.S., B.J.C., S.M., and K.H.) each individually applied the initial codebook to two transcripts and then met to review the coding and resolve any disagreements. The initial codebook was adjusted to incorporate new concepts and definitions, and the two coreviewed transcripts were recoded according to the updated codebook. The remaining interview transcripts were coded by one researcher (L.D.) using the revised codebook. Throughout this phase, the team met regularly to discuss any ambiguities in the codes and whether additional codes were needed. If any changes were made, transcripts that had already been coded were reviewed for clarity based on the team discussions and additional codes added.

Once all interviews were coded, three members of the research team (B.J.C., M.S., K.H.) who had not coded the interview transcripts reviewed a random selection of transcript sections and associated codes to identify any disagreements in the coding. The team then met and some codes that had caused confusion were revised to improve coding accuracy. The transcripts were then reviewed to ensure they fit with the revised codebook and system.

In the next step, the six virtual delivery factors associated with knowledge transfer in the Modified Dynamic Knowledge Transfer model were defined and established as main themes. We then reviewed the codes and organized them into the six defined themes. Within each theme, codes were sorted according to whether they were a barrier or facilitator to knowledge transfer. Next, quotes that best supported the identified barriers and facilitators for each theme were identified. In addition to identifying descriptive quotes, we also worked to ensure quotes from various participants were included to represent the sample. The research team then reviewed the six themes and quotes to ensure they accurately represented the data.

Finally, we completed a member check and shared a summary of our preliminary results with study participants to determine whether our interpretation of the data accurately reflected participants' experiences in the virtual *More Than Words* program. Participants were given a four-page document outlining the six identified themes, barriers and facilitators, and supporting quotes. Participants were asked to review the preliminary results and complete an anonymous online survey to rate their agreement for each of the six themes using the options: "I agree," "I disagree," or "undecided." Participants could also provide optional anonymous written feedback.

Results

Six themes associated with families' experiences in the virtual *More Than Words* program were identified. All participants were given the opportunity to provide feedback on the identified themes as part of the member check, and 17 of the 21 families completed a survey to indicate their agreement or disagreement with the results. Overall, participants agreed with the results as presented. The one disagreement was for Theme 6: Virtual Program Engagement, which was addressed and will be described in that section.

Theme 1: Experiences Participating From Home

The first theme encompassed families' experiences participating in the program virtually.

Facilitators

The convenience factors associated with accessing the program from home were seen as the primary benefit of having the program delivered virtually. Commute time was eliminated, allowing participants to log on right as the weekly session started. This provided participants with more time to complete other necessary tasks and spend time with their families. Eliminating the need for travel also meant that participants did not have to spend money on gas or parking.

> "Oh, the convenience factor. Because you could be in two places at once: you could be in your living room looking at the course and still be able to watch your kids. You can multitask, and the cost savings, and your time to travel." (P112)

For one participant, the virtual program afforded accessibility in addition to convenience. Transportation was a barrier and, therefore, without a virtual option, they likely would not have been able to access the program.

Many program participants had children with complex needs, and taking time away from their families could be a barrier to participating. As one participant explained, another benefit of the virtual program was that parents/caregivers were still accessible should something come up:

> "It was easier in a sense because I didn't have to figure out: I have to go to this place and then to factor all the driving time. I could just finish with my children, come down, do it in the office if my husband needed me or there was a meltdown." (P106)

Another benefit for some families was that the virtual format made the program more accessible for another parent/caregiver to participate. Some participants mentioned that their partner was also able to participate in parts of the program because they were at home.

In addition to the convenience and accessibility factors, some participants acknowledged feeling safer accessing the program virtually. Families attended the virtual *More Than Words* program between December and July 2021, when various pandemic restrictions were still in place. Since the program was virtual, there was no increased risk of exposure to COVID-19 through in-person sessions or commuting to the sessions.

One benefit that participants were divided on was childcare. Some appreciated not needing to use childcare because they were at home. This was especially beneficial at the height of the COVID-19 pandemic:

> "That's what's really nice, especially in December, January, February to not having to try and find someone to watch your child so that you can go." (P102)

Others felt childcare was necessary to remain engaged in the sessions. For families with a young child or multiple children, occupying their child for the 2.5-hr group sessions could be challenging. Specific challenges depended on the time of the group sessions. For example, families had to keep their children occupied while participating in daytime group sessions, and if the program was in the evening, it often interfered with bedtime:

> "Some other people tended to have to leave early to go put their kid to bed, and it was an hour-long process so they would miss a good chunk of the session every week." (P103)

One participant expressed that since their child knew they were home, they wanted the parent who was participating online to put them to bed even though the other parent was home, which would not have happened if that parent was not in the house. One of our questions in the interview was, "What would you tell a parent who is about to start the program?" Some participants recommended securing childcare.

Barriers

The most significant barriers participants identified were distractions at home. These included children, pets, and other people that were coming and going from the house:

> "My main takeaway was that other people I don't feel were as focused on the program as they would have been if you were in a classroom and didn't have your at-home distractions around you." (P104)

Depending on the family's home, they may not have a quiet space to access the group sessions. One participant had the added challenge of having multiple children at home doing virtual school. Distractions were also common in the one-on-one sessions, which previously were done at the family's home or at a clinic when the program was delivered in-person but were now all completed virtually. Some families did not have a quiet space in the home where the caregiver and child could go. Additionally, participants reported having to navigate other distractions for the child (e.g., other toys, children playing).

The program was delivered synchronously, which meant participants had to be available at a specific time each week for 2.5 hr. For some, sessions took place in the evening, and for others, sessions were during the day. When asked about their preferred time, participants had mixed responses but acknowledged some of the additional challenges associated with participating in evening sessions from home:

> "I felt like the sessions were long, and it was right around dinner time and going into bedtime routine, so that's kind of hard. I guess I would say that my

ideal time would have been one in the afternoon." (P115)

There were benefits and drawbacks to having the group sessions during the day (e.g., participants may have to take time off work, but the child might be in daycare) versus at night (e.g., participants had to put their child to bed, but once the child was asleep, participants did not have to worry about keeping them occupied).

The length of the sessions also had an impact. Many participants felt sessions were very long, especially given the virtual nature of the program. Virtual sessions felt especially long for some if they were in the evening after a long day of work. Some participants suggested that it would have been beneficial to have two shorter sessions per week instead of one long session.

Theme 2: Access to the More Than Words *Program*

This theme explored the different factors that impacted participants' access to the virtual program. Factors included technology and previous experience using the virtual platform.

Facilitators

While technology expertise was not a barrier for most participants, having previous experience using Zoom benefited many families. The COVID-19 pandemic started 6 months prior to families' *More Than Words* programs, and as such, many people had become familiar with Zoom by this time:

> "If we had started it last year it probably would have been tougher, but at this point [a year into the pandemic], we are pretty familiar with Zoom and troubleshooting the camera." (P116)

Previous experience with Zoom was also important for the SLPs facilitating the sessions. The SLPs shared their screen to show videos and presentations during the group sessions. They also had to create breakout rooms and monitor the use of the chat box. If SLPs felt uncomfortable navigating Zoom, participants noted it impacted the smoothness of the session.

Barriers

A few participants expressed having had issues with technology, with the primary one being unreliable Internet:

> "The disadvantages: we live out in the country, so my internet sucks." (P120)

Although many did not experience this issue, for those that did, it resulted in missing program content. One participant mentioned that when they had to miss an entire session because of Internet challenges, their SLP met with them separately later in the week.

Theme 3: Delivery Methods and Program Materials

This theme considers the various components of the *More Than Words* program and how they transferred to a virtual platform.

Facilitators

During each group session, the SLP covered the program's curriculum by going through slides, playing videos, and facilitating large and small group discussions. SLPs helped to facilitate dialogue between participants using breakout rooms on Zoom. The breakout room feature allowed a smaller group of participants to meet virtually for a short time. Many participants expressed that they enjoyed the breakout rooms and felt comfortable sharing information with others:

> "I truly felt comfortable. I think the size was good. It wasn't too many people that it gets you anxious to talk, and the fact that the SLP would make us all talk and put us in groups to talk together, I think that made it a lot easier to divulge information about our situation and what was happening." (P105)

Although many enjoyed the breakout rooms and the opportunity to connect with others, some participants mentioned that the breakout rooms were not always beneficial because there were instances where a participant had to step away from their screen to attend to something at home.

During the group sessions, the SLP would often show Hanen-made videos of parent–child interactions and subsequently facilitate a discussion about participants' observations. Families we interviewed described how useful the videos were in terms of helping them learn how the program strategies could be applied to live interactions with their child.

> "The SLP would show us a video of parents and they were interacting with the kids. That was very educational too because it also gives you an idea what you can try and do with each child." (P109a)

In addition to videos produced by the Hanen Centre, some participants mentioned that the SLP also shared

videos from other participants' one-on-one sessions. Participants found it helpful to see how their peers incorporated the strategies they learned into interactions with their children.

Barriers

In addition to the weekly group sessions, participants were assigned weekly reading from the parent guidebook (Sussman, 2012). Participants felt that the guidebook was an excellent resource and would be helpful after the program was done; however, many acknowledged that they often did not complete the assigned readings because of their busy schedules. Interestingly, when participants were asked what advice they would give families starting the program, a common idea was for participants to complete the assigned readings before the group sessions.

> "Yes, so the book that went along with the program, I did purchase the e-book version of that, and it was very helpful. I didn't read every single chapter that we were supposed to just because of time, but it was very helpful to have that on hand to refer back to when I was working on things on my own time." (P104)

In addition to assigned readings, participants had to create a home plan for the week that included identifying the goals they would work on with their child and what accompanying activities they would use. Given the extensive content that had to be covered during the group sessions, families often had to complete additional tasks such as the home plan outside of program time. In the case of the home plan, although it was supposed to be completed during the group session, it had to be scanned and sent back to the SLP weekly, which created an extra task for families. Privacy laws restricted families from being able to use other easier platforms to share the forms with their SLP (e.g., Google Docs). In addition to the home plan, there were other attachments sent to families weekly, and some participants found it hard to keep track of what they had to complete and send back:

> "It was fine doing paperwork during the two-and-a-half-hour session because we would work through things. But I found it hard to do any work outside of it and then scan it and send it back. We didn't do all of that because our life is so busy dealing with the number of kids we have and the special needs that we have. It was just too much." (P101)

Aspects of the one-on-one sessions were also identified as barriers within this theme. This program component was one that participants felt was highly beneficial but also very challenging given the virtual setting. Participants reported significant challenges related to camera set-up that was needed to allow the SLP to watch and record the parent–child interaction. Furthermore, some commented that their child was very active, which meant they had to constantly move the camera to ensure the SLP could observe what was happening. Some parents and caregivers reported being distracted by the added responsibility of monitoring the camera, which meant they were not as engaged in the interaction with their child as they might have been if the session were in-person. The need to monitor the camera was less challenging for families with an additional adult who could record and follow the child. Participants recommend that future program participants try to schedule their individual sessions at times when another adult would be available to manage the camera.

> "It was a little difficult, especially because I have a toddler that likes to run around all over the place, so it was hard to always have to hold the camera and try to be in it, do the activity with him." (P107)

Participants disagreed on whether they would prefer individual sessions to be held in-person. Some felt that there were certain parts of the interactions that SLPs missed or could not observe the same way as they would in-person. Others felt the virtual at-home option was better because children were in a comfortable environment versus being in a new place or with unknown people. Another benefit of being at home was that the family used their own toys and resources to facilitate the interactions. This was useful because they received feedback from the SLP that they could easily implement later (i.e., families were learning how to use their own toys for intervention).

Theme 4: The SLP–Caregiver Relationship

This theme captures the interactions between participants and their SLP and includes emotions participants felt when interacting with their SLP and specific characteristics of the SLP that helped enhance participants' experiences.

Facilitators

Despite group sessions being virtual, participants reported that the SLPs created an environment that allowed them to comfortably share their own experiences. One participant felt that this sense of comfort could be attributed to being at home and seeing the SLP also being at home.

> "I felt comfortable asking questions and sharing things about our family, and she made us feel really

comfortable. It wasn't like a clinical feeling, she made it feel more relaxed, but maybe it's because I'm like sitting in my house, doing it, and she's sitting at her house." (P101)

When considering specific characteristics of their SLP, participants said that they were caring and compassionate:

"She actually cared—like a milestone that my children would make, it felt like she was celebrating with you." (P106)

Participants expressed that they felt their SLP took time to listen to their concerns, which some said was unlike what they had experienced with other health care professionals. A common theme was that SLPs were encouraging while participants worked on implementing the strategies they were learning. This positivity was incredibly impactful for some families:

"She always said what I did a good job in, and that made me feel good because you don't always hear what you're doing good as a parent. And half the time you feel like you're not doing anything right." (P115)

In addition to feeling seen, the positive feedback and encouragement empowered participants to believe that they had the skills to support their child:

"...she really empowered us to do it, and made us feel like we were equipped, we were the best people to do the job." (P101)

Barriers

A few participants acknowledged feeling the relationship with their SLP was not the same as it would have been in-person. More specifically, that it was harder for the SLP to get to know them and their child in a virtual environment.

Theme 5: New Skills Learned

This theme includes opinions surrounding the specific strategies participants learned during the program and how they applied them in interactions with their children.

Facilitators

Participants reported learning strategies to support their child's development including playing alongside their child and getting down to their level to facilitate communication.

"The suggestion to like imitate him and get on his level was extremely helpful, because I found that it just made it a lot easier to be face to face to him and communicate directly with him and I found that he was a lot more open to it when we were down at his level." (P104)

In addition to learning specific strategies, some were surprised that they, as parents or caregivers, could support their child's development as opposed to relying on the SLP.

"I was shocked that some of those strategies worked. I thought the only thing that can help him is them going to a therapist and have them do their magic." (P111)

Participants also noted that the strategies they learned were easy to implement in their daily environment. Prior to starting the program, some participants thought they would have to completely alter how they interacted with their children, but during the program, they realized that it was more about making small changes to their approach. This knowledge made it feel more feasible for participants to implement strategies every day.

"I'm blown away how much I've learned and the difference in two and a bit months. It's not hard to do. It's very basic, simple strategies that you can do at home. The world of difference it makes is just astounding." (P120)

Even after the program ended, the feedback we received from the member check suggested that participants were continuing to use the strategies they learned in the program:

"Nearly a year after the program ended, we still use many of the strategies we learned." (anonymous study participant member check)

Barriers

Since the group sessions included families with children at different communication stages, families learned how to support children at all stages. Some participants who had a child at a different stage than the rest of the group (e.g., those with a child at the lowest/highest stage) felt the strategies discussed during group sessions did not apply to their child. They also had difficulty relating to others in the group who were not experiencing the same situations at home.

"A lot of the other kids in the program were at a higher level than my child was. I didn't feel bad talking about it. I was just like, okay, well, mine is

not that advanced. I'm not really getting anything out of him." (P108)

Although not all the strategies could be utilized with every child, in the member check survey, one participant expressed that it was still valuable to hear about all strategies because they learned how to approach interactions when their child moved to a new stage.

> "I think most of the strategies included in the program were relevant because it gave us an idea of how to manage the kid if the kid is growing from the Own Agenda stage to further stages. It covered strategies for all the stages." (Anonymous study participant member check)

Theme 6: Virtual Program Engagement

Our final theme captured virtual engagement between participants during the group sessions. This theme explored how participant interaction translated to the virtual environment.

Facilitators

Although participants could not meet in-person, many still enjoyed the opportunity to connect with others who had similar experiences. Participants also reported they no longer felt like they were alone because they were surrounded by others facing similar challenges.

> "You know, the first class I think everyone was crying because everyone's going around talking about their kiddos and, yeah, just realizing finally you have people." (P116)

In addition, participants felt more comfortable sharing their stories because others were in a similar situation and could understand what they were going through. Participants viewed the breakout rooms during the group sessions as valuable for connecting with others. The connection with other families was viewed as especially impactful because programs were run during the peak of the pandemic when many restrictions were in place. One participant described the isolating experience of receiving their child's autism diagnosis during the pandemic but noted the *More Than Words* program provided the opportunity to connect with others:

> "Nice to connect with families who are going through similar adjustments and learning at a time where especially during COVID it's been quite isolating just in general but getting a diagnosis like this for a family it's isolating in a different way, so it was nice to have that connection." (P116)

In addition to connecting with others, participants reported learning about other information and resources that were not part of the *More Than Words* program from their peers. Some families that had recently received an autism diagnosis connected with more experienced families to learn about additional developmental supports.

> "I think my son was one of the youngest and at one of the earliest stages in terms of their language development. So, some of the other participants were able to say my child was in that stage earlier and this is what helped them." (P105)

Participants also reported learning about specific toys families found helpful and even about strategies for facilitating teeth brushing:

> "One day we had a conversation about toothpaste because we had a dental hygienist in our group. None of our kids like getting their teeth brushed, so we were talking about different techniques." (P103)

Despite the virtual environment, participants found ways to connect with their group. For example, participants created private group chats external to opportunities organized by The Hanen Centre or SLP to stay connected throughout their program. Some even connected with group members after the program was over and set up playdates.

> "One of the parents in our group did start a private Facebook group for us to stay connected." (P114)

During the member check, one participant disagreed with our preliminary conclusions about virtual engagement because their group did not meet outside of program time; therefore, it is important to note that not all participants were part of a group that stayed connected outside of the program. Although not all the participants were involved in private chats, during the member check one participant said they wished they were:

> "I wish we had a Facebook group to stay connected and learn and exchange ideas from each other." (anonymous study participant member check)

Barriers

Even though participants found ways to connect with others, many felt the virtual program was not the same as it would have been in-person. For example, since everyone was using Zoom to access the program, participants logged on right when sessions started, so they missed opportunities to talk to the person who would

have been beside them if the session were in-person. Similarly, participants stepped away from the screen during breaks, so opportunities for informal discussion and social interaction were missing. Some participants acknowledged that the virtual environment made it challenging to connect with others in the group.

> "Only seeing each other on the computer screen, you don't get that intimacy that you would get. And that building of trust and sharing. . .that wasn't there in the virtual. I think that made the sessions feel extra long." (P102)

Discussion

Overall, participants reported positive experiences in the virtual *More Than Words* program, but challenges associated with virtual delivery were identified. The adapted Dynamic Knowledge Transfer Capacity model guided our analysis process, and our results support the use of this model. More specifically, this model allowed us to organize different aspects of participants' experiences by six virtual delivery factors. Within each of these factors, we described the facilitators and barriers families experienced.

As virtual services were used extensively during the COVID-19 pandemic, and are likely to continue as one service delivery modality (Kwok et al., 2022), it is critical that clinicians, managers, and programs understand the diversity of families' experiences so that services can be meaningful and impactful for families. As such, this discussion focuses primarily on the clinical implications of our study findings. Our results have clinical implications for the virtual *More Than Words* program but will also be applicable to other virtual parent-mediated programs delivered by rehabilitation health professionals.

From the perspective of families, a main benefit of the virtual program was convenience, a factor previously identified as a benefit of teletherapy (Molini-Avejonas et al., 2015; Santoro et al., 2021). In addition to the cost and time-saving benefits, some families liked having both parents participate. Furthermore, the virtual program format eliminated access to transportation as a barrier to participating. One family in this study only had one car so if the program had been run in-person, they may not have been able to participate. Offering a virtual program addresses previous concerns about in-person services not being accessible for working families or for all family members (Patterson & Smith, 2011). The virtual adaptation of *More Than Words* ensured the program was accessible to families, during the COVID-19 pandemic. Beyond the pandemic, clinicians and organizations should consider offering a virtual option for some families, as many have busy schedules, mobility or geographic limitations, and/or children with complex needs.

Childcare was one factor that participants were undecided about, with some expressing a benefit of the virtual program was that it eliminated the need for childcare, while others felt childcare was necessary to ensure engagement during the group sessions. While previous research has suggested virtual programs minimize childcare challenges (Santoro et al., 2021), our participants reported different experiences. Clinicians should schedule sessions at a time when children are either cared for (e.g., at childcare or school) or sleeping, or recommend participants consider organizing childcare. The Hanen virtual *More Than Words* program (Erdmann et al., 2019) does encourage families to find childcare or an activity to keep their child occupied during the group session, but given families in this study were participating during the pandemic, childcare may not have been an option. Furthermore, the timing of group sessions may have impacted families' abilities to access childcare. Our study has shown that not all virtual programs have the benefit of eliminating the need for childcare. In addition to childcare, previous research has suggested that it is important for participants in virtual programs to identify and have access to a quiet space where they can access the program without distractions (Law et al., 2021), an issue also identified by our participants.

The length of the group sessions was an area participants identified as needing consideration. Garnett et al. (2022a) previously reported that most of their participants found the length of the virtual *More Than Words* group sessions appropriate; however, multiple participants in our study felt they were too long. This may be attributed to the program being delivered during a time when everything was virtual. For example, because of pandemic-related restrictions, participants may have been spending time on Zoom for work, school, and social activities, which could have made sessions feel too long. Additional work would be needed to substantiate this hypothesis. Future programs could consider offering families the option to access the program twice per week and shortening the group sessions to hopefully minimize Zoom fatigue. Shorter group sessions may also make it easier for families to secure childcare.

Although not many participants in our study reported significant issues with technology, some did. Technology-related issues associated with Internet connection are commonly reported as barriers to virtual service delivery (Molini-Avejonas et al., 2015; Santoro et al., 2021), and such challenges are likely to be an issue in the future. As a result, those developing and delivering virtual programming should consider how they can adapt their services when

technology issues arise. For example, if clinicians received consent from all participants, they could record synchronous group sessions, allowing participants to review later if they could not attend in real-time or if they missed a portion due to Internet connectivity challenges. Although this may mean a different learning experience, it could provide participants with some program content. Participants could then follow up with their SLP with questions. Clinicians may also need to be flexible in terms of how program content is delivered. As an example, one of our participants reported that their SLP met with them individually to review the material for a missed session. Internet issues were most noted by those living in rural communities, which is another factor that must be considered. Previous research has suggested offering families the option to use a clinic, school, or even community center with more reliable Internet (Simacek et al., 2020). Offering access to such locations may also remove accessibility barriers for families without the necessary technology to participate in a virtual program comfortably. Although this option would involve families travelling to a separate location, it may not be as long as commuting to the therapist's office.

The families we interviewed did not have any issues using Zoom because they had prior experience. Future virtual programs should consider using common or familiar platforms. If using unfamiliar platforms, programs could provide a tip sheet for navigating the platform so participants can focus on the sessions rather than worrying about using the platform (Geller, 2021). Although none of the families we interviewed mentioned having completed a tech check, the manual for delivering a virtual *More Than Words* program (Erdmann et al., 2019) provides clinicians with details on what families should test prior to their first session. Ensuring families feel comfortable navigating the virtual platform prior to the first session could reduce barriers to participation.

The live one-on-one session with the SLP was the most challenging program component for participants in our study. The primary issue was related to balancing managing the camera/recording and facilitating the interaction. To ensure participants can focus solely on working with their child, clinicians could recommend having an additional person present to support recording. This suggestion is included in the Hanen program guide (Erdmann et al., 2019), but SLPs could also highlight this recommendation prior to individual sessions to support family engagement. Another option may be to conduct the individual sessions in-person. The one-on-one sessions were described by one interviewee as the "meat and potatoes of the program" (P112), so it is important that both families and clinicians have a successful experience. Depending on the location of the family and that of the clinician, the virtual manual does provide the option of having the one-on-one sessions in-person; however, this was not possible in the context of our study. An in-person option may be particularly helpful for families when there is not an additional adult to hold the camera. It is important to note that some families saw benefits to being at home. Although it may not always be possible, research for improving the effectiveness of virtual therapy has shown that it is important to consider adapting the program to each individual family's needs, to ensure a more person-centered approach to services (Hines et al., 2019). For example, clinicians could provide families with the option to choose a location for their individual sessions that would best support their child's success.

Although many participants reported a positive relationship with their SLP, many felt that it was not the same as it would have been in-person. Previous research has reported that the virtual environment results in a less personal relationship as it can be more challenging to form a connection virtually (C. Stewart et al., 2021) and requires more effort from clinicians to build rapport (Akamoglu et al., 2018). Families may have lacked a sense of connection because the primary focus of the *More Than Words* program is on the parents/caregivers learning strategies to support their child rather than facilitating personal connections. Clinicians delivering virtual programs should be conscious of this issue and make concerted efforts to address it. For example, clinicians could troubleshoot potential technical issues ahead of time as it has been suggested that being comfortable using the technology and virtual platform allows clinicians to focus on the client during sessions (Geller, 2021).

Group composition was a factor that many participants discussed in their interviews. Some enjoyed having children at various skill levels, while others felt they were learning strategies that were not applicable to their child. Some participants whose children were at a higher social communication stage felt that they were learning strategies that would never be applicable to them. This finding is consistent with the results of an earlier study of the in-person *More Than Words* program in which parents suggested that it would be more helpful to group participants by their child's stage (Patterson & Smith, 2011). However, some participants, especially those who had a child at a lower stage, found it useful to learn about all the communication stages so that they would have strategies to use in the future. Future research could explore the benefits and drawbacks of more heterogeneous groups and how this might impact parent/caregiver and child outcomes.

A study of the in-person *More Than Words* program reported that the support participants received from others in the group was one of the benefits of the

program because it gave them someone to share similar experiences with (Patterson & Smith, 2011). Participants in our study reported a similar experience despite the program being delivered virtually and during the pandemic. Together, results from both studies suggest the *More Than Words* program provides a platform for families to connect with others going through similar experiences. Despite many participants expressing that they enjoyed connecting with other families, the virtual format did not afford as much time for informal social connection as unstructured time to interact with others was lacking. One way to mitigate this issue is by using breakout rooms and providing participants with additional opportunities for informal discussion. Another way participants tried to stay connected was by creating group chats on social media or through text messaging. Although it would not be appropriate for the SLP to be part of informal group chats, they could encourage participants to use technology to stay connected, which may provide additional support for families.

Limitations

This study had some limitations that must be acknowledged and considered when interpreting the results. First, the study was only offered to some families that had recently participated in a virtual *More Than Words* program, specifically those whose SLP was aware of the study and had agreed to support recruitment. All participants were volunteers who wanted to share their experiences. Families who chose not to participate may have had different experiences, and it is possible we are lacking experiences from families with technology limitations, busy schedules, or negative experiences in the program. Self-selection bias is common in interview studies, and due to participation being voluntary, not something that can be eliminated (Robinson, 2014). To encourage participation and minimize self-selection bias, we offered compensation to study participants and flexibility when scheduling interviews.

There is also a possibility of a social desirability bias, where participants provide responses that they think are expected, as opposed to what they actually experienced (Bergen & Labonté, 2020). To mitigate this issue, the interview guide was developed to include questions about both the positive and negative aspects of the virtual program. The way in which the interview guide was developed, combined with participants sharing both positive and negative feedback, led us to feel confident that participants shared their entire experiences.

It is also important to note that the families participated in the program during the COVID-19 pandemic at a time when significant restrictions were in place, which means that their experiences were likely at least slightly different than those of families who might participate in the virtual program under more typical circumstances. Furthermore, some study aspects were uncontrolled. Specifically, although SLPs delivering the program had access to the Hanen telehealth manual (Erdmann et al., 2019), they did not receive any additional training in telehealth service delivery, and fidelity measures were not taken for parents or SLPs. Sampling for families who participated was purposeful and may have impacted the results and generalizability of the findings. The findings of this study are highly contextualized, and future research and different research methodologies (e.g., mixed methods) could expand on the findings. Including fidelity measures for both SLPs and parents may also help explain any differences in participants' experiences. Finally, participants had not previously attended the *More Than Words* program in-person, so while some felt that their experience might have been different, this was only based on expectation.

Future Research Directions

This study focused solely on the experience of families in the virtual *More Than Words* program, but future research should also consider exploring the perspectives of SLPs who deliver the program. There is currently no research on SLPs' experiences delivering program content and coaching participants virtually. For example, some participants thought that the SLPs missed seeing certain aspects of the caregiver–child interaction during the virtual one-on-one sessions. It would be interesting to hear directly from the SLPs whether they felt they missed observing parts of the interactions and, if so, to what extent this impacted their ability to support the family. Furthermore, SLPs may have suggestions or insight into adjustments that could be made to create a better experience for all participants, which could be especially useful information for less experienced SLPs or those delivering the program virtually for the first time.

Conclusions and Clinical Implications

Although many participants expressed having a positive experience in the virtual program *More Than Words*, areas for improvement were identified and these have been highlighted as recommendations for clinical practice. Specific considerations include: (a) adjusting the time and duration of group sessions to minimize Zoom fatigue, (b) incorporating more opportunities for participants to interact with each other during the group sessions (e.g., breakout rooms) and encouraging connection outside of the sessions (e.g., virtual groups and chats), (c) providing families with a tip sheet for ensuring a positive experience before

>starting the program (e.g., organize childcare, have another adult present for the one-on-one video sessions if possible), and (d) being aware that families may be more likely to feel disconnected from their SLP and taking action to ensure families feel heard and supported. Although this study focused on exploring families' experiences in the virtual *More Than Words* program specifically, results and clinical implications may apply to other virtual programs, particularly those that include virtual parent training sessions.

Data Availability Statement

The anonymized data sets generated and analyzed during the current study are available from the corresponding author on reasonable request.

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