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# EBBP *briefs*

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SUPPORTING CAREGIVERS OF CHILDREN WITH  
COMMUNICATION DISORDERS OR DELAYS  
THROUGH TRAINING AND COACHING: COMPARING  
TELEPRACTICE AND IN-PERSON DELIVERY METHODS

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# EBP Briefs

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## Structured Abstract

**Clinical Question:** Do caregivers of young children with communication disorders or children with delays/deficits in social-communication skills who participate in training and coaching on communication strategies via telepractice compared to those who participate in training and coaching on communication strategies in person show enhanced knowledge and/or practice and satisfaction with the intervention's procedures and outcomes?

**Method:** Scoping Review

**Study Sources:** EBSCO, ProQuest

**Search Terms:** caregivers OR children OR disability OR training OR coaching OR telepractice

**Number of Included Studies:** 5

### Primary Results:

1. Caregivers' knowledge and children's communication skills increased through training and coaching.
2. Results indicate that there were similar outcomes for both telepractice and in-person delivery methods.

**Conclusions:** Although there is an increase in research about the effectiveness of telepractice for adult learning (American Speech-Language-Hearing Association [ASHA], 2020; Casale et al., 2017; Meadan et al., 2013, 2020), there is limited literature that compares using telepractice and traditional in-person delivery methods. The evidence from this literature review supports training and coaching caregivers who have children with communication disorders or children with delays/deficits in social-communication skills to increase knowledge and promote empowerment via both in-person and telepractice delivery methods. Results indicate that although there was an increase in caregiver knowledge and child communication with both delivery methods, participants noted some limitations of the telepractice delivery method. Conclusions can be drawn about the importance and benefits of telepractice as a way to enhance and support the learning. Telepractice might not replace traditional in-person delivery methods but could be used to supplement in-person training and coaching.

# Supporting Caregivers of Children With Communication Disorders or Delays Through Training and Coaching: Comparing Telepractice and In-Person Delivery Methods

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## Clinical Scenario

Avery, a speech-language pathologist (SLP), has worked with young children with autism spectrum disorder (ASD) and other developmental disabilities and their families for the past 15 years. Avery's primary clinical areas include increasing children's social-communication skills in preschool settings and providing training and coaching to caregivers. Most of Avery's clients are referred by early intervention agencies in the state and have limited hours; naturally, Avery emphasizes training and coaching the caregivers to support their own children by providing additional opportunities to practice the skills and generalize them to other settings and contexts. When the coronavirus disease 2019 (COVID-19) began spreading, many of Avery's clients canceled sessions and subsequently reported regression of their children's skills and aggravated challenging behaviors of some children because of disrupted daily routines. Avery communicated with her clients by text messages, phone calls, and emails, but this was not nearly enough compared to the level of services the clients received before the pandemic. As COVID-19 worsened and social-distancing became a "new normal," the need for finding an alternative way to deliver intervention became more and more obvious.

Avery considered using telepractice technology such as a two-way live video conferencing application to deliver sessions, but her clients felt unsure because they were not familiar with this method. For most of Avery's younger clients, it did not seem feasible to provide direct services because they would not be able to sit in front of a screen and follow a clinician's directions for a long period of time. Thus, interventions that could be delivered by telepractice seemed to include: (a) training and coaching caregivers to use evidence-based practices (EBP) with their children at home with help from the clinician and (b) reviewing

caregiver goals and managing cases from a distance. Although Avery was glad to have an option of delivering telehealth interventions, she wondered what the literature suggested about providing training and coaching to caregivers via telepractice instead of a traditional, in-person method. Avery decided to conduct more research using literature on this topic.

## Background Information

Developing social-communication skills is a fundamental part of early development and essential for later social relationships and academic success (Kaiser & Roberts, 2011). However, many young children with disabilities or delays have deficits or delays in social-communication skills that impact their everyday life. In some instances, these deficits are expressed in forms of challenging behaviors because children were not yet taught how to communicate in a socially acceptable way. Therefore, it is important to consider that challenging behaviors that manifest in young children with disabilities are communicative in nature. Best practices for working with young children with disabilities and delays include working in the natural environment, such as the child's home or preschool classroom, and with the natural change agents such as parents or teachers (Division for Early Childhood, 2014). SLPs who work with young children with disabilities or delays can support children's development by training and coaching parents to use EBP with their children in the natural environment. Training and coaching caregivers to use EBPs with their children (i.e., parent-implemented intervention) could provide children with more opportunities to practice and learn social-communication skills in the natural environment and, therefore, enhance their learning and development. In addition, training and coaching could

empower parents and enhance the family's quality of life (Biggs & Meadan, 2018). Researchers have reported that parents can learn evidence-based practices and implement them effectively with their children (Kaiser & Roberts, 2011; Meadan et al., 2009, 2016) and parent-implemented interventions for young children with disabilities have been found to be effective in enhancing children's communication repertoires and skills in other domains (Biggs & Meadan, 2018; Hume et al., 2021; Meadan et al., 2016).

In recent years, there has been increasing interest in research and practice in the promise of web-based and telepractice for service provision and to support family members of children with disabilities (ASHA, 2020; Casale et al., 2017; Meadan et al., 2013, 2020). ASHA adopted the term telepractice rather than the frequently used terms "telemedicine" or "telehealth" to avoid the misperception that these services are used only in health-care settings. Services delivered by audiologists and SLPs are included in the broader generic term "telerehabilitation" (Brennan et al., 2010). There are a number of potential advantages offered by telepractice, including the possibility to offer the flexibility needed for SLPs to work with families in natural settings in their home.

Telepractice, or using telecommunication technology to deliver supports and services, can be accessible, cost-efficient, flexible, and useful in achieving treatment integrity for both SLPs and caregivers (Baggett et al., 2010; Ferguson et al., 2019; Kyzar et al., 2014). Furthermore, the threats of the current pandemic and global movement of social-distancing make it extremely difficult for stakeholders (e.g., families, professionals) of children with disabilities. Colizzi and colleagues (2020) conducted a survey with 527 family members of individuals with ASD in Italy, where COVID-19 became particularly obstinate. The majority of the participants (93.9%) reported that the situation for their families was challenging, more so than before the outbreak. Because of the loss of regular routines (e.g., going to school), most participants reported challenging behaviors and a need for more in-home support. Moreover, researchers and practitioners recognize the danger of service interruptions and the need to continue providing necessary services even during the pandemic (Colombo et al., 2020). This also made examining service delivery via telepractice very practical and timely.

## Clinical Question

To guide the literature search, Avery formulated a PICO (population, intervention, comparison, outcome) question. The goal was to explore the literature to find out how interventions using telepractice technology for children with communication disorders/delays compare to traditional in-person interventions. Using the PICO question, Avery explored (a) the population of young children with communication disorders or delays in social communication, (b) the intervention of training and coaching caregivers on communication strategies, (c) the comparison between two delivery methods, and (d) the outcomes for caregivers. Her question was: Do caregivers of young children with communication disorders or children with delays/deficits in social-communication skills (P) who participate in training and coaching on communication strategies via telepractice (I) compared to those who participate in training and coaching on communication strategies in person (C) show enhanced knowledge and/or practice and satisfaction with the intervention's procedures and outcomes (O)?

## Search for the Evidence

Avery conducted a systematic review to find articles that compared telepractice and in-person delivery of services focusing on caregiver-implemented interventions for children with communication disorders or delays. Avery used the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA; Moher et al., 2009) to guide the search process. To begin, Avery identified keywords to include in the search such as caregivers OR children OR disability OR training OR coaching OR telepractice. The inclusion criteria included studies that: (a) were conducted in the United States, (b) focused on social communication skills, (c) had children with disabilities or communication delays, (d) included a family member or guardian who received training and/or coaching, and (e) compared intervention delivery methods of in person and telepractice. When keywords and search terms were specified, studies that did not focus on children and were not peer-reviewed were excluded. Using EBSCO and ProQuest databases, the search yielded 172 records which then were screened by their title and abstract. Finally, Avery conducted a full-text review using the inclusion criteria. Additional articles were identified via a backward and forward search. This included

reviewing the (a) reference lists of each of the included articles and (b) articles that cited the included articles. After reviewing all the records that were found through the initial search and the ancestral search, Avery identified five articles that met all inclusion criteria.

## Evaluating the Evidence

After conducting the thorough search, Avery found five articles that fit within the criteria and she wanted to critically evaluate the literature to support an evidence-based decision (see Table 1). Within these five articles, diverse approaches were used to evaluate interventions to train and coach caregivers of children with disabilities and also to evaluate the two methods of intervention delivery (telepractice and in person). The participants in the five articles included parents of children with disabilities ( $n = 180$ ) ranging from two through 107 in each study. Ages of the children who were included in the identified studies ranged from 21 months through 10 years ( $M = 57.45$  months). Methods included quasi-experimental, single-case research, and randomized controlled trials (RCT). Because of the diverse methods that were used for each of the studies identified, Avery decided to summarize each study and compare findings among them to help guide the decision.

The first study that Avery reviewed evaluated parents' behaviors when communicating and interacting with their children, child communication acts, parent knowledge and implementation, as well as compared delivery methods (McDuffie et al., 2013). Using a quasi-experimental design with A-B replication, the eight mother-child dyads were divided into two groups. The intervention focused on teaching parents to use indirect communication prompts, prompt child communication acts, and response to child communication acts. The researchers conducted the coaching sessions for both groups of participants. One group received coaching in person and the other group was coached via telepractice, yet both groups attended in-person sessions once a month. Results with both delivery methods indicated that desired parent and child behaviors increased over the course of the intervention. Furthermore, Avery noticed that no significant difference between the delivery methods of in person and telepractice were found.

In the second study, the primary focus compared the outcomes associated with the different methods of delivery (Lindgren et al., 2016). The study involved 107 parents of children between the ages of 21 and 84 months ( $M = 49.95$

months) with either a diagnosis of ASD or a developmental disability. Using a multi-element, single-case design, parents were trained to conduct a functional assessment of their child's communicative behaviors. Participants were assigned to one of three groups of delivery: (a) traditional in-home, in-person delivery; (b) clinical telepractice where a therapist delivered services in a different room than the parent/child but within the same building; or (c) in-home telepractice where families were in their home and therapists were at their clinic setting. Using an analysis of variance (e.g., continuous variables), the authors found there was a decrease of costs associated with using telepractice, even with the cost of technology. Also, Avery learned that when services were completed within the home, there was a greater reduction of challenging behavior and increased communication than when the intervention occurred in a regional clinic. However, the authors did note that specific challenges within in-home telepractice treatment included distractions of other things within the home environment (e.g., family members, pets, etc.).

The next study that Avery evaluated was an intervention focused on decreasing challenging behavior while increasing parent knowledge and compared the use of telepractice with in-person delivery (Kuravackel et al., 2018). This study consisted of 33 participants (e.g., parent/child dyads) with the child's average age of 96 months. Using an RCT over 18 months, a pre- and posttest control-group design assessed variables of challenging behavior, parent competency, parent stress, group alliance (e.g., building relationship and community with other parents of children with disabilities), and parent satisfaction with the treatment. Participants were included in one of three groups: in person, telepractice, or waitlist control. The intervention for parents included individual training and coaching with coaches and support groups with other parents. Results showed that those within the in-person and telepractice conditions had decreased challenging behavior posttest scores, but there was no statistical difference between the comparison groups.

The fourth study compared in-person and telepractice methods of parent-implemented intervention to improve parents' communicative behaviors to support their child's communication skills during play (Hao et al., 2021). This study focused on 30 parent/child dyads. Children were between the ages of 1 and 10 years ( $M = 58$  months). The participants were split equally between telepractice and in-person delivery methods and received six 1-hour weekly

individual sessions. Those in the in-person delivery group had two clinicians; one clinician provided training while the other demonstrated with the child. Following the teaching portion of the training, the parent had an opportunity to engage and practice the skills that were just taught while receiving ongoing performance feedback. Then there was a 10-minute uninterrupted observation of the parent/child dyad. Those within the telepractice delivery group only had one clinician implement the training. This clinician provided extensive details and shared video demonstrations to support the adult learner; the remainder of the session consisted of observation with feedback while the parent implemented the strategies and then an observation without feedback. Avery found that parents and children in both groups demonstrated positive behavior changes without significant difference regardless of the intervention delivery method.

The final study compared telepractice and in-person delivery to promote social communication (Baharav & Reiser, 2010). This study included two participants, and the authors implemented a single-case repeated measures design to evaluate the effects of the intervention. Two parent/child dyads received intervention for 50-minute sessions twice a week; one dyad participated in in-person sessions and the other dyad participated in half in-person and half telepractice sessions. These sessions included training as well as performance feedback to promote effective parent behavior to then promote children's social communication. One of the study's measures was qualitative reports from the participants. Findings from the qualitative reports revealed that telepractice was as valuable as the in-person delivery method and that parents would recommend using telepractice to others. The researchers also measured the children's social communication skills, and both participants made gains in their communication and interaction skills within both treatment models. Some constructive feedback was also provided by participants including technical aspects such as using a wireless headset and the feasibility of staying within the camera frame throughout the session. Other feedback included that the clinic's room was a more controlled environment and more difficult for natural engagement.

Although there is a growing body of research on caregiver-implemented communication interventions supported through telepractice (Akemoglu et al., 2020), there is limited information about the comparison between face-to-face/in-person training and coaching versus

telepractice training and coaching for caregivers. Avery learned that there was literature to support using telepractice to provide services within the natural environment. Following the in-depth review and analysis of the five articles, Avery learned how the different methods provide various positives to adult learning and positive behavior change in children. Some important findings from the various articles included: (a) costs can be decreased by up to two thirds when using telepractice (Lindgren et al., 2016), (b) relationships between parents and clinicians can be developed via telepractice (Kuravackel et al., 2018), and (c) participants are pleased with the experiences of telepractice and would recommend it to others (Beharav & Reiser, 2010). Among the studies that were reviewed, Avery noticed that there was no statistical significance difference between delivery methods related to participants' behavior changes; however, she could draw some conclusions about the findings using the participants' feedback.

Avery then noted some areas that could make telepractice challenging. When using telepractice, there is minimal opportunity for hands-on learning directly from the clinicians. For example, Avery noticed that the studies that used in-person training included child-specific demonstrations from clinicians (Hao et al., 2021), whereas the distance learners relied on examples from prerecorded videos or verbal explanations. This can make the training less personal and more challenging for caregivers to transfer the knowledge when explicit demonstrations are not provided. Avery also noted challenges related to using technology such as how those in rural areas may be affected as well as those who may not be able to minimize distractions and stay within camera range to be fully engaged with the therapists (Hao et al., 2021; Lindgren et al., 2016). Encouraged by the findings of this literature search and feedback from participants within the studies, Avery noted that in-person training and coaching is not meant to be replaced, but instead, could be supplemented with telepractice.

## The Evidence-Based Decision

Toward the end of this process, Avery attempted to synthesize all the information from the identified studies to make an informed decision about clinical practices and came to the following conclusions. First, there were few significant differences between the two methods of session delivery (i.e., telepractice and in person) among the five studies. In

other words, studies revealed that the caregivers' behavioral changes across groups who received interventions via telepractice and face to face/in person were not significantly different. For example, Hao and colleagues (2021) reported that there was no significant group difference between the two delivery methods in any of the caregiver or child outcomes and that it indicated that the interventions showed similar effects across both groups regardless of the delivery methods. McDuffie and colleagues (2013) similarly reported that using target strategies of participants in the telepractice group increased as much as the participants who received in-person intervention. As such, it became clear to Avery that clinicians may be able to produce similar results using telepractice as they do in person.

In addition, Avery knew that evaluating the acceptability and feasibility of the caregivers is important when considering using telepractice in home settings, especially given that caregivers are the ones who will facilitate the sessions. Avery noted that some studies reported some level of acceptability and feasibility of using telepractice with caregivers. For example, Lindgren et al. (2016) reported that the caregivers' ratings of acceptability for both methods did not differ between the two groups with very high rating scores. Kuravackel et al. (2018) reported that the satisfaction ratings across two groups of participants in person and telepractice were both high (80% or better) and showed no significant differences. They also noted that caregivers' level of both fidelity and satisfaction did not differ across groups, and the "therapeutic alliance" was preserved in both groups (p. 413). Similarly, McDuffie and colleagues (2013) assessed the acceptability and feasibility of their intervention, including the telepractice component. Caregivers in their study reported a high level (6.63 out of 7 total points) of agreement with the statement that telepractice coaching sessions were helpful to them. In addition, these caregivers also reported a high level (6 out of 7 total points) of agreement about the benefit of distance sessions compared to in-person sessions. Its implication is especially significant given that the caregivers in this study received interventions in both methods. There were some notable limitations that inevitably had some disruptions of the home routine and environment (Lindgren et al., 2016) such as in-home telepractice sessions or the heterogeneity of participants' demographic characteristics (e.g., high level of education) among these studies (Hao et al., 2021).

With the present evidence, Avery disseminated the findings with her colleagues at the clinic with the hope

that this would help other clinicians make informed decisions regarding using telepractice. Despite COVID-19 continuing, Avery will be able to ensure high-quality services with her clients using telepractice.

## Authors' Note

Rebecca Hacker is a doctoral candidate in special education at the University of Illinois at Urbana-Champaign. Her research focuses on social-communication interventions for young children who use augmentative and alternative communication and caregiver-implemented interventions.

James D. Lee is a doctoral candidate in special education at the University of Illinois at Urbana-Champaign. His research focuses on building capacity of caregivers of children with autism spectrum disorder and other developmental disabilities in low-resource settings in the areas of behavior analysis and social communication.

Hedda Meadan is a professor and the Goldstick Family Scholar at the Department of Special Education at the University of Illinois at Urbana-Champaign. Her areas of interest include methods for promoting the social-communication skills of children with disabilities and strategies for supporting caregivers and professionals in implementing evidence-based practices.

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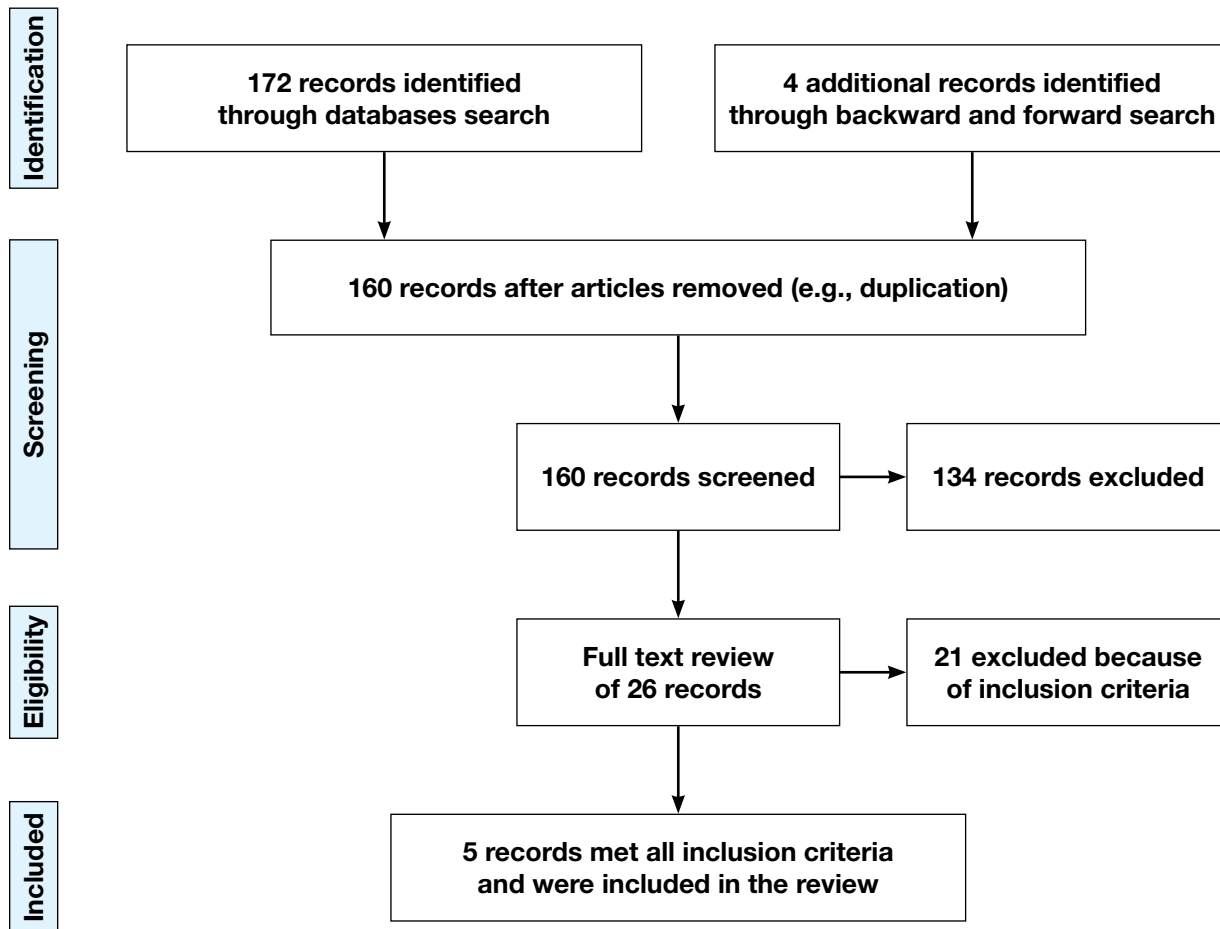
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Figure 1. The PRISMA Process to Identify Articles for the Review



**Table 1. Articles Included in the Literature Review**

Article	Participants	Method	Telepractice description	Key outcomes
McDuffie et al. (2013)	8 parent/child dyads	Quasi-experimental	Cohorts attended in-person trainings once per month with weekly coaching sessions. Coaching was delivered via in person or telepractice.	Increase in parent and child behaviors; no significant differences between behaviors and delivery methods.
Lindgren et al. (2016)	107 parent/child dyads	Single-case design	Participants in three different delivery-method groups received 60-minute sessions weekly via: (a) in person, at home; (b) clinic telepractice; or (c) in-home telepractice.	Increased parent knowledge to manage child's behavior and teach replacement behavior (e.g., functional communication training). The telepractice delivery had lower costs.
Kuravackel et al. (2018)	33 parents	Randomized controlled trial	Three groups of participants received an 8-week training: (a) in-person, (b) telepractice, or (c) waitlist control.	Increased parent knowledge and decreased child challenging behavior. There was no statistical significance between delivery methods.
Hao et al. (2021)	30 parent/child dyads	Randomized controlled trial	Two groups of participants received 1-hour individual sessions for 6 weeks at a university clinic via: (a) in person or (b) telepractice.	Increased child communication skills, yet no significant difference between delivery methods.
Baharav & Reiser (2010)	2 parent/child dyads	Single-case design	Participants received training twice a week for 50-minutes each: one dyad participated in person; one dyad participated in half in-person, half telepractice.	Child communication gains were noted within both delivery methods. Parents reported satisfaction with telepractice but found more challenges with receiving training remotely.