A Multi-Methods Study of Caregiver Coaching in Listening and Spoken Language Practice

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Dedicated to my son whose diagnosis set me on this journey.

He has taught me that no expectations are too high,

nothing is impossible if you are willing to work hard,

and surpassing everyone's expectations is

a worthy and attainable goal.

But most importantly,

"*We can do hard, things, Mom. Look at how far we've come*."

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List of Abbreviations

AVT	Auditory-Verbal Therapist/Therapy
CoP	Community of Practice
DHH	Deaf or Hard of Hearing
EHDI	Early Hearing Detection and Intervention
EI	Early Intervention
FCEI	Family Centered Early Intervention
ID	Interpretive Description
JCIH	Joint Committee on Infant Hearing
LSL	Listening and Spoken Language
LSLS Cert. AVT/AVEd	Listening and Spoken Language Specialist Certified Auditory-Verbal Therapist/Educator
PALS	Participatory Adult Learning Strategy
SLP	Speech Language Pathologist
ToD	Teacher of the Deaf

Acknowledgements

None of this would have been possible without the unwavering support of my supervisor, Elizabeth Fitzpatrick, who championed and encouraged me throughout this experience. You have been as much a mentor as a supervisor, and I am so grateful for the time, effort, and energy you have invested in me. I am also grateful for my outstanding Thesis Advisory Committee: Sheila Moodie, Beth Potter, and Ian Graham. I have learned so much from your feedback, and I could not have asked for a better team to guide, challenge, and encourage me throughout this process. I would also like to thank the Child Hearing Lab at CHEO Research Institute, especially JoAnne Whittingham, who patiently answered my questions and was always willing to help. I would also like to thank my lab colleagues and cohort for being a source of encouragement and support throughout this process. Additionally, I would like to express my immense gratitude to the participants who shared their stories with me. It was an honor to partner with you in this research.

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Preface

This research was approved by the University of Ottawa Research Ethics Board (H-11-19-5210) and the CHEO Research Institute's Research Ethics Board (19/106X) (See Appendix K for ethics approval and Appendix J for consent forms.) The doctoral candidate completing this dissertation, Dorie Noll, participated in all aspects of the study conceptualization, design, and implementation, and is responsible for the analysis and interpretation of the data and presentation of the results.

Contribution of Collaborators

In compliance with University of Ottawa's Academic Regulation 11-7 for theses, the contributions of the collaborators involved in the research process are outlined below.

Research Team Collaborators

The primary researcher, Dorie Noll (DN), conceptualized, led, and participated in all aspects of the research process and accepts full responsibility for each article and the dissertation as a whole. The Thesis Advisory Committee was selected for each member's methodological and/or content expertise and offered guidance on the research design, approved the research proposal, and reviewed and contributed to each chapter included in this dissertation. Main collaborators included my supervisor, Elizabeth M. Fitzpatrick (EMF), and committee members Sheila Moodie (SM), Beth Potter (BP), and Ian D. Graham (IDG). Additional collaborators are outlined below.

Scoping Review (Chapter 2)

DN performed all screening, data extraction, analysis, and synthesis and wrote the original draft of the manuscript. Karine Fournier, Research Librarian at the University of Ottawa, assisted in developing the search strategy. Danielle DiFabio (DF) and Viviane Grandpierre

provided secondary screening and DF verified the data extraction. EMF and SM provided guidance and helped resolve discrepancies. EMF, SM, BP, and IDG reviewed and approved the final manuscript. This article has been previously published in the Journal of Deaf Studies and Deaf Education.

Caregiver and Practitioner Articles (Chapters 3 and 4)

DN developed the interview guide, produced all recruitment and consent materials, and obtained ethics approval prior to conducting the interviews. JoAnne Whittingham (JW) assisted with the development of recruitment and consent materials and the ethics application. DN scheduled and conducted all of the interviews, verified all transcriptions, completed data analysis and interpretation, and wrote the original draft of the manuscripts. Celine Fawagreh and Mubassira Sarker assisted with transcription of the audio files. EF provided guidance, supported DN's reflexivity, and provided feedback on the analyses. All co-authors reviewed and approved the final manuscripts. The caregiver article has been previously published in the Journal of Early Hearing Detection and Intervention. The practitioner article has been submitted for publication to the same journal.

Dissertation Abstract

BACKGROUND: Many families of children who are deaf or hard of hearing (DHH) pursue the development of spoken language through the use of advanced hearing technology and intensive, specialized listening and spoken language (LSL) intervention services. LSL practitioners utilize caregiver coaching to transfer knowledge and skills to parents, equipping them to effectively support their child's listening and language development. Caregiver coaching builds parents' capacity to implement intervention strategies within daily routines to maximize learning opportunities to reach this goal. While caregiver coaching is a hallmark of LSL practice, there is a lack of consensus and paucity of evidence to support its use with children who are DHH learning to listen and talk. The purpose of this research was therefore to gain a greater understanding of caregiver coaching practices in LSL services for families of children ages birth-3 who are DHH.

OBJECTIVES: 1) to provide a synthesis of the literature and identify gaps in the existing knowledge base regarding coaching in LSL services, 2) to gain insight into practitioners' and caregivers' experiences with coaching in LSL services, and 3) to gain a better understanding of coaching practices in LSL services with families of children who are DHH.

METHODOLOGY: The first objective was addressed by performing a scoping review of the literature to synthesize the relevant research and professional practice recommendations and identify gaps in the knowledge base regarding coaching caregivers in LSL practice.The remaining objectives were addressed through qualitative, semi-structured interviews and video observation discussions with LSL practitioners and caregivers to gain insight into caregivers' perspectives and practitioners' perspectives and practices. Interviews were conducted with 14 practitioners and 13 caregivers at three intervention sites in the US and Canada. These sites represent three different service delivery models of LSL intervention for families of children who are DHH.

RESULTS: The scoping review findings revealed a lack of consensus in the literature regarding principles and practices of caregiver coaching in LSL services. We presented the following topics found in the literature: coaching practices, training for coaching, effectiveness of coaching, and recommendations for coaching. Caregivers reported coaching as a positive experience; however, coaching practices differed among sites and between practitioners, supporting the results of the scoping review. The caregivers indicated factors that contribute to a positive coaching relationship, including practitioner characteristics, establishing explicit expectations, and adapting to caregivers' changing needs over time. The practitioner interviews also supported a lack of consistency in coaching practices between sites, and indicated that underlying beliefs impact how practitioners coach and engage caregivers.

CONCLUSION: The findings from this dissertation provide practical, actionable steps that LSL practitioners can implement to develop and support the caregiver coaching relationship. These findings have the potential to inform professional preparation and development activities to better equip practitioners to engage caregivers in the intervention process, and ultimately, positively impact the listening and spoken language outcomes of the children they serve.

Chapter 1: Introduction

Families need support and information in the early years after their child is diagnosed as deaf or hard of hearing (DHH). While newborn hearing screening is an important first step in identifying the estimated thirty-two million children worldwide living with disabling hearing loss (World Health Organization [WHO], 2021), receiving a diagnosis is only the beginning. Without appropriate follow-up in the form of high-quality, specialized intervention, hearing screening is largely meaningless in mitigating the long-term effects of hearing loss (Yoshinaga-Itano, 2014). Family-centered early intervention (FCEI) is the recommended model for the services and supports available to families of children with developmental delays and disabilities, including hearing loss (Centers for Disease Control and Prevention [CDC], 2018; Division for Early Childhood [DEC], 2014). FCEI capitalizes on the critical period for early language development and aims to minimize or avoid delays in communication, language, and literacy traditionally found in children who are DHH as well as providing much-needed information and support for families (Decker & Vallotton, 2016; Durieux-Smith et al., 2008; Joint Committee on Infant Hearing [JCIH], 2019).

After early identification of hearing loss and fitting of hearing devices, children who are DHH require specialized intervention by qualified practitioners with expertise in signed and/or spoken language development (JCIH, 2019; Moeller et al., 2013; Yoshinaga-Itano, 2003). More than 90% of babies diagnosed with hearing loss are born to parents with normal hearing (Mitchell & Karchmer, 2004; Sass-Lehrer, 2015), and, as a result, many families choose to pursue spoken language development through the use of hearing technology and participation in intensive, specialized listening and spoken language (LSL) services (Ching et al., 2018; Crowe et al., 2014; Gallaudet Research Institute, 2010). Recent research reports positive outcomes for

children learning spoken language through listening (Davidson et al., 2021; Geers et al., 2019; Wolfe et al., 2021). To uphold recommendations by the Joint Committee on Infant Hearing (JCIH) and best practices in FCEI (Moeller et al., 2013), LSL practitioners undergo extensive, specialized training specific to the development of listening and spoken language in order to provide the highest quality of service specific to the needs of children who are DHH (JCIH, 2019; Moeller et al., 2013). To address this directive, the AG Bell Academy for Listening and Spoken Language has established a rigorous certification process that results in the designation of Listening and Spoken Language Specialist Certified Auditory-Verbal Therapists (LSLS Cert AVT) or Certified Auditory-Verbal Educators (LSLS Cert AVEd) (AG Bell Academy for Listening and Spoken Language [AG Bell Academy], 2017).

LSL practice is a parent-implemented intervention for children who are DHH who have auditory access to speech via appropriately fit and consistently worn hearing devices (Estabrooks, 2012; Lim & Simser, 2005; Rosenzweig, 2017). A foundational component of LSL practice is coaching caregivers to implement intervention strategies during everyday routines to maximize learning opportunities for their children who are DHH. Caregiver coaching has a rich empirical base in the general FCEI literature (Artman-Meeker et al., 2015; Elek & Page, 2018); however, little is known about how coaching is implemented in LSL practice with families of children who are DHH. Parental engagement and learning through coaching have been established as a critical element of effective LSL services (Maluleke et al., 2021; Rosenzweig, 2017), however, there is a lack of research determining its effectiveness and whether it is being implemented consistently among LSL practitioners. Because it is foundational to LSL practice, it is important to understand how coaching is being implemented in this specialized field of

practice as an important first step in determining whether it is an evidence-based, effective practice.

As the LSL practice literature lacks information regarding the definition and practices that constitute caregiver coaching, this indicates a gap in the current understanding of coaching within this specialized field of practice. Therefore, the goal of this dissertation was to gain a greater understanding of coaching practices in LSL services for families of children ages birth to 3 years of age who are DHH by addressing the following objectives: 1) to provide a synthesis of the literature and identify gaps in the existing knowledge base regarding coaching in LSL services, 2) to gain insight into practitioners' and caregivers' experiences with coaching in LSL services, and 3) to gain a better understanding of coaching practices being utilized in LSL services.

In the context of rehabilitation, this research provides new insight into how families of children who are DHH are being equipped to support their child(ren)'s development of spoken language through LSL practice. It begins the foundational work needed to understand how caregiver coaching is implemented in LSL services from the perspective of the practitioners and caregivers participating in the coaching exchange. By providing a more complete understanding of how coaching is applied with this population, this work may lead to more consistency in the implementation of coaching among LSL practitioners working with families of children who are DHH and contribute to professional preparation programs for LSL practitioners. Additionally, this work may inform much-needed future research efforts to determine the effectiveness of coaching in LSL practice.

A narrative review of the literature in both FCEI and LSL practice follows, providing a historical perspective and overview of the present state of knowledge in both fields, which will

serve to strengthen the rationale for this research. It includes an introduction of FCEI in general, including a brief history of family-centered practice and caregiver coaching as an evidence-based practice. The subsequent section provides an overview of LSL practice, including current practice guidelines and the present state of knowledge related to coaching with families of children who are DHH, followed by an outline of the underlying theoretical framework and methods for the proposed research.

Present State of Knowledge

FCEI in general, and LSL practice specifically, has an imperative to include caregivers as active participants in intervention in order to impact child outcomes, and caregiver coaching is one of the primary approaches for achieving this goal (Douglas et al., 2020; Rosenzweig, 2017). Coaching has long been an accepted adult learning strategy in education, business, and sports, and has more recently been applied to FCEI as a way to equip caregivers to play a role in supporting developmental progress in their children with disabilities (Rush & Shelden, 2019). LSL practice utilizes coaching principles to teach caregivers to implement specific listening and spoken language strategies to facilitate language development in their children who are DHH. An exploration of the literature on coaching in FCEI will build the foundation for the application of coaching in LSL practice.

Hargreaves and Dawe (1990) defined coaching as a "method of transferring skill and expertise from more experienced and knowledgeable practitioners…to less experienced ones" (p. 230). Cox (2015) presented coaching as an active process that "integrates experiences, concepts, and observations to facilitate understanding, provide direction, and support action and integration" (p. 30), and suggested that the role of the coach is to facilitate this process. Commonly cited elements of coaching include observation, collaborative planning and goal

setting, gathering of information by the learner, application of new information, coach feedback, and learner reflection (Artman-Meeker et al., 2015; Dunst, 2015; Elek & Page, 2018; Leat et al., 2006; Rush & Shelden, 2019).

Foundational work by pioneers in the field, including Rush, Shelden, and Dunst, has influenced the theoretical understanding of coaching in the context of early childhood intervention and provided a foundation for caregiver coaching to become the standard of practice in FCEI. There are numerous definitions for caregiver coaching in the FCEI literature; however Rush and Shelden's (2005, 2019) definition is frequently referenced. They conceptualized coaching as an adult learning strategy whereby the coach supports the learner's ability to evaluate the effectiveness of an action through reflection and together develop a plan for refinement and use of the action in the future.

Early Intervention

The primary focus of FCEI is to provide information, guidance, and support to families as their child's most important and effective teacher. Caregiver coaching in FCEI is a process designed to build caregiver capacity, competence, and confidence to independently implement intervention strategies within naturally occurring daily routines, between intervention sessions, to maximize learning opportunities and empower caregivers to support their child's development (Dunst et al., 2007; Dunst & Trivette, 2009a; Rush & Shelden, 2019; Sukkar et al., 2016; Woods et al., 2011).

Empowerment enhances the ability for people to control their own lives (Rappaport, 1981). Dunst, Trivette, and Deal (1994) first applied this concept to FCEI, emphasizing the importance of caregiver involvement in decision-making and goal-setting for their children receiving intervention services. In the FCEI context, empowerment involves creating

opportunities that support and strengthen caregiver knowledge and skills, with a goal of creating feelings of control and mastery (Dunst, 2014; Dunst & Trivette, 2009a; Moodie, 2016). With regard to caregiver coaching, Rush and Shelden (2019) refer to empowerment as 'capacity building,' as coaching builds the knowledge and skills of the caregiver with the goal of functioning without the ongoing support of the coach. Rather than creating dependency, a coach helps the learner discover what he or she can already do and shares new information in order to build on those skills, so that the learner develops the ability to implement and generalize the newly-learned skills in new and different situations (Ciupe & Salisbury, 2020; Josvassen et al., 2019; Rush & Shelden, 2019).

Coaching in FCEI is grounded in the principles of adult learning. The term family-centered refers to a particular set of values and practices for supporting and strengthening a family's capacity to bolster their child's development (Dunst, 2002). A family-centered approach is characterized by practices that treat families with respect, share information to assist families in informed and shared decision-making, support family choice in the provision of services, and involve a reciprocal partnership between practitioners and caregivers (Dunst, 2002; Dunst et al., 2007; Espe-Sherwindt, 2008; Moeller et al., 2013; Sukkar et al., 2016). This approach to intervention elevates the role of the family, empowering them to implement strategies that strengthen their child's existing capabilities and promote child and family competence (Bailey et al., 1998; McWilliam, 2010; Raver & Childress, 2015). Capacity-building is both a process and a benefit for families participating in FCEI and includes building on families' strengths and establishing a collaborative partnership to achieve desired outcomes (Dunst & Trivette, 2009a). Practices that build caregivers' capabilities have been shown to increase feelings of self-efficacy, which, along with active engagement in the intervention process, is an important variable in the

achievement of child outcomes (Dunst et al., 2014; Hughes-Scholes & Gavidia-Payne, 2019; Kaiser & Roberts, 2013; Trivette et al., 2010).

Family-centered practice refers to the foundational beliefs behind the practice, whereas coaching comprises a specific set of practices utilized to transfer knowledge and skills from practitioner to caregiver. Caregiver coaching incorporates a strengths-based, collaborative approach to the mastery of intervention strategies and functions as a reflective and cooperative means to engage caregivers in the intervention process and to increase meaningful interactions with their children (Dunst & Trivette, 2009c; Rush & Shelden, 2019).

Caregiver coaching is designed to equip families with specialized knowledge and skills to enhance their child's learning and development. Research supports the use of caregiver coaching, indicating that caregivers are able to effectively learn and implement strategies to facilitate child outcomes (Barton & Fettig, 2013; Brown & Woods, 2015, 2016; Kaiser & Roberts, 2011). For example, in a meta-analysis of empirical studies on the effectiveness of parent-implemented language interventions in children with language delays, Roberts and Kaiser (2011) found that when compared to a control group, parent-implemented intervention had positive effects on receptive and expressive language outcomes in children. Additionally, parent training had a positive impact on their use of intervention strategies, with the largest effect on parental responsiveness. These results indicated that caregiver training, through coaching, can have a substantial impact on children's language development, and coaching caregivers to modify their interactions may be an important factor in their child's outcomes. However, minimal information was provided about the coaching strategies utilized in the studies and the results were ambiguous as to which components of the parent-implemented language intervention led to positive child

outcomes. As a result, the authors called for future research to include detailed descriptions and direct measures of caregiver coaching procedures (Roberts & Kaiser, 2011).

There is widespread agreement about the value of caregiver coaching (Dunst et al., 2007; Rush & Shelden, 2019; Trivette et al., 2009); however, the FCEI coaching literature lacks specificity in definition, terminology, and framework. In a research synthesis on coaching in FCEI, Kemp and Turnbull (2014) found no common definition or description of 'coaching with parents in early intervention'. In fact, the authors discovered a broad continuum of FCEI practices across studies that were described as coaching, ranging from 'relationship-driven' practices on one end of the spectrum to 'intervener-directed' practices on the other. They described intervener-directed practices as practitioners teaching caregivers to replicate an evidence-based intervention with fidelity. This type of coaching resembles traditional caregiver training, in that caregivers are expected to implement very specific, prescribed strategies, rather than being reciprocal partners throughout the intervention process. The authors described relationship-driven practices as entailing joint planning and collaboration to determine goals and activities that are important to the caregivers. Across all of the coaching studies, the most frequently occurring caregiver outcome reported was mastery of the intervention strategies. Other outcomes included increased perception of competence, more positive perceptions of their child's abilities, and increased caregiver responsiveness to their child. The majority of the studies indicated that when coaching was used with caregivers, children made developmental gains; however, it was difficult to separate the coaching component from the other elements of the intervention, such as the actual treatment or strategy employed, to determine its direct impact on child outcomes (Kemp & Turnbull, 2014). In a more recent systematic review, Ward et al (2020) found that the lack of operationalized definition persists, and there is inconsistent reporting of

coaching practices and an absence of outcome measures regarding caregiver capacity in the coaching literature. The lack of consensus regarding the principles and practices of caregiver coaching is also evident in LSL practice (Maluleke et al., 2021).

Listening and Spoken Language Practice

As a result of population-based early hearing detection and intervention (EHDI) initiatives, children with congenital hearing loss are identified, fit with appropriate hearing technology, and enrolled in FCEI programs in the first few months of life. Most EHDI programs worldwide recommend that FCEI services be initiated by 6 months of age (JCIH, 2019; WHO, 2021). For families who choose a spoken language approach, LSL practice capitalizes on early diagnosis and advanced technology, including digital hearing aids and cochlear implants, to enable children who are DHH to gain auditory access to sound and develop speech through audition. The primary goals of LSL practice are for children to learn to listen and talk with conversational competence, to attend mainstream schools, and to be unlimited in their education and social choices throughout their lives (Estabrooks, 2012).

Key LSL practice guidelines, principles, and best practice documents provide insight into the centrality of coaching to LSL practice and highlight the lack of specificity regarding coaching skills and strategies (Kendrick & Smith, 2017). In June of 2012, an international panel of experts convened to develop 10 best practice principles for family-centered practices with children who are DHH, two of which are directly related to coaching caregivers (Moeller et al., 2013). The first of these aligns with general FCEI recommended practices; that is, the development of collaborative partnerships between families and the professionals supporting them, characterized by open communication, shared tasks, and mutual trust (Moeller et al., 2013). The authors encouraged practitioners to partner with families, focus on facilitating family-

child interactions (rather than child-directed therapy), and to identify and build on family strengths. The second principle related to coaching encourages practitioners to work with caregivers to create optimal environments for language learning. Recommended provider behaviors include teaching caregivers new skills through the use of adult learning strategies, as well as building on existing knowledge and skills (Moeller et al., 2013).

The 2013 best practice document (Moeller et al., 2013) clearly outlines foundational principles that guide the implementation of LSL practice. LSL practitioners are expected to 'guide and coach parents' to prioritize audition, become the primary facilitators of their child's listening and language development, create enriched listening environments, use natural developmental patterns of listening and language, help their child monitor his or her own speech through listening, and integrate listening and language into all areas of the child's life (Estabrooks, MacIver-Lux, Rhoades, et al., 2016; Rosenzweig, 2017). In addition to these guiding principles, the domains of knowledge that guide the provision of specialized LSL services emphasize the importance of caregiver coaching (AG Bell Academy, 2017). LSL practitioners are expected to develop proficiency in 'parent guidance, education, and support,' including "family coaching and guidance techniques" and "adult learning styles" (AG Bell Academy, 2017, p. 20). Although these constructs are essential components in LSL practice, these guidance documents do not provide a definition or specific practices that comprise coaching in LSL practice. This lack of information regarding what exactly constitutes coaching and how it should be implemented indicates a gap in the current understanding of caregiver coaching in LSL practice.

Caregiver Engagement in Listening and Spoken Language Practice

Caregiver engagement and participation are critical to the implementation and success of LSL practice. Caregivers who participate in LSL services are considered the key stakeholders and primary clients in the intervention process and are empowered to become the most significant agents of change in the life of their child (Estabrooks, MacIver-Lux, Rhoades, et al., 2016; Rosenzweig, 2017). Research indicates that caregiver involvement in early childhood intervention is multifaceted (Erbasi et al., 2018) and linked to positive outcomes for children who are DHH (DesJardin, 2006; Ganek & Cardy, 2021; Zaidman-Zait & Young, 2008). Increasing caregivers' self-efficacy, a fundamental goal of family-centered LSL practice, is positively associated with the implementation of higher-level language facilitation techniques (DesJardin, 2006) and device use (Ambrose et al., 2020), which in turn impact a child's ability to function and communicate successfully with others, ultimately impacting child language outcomes.

In a survey study, DesJardin (2006) measured mothers' feelings of self-efficacy and levels of involvement in intervention using The Scale of Parental Involvement and Maternal Self-efficacy (SPISE). Results indicated that mothers of children with cochlear implants expressed more confidence in their ability to support their child's language development using high level language facilitation techniques than mothers of children with hearing aids. Utilizing a revised version of the same scale (SPISE-R), Ambrose and colleagues (2020) compared mothers' confidence scores with child hearing devise use and spoken language abilities and found correlations between maternal self-efficacy and confidence, device use, and child outcomes. However, while parental self-efficacy result from caregiver coaching, neither of these studies directly examined coaching as a strategy for eliciting the engagement of caregivers.

Caregiver Coaching in Listening and Spoken Language Practice

Coaching practices are utilized in LSL intervention to empower caregivers to take on the role of primary facilitators of language development for their children within the meaningful context of their day-to-day activities (Caraway & Horvath, 2012; King & Xu, 2021; MacIver-Lux et al., 2020; Rhoades & MacIver-Lux, 2016). Through coaching, caregivers actively participate in planning intervention sessions, observe and practice strategies during sessions, and engage in reflective discussions with LSL practitioners to evaluate their understanding (Rhoades & MacIver-Lux, 2016).

Similar to the FCEI literature, there is a lack of agreement on the definition or specific practices of caregiver coaching in LSL practice (King et al., 2021; King & Xu, 2021). However, general guidelines can be found for coaching within the context of LSL sessions. For example, Estabrooks et al.(2016) outlined an Auditory-Verbal Therapy Session Cycle that delineates components of an effective LSL session. This involves the practitioner sharing session objectives and strategies, demonstrating, and then passing the activity to the caregiver while the practitioner 'observes and coaches' (Estabrooks et al., 2016). While indisputably family-focused, this cycle lacks specificity on the elements of coaching, and therefore, does not address the ambiguity of the current understanding of coaching practices in LSL services.

In addition to guidelines for the components of an effective LSL coaching session, the literature contains a variety of examples of specific strategies for coaching and family-centered LSL practices. These include suggestions for building relationships, partnering with families (Sass-Lehrer, 2015), encouraging caregiver engagement during sessions (Kovacs, 2012), providing opportunities to practice strategies (Talbot & Estabrooks, 2012), building caregivers' self-efficacy (Ambrose et al., 2020; Cejas et al., 2021; Davenport et al., 2021), and empowering

families to become advocates for their children who are DHH (Caraway & Horvath, 2012). Rhoades and MacIver-Lux (2016) summarized the top five caregiver coaching strategies that are 'similar to most' coaching frameworks in the FCEI literature: "1) having conversations and sharing information; 2) collaborating in setting goals and planning activities; 3) demonstrating; 4) providing guided practice with feedback; and 5) providing video-feedback" (p. 331).

Morrison (2017) outlined caregiver coaching strategies based on Robert and Kaiser's Teach-Model-Coach-Review model (Kaiser & Roberts, 2013; Roberts & Kaiser, 2012), adapted for LSL services delivered in families' homes: "1) getting started; 2) modeling; 3) parent practice with feedback; 4) reflection; and 5) assessment of learning" (Morrison, 2017, p. 271-273). Preliminary research indicates that this model is effective in increasing parental implementation of strategies with children with language delays and intellectual disabilities, indicating its promising potential as an effective model of caregiver coaching. Morrison (2017) suggests that it may be effective in LSL practice, but this application has not been directly investigated.

Voss and Stredler-Brown (2017) presented an additional coaching framework for LSL practice home visits. In their 'Rubric for a Home Visit,' they listed the following components: "1) reconnect and review; 2) address priorities; 3) show the craft; 4) assess and evaluate; and 5) reflect on the home visit" (p. 8-10). All of these models share common elements; however, the terminology, definitions, and procedures are diverse. This lack of consensus creates a challenge for practitioners expected to implement coaching in LSL practice, especially novice practitioners. When practitioners are uncertain about what constitutes coaching and how it should be implemented, it becomes difficult for them to identify which components of their practice needs to change to effectively coach caregivers (Friedman et al., 2012) or evaluate whether their coaching has achieved appropriate outcomes. In addition, these coaching models

have been recommended as potential applications of caregiver coaching in LSL practice by expert practitioners, but lack empirical evidence within this field of practice, and it is not known whether they are widely known or practiced. A deeper understanding of coaching behaviors has the potential to improve the quality and consistency of LSL practice, as well as guide professional development and provide a foundation for future research on the effectiveness of coaching in LSL practice.

As evidenced by the principles that guide the provision of LSL services, caregiver engagement and coaching are widely accepted as essential components of family-centered LSL practice. However, the absence of a specific coaching definition, agreed-upon standard of application, and empirical evidence make it difficult to determine whether coaching practices are being implemented consistently and effectively. The impact of caregiver coaching has not yet been evaluated in LSL practice; however, an important first step in determining coaching effectiveness is to gain a better understanding of how coaching is being implemented in this highly specialized field of early childhood intervention.

The Need for Empirical Evidence

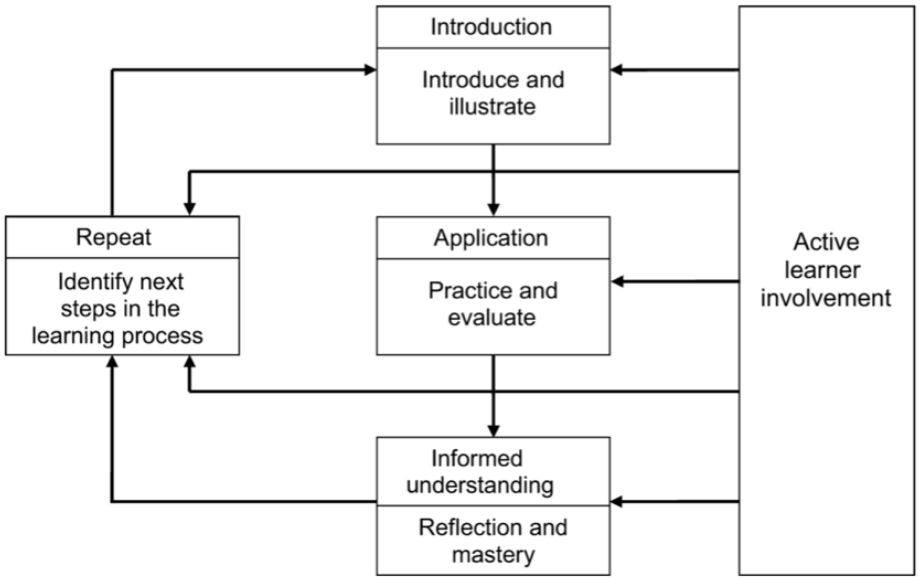
This overview of the literature on coaching in FCEI and LSL practice highlights that while coaching is considered a critical element of effective family-centered practice, the lack of consensus and specificity in the principles and practices of coaching indicate a need for further research in this area. The literature on coaching in FCEI is significantly more developed than the literature on coaching in LSL practice, which leads to unanswered questions about how coaching is implemented with families of children who are DHH. The first phase of this research examines the breadth and depth of the existing literature on coaching in LSL practice, identifying gaps in

the current knowledge base and providing a foundation for a qualitative inquiry to better understand how practitioners coach caregivers.

Theoretical Framework

The Participatory Adult Learning Strategy (PALS) (Dunst & Trivette, 2009b) provided a foundation for this program of research, particularly with regard to the inclusion of active caregiver engagement and reflection in my inquiries into caregiver coaching in LSL practice. The PALS model is depicted in Figure 1.

Figure 1.
Major Components of PALS



Note. From "Let's be PALS: An evidence-based approach to professional development" by C. J. Dunst and C. M. Trivette, 2009, Infants & Young Children, 22, p. 171. Copyright 2009 by Wolters Kluwer Health, Inc. Reprinted with permission.

Participatory Adult Learning Strategy

Adult learning is an overarching term that refers to a collection of theories about processes and conditions that are thought to optimize learning for adults (Dunst & Trivette,

2012; Trivette et al., 2009; Yang, 2003). Adult learning involves a readiness-to-learn, self-directed learning, active participation in the learning process, and a solution-centered, contextual approach to learning (Cox, 2015; Dunst & Trivette, 2009b). Active learner participation, opportunities to practice new knowledge and skills, and reflection are important components for effective adult learning (Trivette et al., 2009). Since coaching positions caregivers as the primary learners in the intervention process, it is critical for practitioners to utilize practices geared toward adult learners.

PALS is an adult learning strategy developed from a compilation of meta-syntheses of adult learning methods undertaken to identify the evidence-based characteristics and conditions that are optimally effective for adults to learn (Dunst & Trivette, 2009b; Raab et al., 2013). Applied to caregiver coaching, the PALS model portrays coaching practices as bidirectional and reciprocal exchanges between the practitioner and learner, and these interactions form the context for learning and mastering new knowledge and skills (Woods et al., 2011). The four-phase process includes: 1) introduction and illustration of the targeted knowledge or practice, 2) an opportunity to apply the new knowledge or skill and receive feedback, 3) reflection on and assessment of mastery of the new knowledge or skill to promote informed understanding, and 4) the use of this informed learning to decide next steps in the learning process (Dunst & Trivette, 2009b; Raab et al., 2013). This framework represents the current understanding of coaching best practices in FCEI and served as a starting point from which to understand coaching in LSL practice.

Research highlights two important elements of adult learning that are central to the PALS model: active learner participation and reflection. Results from two research syntheses of four adult learning methods indicate that the more actively involved learners were in evaluating and

reflecting on the consequences of their learning experiences, the stronger the relationship between the adult learning methods and the learner outcomes, highlighting the importance of reflection and active learner participation in the acquisition and application of new knowledge and skills (Dunst & Trivette, 2012; Trivette et al., 2009).

Active Learner Participation

Active learner participation is a fundamental component of the PALS model, which closely aligns with the principles of LSL practice. The learner is engaged in every stage of the process, from planning to implementation, to establish goals and acquire new knowledge and skills that are relevant and applicable to his or her unique needs. Flaherty (2010) noted that a coach's role is not telling people what to do, but giving them an opportunity to examine their actions in light of their intentions. By supporting active learner engagement in the intervention process, coaches support caregivers in identifying and working toward intended outcomes for their children. As a capacity-building practice, coaches collaboratively plan, practice, and reflect with caregivers to work toward goals that are important for their family. The goal of the PALS model is to build caregiver confidence and competence by fostering active participation in each stage of the coaching process.

Reflection

Reflection is an essential element in adult learning, and therefore critical for caregiver coaching (Inbar-Furst et al., 2020; Lorio et al., 2020; Merriam, 2008). Reflection is an interactive process between caregiver and coach, which encourages caregivers to think about the effectiveness and consequences of their actions during the coaching cycle as they work toward mastery. The 'Informed Understanding' phase of PALS involves learner reflection on his or her understanding and a self-assessment of mastery of the newly learned knowledge or skill (Dunst

& Trivette, 2009b; Raab et al., 2013). Reflection also involves engaging the learner in determining the next steps in the learning process, whether that entails repetition to further develop learner understanding, or setting new learning targets (Dunst & Trivette, 2009b; Trivette et al., 2009). Reflection differentiates coaching from other types of problem-solving and information sharing, as it allows the coach to build on the learner's existing skills and promote continuous improvement by teaching the learner to analyze his or her understanding and practice (Gallacher, 1997; Rush et al., 2003).

In this thesis project, the PALS model informed the examination of reflective practice and active learner participation within a coaching interaction by the incorporation of video observations, as well as the exploration of the perspectives of practitioners and caregivers on their participatory role in the coaching relationship through individual interviews. PALS represents the key elements of adult learning important for caregiver coaching and guided the development of the interview and video observation guides, as well as the analysis of the resulting data, to determine whether these elements are included in the coaching practices of LSL practitioners.

Objectives

This research examined the coaching practices of LSL practitioners to conceptualize caregivers' and practitioners' perspectives and experiences with coaching. Existing literature and the perspectives of both practitioners and caregivers were examined to address the following objectives: (1) to provide a synthesis of the literature and identify gaps in the existing knowledge base regarding coaching in LSL services, (2) to gain insight into practitioners' and caregivers' experiences with coaching in LSL services, and (3) to gain a better understanding of coaching practices being utilized in LSL services with families of children who are DHH.

Methodology

The first objective of this thesis project was addressed by performing a scoping review of the literature pertaining to caregiver coaching in LSL practice. The remaining objectives were addressed through an Interpretive Description (ID) qualitative study, including semi-structured interviews and video observations with LSL practitioners and caregivers receiving services for their children who are DHH. The PALS model served to scaffold the inquiry, providing the theoretical fore-structure that guided methodological and analytical decisions and determined the manner and extent to which the knowledge and practice of coaching in FCEI aligned with coaching in LSL practice (Thorne, 2016). Table 1 provides an overview of the methodology and objectives of each study.

Table 1
Study Methodologies and Objectives

Study	Methodology	Objectives
Scoping Review, Chapter 2	Qualitative	To gain a better understanding of the relevant research and professional practice recommendations and identify gaps in the knowledge base regarding coaching caregivers in LSL practice
Caregiver Interviews, Chapter 3	Qualitative	To gain insight into caregivers' perspectives and practices with regard to coaching in LSL services.
Practitioner Interviews, Chapter 4	Qualitative	To gain insight into practitioners' perspectives and practices with regard to coaching in LSL services.

Scoping Review (Chapter 2)

A scoping review of the literature in LSL practice was completed. See Appendix A for the protocol and Appendix B for the search strategy used. The primary research question addressed was: What is known from the existing literature about caregiver coaching in LSL

services for families of children who are DHH? Additionally, the following sub-questions were addressed:

1. What is known about:
    a. coaching practices in LSL services?
    b. training for coaching in LSL services?
    c. professional practice recommendations for coaching in LSL practice?
    d. the effectiveness of coaching in LSL practice?
2. What is the definition(s) of coaching presented in the LSL literature?
3. What are the characteristics of coaching outlined in the LSL literature?
4. What does the literature say about active learner participation in the caregiver coaching process?
5. What does the literature say about reflection as it relates to caregiver coaching?

Scoping reviews aim to rapidly map the fundamental concepts underpinning a research topic, the types of evidence available, and gaps in the literature related to a field by systematically identifying and synthesizing existing knowledge (Colquhoun et al., 2014). Scoping reviews are particularly useful for complex topics or those that have not been comprehensively reviewed previously, and allow for a broader scope to summarize the current state of the literature (Arksey & O'Malley, 2005; Levac et al., 2010; Peters et al., 2015). Due to the emerging nature of the literature on coaching in LSL practice, a scoping review allowed for a broad inquiry into the existing knowledge on the topic, without the requirement for a highly specific research question. The PALS model was utilized as a benchmark of best practices in caregiver coaching from which to examine how caregiver coaching is represented in the LSL

practice literature and informed the examination of active learner participation and reflection in LSL practice.

Interviews with Caregivers (Chapter 3) and Practitioners (Chapter 4)

The objective of the qualitative inquiry was to gain insight into practitioners' and caregivers' perspectives and practices with regard to coaching in LSL services. The primary research questions addressed were:

1. How do LSL practitioners conceptualize coaching?
2. How do LSL practitioners describe how they coach caregivers?
3. How did LSL practitioners learn to coach caregivers?
4. How do LSL practitioners incorporate and encourage active caregiver participation and reflection in their coaching practices?
5. How do caregivers experience coaching in LSL services?

To address these questions, qualitative interviews were conducted with caregivers (Chapter 3) and practitioners (Chapter 4) at three intervention sites providing services for families of children who are DHH. Results from the scoping review informed the development of the interview guides for caregivers and practitioners (Appendix H). Data was collected through multiple sources, including: (a) semi-structured interviews with LSL practitioners and caregivers and (b) video observation discussions of self-selected segments of intervention sessions. All practitioners at each site agreed to participate and met the following inclusion criteria: (a) currently providing LSL services to families of children who are DHH from birth to 3 years of age, and (b) implementing family-centered services utilizing a caregiver coaching model. Basic demographic data were collected from caregivers and practitioners (see Appendix I). The PALS model provided the foundation from which the qualitative inquiry was designed

and conducted and allowed for a clinically applicable and informed exploration of coaching in LSL practice.

Integrated Discussion (Chapter 5)

The final chapter summarizes and integrates the key findings of the thesis project. The integrated results are presented as: (1) a proposed conceptual framework for caregiver coaching in LSL practice, and (2) implications for applied practice. The chapter concludes with the strengths and limitations of this project and suggestions for future research.

Situating the Researcher

As with all qualitative research, ID requires researchers to position themselves within the area of study to acknowledge the impact of personal and professional experiences, as they play a meaningful role in shaping the nature and outcome of the study (Berger, 2015; Thorne, 2016). Thoughtfully accounting for my perspective as a researcher adds credibility, as I worked to provide a clinically applicable, meaningful contribution to the field in which I have personal experience and professional expertise. I have a unique dual perspective on issues of clinical significance in LSL practice because I am both the parent of a child who is DHH who participated in LSL services and I am an LSL practitioner who worked with families and their young children who are DHH.

As a parent who partnered with an LSL practitioner to develop goals and learn new skills that were important to my family, I experienced the empowering benefits of the coaching model that enabled me to help my child learn listening and spoken language skills. I later became an LSL practitioner and utilized coaching in early intervention with families of children ages birth-to-3 years who are DHH, and I witnessed the positive impact of coaching on families. Through my personal experience and professional practice, as well as discussions with colleagues and

preparation for certification as a Listening and Spoken Language Specialist, I noticed that the emphasis on coaching in the professional literature and guidelines did not seem to match the amount of empirical evidence available in the literature. This need for a better understanding of the coaching process, particularly as it relates to this specialized field of practice, was the impetus for this research.

My familiarity with the literature and professional experience with coaching in LSL practice informed my research, allowing me perspective from which to approach this qualitative inquiry. I utilized a reflexive approach throughout the entirety of the process, in order to delimit the effects of any preconceived ideas of the nature and practice of coaching in LSL services on the outcome of this research. Reflexivity involves recognizing and taking responsibility for one's own positioning within the research and the effect it may have on the participants, the questions being asked, and how data is collected and interpreted (Berger, 2015). This was accomplished through reflexive journaling, debriefing with colleagues, and regular reflexive discussions with my supervisor. Through reflexive introspection, I continually evaluated how my previous experience informed each stage of the research process, challenged my assumptions, and reflected on my biases, which allowed me to remain open to new understanding based on the perspectives of the participants of my study.

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Coaching Caregivers of Children who are Deaf or Hard of Hearing:

A Scoping Review

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Abstract

Caregiver coaching is an expected practice in early intervention. However, little is known about coaching with caregivers of children who are deaf or hard of hearing (DHH), receiving services for listening and spoken language (LSL). A systematic review of 7 databases, the gray literature, and consultation with 7 expert LSL practitioners yielded 506 records for full-text review, 22 of which were ultimately included in the review. Our findings are presented as 3 themes: coaching practices, training for coaching, and effectiveness of coaching. Eight models of coaching were identified in the literature, from which we identified commonalities to propose a consolidated model that illustrates the recommendations and process of caregiver coaching found in the LSL literature.

Chapter 2: Scoping Review

Children who are deaf or hard of hearing (DHH) are identified and enrolled in early childhood intervention programs ideally no later than 3-6 months of age (Joint Committee on Infant Hearing [JCIH], 2019). The provision of timely, appropriate, and effective hearing intervention aims to foster communication development. For families who choose to pursue spoken language, hearing aids and/or cochlear implants enable children who are DHH to gain auditory access and develop spoken language through audition. Research has shown that early aided audibility and consistent device use contribute to improved language and auditory development (Moeller & Tomblin, 2015; Tomblin et al., 2015). Additionally, quality linguistic input from caregivers leads to better early language outcomes (Ambrose et al., 2015; Cruz et al., 2013; DesJardin & Eisenberg, 2007) and early intervention leads to better language outcomes at five years of age (Ching, 2015; Ching et al., 2017). It is imperative for caregivers, including family members and anyone regularly involved in the child's care, to receive support in order to understand their role in establishing consistent device use, as well as how they can facilitate their child's listening and language development.

Practitioners who work with families of children who are DHH require specialized knowledge and skills in the development of listening and spoken language (LSL) through audition (JCIH, 2019; Moeller et al., 2013). Some practitioners undergo extensive training and mentorship to obtain certification as a Listening and Spoken Language Specialist (LSLS) through the AG Bell Academy for Listening and Spoken Language (https://agbellacademy.org/certification/). The LSLS principles that guide certified practitioners include early diagnosis and access to sound through appropriate hearing technology and highlight the importance of guiding and coaching caregivers to become the primary facilitators

of listening and language for their children (AG Bell Academy for Listening and Spoken Language, 2017). The primary goals of LSL practice are for children who are DHH to learn to listen and talk with conversational competence, to be included in general education, and to maximize their educational and social choices throughout their lives (Estabrooks, 2012; JCIH, 2019).

Caregivers are considered key contributors to their child's language development. Coaching is utilized in LSL practice to empower caregivers to take on the role of primary facilitators of language development for their children within the meaningful context of their day-to-day activities (DesJardin et al., 2009; Quittner et al., 2013; Simser & Estabrooks, 2012). Through coaching, caregivers actively participate in planning intervention sessions, observe and practice strategies during sessions, and engage in reflective discussions with LSL practitioners to evaluate their understanding.

Since coaching positions caregivers as the primary learners in the intervention process, it is widely recommended for practitioners to utilize practices geared toward adult learners. Adult learning involves a readiness-to-learn, self-directed learning, active participation in the learning process, and a solution-centered, contextual approach to learning (Cox, 2015; Dunst & Trivette, 2009b, 2012; Knowles et al., 2011). Active learner participation, opportunities to practice new knowledge and skills, and reflection are important components of the coaching process for effective adult learning (Trivette et al., 2009). Reflection is an essential element in adult learning, and caregiver coaching is an inherently reflective process (Jackson, 2004; Merriam, 2008). Broadly defined as the deliberate, purposeful, metacognitive thinking and/or action in which an individual engages in order to improve their performance or practice (Sellars, 2017), reflection is

an interactive process that encourages caregivers to think about the effectiveness and consequences of their actions during the coaching cycle as they work toward mastery.

There is a lack of agreement on the definition or specific practices of coaching in the literature (Friedman et al., 2012). Best practice guidelines for EI services indicate that family/professional partnerships are critical for intervention that is family-centered and effective (JCIH, 2019; Moeller et al., 2013). Additionally, key LSL practice guidelines, principles, and best practice documents provide insight into the centrality of coaching in LSL practice but also highlight a lack of specificity regarding coaching skills and strategies (AG Bell Academy, 2017; Dickson et al., 2013; Kendrick & Smith, 2017). While these guidance documents support LSL practice, less attention has been paid to the application of caregiver coaching within this specialized field of practice.

This scoping review sought to determine how coaching is conceptualized and implemented in LSL practice, and identify whether there is a consensus within the LSL literature. Therefore, the objective of this review was to gather and summarize what is known about coaching caregivers of children who are DHH, including definitions, coaching practices, and the impact of coaching.

Methods

This scoping review of the literature was informed by the framework outlined by Arksey and O'Malley (2005) and subsequent recommendations for increasing the clarity and rigor of the methodology (Levac et al., 2010; Peters et al., 2015). Our review complies with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018). We utilized the five steps of Arksey and O'Malley's (2005) framework to complete this review: (1) identifying the research question, (2) identifying relevant

studies, (3) study selection, (4) charting the data, (5) collating, summarizing, and reporting the results.

Identifying the Research Question

We developed the research question following the structure of population, concept, and context (Peters et al., 2015), whereby studies of caregivers of children who are DHH and LSL practitioners (population), caregiver coaching (concept), and LSL services for the development of listening and spoken language (context) were included. The primary research question addressed was: What is known from the existing literature about caregiver coaching in LSL services for families of children who are DHH?

The primary research question was left intentionally broad, as the focus of the review was to map the breadth of the existing knowledge about coaching in LSL practice (Arksey & O'Malley, 2005; Levac et al., 2010). To focus the scope of the inquiry, we developed several sub-questions, including: a) what are the definition(s) of coaching, b) what is known about coaching practices, training, professional practice recommendations, and active caregiver participation and reflection in the caregiver coaching process, and c) what is known about the impact of coaching in LSL services?

Identifying Relevant Studies

In consultation with a research librarian, a comprehensive search strategy was developed to identify relevant articles from the inception of databases through October 2019, with a check for new literature in June and September 2020. We conducted the search in the following databases: Web of Science, PsycInfo, CINAHL, Embase, ERIC, Medline, and ComDisDome. Major concepts included in the search strategy were caregiver/parent coaching, listening and spoken language or auditory-verbal practice, early intervention, and children who are deaf/hard

of hearing. The terminology used in this field is diverse and has changed over time; therefore, the search strategy included terminology (such as "parent education") to capture the concept of "coaching" before the term was widely used in the literature (details regarding the search strategy are included in Appendices B and C).

Additionally, we hand searched key journals, websites of professional organizations, and reference lists of included studies to identify further relevant documents (see Appendix D). We contacted authors and utilized the interlibrary loan system and electronic scan-on-demand services for documents identified in the search that we could not otherwise locate. Finally, seven experienced professionals in the field of LSL practice provided recommendations for resources that they find helpful in their coaching practice with families.

Inclusion criteria consisted of primary studies (published articles and dissertations), literature reviews, and professional commentaries that were: (a) specific to LSL services for children who are DHH, aged birth-six years, and their caregivers, (b) contained information specific to coaching or teaching caregivers, and (c) published in English. In order to gain a broad understanding of the practice of coaching caregivers since the inception of LSL practice, no date constraints were set. Because this review sought to map the literature specific to families pursuing spoken language outcomes, articles related to the development of sign language, total communication or bilingual/biculturalism were excluded.

Study Selection

Covidence systematic review software (http://www.covidence.org) was used to manage the study selection. We removed all duplicates and documents that included duplicate information (retained document with most relevant information). We proceeded to study selection in two stages: a) title and abstract screening and b) full-text review.

Two reviewers (DN and VG or DD) completed the independent screening process of the title and abstracts. Each reviewer participated in a calibration exercise with 10 articles to ensure that the inclusion criteria were clear and consistently applied, and met throughout the screening process to address any ambiguities (Levac et al., 2010). Non-consensus titles/abstracts were discussed or resolved with additional members of the research team (EF and SM). Articles that were tagged as "yes" or "maybe" were retrieved for full-text review. Two reviewers (DN, DD) independently screened the full-text articles against the inclusion criteria. We resolved discrepancies through discussion and consultation with members of the research team as needed to reach consensus on the included documents.

Charting the Data

Two data extraction forms were developed to extract contextual and process-oriented information from the included documents (Colquhoun et al., 2014; Peters et al., 2017). The first data extraction form was developed for empirical studies, to extract data including study design, aim of study, and relevant methods and results, in addition to information pertaining to coaching practices. The second data extraction form was developed for documents such as conceptual papers and guidance documents, to extract relevant and meaningful information pertaining to caregiver coaching. Data from both types of documents included information related to caregiver coaching, definitions, descriptions, and recommendations for coaching, as well as practitioner training, active caregiver participation, and reflection. Data from the extraction sheets were coalesced for data analysis.

Two reviewers (DN, DD) piloted the data extraction forms with three articles and recalibrated after 10 articles to ensure that information extracted was standardized and consistent

with the research questions and purpose (Levac et al., 2010). One reviewer extracted data from the remaining articles (DN) and the second reviewer (DD) verified all data.

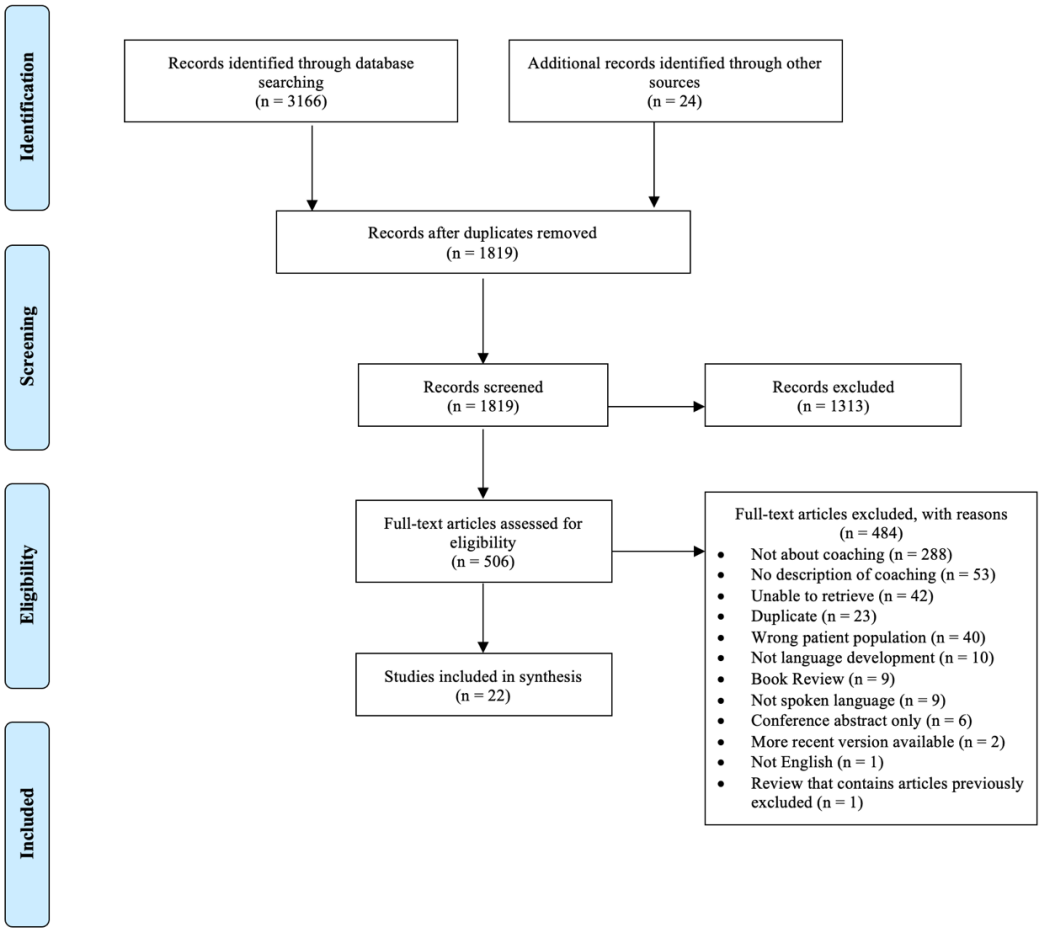
Analysis was facilitated using NVivo (version 12.6.0), a qualitative data analysis software package. We organized the documents by type (i.e., empirical study, grey literature, conceptual paper) and synthesized the data across types thematically. Initial categories were defined *a priori* based on the research questions, including definitions, practices, types of training for coaching, and the impact of caregiver coaching. Categories were expanded and added as we identified themes in the literature related to coaching steps and recommendations. One researcher (DN) completed the iterative process of open coding, creating categories, and organizing the data into main concepts. The research team reviewed and refined the resulting concepts.

Results

The search and review process are represented in Figure 1. Of 1819 records initially screened, 506 underwent a full-text review. Reasons for exclusion of articles are provided. Twenty-two articles were included in the analysis, six of which were primary research publications, including five dissertations and one peer-reviewed study. Five peer-reviewed conceptual papers, nine book chapters, one curriculum manual, and one report pertaining to caregiver coaching in LSL practice were also included (see Appendix E). Evidence from the included grey literature augmented and reinforced information about caregiver coaching contained in the peer-reviewed literature. This “clinical wisdom” provided additional information as well as context for the implementation of coaching in LSL services, particularly due to the lack of consensus on the measurement or practices of LSL coaching and the low volume of empirical evidence (Benzies et al., 2006).

Figure 1.

PRISMA Flow Diagram for Search and Selection Process



We synthesized and grouped the results of our literature review into three main themes: (1) coaching practices, including definition and purpose, roles of the practitioner and caregiver, coaching steps, recommendations, and the incorporation of caregiver participation and reflection; (2) practitioner training for coaching, and (3) the impact of coaching. Finally, we explored the commonalities between the various stages of coaching represented in the literature and organized them into a framework for coaching caregivers of children who are DHH.

Coaching Practices

Definition and Purpose of Coaching

The most widely referenced model of coaching was that of Rush and Shelden, a model of coaching for EI, not specific to children who are DHH (Rush et al., 2003; Rush & Shelden, 2011). Six papers quoted or referenced Rush and Shelden's definition of coaching (Brooks, 2017; DesJardin, 2017; MacIver-Lux et al., 2020; Martin-Prudent, 2018; Morrison, 2017; Voss & Stredler-Brown, 2017), while two (Hamren & Quigley, 2012; Houston, 2020) referenced steps outlined by Doyle (1999), whose model of coaching in business is cited in the development of Rush and Shelden's model of coaching for EI (Rush & Shelden, 2005, 2011).

Fifteen of the included 22 articles defined coaching; yet, definitions and descriptions of caregiver coaching varied, and there was little consensus between them. In four studies, coaching tended to be narrowly defined (Brooks, 2017; Estabrooks et al., 2020; Roberts, 2019; Voss & Stredler-Brown, 2017) and in a further three studies, it was more broadly presented as a description of a philosophy rather than a specific set of practices (Brown & Nott, 2005; DesJardin et al., 2006; Hamren & Quigley, 2012), In addition, eight articles referred to the foundational principles of adult learning when describing the coaching paradigm (Brooks, 2017; Brown & Nott, 2005; Clark & Watkins, 1985; MacIver-Lux et al., 2020; Morrison, 2017; Rhoades & MacIver-Lux, 2016; Stredler-Brown, 2015; Voss & Stredler-Brown, 2017). See Table 1 for examples of coaching definitions found in the literature.

Table 1.
Definitions of Coaching in the Literature

Author	Definition	Specific to LSL?
A. DesJardin, 2017 B. Martin-Prudent, 2018 Also referenced in: Brooks, 2017; MacIver-Lux et al., 2020; Morrison, 2017; Voss & Stredler-Brown, 2017	<u>Variations of Rush & Shelden's definition:</u> A. Coaching is an interactive process of observation, reflection, and action in which a coach promotes the learner's ability to support a child's learning and participation in both family and community contexts (Rush et al., 2003; Rush & Shelden, 2011) (DesJardin, 2017, p. 685). B. Coaching is "an ongoing process that promotes self-observation, self-correction, and an ongoing learning process thru examination, reflection, discussion, and refinement of one's knowledge and skills" (Rush et al., 2003, p. 34) (Martin-Prudent, 2018, p.22).	No
King, 2018	Caregiver coaching consists of strategies used by EI professionals to enlist the caregiver as a partner in the process of facilitating the child's development, and builds the caregivers' capacity to implement language-enhancing strategies within the natural environment (Roberts & Kaiser, 2011).	No
Rhoades & MacIver-Lux, 2016	Parent coaching is an evidence-based interactive and developmental process that facilitates adult learning and competencies (Friedman et al., 2012; Hanft et al., 2003)	No
Brooks, 2017*	For the purpose of this study, real-time embedded coaching is the act of providing suggestions, comments, and support to a parent/caregiver while the parent is engaged in an activity with her child (Brooks, 2017, p. 12).	Yes
Brown & Nott, 2005**	The coaching role of the teacher of the deaf is so named to convey the idea that, in family-centered intervention, the teacher does not work directly with the child but supports the parent to do so (Brown & Nott, 2005, p. 159).	Yes

Note: * example of narrow definition of coaching, **example of broad description of coaching

Eleven of the 22 articles did not provide a precise definition of coaching, but instead described components of a program or model (Brown & Nott, 2005; DesJardin et al., 2006; Estabrooks et al., 2020; Hamren & Quigley, 2012; Roberts, 2019), goals for a program (Bruce, 1986; Clark & Watkins, 1985), or simply did not include any definition or description (Daczewitz, 2015; Houston, 2011, 2020; Nevins & Sass-Lehrer, 2015).

Overwhelmingly, the purpose of coaching was consistently described as a means to equip and empower caregivers to increase and improve language interactions with their children, ultimately resulting in self-efficacy and carryover of intervention strategies into their daily routines. Even the coaching models with more of a practitioner-as-expert approach mentioned

the purpose of coaching as increasing caregiver confidence and emphasized caregiver-child interaction (Bruce, 1986; Clark & Watkins, 1985; Daczewitz, 2015; Martin-Prudent, 2018; Nardine, 1974).

Role of Practitioner

There was a consensus in the literature that caregivers play an important role in a child's listening and spoken language development. The role of the practitioner in facilitating this involvement was described as a collaborative partnership (Daczewitz, 2015; Stredler-Brown, 2015; Voss & Stredler-Brown, 2017) and involved inviting the caregivers to participate (Martin-Prudent, 2018), supporting them to implement learned strategies (Brown & Nott, 2005; DesJardin et al., 2006; DesJardin, 2017; Martin-Prudent, 2018), and positioning them as the primary communication partners with their child (Blaiser et al., 2012; Brown & Nott, 2005; Estabrooks et al., 2020; Stredler-Brown, 2015). In addition to "coach," the practitioner was described as a "facilitator" (Clark & Watkins, 1985), "navigator" (Estabrooks et al., 2020), and "consultant" (Morrison, 2017; Nardine, 1974; Voss & Stredler-Brown, 2017).

Studies on practitioner roles have shown various results. In interviews following the implementation of real-time embedded coaching, Brooks (2017) found that teachers reported a shift in thinking from being the expert whose role it was to plan activities and teach strategies to an individual who recognized the value of including caregivers as collaborative team members capable of making decisions, planning, and taking the lead in sessions. In contrast, student practitioners were expected to deliver intervention strategies according to an established sequence and criteria and invite the caregivers to participate in a pre-planned, structured session, in more of a practitioner-as-expert approach in a model described by Martin-Prudent (2018). This study included a caregiver involvement rating to categorize the type and degree of

engagement in the intervention sessions. Caregiver involvement was categorized as ‘excessive’ when caregivers demonstrated strategies before the graduate student was able to model them (or led the session by showing their child’s skills or suggesting activities). Caregiver involvement was categorized as ‘expected participation’ when caregivers actively engaged in the session and practiced strategies when invited by the graduate student. ‘Excessive’ caregiver involvement resulted in the graduate students’ inability to implement the coaching model with fidelity according to a standard established by the researcher. Three publications highlighted the importance of moving from teacher to facilitator as the caregivers developed confidence and proficiency with strategies (Estabrooks et al., 2020; Morrison, 2017; Nardine, 1974).

Stredler-Brown (2015) investigated the role of the practitioner in face-to-face compared to remote intervention (telepractice); specifically, the relationship between provider attributes and provider behaviors related to caregiver coaching. Of the four provider behaviors examined – observation, direct instruction, parent practice with feedback, and child behavior with provider feedback – only direct instruction was used with similar frequency in face-to-face and telepractice sessions. The other three were used more frequently during telepractice sessions compared to in-person sessions. Providers with fewer years of experience were more likely to implement parent practice with feedback in telepractice sessions, which is a provider behavior closely linked to caregiver coaching. The author speculated that this may be related to the content and temporal proximity of their graduate training. This study suggests that there may be a difference in the role of the practitioner, including caregiver coaching, in different practice conditions.

Stages of Coaching

A number of coaching steps were presented in the literature, and like the definitions, the steps in a caregiver coaching session and the language used to describe them varied widely. For example, modeling and demonstration were used to describe the same concept (Brooks, 2017; DesJardin et al., 2006; DesJardin, 2017; Estabrooks et al., 2020; Houston, 2011; King, 2017; MacIver-Lux et al., 2020; Rhoades & MacIver-Lux, 2016; Stredler-Brown, 2015). Practice was described as action (DesJardin, 2017; Hamren & Quigley, 2012; Houston, 2020; MacIver-Lux et al., 2020; Martin-Prudent, 2018; Nevins & Sass-Lehrer, 2015), carrying out the skill, (Bruce, 1986; Clark & Watkins, 1985) repeating the activity (Houston, 2011), or simply, the parent trying the strategy (Voss & Stredler-Brown, 2017). We synthesized and organized the coaching steps found in the literature into three stages of caregiver coaching: setting the stage, application, and wrap-up. The stages of the coaching process and examples of each step are included in Table 2. See Appendix F for the distribution of coaching stages in the included literature.

Table 2.
Stages of Caregiver Coaching Represented in the Literature

Stage of coaching		Examples from the literature
Setting the stage		
	Planning the session (n=15)	The coach and parent cooperatively develop a plan that includes a purpose and an outcome (Houston, 2020, p. 8).
	Initiation (n=14)	The caregiver provides updates regarding the child or family, and the two participants (caregiver and provider) share information and prepare for the session (King, 2017, p.43).
	Introducing the strategy (n=13)	The interventionist may observe the parent and child interacting to identify which strategy or technique to explore first. Or the parents may select the strategy that is most important or appealing to them. Once the technique is identified, it is briefly discussed (Voss & Stredler-Brown, 2017, p. 11).
Application		
	Observation (n=17)	One way it (observation) could occur is for a professional to watch a parent interacting with the child while practicing a new skill previously discussed in a coaching session...An observational situation might also occur with the parent observing the professional demonstrate a particular skill, technique, or strategy (DesJardin, 2017, p. 692).
	Modeling (n=19)	Modeling the targeted strategy provides the parent or caregiver an opportunity to see how the strategy should be employed (Martin-Prudent, 2018, p. 116).
	Practice (n=20)	Following demonstration, the practitioner turns the activity over to the parent for practice (Morrison, 2017, p. 271).
	Feedback (n=20)	Providing guided practice with feedback involves opportunities for parents to practice implementing strategies, to obtain feedback from the practitioner, and to refine those skills that are critical for optimal parent-child interactions (Rhoades & MacIver-Lux, 2016, p. 334).
	Evaluation (n=13)	Evaluation requires a conscious effort for the provider to identify the child's current skill level and any perceived behavioral responses to the strategy being used. In a family-centered approach, the evaluation also includes an assessment of the family members' use of new strategies (Stredler-Brown, 2015, p. 57).
Wrap-up		
	Planning for carryover (n=12)	The practitioner…jointly evaluates the outcomes of the activity with the parent and talks about ways to generalize the outcomes at home during the family's everyday life (Estabrooks et al., 2020, p. 597-598).
	Final discussion (n=6)	Before the session ended, the parent was given ample opportunity to discuss any concerns about the child's progress, ask questions about short- or long-term communication goals, or seek input about troubleshooting the child's hearing technology (e.g., digital hearing aids and/or cochlear implants, FM systems) (Houston, 2011, p. 68).

Recommendations for Coaching

Four themes related to recommendations were identified from this scoping review. Caregiver coaching with families of children who are DHH should be individualized (n=20), context-driven (n=19), collaborative (n=19), and strengths-based (n=13). Table 3 describes and provides examples of each of these recommendations. The list of documents that incorporated

these recommendations is provided in Appendix G. Individualized services take into account the unique needs and environments of each family (e.g., Daczewitz, 2015). Context-driven services utilize the family's everyday routines as a context for their child's learning, to ensure that activities are functional and generalizable (e.g., Martin-Prudent, 2018). LSL services should be a collaborative effort between a practitioner and family, as well as between all professionals working with that child (e.g., Hamren & Quigley, 2012; Rhoades & MacIver-Lux, 2016). Less-frequently mentioned in the literature, strengths-based services acknowledge and build upon on the family's strengths (e.g., Brown & Nott, 2005; Daczewitz, 2015).

Table 3.

Recommendations for Coaching from the Literature

Recommendation		Description	Examples
Individualized	n=20	Models of coaching ranged from prescribed curricula or strict protocols to more flexible practices, but almost all of the articles espoused some level of individualization of coaching based on the needs of the child and family.	"Each individual AVT session, situation, and/or family presents with a number of human variables that can determine how the coaching components occur, and the order of transition from one component to another will change depending on the parents' knowledge and competency" (MacIver-Lux et al., 2020, p. 567).
Context-driven	n=19	The majority of articles described routines-based, context-driven activities as an important avenue through which children who are DHH learn language and coaching as a means by which to equip caregivers to utilize strategies to increase and improve language interactions with their children in these contexts. LSL strategies learned through coaching were expected to be carried over to the everyday contexts of family life.	"The coaching experience provides opportunities to apply learned skills to all aspects of one's daily routine and life activities" (Brooks, 2017, p.102).
Collaborative	n=19	A majority of articles described coaching as a collaborative process between practitioner and family. Collaborative practices mentioned were including caregivers in decision-making, planning, and goal setting (n=7), emphasizing the reciprocal relationship and role of parents as experts on their child (n=3) and working collaboratively within a session (n=2) or with other professionals (n=3).	"In Auditory-Verbal Therapy (AVT)…[coaching] is a collaborative effort between practitioner and parent, helping parents discover their own strengths and enabling them to become confident parents of children with hearing loss" (Rhoades & MacIver-Lux, 2016, p. 328).
Strengths-based	n=13	Many articles specifically mentioned the utilization of strengths-based coaching in the implementation of LSL services, indicating that building on families' strengths, rather than remediating deficits, is best practice.	"All coaching interactions with family members should acknowledge existing strengths of the parent and the child and offer support to key caregivers" (DesJardin, 2017, p. 686).

Caregiver Participation

The level of caregiver involvement during the different stages of coaching varied, particularly with regard to choosing goals and activities for the session. Nine articles described caregiver involvement in every stage of the coaching process, including in the planning stage (Blaiser et al., 2012; Brooks, 2017; Daczewitz, 2015; Hamren & Quigley, 2012; Houston, 2020; MacIver-Lux et al., 2020; Morrison, 2017; Rhoades & MacIver-Lux, 2016; Voss & Stredler-Brown, 2017). Three documents described a model in which practitioners did the majority of the planning and goal-setting, but adjusted accordingly after discussing and weighing priorities with caregivers (Clark & Watkins, 1985; DesJardin, 2017; Estabrooks et al., 2020). In four of the documents, the authors described models whereby caregiver participation occurred primarily during the session and in-between sessions, when caregivers practiced strategies in the natural environment (Bruce, 1986; Houston, 2011; Martin-Prudent, 2018; Nardine, 1974). In the remaining five articles, it was unclear whether caregivers were involved in planning or goal setting, but active participation in the sessions and the expectation of carryover between sessions was clear (Brown & Nott, 2005; DesJardin et al., 2006; King, 2017; Nevins & Sass-Lehrer, 2015; Stredler-Brown, 2015).

Practitioner Reflection

Two categories of practitioner reflection were identified in the literature: reflecting with caregivers and self-reflection. Twenty of the 22 articles described reflection as occurring during the application stage, wherein the practitioner guides the caregiver through reflection on the exchange that just occurred. Four articles presented practitioner self-reflection as occurring before or after an intervention session.

Reflecting with Caregivers. Reflection was presented in the literature as a means by which to determine the effectiveness of actions or practices (Stredler-Brown, 2015). Nine articles described practitioners guiding caregivers in reflective practice by asking open-ended questions (DesJardin, 2017; Estabrooks et al., 2020; Hamren & Quigley, 2012; MacIver-Lux et al., 2020; Martin-Prudent, 2018; Morrison, 2017; Nardine, 1974; Rhoades & MacIver-Lux, 2016; Voss & Stredler-Brown, 2017) and three referred to the utilization of active, reflective listening (King, 2017; Martin-Prudent, 2018; Voss & Stredler-Brown, 2017). Four articles outlined the practitioners' role in reflection: to highlight caregiver strengths and encourage them to identify their own strengths and learning needs (Brooks, 2017; DesJardin, 2017; MacIver-Lux et al., 2020; Rhoades & MacIver-Lux, 2016). Two articles asserted that as caregivers become more efficacious at self-reflection, it builds their confidence (Brooks, 2017; DesJardin, 2017), five indicated growth in caregiver self-awareness or self-analysis skills (Nardine, 1974; Nevins & Sass-Lehrer, 2015; Rhoades & MacIver-Lux, 2016; Voss & Stredler-Brown, 2017), and one author attributed the encouragement of active engagement and accountability of caregivers to reflection (Brooks, 2017). Three authors suggested that ideally, caregivers should be encouraged to self-reflect before the coach provides feedback (Brooks, 2017; Nevins & Sass-Lehrer, 2015). In addition to evaluating specific intervention strategies following practice, three authors suggested that reflection may also be used to review the effectiveness of the coaching experience for the caregivers (Brooks, 2017; Hamren & Quigley, 2012). In one study, practitioners reported that incorporating reflection into coaching sessions accelerated the caregivers' learning beyond external practitioner feedback alone (Brooks 2017). Taken together, this highlights the variety of ways in which reflection is utilized in caregiver coaching.

Practitioner Self-Reflection. Practitioner self-reflection was presented as a way to continually improve LSL practice in order to achieve better outcomes with children and families. MacIver-Lux, et al. (2020) recommended personal evaluation following each intervention session, and Estabrooks et al. (2020) provided open-ended question prompts and a goal-setting form to facilitate this self-reflection. Nevins and Sass-Lehrer (2015) suggested that self-reflective practitioners develop the ability to observe and refine their coaching skills, enabling them to work toward exemplary practice.

Training for Coaching

Caregiver coaching is a central tenet in LSL professional practice (AG Bell Academy, 2017); therefore, an objective of this review was to identify how practitioners learn to coach. The literature contained information in two categories: pre-service graduate training, and post-degree professional development activities.

Graduate Training

Five articles explicitly mentioned graduate training for caregiver coaching, three of which were empirical studies. Stredler-Brown (2015) found that practitioners with graduate training as Speech-Language Pathologists or Audiologists used direct instruction, or teaching skills to caregivers, 2.5 times more often than did practitioners trained as Teachers for the DHH. The author attributed the limited use of coaching strategies by Teachers for the DHH to the coursework in their pre-service training programs. In King's (2017) study, almost 18% of Developmental Specialists, who are not trained to work specifically with children who are DHH, took an entire course on caregiver coaching in their preservice training, compared to 9.1% of Teachers of the DHH and 7.7% of Speech-Language Pathologists. Consequently, only 37.1% of

all participants felt prepared to utilize caregiver coaching with this population upon completion of their graduate programs.

Martin-Prudent (2018) recruited student participants from a program at Illinois State University called AIM to Be Ahead Grant ™ (An Interdisciplinary Model to Offer Babies Early Auditory Habilitation, Education, and Development). This program included specialized instruction in caregiver coaching for graduate students, particularly a four-step parent training model designed to increase parent engagement in intervention sessions. The author investigated the impact of the training on the students' ability to execute the parent model with fidelity in the home and clinic settings. Results indicated that although the graduate students learned and implemented the strategies, they did not consistently execute all four steps of the coaching model.

Two additional references mentioned pre-service training for professionals working with families of children who are DHH. Blaiser (2012) described the program at Sound Beginnings, which serves as a practicum site for graduate students in Utah State University's LSL personnel preparation program. One component of Sound Beginnings is to educate students to coach while serving families through telepractice. MacIver-Lux, et al. (2020) outlined components of caregiver coaching and suggested that LSL practitioners often learn how to coach "on the job." As an essential element to LSL practice, the authors advocated for caregiver coaching to be added as a required component in all graduate programs for Speech-Language Pathologists, Teachers of the DHH, and Audiologists.

Professional Development

Eleven articles suggested that training for coaching only occurred once professionals began working with families, through job-embedded training or professional development

activities. Two authors referred to the AG Bell Association's LSLS certification process as a means by which practitioners gain coaching skills (Morrison, 2017; Stredler-Brown, 2017). The LSLS certification process requires three to five years of post-graduate mentoring, during which practitioners learn the specialized skills needed to work with families of children who are DHH learning to listen and talk, including caregiver coaching (AG Bell Academy, 2017).

Two articles outlined specific professional development programs created to develop caregiver coaching skills (Brooks, 2017; Nevins & Sass-Lehrer, 2015), while two others only briefly mentioned that providers learn to coach on-the-job (Houston, 2020; MacIver-Lux et al., 2020). Three others discussed training related to a specific coaching model, including a researcher-developed model (Roberts, 2019) and an established curriculum for working with families of children who are DHH (Bruce, 1986; Clark & Watkins, 1985). Two articles specifically addressed telepractice as a means by which practitioners develop and practice caregiver coaching skills. Hamren and Quigley (2012) suggested that telepractice provides an avenue for practitioners to focus specifically on strengthening their coaching skills to better empower families to facilitate listening and spoken language skills in their children. Stredler-Brown (2015) found that practitioners who obtained LSLS certification were more experienced using family-centered early intervention practices, including caregiver coaching via telepractice, suggesting that the certification process is an avenue through which practitioners developed coaching expertise.

The Impact of Coaching

There is a lack of evidence to support caregiver coaching in LSL practice. We identified four studies that investigated the impact of caregiver coaching in the current LSL literature, including a single randomized controlled trial (RCT), a quantitative descriptive study, a single-

case multiple baseline mixed methods study, and one qualitative study with a quantitative secondary objective.

Caregiver Application of Strategies

Two studies measured caregiver application of strategies following coaching. In an RCT, Roberts (2019) utilized a fidelity checklist to evaluate whether parent-implemented communication treatment (PICT) training resulted in parents' application of strategies with fidelity. Parents of children who are DHH (n=9) participated in a structured PICT training over a 6-month period to learn visual, interactive, responsive, and linguistic communication support strategies to use with their children, and parents of children with normal hearing (n=10) received no PICT training. The authors reported that across a six-month period, parents in the treatment group achieved an average of 92% fidelity, with fidelity exceeding 85% in every session, compared to parents in the control group. Parents in the treatment group increased their use of strategies over the parents who did not participate in the training (17% vs. 2%). As a result, children of the parents in the treatment group made significant gains in social and symbolic prelinguistic speech skills. The second study was a case study; Daczewitz (2015) found that virtual training of a highly structured parent-implemented communication strategy (PiCS) led to the successful use of specialized communication strategies by the parent of one child who was DHH, and the parent reported that the strategies met his goals.

Practitioner Application of Coaching

Two studies evaluated the process of practitioner coaching by measuring the fidelity of use of coaching strategies (Martin-Prudent, 2018) and examining the perspectives of practitioners and caregivers (Brooks, 2017). In a quantitative descriptive study, Martin-Prudent (2018) measured the fidelity of the use of a 4-step parent coaching model by graduate student

practitioners following specialized training. Results indicated that overall compliance and use of all four steps of the model with fidelity was only demonstrated in 23.97% of the sessions. Qualitatively, Brooks (2017) explored the application of adult learning principles to real-time embedded coaching with caregivers of children in a school-based EI program. Caregivers and teachers reported that this new approach to intervention resulted in a change in attitudes and behaviors, resulting in increased caregiver engagement and feelings of empowerment by both caregivers and teachers.

Impact of Caregiver Coaching on Child Outcomes

Three studies evaluated the effectiveness of caregiver coaching by measuring child outcomes pre-and post-intervention. In the quantitative portion of her study, Brooks (2017) reported that children (n=5) whose caregivers received coaching showed from three to five months more growth in expressive vocabulary on the MacArthur-Bates Communicative Development Inventories (CDI), than children whose caregivers did not participate in coaching. Daczewitz's (2015) case study reported overall positive child outcomes as the result of caregiver coaching, as indicated by increased raw scores on the CDI and Cottage Acquisition Scales for Listening, Language, and Speech (CASLLS). However, due to developmental delays, the child's scores could not be reported as percentile rankings, and the author could not attribute the child's progress directly to the PiCS intervention. Results of Roberts' (2019) PICT RCT study indicated that children of the parents who received PICT coaching made significant gains in prelinguistic speech skills compared to children in the control group (effect size 1.09, [p = .03]).

Discussion

The aim of this scoping review was to gain a better understanding of the current state of the LSL literature regarding caregiver coaching definitions, practices, recommendations, and

impact. Our findings indicate that there is a continuum of practices that fall within caregiver coaching in LSL services and the definitions are varied. However, common elements include coaching as a means to equip and empower caregivers to increase and improve language interactions with their children, ultimately resulting in self-efficacy and generalization of LSL intervention strategies into their daily routines.

The findings of this review highlight the lack of a consistent, widely recognized model of coaching being utilized in LSL practice. There are a variety of coaching approaches, including a model that was developed for other populations and adapted for families of children who are DHH (PiCS) (Daczewitz, 2015). The literature included eight models of coaching (across 15 articles), while two articles described the general philosophy of family-centered intervention and five did not specify a particular model. No dominant approach to coaching was evident, as the models ranged from highly structured curricula, like the SKI-HI and PICT (Bruce, 1986; Clark & Watkins, 1985; Roberts, 2019), to more flexible steps intended to be implemented in a prescribed manner (Martin-Prudent, 2018), and finally to less-defined family-centered EI frameworks intended to be individualized and flexible (Stredler-Brown, 2015; Voss & Stredler-Brown, 2017). Several models were put forth by the authors specific to the context of LSL practice (Brown & Nott, 2005; Estabrooks et al., 2020; Voss & Stredler-Brown, 2017). Most LSL coaching models were informed by caregiver coaching models developed for EI in general, most notably the model developed by Rush and Shelden (Rush et al., 2003; Rush & Shelden, 2011), indicating that authors have sought to adapt and apply established, evidence-based caregiver coaching strategies with families of children who are DHH.

Best practice guidelines indicate that family/professional partnerships, including involving caregivers as active participants in the intervention process, are critical for family-

centered LSL practice (JCIH, 2019; Moeller et al., 2013). Active participation by caregivers was a central theme across the literature, although the amount and type of caregiver participation across the stages of coaching varied. This supports LSL research indicating that caregiver involvement is linked to positive outcomes for children who are DHH (Allegretti, 2002; DesJardin et al., 2006; Lund, 2018; Nicastri et al., 2020; Spencer, 2004; Zaidman-Zait & Young, 2008), and caregiver involvement is a strong predictor of child language outcomes (Calderon, 2000; Moeller, 2000; Nicastri et al., 2020). Active caregiver participation is a critical component of adult learning, and thereby important to caregiver coaching (Dunst & Trivette, 2009; Trivette et al., 2009). By supporting active caregiver engagement in the LSL intervention process, coaches support caregivers in identifying and working toward intended outcomes for their children. As a capacity-building practice, coaching requires collaborative planning, practice, and reflection with caregivers to work toward goals that are important for their family. The findings of this review support that caregivers should be encouraged to be actively engaged as equal partners in every stage of the LSL intervention process, from planning to implementation, to establish goals and acquire new knowledge and skills that are relevant and applicable to their unique needs.

Recommendations for caregiver coaching drawn from this scoping review of the literature indicate that it should be individualized, context-driven, collaborative, and strengths-based (e.g., DesJardin, 2017; MacIver-Lux et al., 2020; Voss & Stredler-Brown, 2017). Although building on families' strengths was mentioned less frequently in the LSL literature, these recommendations align with recommended practices. The Division for Early Childhood (DEC) Recommended Practices indicate that EI services for families of children with all disabilities should identify and build on individualized family strengths and capacities because all families

are capable of supporting their child's learning when the right services and supports are in place (Addision et al., 2008; Division for Early Childhood [DEC], 2014). Additionally, because context is important for children's learning (DEC, 2014), intervention strategies should be implemented within the context of meaningful family activities, which can be achieved through coaching the caregiver to utilize strategies with their child outside the confines of an intervention session. An international consensus statement of best practices in family-centered EI for children who are DHH recommends that EI services should comprise a partnership between caregivers and practitioners characterized by reciprocity, mutual trust, honesty, respect, shared responsibility, and open communication (Moeller et al., 2013). These recommendations are echoed in the JCIH Year 2019 Position Statement (JCIH, 2019) and supported by the articles included in this review.

Reflection is another principle of adult learning that plays an important role in caregiver coaching (Dunst & Trivette, 2009; Lorio et al., 2020; Nelson et al., 2020; Salisbury et al., 2018; Trivette et al., 2009). Consistent with the broader EI literature, reflection appeared consistently across the included literature as an important component in the coaching process in LSL practice. In the context of coaching, reflection with the caregivers involves engaging them in purposeful thinking to determine the next steps in their learning process, whether that entails repetition to further develop understanding, or setting new learning targets (Dunst & Trivette, 2009b; Trivette et al., 2009). Reflection is what differentiates coaching from other types of problem-solving and information sharing, as it allows the coach to build on the caregivers' existing skills and promote continuous improvement by teaching the caregivers to analyze their understanding and practice. EI research suggests that caregivers consider reflection an integral component for learning to confidently and effectively support their child's learning (Gallacher, 1997; Rush et al., 2003;

Salisbury et al., 2018), although it may be challenging for practitioners to implement (Douglas et al., 2019; Meadan et al., 2018).

Reflection with the caregivers, for the purpose of evaluating the achievement of goals within a session, appeared more frequently in the literature than did practitioner self-reflection. Where practitioner self-reflection was outlined, it was emphasized as an important component of professional growth and mastery of coaching principles. In the included literature, self-reflection occurred before intervention sessions, during planning, and/or afterwards, to evaluate professional performance and consider changes that might be implemented moving forward. However, it is unclear whether practitioners utilize self-reflection within the context of a coaching exchange to evaluate whether the coaching strategies are effective or need to be adjusted to optimize caregiver learning; therefore, this may be an interesting direction for further research.

Although not as prevalent in the literature, studies addressing the impact of caregiver coaching suggest that families of children who are DHH can effectively learn to implement specialized LSL strategies through coaching. Findings are limited; however, three studies reported that an increase in caregivers' use of strategies led to benefits in their child's language skills, indicating that equipping caregivers to increase and improve language interactions with their children through coaching may facilitate spoken language development during early childhood (Brooks, 2017; Daczewitz, 2015; Roberts, 2019). This is consistent with previous research in the general EI literature that indicates that caregivers can successfully learn to implement intervention strategies through coaching (Akamoglu & Meadan, 2018; Brown & Woods, 2016; Meadan et al., 2014; Roberts et al., 2014; Woods et al., 2004), and caregiver-implemented interventions may lead to positive child outcomes (Heidlage et al., 2020; Roberts &

Kaiser, 2011). However, the degree to which caregivers were involved in the coaching process varied across the studies, ranging from active engagement in every part of the process, including goal setting and planning, to caregiver participation. Participation mainly consisted of practicing strategies that were planned and modeled by the practitioner during the intervention session and carrying those strategies over at home. Highly structured models, in which caregiver participation is limited to following the practitioners' lead, may not be the most effective approach if the goal of coaching is for families to implement strategies in real-life situations. This does not indicate, however, that caregiver coaching is less effective when implemented in a flexible, individualized way to accommodate the needs of each family; in fact, this review identified individualization as an important characteristic of effective coaching practices. Individualized coaching is imperative for the provision of equitable and culturally competent services for all families of children who are DHH.

Overall, all of the articles that addressed professional training for coaching indicated that it is a specialized skill that practitioners need to master in order to equip and empower caregivers to increase and improve language interactions with their children. However, within the EI literature, no consensus has been reached as to the type or dosage of professional development needed to achieve implementation fidelity of caregiver coaching (Haring Biel et al., 2020; Salisbury et al., 2018), and researchers have identified a need for comprehensive, well-designed, and sufficiently detailed studies to address this (Artman-Meeker et al., 2015; Elek & Page, 2018; Haring Biel et al., 2020; Romano & Schnurr, 2020; Salisbury et al., 2018). Of the documents included in our study, few referred to professional training opportunities outside of LSLS certification training, other than to indicate a scarcity of coursework pertaining to caregiver coaching offered in professional preparation programs. This is worth noting, because the LSLS

certification process requires three to five years of post-graduate training, during which time practitioners are already working with families. Additionally, not all LSL practitioners choose to pursue certification, so it is therefore worth considering the inclusion of caregiver coaching in professional training program curricula and the development and expansion of robust post-graduate professional training programs to ensure the acquisition of the requisite skills for coaching caregivers.

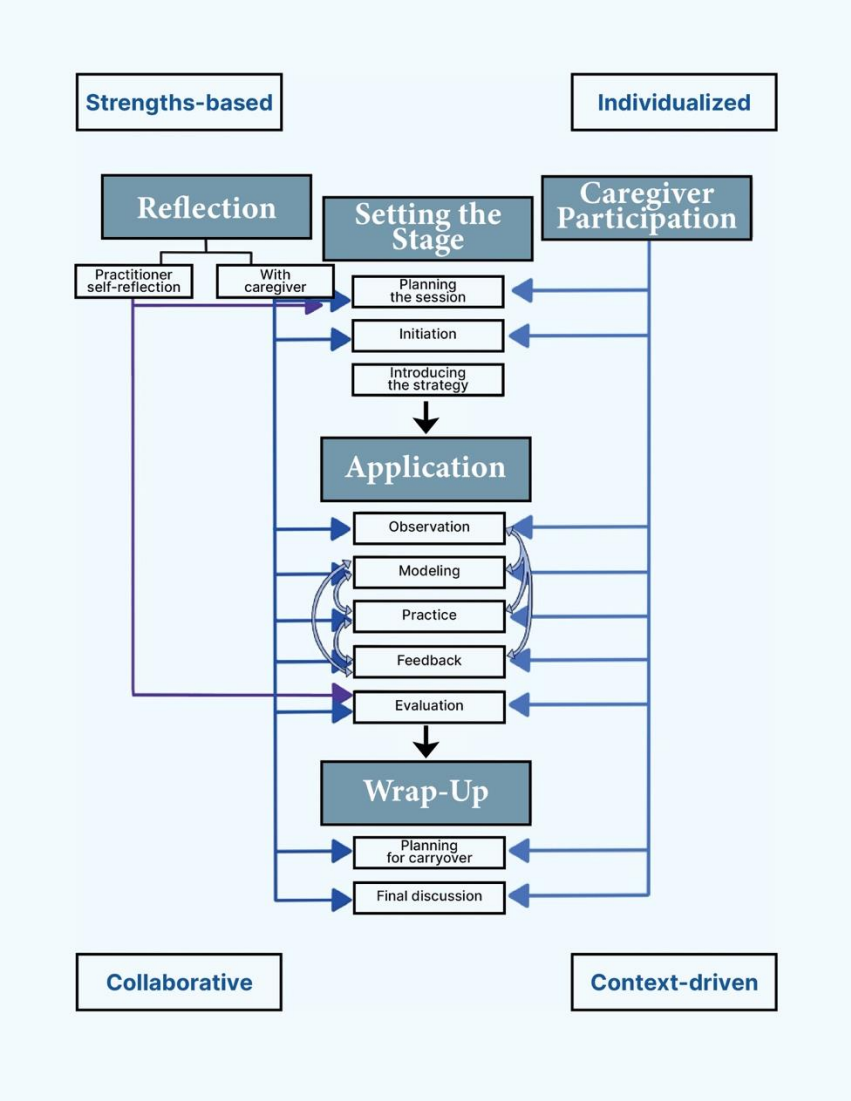
The majority of documents included in this review were conceptual papers and professional practice recommendations published in peer-reviewed journals or professional books. The lack of peer-reviewed research related to coaching in LSL services is evidenced by the identification of only one RCT that met the inclusion criteria. Large-scale RCTs are considered the most reliable source of evidence to determine the effectiveness of an intervention, and are therefore necessary to establish an evidence based for clinical practices (Akobeng, 2005). Researchers have highlighted the challenge of designing empirical research that accommodates for the individualization needed to support families receiving EI services (Romano & Schnurr, 2020), which may account for few well-designed studies specific to LSL practice. Studies addressing what types of coaching interventions are effective and in what settings are just beginning to emerge in the LSL literature, and more well-designed research is needed to determine the effectiveness of specific coaching practices and the circumstances under which they are effective (Akamoglu & Meadan, 2018; King & Xu, 2019). We identified only four studies investigating the impact or fidelity of use of caregiver coaching, and the sample sizes of the included studies were generally small. Recent research has emerged that examines the perspectives of caregivers receiving EI services, which may include coaching, for their children who are DHH (Ambrose et al., 2020; McCarthy et al., 2020; Scarinci et al., 2018; Stewart et al.,

2020; Ward et al., 2019); however, few empirical research studies and small sample sizes indicate a need for ongoing research to establish the evidence base for the effectiveness of caregiver coaching in LSL practice.

Implications for Research and Practice

We integrated the findings of this review to present a potential model of LSL caregiver coaching, shown in Figure 2. The proposed model includes a synthesis of caregiver coaching steps, coaching recommendations, and the role of caregiver participation and reflection in coaching in LSL practice, and represents commonalities identified across most of the literature. This model was derived from limited empirical evidence and a prevalence of informed professional recommendations; therefore, it requires further investigation to be validated through research and practice.

Figure 2.
Caregiver Coaching in LSL Practice



Three broad stages of the coaching process were identified in the literature: setting the stage, application, and wrap-up, each containing a number of steps. Some of the steps may overlap; for example, caregivers may observe while a practitioner is modeling a strategy, or a practitioner may provide feedback while the caregivers practice a strategy. The steps are not necessarily applied in order, as coaching is individualized to each family, and the process is cyclical, so steps may be repeated several times within a single LSL session. The overarching

recommendations are included to represent the application of the coaching model in an individualized, context-driven, collaborative, and strengths-based manner.

Setting the stage represents the beginning of a coaching session. This stage may incorporate practitioner self-reflection, particularly during planning. Setting the stage includes a) planning for the session, which the practitioner may complete without the caregivers before the session, or in collaboration with the caregivers; b) initiation, which includes checking in on how things have gone since the previous session; and c) introducing the listening or language strategy that will be practiced during the session.

In the application stage, caregivers practice strategies during a meaningful routine, often incorporating play. This stage includes a) observation, both by the practitioner and the caregivers; b) modeling, during which the practitioner demonstrates a strategy for the caregivers to observe; c) practice, at which point the caregivers take a turn practicing the strategy with the child; d) feedback by the practitioner; and sometimes e) evaluation, which may involve formal assessment of the child's speech and language skills or informal evaluation of how the coaching process is going for the caregivers.

The final wrap-up stage includes a) planning for carryover to other routines throughout the week and b) the final discussion, during which the caregivers have an opportunity to ask questions or discuss concerns.

Active caregiver participation and reflection happen throughout the coaching process. Reflection occurs in two forms: reflection with the caregiver, which may occur at any point during the process, and self-reflection by the practitioner, which generally takes place during planning and/or evaluation.

This scoping review offers insight into the existing literature on caregiver coaching with families of children who are DHH and highlights gaps that represent opportunities for further research. It is clear that research on the effectiveness of caregiver coaching is needed. Although we identified a few studies that evaluated the impact of coaching in our review, sample sizes were relatively small, and due to study design, the level of evidence is low. Larger scale intervention studies are needed in order to increase the evidence base for the effectiveness of caregiver coaching on family and child outcomes.

While reflection was identified as an important component of caregiver coaching, further research is warranted to determine whether practitioner self-reflection is more prevalent than the current literature suggests. It would also be beneficial to investigate whether practitioners reflect during the application phase of a session in order to evaluate the effectiveness of their coaching strategies. Gaining a better understanding of how reflection is used in practice would be useful for validating, evaluating, and improving practitioners' coaching practices with families. Further research in this area may also lead to the development of best practice guidelines for incorporating reflection in caregiver coaching for families of children who are DHH.

Successful EHDI programs have led to growth in early intervention programs for children who are DHH and it is reasonable to expect that the demand for LSL practitioners who are trained in caregiver coaching will continue to increase. This review highlights the need to evaluate professional training programs, in order to ensure that practitioners working with young families learn to implement caregiver coaching. Important directions for future research also include an investigation of how much training is needed to obtain mastery of caregiver coaching skills and the best way for practitioners to acquire those skills. Additionally, the development of caregiver coaching competencies and standards would enable consistency of application and

provide a framework for future research studies, as well as result in higher quality LSL services for families.

Consistent with the general EI literature (Friedman et al., 2012), there is a lack of consensus on the steps involved in coaching in LSL practice. As presented in our proposed model, caregiver coaching is consistently represented in the literature as involving three stages: setting the stage, application, and wrap-up. While some variations exist with regard to the specific steps involved in the coaching process, all caregiver coaching involves touching base on what's new with the family, discussing the goals for the session, learning and applying LSL strategies, and discussing how those strategies can be practiced in-between sessions. This review also provides a greater understanding of how the steps are implemented and recommendations for the implementation of caregiver coaching with families of children who are DHH.

Limitations

Our search strategy was intentionally broad in scope and no date limitations were set; however, due to the variability of terminology regarding caregiver coaching over time, it is possible that some relevant references were missed. Secondly, the inclusion of only English articles precluded the representation of potential cultural differences in the implementation of caregiver coaching. Although we did consult with experienced professionals during the identification stage of the review, we did not conclude with a consultation exercise to evaluate the validity of our findings or the resulting model, which might have increased the strength of our results (Arksey & O'Malley, 2005). Only six of the 22 included articles were empirical research studies, indicating a lack of evidence upon which to base practice recommendations. Therefore, our proposed model represents the current state of the literature but will require further research to refine it for caregiver coaching in LSL practice. Additionally, we were unable

to retrieve 13 of the 506 full-text articles due to COVID-19 closures. However, all of these items were at least 20 years old, and therefore would likely have contributed limited new information to our review.

Conclusion

Caregiver coaching in LSL practice is a means by which caregivers learn to utilize enhanced language interactions to improve their child's language outcomes, ultimately resulting in self-efficacy and carryover of intervention strategies into their daily routines. The principles and practices of LSL services prioritize caregiver coaching as a means to enable children who are DHH to develop communication competency (AG Bell Academy, 2017). The LSL research is beginning to address the effectiveness of caregiver coaching, but a lack of consensus on definitions and practices is still evident in the literature, and more research is needed to validate its application in a variety of settings. This scoping review provides a foundational understanding of the current state of the LSL literature with regard to caregiver coaching and may inform future research endeavors that are critical for establishing an evidence base for coaching caregivers of children who are DHH. Finally, coaching steps found in the literature were synthesized, resulting in a proposed coaching framework that has the potential to improve consistency in terminology, practices, and application of coaching strategies across LSL programs and establishes a foundation for further research. With validation, this model of caregiver coaching may inform the practices of current LSL practitioners, advise the development of training programs for the next generation of LSL practitioners, and ultimately impact the quality of LSL services for families. Most importantly, this new understanding may impact the outcomes of children who are DHH by equipping and empowering their caregivers through coaching.

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“It gives me confidence”: Caregiver coaching from the perspective of families of children who are deaf or hard of hearing

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Abstract

Caregiver coaching is utilized in early intervention services with families of children who are deaf or hard of hearing to increase caregivers’ skills and confidence in supporting their child’s language development, but few studies have examined coaching from the perspective of the caregivers. The purpose of this study was to increase understanding of caregivers’ experiences of coaching in the context of listening and spoken language intervention services. Using semi-structured, qualitative interviews, this study examined 13 caregivers’ perspectives at three intervention sites in the US and Canada. Results indicate that caregivers perceive that practitioner characteristics, expectations, and the evolution of the coaching relationship over time contribute to a positive caregiver coaching relationship. This study contributes to the understanding of the caregiver coaching experience and has implications for new and experienced practitioners working to improve their practice by establishing and strengthening collaborative caregiver coaching relationships with the families they serve.

Chapter 3: Caregiver Interviews

Caregiver coaching is a process designed to empower caregivers by building their capacity, competence, and confidence to support their child's development within naturally occurring daily routines (Dunst & Trivette, 2009a; Dunst, Trivette, & Hamby, 2007; Rush & Shelden, 2011a; Sukkar et al., 2016; Woods, Wilcox, Friedman, & Murch, 2011). Caregiver coaching is widely considered best practice in early intervention (EI) for families of children with disabilities, including children who are deaf or hard of hearing (DHH) (Division for Early Childhood, 2014; Moeller et al., 2013). For families pursuing listening and spoken language (LSL) for their children who are DHH, timely diagnosis, appropriate audiologic management, including hearing technology and early enrollment in specialized EI services provide much-needed support for families (Ching & Leigh, 2020; Durieux-Smith et al., 2008; Holzinger et al., 2011; Moeller et al., 2013). Through caregiver coaching, families learn LSL strategies to support their child's learning and development.

EI in general, and LSL practice specifically, has an imperative to include caregivers as active participants, and caregiver coaching is one of the primary approaches for achieving this goal (Rush & Shelden, 2005, 2011; Shelden & Rush, 2005). This is particularly relevant for families of children who are DHH, because research indicates that caregiver involvement in EI is linked to positive outcomes for children (Allegretti, 2002; DesJardin et al., 2006; Spencer, 2004; Zaidman-Zait & Young, 2008), particularly in communication development (Calderon, 2000; Moeller, 2000; Yoshinaga-Itano, 2003). Recent research indicates that early amplification and participation in EI resulted in a higher likelihood of reaching language scores commensurate with typical hearing peers (Ching & Leigh, 2020; Davidson et al., 2021), and these benefits

increased with greater intensity of EI services and greater levels of hearing loss (Ching et al., 2017; Geers et al., 2019).

Recent research has begun to examine the effectiveness of coaching for caregiver learning (Ciupe & Salisbury, 2020; Sone et al., 2021); however, incongruence persists in definition, terminology, and framework. Improving specificity is critical to inform robust evaluations of the processes, intermediate outcomes (e.g., caregiver learning), and eventual outcomes (e.g., communication outcomes for children) of caregiver coaching. In a research synthesis on coaching in EI, Kemp and Turnbull (2014) found no common definition or description of coaching, and practices ranged from 'relationship-driven' on one end of the spectrum to 'intervener-directed' on the other. Relationship-driven practices involved practitioners collaborating with caregivers on planning and decision-making, and intervener-directed practices involved a more prescribed approach for caregivers to follow. A more recent systematic review in Australia indicated a persistent lack of an operationalized definition of caregiver coaching, inconsistencies in reporting of how practitioners learn and implement coaching practices, and a lack of outcome measures to determine its effectiveness with families of children at risk for disabilities (Ward et al., 2020).

Listening and spoken language practitioners abide by principles that emphasize the importance of caregiver coaching when working with families of children who are DHH (AG Bell Academy for Listening and Spoken Language [AG Bell Academy], 2017; Kendrick & Smith, 2017; Moeller et al., 2013); however, these practices are not well-defined. Practitioners are expected to 'guide and coach parents' to become the primary facilitators of their child's communication development, and integrate listening and language into all areas of the child's life (AG Bell Academy, 2017; Estabrooks et al., 2016). Widely recognized best practice

principles for family-centered EI provide guidance for coaching caregivers of children who are DHH, including the development of collaborative partnerships characterized by open communication, shared tasks, and mutual trust. Teaching caregivers new skills through the use of adult learning strategies, building on existing knowledge and skills is also endorsed (Moeller et al., 2013). Additional guidance indicates that practitioners are expected to develop proficiency in parent guidance, including family coaching and adult learning (AG Bell Academy, 2017, p. 20). Although these constructs are essential components of LSL practice, professional guidance documents lack clarity regarding the elements of coaching and how it should be implemented with families of children who are DHH.

Few empirical studies have examined caregiver coaching in this population. Recent reviews of the literature highlight this dearth of evidence. Shekari et al. (2017) identified 22 studies for inclusion in a systematic review of the role of parents and the effectiveness of EI for children who are DHH, but none were directly related to caregiver coaching. The review found that family participation in EI is an important factor in a child's outcomes; however, how caregivers learn skills in the context of intervention was not examined. In a systematic review of coaching practices in EI for children at risk of developmental delay, only one of the 18 included papers was directly related to the impact of parent coaching versus therapist-delivered intervention (Ward et al., 2020). The authors concluded that while caregiver coaching is widely accepted, there is a need for studies measuring the impact of caregiver coaching on parent capacity and self-efficacy. Our scoping review on caregiver coaching in LSL EI services included 22 articles, six of which were primary research studies but only one peer-reviewed publication (Noll et al., 2021). Our results indicated that caregiver coaching should be individualized, context-driven, collaborative, and strengths-based (Noll et al., 2021). We

consolidated eight models of coaching and a variety of coaching practices found in the literature to propose a model of caregiver coaching in LSL practice.

There is limited evidence that parent training is effective in teaching caregivers to implement language strategies with their children who are DHH (Nicastri et al., 2020; Roberts, 2019). In a small randomized-controlled trial, Roberts (2019) found that caregivers (n=9) increased their use of communication support strategies following training, and this resulted in significant gains in prelinguistic speech skills in their children, compared to a control group (n=10) who did not receive training. In a small prospective clinical study, Nicastri et al. (2020) studied the long-term effects of a parent training program focused on increasing language facilitation skills in 14 parents of children with cochlear implants. Parental interaction and child language results were measured immediately following the parent training, and again three years later. Parents improved the quality of their interactions and the children in the treatment group showed a signification improvement in linguistic skills compared to the control group. This study indicates that parent training can be an effective tool for improving parents' use of communication strategies; however, parents learned new skills through a predetermined group curriculum, rather than through individualized caregiver coaching.

Although the EI literature supports caregiver coaching and LSL guidelines suggest its use as a standard of practice, current literature lacks a clear description of caregiver coaching with families of children who are DHH, and little is known about caregivers' experiences with coaching. As such, the purpose of this qualitative study was to broadly examine and increase understanding of caregivers' experiences with coaching in EI services for their children who are DHH and suggest steps practitioners can take to establish a positive caregiver coaching relationship.

Method

This qualitative research study involved semi-structured interviews with caregivers receiving LSL language EI services at one of three sites and was informed by the principles of interpretive description (Teodoro et al., 2018; Thorne, 2016; Thorne et al., 1997, 2004). This methodology is well-suited to our purposes because the foundation of this applied qualitative approach is the investigation of a clinically relevant phenomenon in order to identify themes and patterns from subjective perceptions and generate an interpretive description to inform clinical understanding (Burdine et al., 2020; Thorne et al., 2004). This study received research ethics approval from the University of Ottawa and the CHEO Research Institute in Ottawa, Ontario. Consent was obtained prior to each interview.

Sampling

Participants were purposely selected from one early intervention program in Canada and two programs in the United States, representing diversity in geographical location, service delivery models, and exemplary LSL services. Site 1 offers services on-site, Site 2 primarily offers home-based services, and Site 3 offers a combination of site-based and home-based intervention services. Eligible participants included caregivers who: 1) participated in LSL services for a child who is DHH, ages birth to 3 years within the previous six months, and 2) were able to communicate in English. Caregivers were invited to participate by their practitioners, and each practitioner was asked to recruit 1-2 caregivers, at their discretion. This sampling strategy allowed the practitioners to choose caregivers who could meaningfully inform an understanding of the research problem and provide valuable information to help answer the research questions (Creswell & Poth, 2018).

The aim was to identify recurrent patterns while also capturing diversities in the experiences among practitioners implementing LSL services in different contexts (Braun & Clarke, 2021; Burdine et al., 2020; Thorne et al., 2016). Aligned with the principles of interpretive description, we identified commonalities to generate a deeper understanding of practitioners' experiences, while still recognizing that variations will always exist in applied practice (Abdul-Razzak et al., 2014; Burdine et al., 2020; Thorne, 2016). The identified commonalities provide new and clinically-applicable understanding of the experience of caregiver coaching in LSL practice.

Data Collection and Analysis

Individual, semi-structured interviews were conducted at a convenient location for the caregivers, including on-site, in the family's home, and, for one family, via Zoom video conferencing software. Caregivers were asked to describe their overall experience participating in LSL EI services, with a particular focus on their relationship with their practitioner and how they learn within the context of an intervention session. The interviewer explained coaching to the caregivers as "a provider teaching the parent, rather than teaching the child" (see Appendix H for interview guide). Interviews were audio recorded, transcribed verbatim, and verified before being uploaded into NVivo (12.6.0), a qualitative data analysis software that was utilized to organize and facilitate analysis. To preserve confidentiality in the final report, we removed participant and site names and assigned pseudonyms for reporting.

Interview data were analyzed using reflexive thematic analysis, which utilizes an inductive, iterative six-phase process: 1) familiarization, 2) generating codes, 3) constructing themes, 4) reviewing themes, 5) defining and naming themes, and 6) producing the report (Braun et al., 2019; Braun & Clarke, 2006; Terry et al., 2017). This method of analysis acknowledges

and values the researchers' experience and perspective and is well-suited to applied qualitative research that answers clinically relevant questions (Campbell et al., 2021).

To ensure rigor and trustworthiness and account for potential bias (Holmes, 2020), the primary researcher critically reflected on her positionality, participated in reflexive memoing throughout data collection and analysis, maintained detailed field notes and an audit trail, and met with other members of the research team throughout to challenge assumptions, debrief, reflect, discuss and refine codes and themes.

The primary researcher who conducted and analyzed the interviews is the parent of a child who is DHH and an experienced LSL EI practitioner with experience utilizing collaborative caregiver coaching. This dual perspective affords the researcher a unique perspective on issues of clinical significance in LSL practice and informed the design of this research project.

Results

Thirteen interviews were completed with one father, nine mothers, and three sets of both parents (see Table 1 for demographic information). All families but one had a child currently receiving LSL EI services; one child transitioned out of EI four months prior to the interview. Four of the participants reported working with more than one practitioner while in EI, and two participants had two children who have received LSL EI services, both of whom worked with a single practitioner. The distribution across sites was as follows: Site 1, n=3; Site 2, n=6; Site 3, n=4.

Table 1

Demographics

Variable	Number	Percentage
Interview participant(s)		
Mother	9	69.2%
Father	1	7.7%
Both parents	3	23.1%
Age of child at time of interview		
12-18 months	2	15.4%
18-24 months	2	15.4%
24-30 months	5	38.5%
30-36 months	3	23.1%
>36 months	1	7.7%
Age at diagnosis		
<6 months	13	100%
Degree of hearing loss		
Mild	2	15.4%
Moderate	1	7.7%
Severe	2	15.4%
Moderately-severe	3	23.1%
Profound	5	38.5%
Age at service initiation		
<6 months	11	84.6%
7-12 months	1	7.7%
13-24 months	1	7.7%
Device type		
Hearing aid(s)	5	38.5%
Cochlear implant(s)	6	46.2%
Both	2	15.4%
Frequency of services		
1x/week	6	46.2%
2x/month	5	38.5%
1x/week (onsite), 2x/month (home)	2	15.4%

Overwhelmingly, caregivers reported positive experiences with coaching throughout the course of their early intervention experience. Several discussed feeling hesitant, uncertain, or guarded in the beginning, which changed over time as they established a trusting relationship with their practitioner.

Cumulatively, the caregivers described coaching as a positive experience, and we identified three overarching themes that contribute to this positive experience, from the caregivers' perspective: 1) it takes a special kind of person, 2) building on expectations, and 3) figuring it out along the way. See Table 2 for a description of themes, sub-themes, and codes, along with supporting quotes from the interview data.

Table 2
Description of Themes and Supporting Evidence

Theme	Sub-theme	Description	Codes and Quotes as Evidence
It Takes a Special Kind of Person		Practitioner characteristics reported as important for fostering the coaching relationship	"I mean, obviously you have to have a certain demeanor to be that type of profession." (Ashley)
Building on Expectations	Expectations of Practitioner	How caregivers view their practitioners' role in the coaching relationship	*Practitioner-as-expert:* "But she is the, at the end of the day, she's the professional in this. She feels that that's, that's where we need to be going, okay, that's where we're gonna go." (Matthew) *Practitioner-as-partner:* "I don't know, she feels like a partner. It's kind of fun. Like, compared to some of the other therapists, like physical therapy and occupational therapy, it's a little more them directing everything and them doing everything and just kind of talking me through stuff. Where I feel like with (Practitioner), it's kind of like, I don't know, we're doing it together." (Julie)
	Expectations of Self	How caregivers view their role in the coaching relationship	*Being an observer:* "So, you know, that's what I take away from my role: observing what they're doing." (Ashley) *"I'm the student":* "But yeah, I do feel like a student. I'm learning new things and I feel like every session I'm learning something different." (Jane) *"It's all on me":* "I'm the everything." (Henry)
	Expectations of Success	How caregivers view progress as a result of coaching	*Caregiver learning as a measure of success:* "I wanted her to see that we were learning, and we were trying and that we were applying the things that we were learning." (Chelsea) *Child performance as a measure of success:* "And then she turned 18 months and her language just exploded. I felt so confident after that. That everything they said, 'Oh, work on this,' I would work on it for like a day and (Child) would have it down. And I would, I would be like, 'Oh my gosh, this is amazing!'" (Sarah)
Figuring it Out Along the Way	Establishing a Foundation	The foundation of the coaching relationship is built during a vulnerable time in caregivers' lives and involves a	*Building trust:* "I would also say that you just have to immediately establish this trust, which is not something you can teach, it just kind of happens." (Chelsea)

	high need for information and establishing trust.	*Establishing expectations:* "One of the very first things she said to me was, 'This is going to be as good as you, as you want it to be. And it's going to be as much as you're engaged in it.'" (Henry) *Information sharing:* "When he was younger, we – it was a lot about how to deal with his equipment…it was more informative for us." (Ashley) *Overwhelming at times:* "I remember at the beginning, it was so overwhelming for all of us…and she…would take the time to explain what is now, what will be, and give us all the information in between." (Isabelle)
Ongoing Trust and Unguardedness	Trust and unguardedness are needed for the entirety of the coaching relationship.	*Mutual respect:* "When there were things that we questioned, I felt like our relationship made it so that we could bring things up, or I never felt like I could ask a dumb question or anything like that, and I think it's just because we've had that mutual respect." (Chelsea) *Openness:* "And it's really, you just got to let your walls down and trust someone else." (Cynthia) *Rapport:* "…if you don't make that connection, it's not going to work." (Michael) *Transparent communication:* I: So, what would you say is, is the most important thing for a good provider and parent relationship? Mary: "I would say transparency and being able to listen to one another…"
Shared Development of Knowledge and Skills Leads to Empowerment	Practitioners equip caregivers over time by providing information and developing skills; as a result, caregivers take on more responsibility and need less support.	*Explaining the "why":* "She was, from beginning to end, step by step, we knew why we were doing it from the beginning and what result we were going to have at the end." (Michael) *"I've learned a lot":* "I learn what I need to know. I mean, I feel like it's an accomplishment, like 'oh, oh!'" (Rebecca) *"It makes me feel empowered and confident":* "So I can try their new suggestions and, yeah, it makes me feel, like, empowered and more confident as a parent." (Mary)

Caregiver Coaching is a Positive Experience

"So, coaching is very positive. Strong reinforcement with the things we're doing right, and then guidance on the things we're doing wrong." (Henry)

It Takes a Special Kind of Person

"You really have to be interested in helping these kids and the parents." (Ashley)

All of the caregivers talked about their relationship with their practitioner as an impactful part of the coaching relationship, using a variety of adjectives to describe positive attributes (see Figure 1). Some caregivers worked with multiple practitioners over the course of their time in early intervention and used positive language to describe all of them. All the caregivers talked about the importance of establishing a meaningful relationship as a foundational aspect of their overall positive experience.

Figure 1

Caregivers' Description of Practitioners

Note: Word size represents frequency (made on wordart.com)

In addition to highlighting positive personality characteristics, caregivers also described a warm relationship with their practitioner, using phrases such as “familial,” “like a friend,” and “a professional friendship.” After describing her practitioner as supportive, Chelsea described their relationship in this way: “I would say that our relationship is like a family member but also kind of like a teacher – that you really want to please and that you don’t want to disappoint.”

When asked what they thought was most important for establishing the caregiver-practitioner relationship, some caregivers referred to practical factors, such as practitioners’ preparedness, expertise, and time; however, most also cited positive personality traits and the primacy of establishing trust as the building blocks for the coaching relationship.

Building on Expectations

“Expectations have to be clear.” (Henry)

When describing their experiences, caregivers talked about practitioner expectations as a fundamental component in a positive coaching relationship. Expectations were either explicitly or implicitly established by the practitioner at the beginning of the coaching relationship, and this set the tone for how caregivers viewed their role and the role of the practitioner. These expectations established the foundation for how caregivers experienced the coaching relationship over time and included three elements: 1) the caregivers’ expectations of the practitioner, 2) the caregivers’ expectations of themselves, and 3) how caregivers expected to see progress as a result of coaching.

Eight of the caregivers described an explicit manner in which their practitioners established expectations for their role in the coaching relationship, while six described a more implicit approach. The explicit approach included clearly outlining the role of the caregiver from the very beginning of the coaching relationship and reiterating the importance of the caregiver’s

role over time. A more implicit approach involved demonstrating for the caregiver without explicitly outlining the importance of his or her involvement in planning and during sessions.

Expectations of Practitioner

While all the caregivers acknowledged and respected the practitioner's expertise in LSL, some deferred to the practitioner as the primary expert and others saw the practitioner as more of a partner whose role it was to collaborate with them as the experts on their child. Some caregivers vacillated between the two, while others generally fit into one category or the other.

Practitioner-as-expert

Caregivers who viewed their practitioner as the primary expert tended to describe themselves as less important partners in the coaching relationship. They relied on the practitioner to problem-solve, provide resources, and plan goals and activities for intervention sessions, and were less likely to describe the relationship as collaborative than caregivers who considered their practitioners as a partner. For example, when asked about her role in deciding what to work on with her child, Rebecca shared that she would feel comfortable bringing up concerns with her practitioner, but "I probably wouldn't make a suggestion because I feel like I'm not the expert."

Practitioner-as-partner

Alternatively, caregivers who viewed their practitioner as more of a partner considered their role in the coaching relationship as pivotal for their child's progress. These caregivers described setting goals in partnership with their practitioner because they know their child best and understand what will work in the context of their daily lives. Chelsea described it as "shoulder-to-shoulder learning together," and stated, "I like working alongside someone." Some caregivers reported choosing activities and goals for the sessions themselves, others worked

together with their practitioner to decide what to target during intervention sessions, and some reported a combination of both approaches.

Expectations of Self

Caregivers described their expectations of themselves in the context of their role in the coaching relationship. These expectations ranged from taking full responsibility during sessions and in-between, to being a learner who takes an active role in intervention sessions following practitioner demonstrations, to being an observer and primarily watching the practitioner working with their child. How caregivers viewed their role in the coaching relationship was tied to how they talked about their practitioners' role – those who saw themselves as observers were more likely to defer to their practitioner as "the expert," and those who talked about their own role as primary in the relationship viewed their practitioners as a partner. The following codes represent this continuum.

It's All on Me

Five of the caregivers described themselves as highly involved in the coaching relationship, because the outcome depended on them learning and implementing strategies with their children in their everyday lives. Henry described the significance of his role in the coaching relationship this way: "I'm the everything. I mean, (Practitioner) is really just giving us the framework." He went on to say that while he sees his practitioner for 45 minutes to an hour twice a month, it's what he does in-between that makes the difference, and that he and his wife want to make sure they are doing everything possible to ensure their child's progress.

I'm the Student

Six of the caregivers saw their role as students, learning from the practitioners' expertise, but also willing to actively participate and practice skills after a model during the coaching

exchange. Mary described a typical session in which she observes as her practitioner demonstrates a strategy with her child, then she takes a turn and her practitioner offers feedback. She may try again and then they will discuss how she did and what she might do differently the next time. “She’ll pull out her activity, she’ll tell me what she expects (Child) to say from it. She’ll, she’ll say it and then she’ll pause and wait for him to do it, and then she’ll ask me to try it out.”

I’m an Observer

Two caregivers described their participation as primarily watching and learning and not necessarily taking a turn during the session. Lauren described her role as “an observer and taking it in.” She described intervention sessions in which she watches and learns while her practitioner interacts with and teaches her child. She described hesitation to actively participate during sessions because, as she states, “I’m not good at demoing with somebody watching me….but if I can gather all the information and watch you do it, then I can do it later.”

Expectations of Success

Caregivers revealed the ways in which they measured success, separate from traditional indicators of progress, such as assessments. They talked about things that made them feel like caregiver coaching was successful, either in terms of their child’s progress or their own learning. Some caregivers indicated that both these factors contributed to what they considered a successful coaching experience.

Child Performance as a Measure of Success

Caregivers indicated that their child’s speech and language growth played a role in determining whether coaching was working. Julie talked about her child’s progress as a motivating factor for continuing to implement the strategies she was learning:

> I think at first, too, it was hard because he really was not turning to anything, so it's, it's hard to be motivated when you're not seeing direct results of it. Once we started really seeing the changes happening, then it was like, ok this is, this is real.

Caregiver Performance as a Measure of Success

Six caregivers considered their own growth in understanding and implementing LSL strategies with their child as an indicator of success. Henry referred to his own learning as a measure of progress: "I'm reading to her, I'm always making sure I'm beside, like, and it, there's times where I'll realize, I'm like, holy smokes, she trained me!"

Figuring It Out Along the Way

"It's a process, it's a journey, you figure it out along the way - what works and what doesn't." (Sarah)

The coaching relationship changes over time in response to the changing needs of the caregivers. The caregivers described their emotional state and needs in the beginning as very different than what they needed as services progressed, and suggested that by adapting to their needs, practitioners contributed to a positive coaching experience overall.

Establishing a Foundation

The foundation of the coaching relationship is built during a vulnerable period in caregivers' lives. Caregivers reported feeling overwhelmed and in need of information and emotional support. This vulnerable time period is when trust and expectations must be established. Cynthia described the beginning of the coaching relationship in this way: "They come into your life in such a vulnerable place. And it's really, you just got to let your walls down and trust someone else." According to caregivers, the time and effort that practitioners spend in the beginning laying the foundation helps to establish a positive and meaningful coaching

relationship. Establishing a foundation includes building trust, establishing expectations, and sharing information, and caregivers often described this as overwhelming at times.

Ongoing Trust and Unguardedness

The ongoing coaching relationship also requires trust and unguardedness and caregivers shared that mutual respect, rapport, transparent communication, and openness contribute to a positive coaching experience. All of the caregivers described a level of comfort with their practitioners that allowed them to freely ask questions, share concerns, and communicate openly without fear of judgement. They expressed relief to have someone supporting them and providing reliable information, and the confidence that was gained in the beginning provided the foundation upon which the ongoing relationship was built. Gina described this progression of trust: "I always felt like I had to be so defensive about him and stuff, where, after a while, she just made it really comfortable, and I didn't feel like I had to have a guard up anymore."

Cynthia highlighted the willingness to be open and vulnerable as a necessary component in a coaching relationship that may involve difficult conversations at times:

> I think there needs to be an element of accepting and giving of, like, critical information. If you can't receive information from them that is hard to hear…it's a level of vulnerability that's kind of required…if you can't receive or give information back and forth, without open communication, and there's a lot of walls up, it's just, it's not going to be a good relationship…

Gina and Michael talked about what they considered to be the most important component of the ongoing coaching relationship: trust.

> We trusted that we could ask her a question and she trusted that she could ask us or tell us something and it would not change anything…so even when we did not

> get the best news or you get the good news, she's always there to help you and guide you.

Caregivers described several ways in which practitioners established trust, including being a reliable source of information, being supportive and non-judgemental, establishing a personal connection with them and their child, and actively listening to their concerns. They also indicated that time was a factor, both in the amount of time they spent with their practitioner, and the timing of the onset of the relationship, when they needed information, support, and encouragement.

Shared Development of Knowledge and Skills Leads to Empowerment

Over the course of the coaching relationship, the shared development of knowledge and skills leads to a transfer of responsibility and empowerment from the practitioner to the caregiver. Sarah described how her level of confidence has changed over time: "I always leave, especially now, feeling really confident in what (Child) is doing…Knowing that, that I get it, that I can, that I can help my child." Ashley talked about having so many questions in the beginning, especially with regard to how to help her child, but then, over time, utilizing LSL strategies has become second-nature: "I've started doing things that I don't even notice that I'm doing…it's become the norm."

While all of the caregivers described an evolution of the coaching relationship over time, the progression was not necessarily linear. Caregivers described times when they felt overwhelmed, even after the intensity of the early stages of their child's diagnosis and beginning EI. While they reported feeling more empowered as they learned skills and built confidence, there were times when they still needed extra support. Ashley explained one example of this: "I think, personally, like, with early intervention and with parents that are, like, overwhelmed - like,

right now we are going into the transition stage and that's very overwhelming to me. I don't want to leave the comfort of here."

Discussion

This research is novel in that it examines caregivers' perspectives specific to coaching in LSL EI services, increases understanding of how caregivers experience coaching, and highlights how practitioners can establish and maintain an effective coaching relationship. Caregivers of children who are DHH viewed coaching as a positive experience; however, because practitioners recruited caregivers, it is possible that these data reflect only meaningful coaching relationships. The caregivers conceptualized coaching in different ways, according to their experience, and some conflated caregiver coaching with the entirety of the EI experience. This suggests one of two things: that the LSL practitioners integrated coaching seamlessly with families in the context of their intervention, or that practitioners did not always take a collaborative approach to caregiver coaching. This study reveals three factors that contribute to a positive coaching experience, according to caregivers: practitioner characteristics, how expectations are set and maintained, and coaching that adapts to changing caregiver needs over time.

Our findings indicate that characteristics of the practitioner play an important role in a positive caregiver coaching relationship. Caregivers used a variety of descriptors to describe their practitioner as warm, caring, and trustworthy. Interestingly, Tattersall and Young (2006) also found that professional communication and manner were the most important influences on parents' experiences during the audiologic diagnostic process. The perspective of the caregiver has been underrepresented in both the general EI and LSL literature, and, as such, this insight highlights the importance of demeanor and the establishment of trust in creating a positive coaching partnership, which can, in turn, lead to growth. This finding aligns with perspectives of

coachees in an early childhood setting, who reported that that they valued their relationships with their coaches and this positive partnership led to growth and change (Knoche et al., 2013). Other studies have indicated that caregivers were satisfied with their family-centered intervention services (Stewart et al., 2020) and that a collaborative and supportive relationship was important for their learning (Salisbury et al., 2018); however, our study extends the understanding of specific characteristics that may lead to a supportive relationship between caregivers and practitioners. Caregivers' experiences with coaching may in part determine the uptake of intervention and their engagement as well as their perceptions of the quality of intervention, which in turn can influence their child's developmental outcomes.

An interesting finding from this study was that expectations were a strong underlying factor in a positive coaching partnership. Caregivers' expectations of their practitioners were connected to their view of their own role in the partnership, with those who described their practitioners as partners taking a more active role in the coaching process during EI sessions. Consistent with previous literature, our study showed that clear expectations and mutually agreed upon goals are important for establishing a partnership, leading to a positive and successful coaching relationship where partners play a vital role (Rush et al., 2003; Rush & Shelden, 2011; Workgroup on Principles and Practices in Natural Environments, 2008). As active caregiver participation is understood as an important component in the coaching process (Noll et al., 2021), a lack of engagement precludes a bidirectional, collaborative exchange between caregiver and coach. This balance of power is an important consideration. Balanced partnerships between families and practitioners are considered best practice in family-centered EI for children who are DHH, according to an international consensus statement (Moeller et al., 2013).

Our findings indicated that this partnership is established at the beginning of the coaching relationship and is reinforced through joint planning and active participation in individual sessions. Caregivers who consider themselves observers and the practitioner as "expert" do not enter into a reciprocal coaching exchange where the caregivers actively contribute and participate; rather, the practitioner primarily chooses goals and activities and instructs the caregivers, with or without opportunities to practice skills within the context of a session. This level of caregiver participation represents more of a practitioner-directed style of intervention and does not represent a balanced partnership, therefore highlighting a potential obstacle in establishing a collaborative coaching relationship. Ambiguities in the EI literature suggest that caregiver coaching is not always differentiated from parent training; the difference lies in the extent of the caregiver's role in decision-making and goal setting and a truly collaborative partnership between caregiver and coach (Kemp & Turnbull, 2014; Ziegler & Hadders-Algra, 2020). Most caregivers in our study described an active role and hands-on practice during sessions with their child; however, two caregivers described their role primarily as observers. While all three intervention sites espouse caregiver coaching, this indicates that at least some of the time with some caregivers, more traditional intervention that does not incorporate caregiver coaching is utilized. This may be due to personality characteristics of the caregivers or may be linked to the expectations established and maintained by the practitioners throughout the EI process.

Our results highlight that practitioners need to explicitly establish expectations and partner with families in ways that will encourage active participation and allow for a reciprocal coaching relationship to develop. Caregivers were more likely to view their practitioner as the "expert" (vs practitioner as "partner") when expectations were established implicitly rather than

explicitly. Additionally, the ways in which caregivers talked about their expectations of progress provides insight into their perception of success. Caregivers who view progress as their own mastery of LSL strategies, rather than solely based on their child's progress, understand how critical their role is in the coaching process, and take responsibility for learning and implementing LSL strategies with their child beyond the context of the intervention session.

Results of our study indicate that caregivers' needs change over time, and practitioners who adjust their coaching in response contribute to a positive coaching relationship. The goal of the coaching relationship is to build expertise to enable the caregivers to become skilled facilitators of speech and language with their children. The practitioners scaffold their coaching by gradually increasing the caregivers' responsibility and ownership as they gain skills. This is accomplished by ensuring that the caregivers understand the reasoning behind the strategies they are learning, co-creating goals, continuing to build on what they are learning over time, and giving them opportunities to feel successful and confident in their newfound expertise. Previous studies have indicated that the provision of information is important for meeting the needs of caregivers of children who are DHH (Decker & Vallotton, 2016; Fitzpatrick et al., 2008; Roberts et al., 2015; Stewart et al., 2020), and our study suggests that this need is greatest in the beginning of the coaching relationship. Previous research suggests that caregivers initially experience shock, but it gets easier over time with information and support provided by EI professionals (Haddad et al., 2019). Additionally, caregivers have reported that they find the initial decisions related to intervention such as communication modality and device use stressful, and the support of LSL practitioners is invaluable (Gilliver et al., 2013; Roberts et al., 2015). In our study, caregivers reported this as a time of trust-building that formed the foundation of the

coaching relationship, so, although it was a stressful time, ultimately it solidified their confidence in their practitioner.

Not only does the type of information caregivers need change, the amount of support changes as caregivers gain knowledge and confidence in implementing LSL strategies. One goal of family-centered EI is for caregivers to gain proficiency in implementing LSL strategies with their children. According to the caregivers in this study, practitioners who scaffolded their support built the caregivers' confidence and made them feel empowered. This resulted in caregivers taking a more active role in the coaching process, and in some cases independently setting goals and implementing strategies with feedback from the practitioner. This supports recent research that indicates that caregivers gain skills over time as a result of focused LSL EI (Josvassen et al., 2019) and research in the general EI literature that found that practitioners' use of caregiver coaching strategies decreased over time, resulting in caregivers taking the lead in sessions with less support (Ciupe & Salisbury, 2020). An interesting direction for future research would be to examine the effectiveness of coaching practices - whether coaching (process) indeed leads to measurable skill development (outcome) for families participating in EI services.

This study adds to recent research aiming to better understand the experiences of caregivers receiving family-centered EI, including coaching. Studies have indicated that caregivers report being told that taking an active role in the intervention process is essential for their child's development (Decker & Vallotton, 2016), which is aligned with recommended EI practices and essential for caregiver coaching (Division for Early Childhood, 2014; Moeller et al., 2013). Families of children who are DHH find coaching beneficial for learning LSL strategies (Josvassen et al., 2019), and report satisfaction overall with the family-centered services they receive (Fitzpatrick et al., 2008; Josvassen et al., 2019; Roberts et al., 2015;

Stewart et al., 2020). Our results align with recent survey research that indicated that caregivers considered coaching a positive experience (Josvassen et al., 2019; Salisbury et al., 2018).

Our study extends this understanding by examining the experiences of caregivers receiving LSL EI services and suggests specific factors that practitioners can incorporate to contribute to a positive coaching relationship in their work with families. First, there is benefit to setting clear expectations and parameters for caregiver participation as partners in the coaching relationship from the very beginning. Also, recognizing that caregivers' needs change over time and that they have a high need for information and support in the beginning, practitioners can build trust by being a credible source of information and offering support with kindness and empathy. Another consideration is that families who start the process later, resulting in less time in EI, will likely still need the trust-building that sets the stage for the remainder of the coaching relationship. Once trust is established and the foundation is set, practitioners can adapt to the changing needs of the caregivers over the course of their time together. Finally, practitioners can scaffold their coaching strategies, including modeling and demonstrating in the early stages of learning, with the goal of transferring responsibility to the caregiver as skills and confidence increase. Caregiver coaching is a capacity-building practice, intended to build knowledge and skills to a level of mastery that empowers caregivers in their interactions with their children (Dunst et al., 2014; Dunst & Trivette, 2009; Rush & Shelden, 2019, 2011). This goal should be explicitly shared with the caregivers from the beginning to establish the expectation for active participation in the coaching relationship and to empower them as capable agents of change in their child's LSL development.

The variability with which the caregivers talked about coaching highlights differences in coaching practices among practitioners. In particular, caregivers described their role in

intervention on a continuum from observation to active participation in all aspects of the coaching exchange. These differences in expectations and practice may reflect discrepancies in practitioners' training and preparation for coaching, as some may have been trained to teach children who are DHH rather than to coach their caregivers. This is an important consideration, because while best practices indicate that children who are DHH should receive services from highly trained practitioners (Moeller et al., 2013), this does not account for the specialized skills needed to engage with and teach adult learners. Additionally, because there is a lack of a consistently utilized model of caregiver coaching in LSL services (Noll et al., 2021), it cannot be assumed that all practitioners are adequately trained to implement evidence-based coaching practices with families. This indicates a need for the development of standards of practice for coaching caregivers and pre-service and in-service training to increase the likelihood that practitioners will consistently implement these coaching practices.

This study was not without limitations. Caregivers were invited to participate by their practitioners, who may have chosen "ideal" families that do not necessarily represent the diversity of viewpoints and experiences of all families on their caseload. This is especially important to consider since all participants considered caregiver coaching a positive experience. It is also important to note that differences in caregiver demographics were not addressed in this study due to small numbers; however, this presents an opportunity for future exploration. In addition, while a strength of this study was the inclusion of three different models of service provision, the experiences of relatively few caregivers may not be transferable to experiences of the broad range of caregivers receiving LSL EI services across North America, much less globally. This limitation provides direction for future research to elicit the voices of caregivers from a variety of cultures and backgrounds, in a range of settings, in the broader context of LSL

language EI services. In addition, the design of the study and the number of participants precluded meaningful comparison between sites offering different models of service provision; however, it would be interesting to further explore these differences with a larger group of caregivers. Examining the views of LSL practitioners in future research will also enhance understanding of the caregiver coaching process. Finally, interpretive description necessitates that the researcher uses reflexivity to continually evaluate their response during data collection, analysis, and writing. The researcher's own positionality, pre-understandings, and experiences are considered by some to be integral to the research process and these important considerations should be identified and disclosed as a means to enhance the credibility of the study (Agrey, 2014; Berger, 2015; Holmes, 2020). Interpretation from the lead researcher's perspective as a parent of a child who is a DHH and an LSL practitioner becomes a "common ground" from which to hear, co-construct meaning and learn from others. While I employed reflexivity throughout this work, my belief in collaborative caregiver coaching as an effective and family-centered approach to LSL language EI services informed the research design and analysis and therefore may have impacted the results.

Caregiver coaching in LSL practice is a means by which caregivers learn to utilize enhanced language interactions to improve their child's language outcomes, ultimately resulting in self-efficacy and carryover of intervention strategies into their daily routines (Noll et al., 2021). This study is unique in that it explores from the perspectives of caregivers how LSL coaching influences their active role in communication intervention and achieving positive outcomes for their child and family. This work has the potential to help current and future caregivers of children who are DHH advocate for a partnered, collaborative approach to caregiver coaching. Additionally, this study provides insight for practitioners working to

establish and maintain positive caregiver coaching relationships, including understanding the role of practitioner characteristics, explicitly establishing expectations, and adapting their coaching over time. This insight has the potential to impact the work of practitioners currently coaching caregivers as well as pre-service professionals learning the art and science of LSL caregiver coaching.

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"It's about walking alongside a family": Practitioner perspectives on caregiver coaching with families of children who are deaf or hard of hearing

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Abstract

Practitioners utilize caregiver coaching in early intervention services, but coaching principles and practices are not well understood in the context of listening and spoken language (LSL) intervention services with families of children who are deaf or hard of hearing. The purpose of this study was to examine practitioners' experiences with coaching, including how they define coaching, how they learned to coach, how they engage caregivers in coaching, and practices they utilize in their work with families. Using semi-structured, qualitative interviews and video observation discussions, this study examined the perspectives of 14 practitioners providing LSL services to families at three intervention sites in the US and Canada. Results indicate that practitioners' underlying beliefs about their coaching proficiency and caregivers' capacity impact their coaching practices and how they engage with caregivers. Results highlight ongoing practices such as mentoring and accountability that practitioners felt supported their coaching skills. This study contributes to the understanding of caregiver coaching in LSL practice and has implications for new and experienced practitioners working to improve their coaching skills, which is likely to improve LSL services and optimize child outcomes.

Chapter 4: Practitioner Interviews

The Division for Early Childhood has established evidence-based recommended practices to guide practitioners in implementing family-centered early intervention (FCEI) with families of children with disabilities, including caregiver coaching to build on families' strengths and impact child outcomes (Division for Early Childhood [DEC], 2014). Coaching empowers caregivers by building their capacity, confidence, and competence to support their child's development and maximize learning opportunities throughout their daily routines (Dunst & Trivette, 2009a; Rush & Shelden, 2019; Woods et al., 2011). Caregiver coaching increases both the quality and quantity of intervention that children receive, and as a result, improves child outcomes (Heidlage et al., 2020; Roberts, 2019; Roberts & Kaiser, 2011; Sone et al., 2021).

The Joint Committee on Infant Hearing (2019) recommends FCEI services provided by professionals with expertise in hearing loss as the most appropriate way to meet the needs of children who are deaf or hard of hearing (DHH) and their families (Moeller et al., 2013). For families who choose listening and spoken language (LSL), practitioners abide by principles that prioritize caregiver involvement in all aspects of intervention, and caregiver coaching is utilized to achieve this goal (AG Bell Academy for Listening and Spoken Language [AG Bell Academy], 2017; Kendrick & Smith, 2017; Moeller et al., 2013). Caregiver coaching necessitates that practitioners engage caregivers as the primary learners in intervention sessions, facilitating and enhancing caregiver-child interaction rather than teaching the child directly. Through coaching, practitioners teach caregivers specialized LSL skills, provide opportunities for them to practice, and offer feedback in the context of an intervention session. This enables caregivers to learn strategies to embed intervention within their daily routines, providing the intensity of services needed for their child to develop language.

Coaching positions caregivers as the primary learners in the intervention process, therefore, practitioners must utilize practices geared toward adult learners. Adult learning refers to a collection of theories about processes and conditions that optimize learning for adults (Dunst & Trivette, 2012; Trivette, Dunst, Hamby, & O'Herin, 2009; Yang, 2003). Adult learners must be ready to learn, actively participate in the learning process, be self-directed, and the learning must be solution-centered and contextual (Cox, 2015; Dunst & Trivette, 2009b, 2012). Active learner participation, opportunities to practice new knowledge and skills, and reflection are important components for effective adult learning (Dunst & Trivette, 2009b; Trivette et al., 2009). However, practitioners providing intervention services to families of children with disabilities often report a lack of training in adult learning principles (Douglas et al., 2020; Meadan et al., 2018). Even when practitioners claim to implement caregiver coaching, research suggests that a significant amount of time is spent engaging the child directly during intervention sessions (Campbell & Sawyer, 2007; Salisbury & Cushing, 2013), suggesting a need for training and accountability in coaching.

There is lack of consensus on the principles and practices of caregiver coaching in the FCEI literature (Friedman et al., 2012; Ward et al., 2020). However, most coaching models contain elements of the following evidence-based practices, as outlined by Rush and Shelden (2005, 2019): (a) joint planning, (b) observation, (c) action, (d) reflection, and (e) feedback.

The lack of consensus about best practices in coaching for families raising children with disabilities also applies to the specialized intervention services provided by LSL practitioners (Noll et al., 2021). Practitioners can pursue a Listening and Spoken Language Specialist (LSLS) certification through the AG Bell Academy, which requires 3-5 years of mentorship and extensive professional development, and results in a professional designation of LSLS Auditory-

Verbal Educator (AVEd) or Auditory-Verbal Therapist (AVT) (AG Bell Academy, 2017). Practitioners abide by principles for the provision of high-quality services to children who are DHH, including 'guiding and coaching' caregivers (AG Bell Academy, 2017). However, these principles lack specificity and guidance on specific practices for coaching and it is unclear whether LSLS practitioners incorporate well-established FCEI practices such as those suggested by Rush and Shelden (Noll et al., 2021).

Recent research has begun to explore caregivers' experiences participating in FCEI services, including coaching. Families of children who are DHH have reported positive experiences with coaching in LSL services, indicating that participation increased their skills and confidence in supporting their child's speech and language development (Josvassen et al., 2019; Noll et al., 2022; Stewart et al., 2020). In addition, caregivers have reported that a supportive, collaborative coaching relationship that involved shared decision-making and working together with their practitioner in the context of their daily routines was key to building their knowledge and skills (Salisbury et al., 2018). In our recent interviews with caregivers participating in LSL intervention, they indicated three factors that contributed to a positive caregiver coaching relationship: (1) practitioner attributes, (2) how expectations are set for caregiver participation, and (3) the evolution of the coaching relationship over time in response to changing caregiver needs (Noll et al., 2022).

Fewer studies have examined the perspective of practitioners who utilize caregiver coaching. In previous research examining the perspectives of general FCEI practitioners, participants reported challenges with implementing coaching due to incongruent expectations and family characteristics; the incorporation of pre-coaching strategies, such as trust-building, facilitated caregiver engagement and helped to overcome these barriers (Douglas et al., 2020;

Meadan et al., 2018). Practitioners reported that meeting families' needs required flexible, individualized practices, and that engagement in intervention through positive caregiver/practitioner relationships promotes caregiver competence and empowerment (Meadan et al., 2018). Similarly, practitioners implementing a highly structured model of coaching reported that while they felt it to be worthwhile, it was challenging to implement despite participating in professional development activities to support their skills (Salisbury et al., 2018). In a study specific to LSL practitioners, King and colleagues (2021) reported providers' perception that services for families of children who are DHH differ from other FCEI services due to the specialized nature of developing LSL skills through audition, and there is a need for intensive and continual professional development to develop and maintain the requisite skills.

Although the use of caregiver coaching is supported in the literature and LSL practice guidelines, our recent scoping review found that the current literature lacks a clear description of caregiver coaching with families of children who are DHH (Noll et al., 2021). Furthermore, very little research has examined caregiver coaching from the perspective of LSL practitioners. Gaining greater insight into LSL practitioners' knowledge, coaching practices, and professional preparation can identify changes in practice and professional development that could ultimately result in higher quality services for children and families. Therefore, the purpose of this qualitative study was to understand practitioners' experiences with coaching in LSL EI services, including how they define coaching, how they learned to coach, how they engage caregivers in coaching, and practices they utilize in their work with families. The specific research questions that we sought to answer were:

1. How do LSL practitioners conceptualize coaching?
2. How do LSL practitioners describe how they coach caregivers?

3. How do LSL practitioners incorporate and encourage active caregiver participation and reflection in their coaching practices?

Methods

This qualitative research study included semi-structured interviews and video observation discussions with practitioners providing LSL services at one of three sites. Our design and methods were informed by the principles of interpretive description (Teodoro et al., 2018; Thorne, 2016; Thorne et al., 1997, 2004). The foundation of this applied qualitative research approach is to investigate a clinically relevant phenomenon and generate an inductive interpretation to advance clinical understanding (Burdine et al., 2020; Thorne et al., 2004). Research ethics approval for this study was obtained from the University of Ottawa and the CHEO Research Institute in Ottawa, Ontario (19/106X).

Sampling

Participants were selected from one LSL program in Canada and two programs in the United States. These sites were purposively selected to represent diversity in service delivery models and chosen for their reputation for providing exemplary LSL services. The sites were accessed through personal networks of two authors, and some of the practitioners were familiar with the first author, who completed the interviews. Service delivery differs between sites: on-site (Site 1), in the home (Site 2), and an approach that includes both in-home and school-based service delivery (Site 3). All practitioners at each site met the following eligibility criteria and were therefore invited to participate: a) providing LSL services to families of children who are DHH from birth to 3 years of age, and b) implementing family-centered services utilizing a caregiver coaching model, per each organization's intervention model. We invited practitioners to participate in an interview and guided discussion based on a short, self-selected segment of a

video-recorded coaching exchange between the practitioner and a caregiver. We first contacted site administrators to obtain permission to contact practitioners directly via email. We sent information about the study by email, and followed up with a group meeting to allow practitioners to ask questions and make an informed decision about participation. We aimed to interview all practitioners to gain an understanding of the coaching principles and practices at each site, and all agreed to participate. Informed consent was obtained from practitioners prior to each interview and from caregivers prior to viewing each video.

Our intent was to capture the diversity of approaches among practitioners with regard to coaching, while also gaining a broader understanding through identifying similarities between practitioners implementing LSL services in different contexts (Braun & Clarke, 2021; Burdine et al., 2020; Thorne et al., 2016). The principles of interpretive description informed our efforts to generate a deeper understanding of practitioners' perspectives and experiences, while recognizing the variability inherent in applied practice (Abdul-Razzak et al., 2014; Burdine et al., 2020; Thorne, 2016).

Data Collection and Analysis

Individual, semi-structured interviews were conducted in person at the two intervention sites in the US from February to March 2020. Interviews with the Canadian practitioners were completed from July to August 2020 using Zoom video conferencing software due to Covid-19 pandemic restrictions put into place during data collection. Practitioners were asked to describe how they learned to coach and to share their overall experiences with caregiver coaching (see Appendix H for interview guide). While examining how each practitioner defined coaching was part of the purpose of these interviews, in order to facilitate deeper discussion, the interviewer provided a cursory definition of coaching as the point at which they "coach or teach caregivers to

implement intervention strategies themselves, throughout their daily routines, in-between intervention sessions."

To supplement the interviews, practitioners self-selected a portion of a video-recorded session and participated in a guided discussion with the interviewer about the interaction they selected (see Appendix H for video observation guide). Practitioners chose a 10-minute segment that contained a coaching exchange between the practitioner and the caregiver. Because there is no agreed-upon definition of coaching components or procedures (Noll et al., 2021), the practitioners' selection provided insight into what they consider coaching and allowed for rich discussion of their beliefs and practices in the context of the practitioner/caregiver interaction. This component was not evaluative, but rather utilized to augment the interviews to give the practitioners an opportunity to explain their decisions and coaching behaviors during an interaction with a caregiver. This type of video-elicitation has been shown to facilitate reflection and enable a deeper understanding of participants' thought processes (Hamel & Viau-Guay, 2019; Paskins et al., 2017).

Interviews and guided video discussions were audio recorded, transcribed verbatim, and verified before being uploaded into NVivo 12 (QSR International Pty Ltd., 2020), a qualitative data analysis software that was utilized to organize and facilitate analysis. We combined the interview transcripts with the video-based guided discussion transcripts for interpretation and analysis. We removed participant and site names and assigned pseudonyms to preserve confidentiality in the final report. Videos were viewed on the practitioners' devices and not collected by the researcher.

To ensure rigor and trustworthiness and account for potential bias (Holmes, 2020), we incorporated credibility processes throughout this study (Cypress, 2017). The primary researcher

conducted all interviews to maintain consistency, critically reflected on her positionality, participated in reflexive memoing throughout data collection and analysis, maintained a careful audit trail and detailed field notes, and participated in frequent debriefing sessions with members of the research team to challenge assumptions, reflect, discuss, and refine codes and themes. Practitioners were de-identified and quoted directly to ensure adequate representation and thick description of their perspectives. This study followed the Standards for Reporting Qualitative Research (SRQR) (O'Brien et al., 2014).

The primary researcher who completed the interviews and data analysis is the parent of a child who is DHH and an experienced LSL EI practitioner. This dual perspective, along with experience in caregiver coaching, provides a unique lens through which to identify and examine matters of clinical significance, and informed the design of this research.

Results

All practitioners recruited at each intervention site agreed to participate, as did the program directors at two sites, both of whom are still providing services to families, for a total of 14 interviews (see Table 1 for demographics). The site distribution was as follows: Site 1, n=4; Site 2, n=6; Site 3, n=4. Eight practitioners supplied video clips to supplement their interviews. Video recordings were prohibited once pandemic restrictions were implemented, limiting the number submitted.

Table 1.
Demographics

Variable	Number	Percentage
Time in Early Intervention		
1-4 years	3	21.43%
5-10 years	3	21.43%
11-15 years	1	7.14%
16-19 years	1	7.14%
20+ years	6	42.86%
Professional Designation		
ToD	10	71.43%
SLP	3	21.43%
AVT only	1	7.14%
Certification Status		
LSLS Cert. AVEd	4	28.57%
LSLS Cert. AVT	1	7.14%
Not certified	9	64.29%
Highest Degree		
Masters	13	92.86%
Bachelors	1	7.14%
Country Where Degree Conferred		
USA	10	71.43%
Canada	2	14.29%
Australia	1	7.14%
Egypt	1	7.14%

Note: ToD: Teacher of the Deaf; SLP: Speech-Language Pathologist; AVT: Auditory-Verbal Therapist; LSLS Cert. AVEd/AVT: Listening and Spoken Language Specialist Certified Auditory-Verbal Educator/Therapist

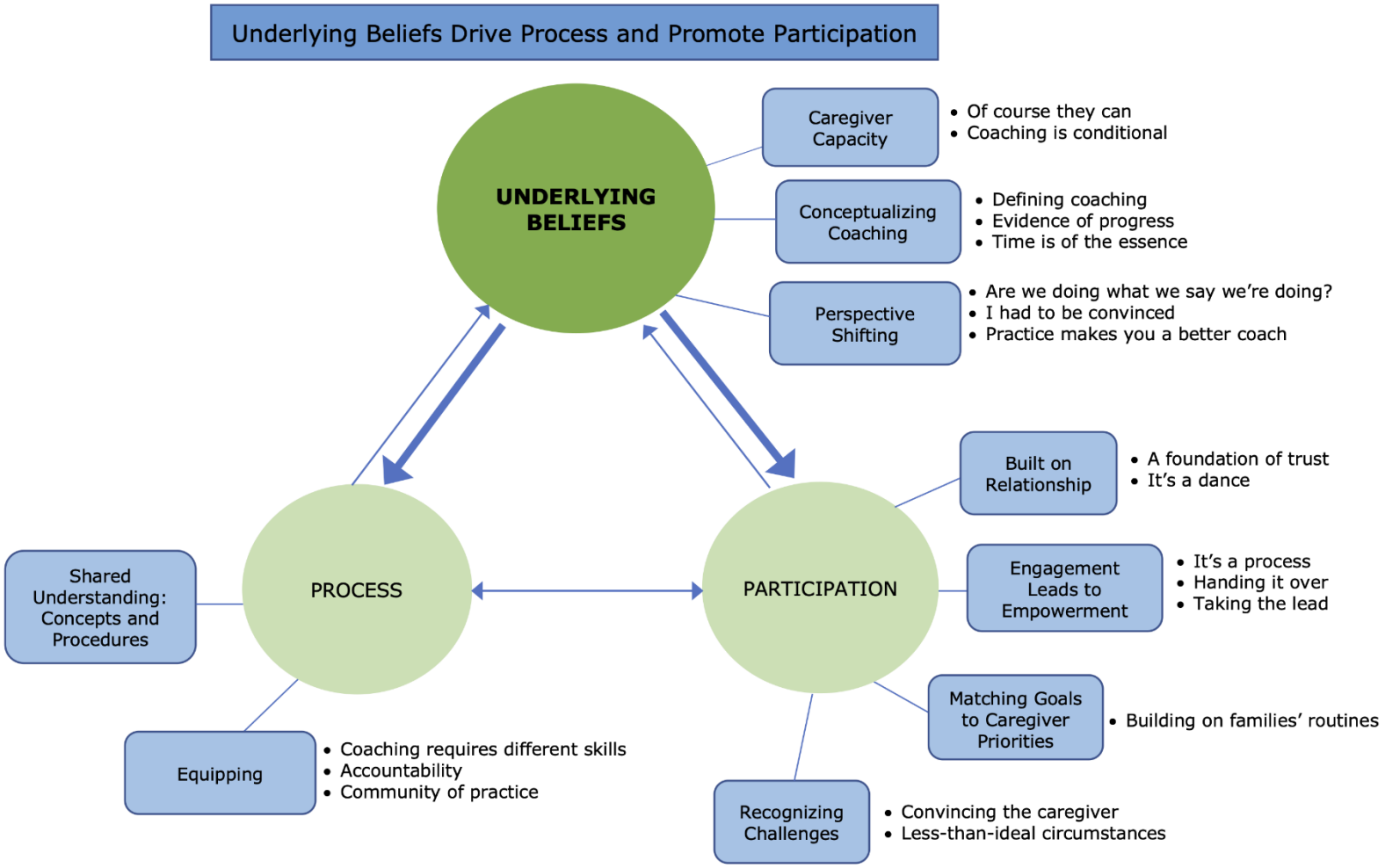
The video discussions provided rich and informative insight into practitioners' conceptualization of coaching and illustrated differences in their approaches that were not evident in the interviews. The majority of practitioners reported that they chose clips that demonstrated a 'typical' rather than 'ideal' coaching exchange with caregivers. The videos allowed the practitioners to elaborate on and explain their coaching practices and decisions in real time.

All practitioners ascribed to caregiver coaching and reported efforts to actively engage caregivers in intervention. However, variations existed between sites and among practitioners as to the definition and specific practices they incorporate in their LSL intervention with families.

As we gained understanding of the practitioners' perspectives, an overarching concept became clear: the underlying beliefs practitioners held about the role and capacity of caregivers impacted both the process of coaching and the ways in which they engaged caregivers. As such, we identified themes in three categories: (a) underlying beliefs: caregiver capacity, conceptualizing coaching, and perspective shifting; (b) process: equipping and shared understanding of concepts and procedures; and (c) participation: built on relationship, engagement leads to empowerment, matching goals to caregiver priorities, and overcoming barriers. See Figure 1 for a graphic representation of themes and subthemes.

Figure 1.

Practitioners' Experiences with Caregiver Coaching in LSL Practice



Underlying Beliefs Drive Process and Promote Participation

Underlying Beliefs

Practitioners revealed how they conceptualize coaching and their underlying beliefs related to caregiver capacity, and many of the practitioners discussed how experience and new learning shifted their beliefs over time. These underlying beliefs impacted how they talked about the process of coaching and expectations for caregiver participation in intervention sessions.

Caregiver Capacity

Practitioners discussed their views about caregiver capacity and desire to engage in coaching as certain and expected of all caregivers or based on extenuating circumstances, and therefore variable.

Of Course They Can

The majority of practitioners described caregiver coaching as the norm rather than the exception and expressed the assumption that caregivers can and will engage meaningfully in intervention. Several participants recounted instances in which caregivers chose not to participate in coaching, but indicated that it was rare and they were "not okay" with it, but ultimately, the choice belonged to the caregiver. In some cases, the practitioner provided direct service to the child rather than coaching and in others, the caregivers sought services elsewhere. All practitioners from two sites and one from the third site held this perspective. Alexis shared her frustration with other practitioners in this way: "Therapists…make assumptions on what the parents are feeling. 'Oh, they're not ready…they've already been through too much.' And it's like, 'No, let's ask them, because it might be the one thing they think they *can* do.'"

This concept was particularly evident in the self-selected video clips. Several practitioners chose families who were facing significant challenges that might have impacted

their ability to fully engage in coaching. However, the practitioners shared the obstacles the caregivers had overcome and how proud they were of the progress they had made, indicating that they believed in their capacity to engage and benefit from coaching despite the challenges they faced.

Coaching is Conditional

In contrast, several practitioners talked about coaching as the ideal, but not always possible, citing reasons such as caregiver personality and family situational factors. These practitioners used words such as "awkward" and "uncomfortable" to describe coaching interactions and described some caregivers as "pretty fragile," and, as such, they did not want to push them too hard to engage in coaching. Ann reported, "sometimes it just, it does not matter how well you explain it, it's not going to happen."

These practitioners identified strategies they might use to encourage engagement, such as using siblings as an example and "indirectly modeling" in an effort to encourage the caregiver to take a turn. These practitioners, all from one site, discussed coaching as if it were the exception, rather than the norm. These same practitioners reported lower levels of self-efficacy with regard to their coaching practices and were less likely to report supervisor and/or colleague accountability as a regular part of their practice.

Conceptualizing Coaching

Defining Coaching

The definition and practices of coaching varied widely. According to Kelly:

> Everybody gets this big global idea, but then when it comes down to how you implement it and which parts are really the most important, you probably get many varied answers…the biggest definition I would have is…it's about walking alongside a family.

In general, practitioners within each site shared similar viewpoints of what caregiver coaching is and the practices that comprise it, although differences between sites were considerable. These differences included which parts of an intervention session are considered coaching, specific practices that should or should not be included during coaching, and the terminology used to describe specific coaching practices. Site 1 practitioners conceptualized coaching as the teaching portion of a session, when practitioners provide information or explain strategies, rather than the 'activity' part of the session, when strategies are applied and practiced. Site 2 practitioners considered coaching to encompass most of an intervention session, including providing information, explaining and/or demonstrating a strategy, practicing in the context of an activity, and reflecting with the caregiver. Site 3 practitioners conceptualized coaching as a specific part of the intervention session, when the caregiver engages in an activity with their child, incorporating LSL strategies while the coach sits back to observe and provide feedback, and reflection with the caregiver after the completion of the activity.

These differences were especially apparent as the practitioners discussed their video clips and shared what they considered to be a typical example of a coaching exchange. One site has developed specific criteria and protocols for coaching practices, and accountability is built into their organizational professional practices through regular reflective supervisory and collaborative team meetings. Practitioners at this site, in particular, clearly articulated their coaching practices using shared language as a staff. Practitioners from the other sites shared the same general criteria for coaching as their coworkers, although more variability existed in how they talked about their coaching practices.

Evidence of Progress

Practitioners discussed methods for determining whether caregiver coaching was effective in terms of caregiver learning and the child's LSL outcomes. All practitioners reported using a variety of formal and informal assessments to document child progress, and several talked about attributing child progress to their caregivers learning LSL skills and implementing them at home. No practitioners reported the use of a formal measure for documenting caregiver learning through coaching. A few mentioned informal measures for assessing caregiver learning, such as observing their interactions with their children during and in-between intervention sessions, including Sara, who said, "I will tell when I see them…because she will talk to him, she will tell him, she will comment about what's going on, parallel talk, self-talk. She will be a talkative parent."

Time is of the Essence

Another conceptualization of coaching was evident in how practitioners viewed their time with families. Several of them talked about the value of the length of time they are able to work with families – typically approximately three years – which afforded them the opportunity to establish trust and develop a meaningful coaching relationship. Several practitioners viewed caregiver coaching as a way to make the most of a 45-60-minute intervention session, and indicated that they value the time caregivers commit to intervention and do not want to waste a moment of it. The value of time was also evident in the emphasis practitioners placed on teaching caregivers concrete skills to carry over into naturalistic environments, to optimize their child's learning during the critical period for language development. Sara shared that it upsets her when she sees other practitioners "waste the critical age." She went on to explain, "I'm very keen for all my kids not to waste a day. So, sometimes, I will explain…'You have a diamond in

your hand. And then the age will change to become…just sand. So, don't waste your diamond. No pressure, no diamond.'"

Perspective Shifting

All practitioners indicated that perspectives about caregiver coaching can change over time, through experience and professional development. Eight of the practitioners have worked in EI for more than 10 years, and many discussed how their understanding and expectations for caregiver coaching in LSL practice have evolved over the course of their career. However, even the less-experienced practitioners mentioned that their perspective about caregiver coaching has evolved since they began working with families.

Are We Doing What We Say We're Doing?

Five of the practitioners described the shift to caregiver coaching as an internally-motivated decision to more explicitly engage caregivers in intervention sessions. Practitioners questioned whether their intervention practices reflected their conceptualization of caregiver coaching, as they claimed, or if they needed to implement changes to best serve families. Olivia described a desire for improvement, stating, "I knew what we were doing was good work, but I also knew that what we were doing could of course be better, because it can always be better." She recalled a conversation with her coworkers during which they agreed that the caregivers should be making the decisions and engaging with their child during sessions, and, as a result, they decided to change their coaching practices. However, they were not without doubts. Olivia recalled that they initially "did not trust that the parents would be able to rise to the occasion," indicating a skepticism that had to be overcome in order to change their practice, despite their conviction that it was a worthwhile change.

I Had to Be Convinced

Nine practitioners shared that their reasons for changing their coaching practices were more externally-motivated. They described a shift in thinking after learning about changing recommendations in the field; however, several reported that the decision to change their practices ultimately resulted from being held accountable to implement coaching by a supervisor and their colleagues. Several reported doubt that relinquishing control of the intervention would be effective, but were convinced after caregivers were willing and able to actively participate in coaching. Susan described this initial hesitation and how she was eventually convinced of the feasibility of coaching:

> I didn't believe it at first…I thought parents needed me to be telling them everything…I just didn't really realize the power of empowering them…When we really started doing it…we saw the parents be more responsible and kind of doing things on their own…I think it empowered us, as well, to believe this was a good thing.

A subset of these practitioners reported learning about coaching and believing that it should be implemented, but are still working to change their practice. This was reflected in their reported perception that coaching is conditional, impacted by external circumstances.

Practice Makes You a Better Coach

While a few practitioners reported feeling confident in their ability to coach from the beginning, most said that they gained confidence with experience, which changed their perspective on coaching. Kelly described making the adjustment from teaching in an LSL classroom to coaching caregivers, indicating that there was a significant learning curve. Over time, she reported gaining confidence, stating, "more practice with coaching just makes you a

better coach." A few practitioners, however, reported that even after years of experience, they are still working to gain confidence in their skills as a coach.

Process

Coaching practices varied among practitioners and sites, including coaching components and how they are implemented. Practitioners described how they learned to coach and discussed factors that facilitate their coaching practice, including ongoing professional development, systems of accountability, and support from colleagues sharing similar experiences.

Equipping

Coaching Requires Different Skills

All practitioners acknowledged that coaching caregivers requires a different skillset than teaching children, which is primarily what they learned in their professional preparation programs. Jessica shared, "I was…very nervous because…the whole responsibility of…teaching a family…versus working with a child…I knew that required a whole other set of skills." Four practitioners reported learning about coaching in their graduate programs, although only two of them reported this as a primary focus of their training. Other ways practitioners reported learning coaching skills included professional development activities, on-the-job learning, and mentoring from more experienced practitioners. Nine practitioners reported that providing tele-intervention services sharpened their coaching skills, and six reported refining their skills through teaching other professionals.

Many practitioners reported a desire for more opportunities to develop their skills, including Hannah, who put it this way: "I want to…coach the parents to teach their child. I feel like a link that's missing is – who's coaching me to do that?"

Accountability

Several practitioners mentioned accountability as a facilitator for coaching. They described accountability as answering to and brainstorming with a supervisor and colleagues about their coaching practices and challenges, as well as the responsibility inherent in training others to coach. The practitioners at one site in particular shared how much they value having a supervisor who has high expectations and holds them accountable, to which they attributed gaining confidence in their ability to coach caregivers.

Several practitioners shared that part of their accountability practice included video recording sessions and reviewing them with a supervisor as well as utilizing them regularly for self-reflection. When discussing her self-selected video clip, Ann shared an example of supervisory reflection when she stated, “this is a moment where (director) helped me through a part that could be coaching or strategy.” Olivia felt strongly about using video for self-reflection, declaring, “the most enlightening thing is to videotape yourself.”

Community of Practice

Another facilitator for coaching was regular interaction with colleagues with whom practitioners can share ideas, problem-solve, and pursue professional learning and development. Several practitioners mentioned the value of learning and growing together and stated that they appreciated having someone with whom to problem-solve difficult situations. Paula articulated the importance she places on sharing with her colleagues by saying, “It’s nice to have peers with experience in the same boat as you, that you can talk to…I’m not an individual provider out there by myself. Because we do give each other a lot of feedback.”

Shared Understanding of Concepts and Procedures

According to the practitioners, a shared and clear understanding of coaching principles, components, and procedures was a facilitator for gaining confidence and implementing coaching with fidelity. Susan reported that "there's certain components of every session that we know need to happen in order for it to be well done." Alternatively, a lack of clarity impeded coaching practices, resulting in a lack of confidence in coaching skills for some practitioners.

Several specific coaching practices were identified during the interviews including: checking in, setting goals, explaining the strategy, demonstration, observation, an opportunity to practice, providing feedback, reflection, planning for carryover, and wrapping up. Of these, reflection was reported as most difficult by many practitioners. They described it as "difficult," "challenging," and "uncomfortable," and several considered it "an area of growth." Some practitioners reported not always incorporating reflection. Two practitioners reported that it was difficult when they first incorporated reflection into their coaching practice, but, as Kelly stated, "now it feels pretty natural."

Practitioners also shared practices that supported the coaching exchange, including establishing the expectation for caregiver engagement and providing information to caregivers, especially at the beginning of EI services and during transitions. As coaching practices varied between sites, not all of these components were included by all practitioners in every coaching session.

Participation

Practitioners' expectations and experiences regarding caregiver participation derived from their underlying beliefs about the capacity of caregivers to engage in coaching. Their expectations for participation ranged from full, active participation in all aspects of the session,

including choosing goals, to expecting caregivers to take a turn after the practitioner modeled a strategy with the child. All practitioners agreed that caregiver engagement is a crucial criterion for coaching.

Built on Relationship

A Foundation of Trust

All practitioners reported that a foundation must be built with a family before establishing a meaningful and effective coaching relationship, and eight practitioners specifically mentioned trust as an important component of that foundation. For example, when asked, "what makes coaching work?" Kelly replied, "I think trust is the most important thing."

It's a Dance

Twelve of the practitioners mentioned that every family is different and adapting coaching to meet individual needs is an important skill for a practitioner to develop. Stephanie described adjustments made to coaching practices to meet families "where they are" in this way: "So, it's sort of a dance…it's so different for different parents and different children."

Engagement Leads to Empowerment

All practitioners agreed that the goal of caregiver coaching is to empower and equip caregivers to facilitate language growth in their children and the most effective way to do that is to actively engage caregivers in sessions. According to Susan, "it's all about empowering the parents and helping them believe that they have the skills in order to do this." However, they all reported that this is challenging at times. Practitioners reported expectations for engagement on a continuum, ranging from observing to taking the lead in all aspects of the session.

It's a Process

Practitioners reported that some caregivers are hesitant to engage during sessions, preferring to observe rather than participate, and described efforts to increase engagement as 'a process' that can take time. Patrice described using demonstration to help caregivers understand the expectation: "Even the families who aren't there yet, you're mostly demonstrating…they're the ones who won't take a turn, even in spite of your best efforts…still it's engaging them and pulling them into seeing their role."

Handing it Over

One level of engagement that practitioners reported was that of taking a turn following demonstration of a strategy. In this scenario, practitioners lead the session and expect the caregivers to actively participate. Most practitioners described this as an acceptable level of engagement, as it gives caregivers an opportunity to practice skills during the session, during which the practitioners can offer feedback and encouragement. Carrie described her approach in this way: "I will say, 'Ok, so I will start. So, the cow says moo, and then I wait.' And then I'll just take the bag and give it to the parent, 'your turn.'"

Taking the Lead

Some practitioners expect an even greater level of engagement from caregivers, in which they take the lead and participate in all aspects of the session, including establishing goals for the session and deciding which activity they would like to use to target them. For these practitioners, the primary focus of the session is the caregiver/child interaction, and they see their role as facilitators who observe and provide feedback. One site's approach to coaching hinges on this premise; their practitioners generally do not engage with the child directly and use demonstration minimally. When describing this level of engagement, Paula said, "the parents would do the

activity with the baby. My goal is to sit there and coach…offering suggestions, making comments about what's good and what needs work."

Matching Goals to Caregiver Priorities

Practitioners talked about the value of partnering with caregivers to choose goals that are meaningful to them. Kelly described a time when she struggled to get a caregiver to engage, and once she realized that her goals for sessions did not necessarily match what the caregiver wanted for his child, she elicited his ideas, and his engagement completely changed. She said this helped her realize the importance of listening to caregivers when choosing goals because, "it's just something that sticks and it has more value to them because they were engaged in making the decision."

Building on Families' Routines

Twelve practitioners talked about the importance of teaching LSL strategies in the context of a family's daily routines to optimize language learning. Many utilized routines for their session activities, such as snack time and outdoor play. Others taught strategies using specific toys or activities, but made sure to discuss ways caregivers could utilize the same strategies in the natural context of their everyday lives. Dawn reported that she teaches families that specialized toys or structured activities are not required for implementing LSL strategies, telling them, "if you don't do anything else, narrate life…talk to them all the time and make them aware of things they hear and see."

Recognizing Challenges

In addition to the challenges practitioners reported with implementing coaching related to their principles and process, they shared perceived challenges related to caregivers' active participation in coaching.

Convincing the Caregiver

Twelve practitioners mentioned the perception that a caregiver's lack of "buy-in" is a barrier that must be overcome to establish a good coaching relationship. Some attributed this to the fact that some families expect direct therapy for their child and do not understand or subscribe to the coaching model. They talked about strategies they use to convince the caregiver of the effectiveness of coaching, including clearly explaining the expectations and setting them up for success so they experience the benefits first-hand. Susan reported that most of her caregivers eventually "come around." She said, "it's not very natural for some parents…it takes a little while…once they see that the suggestions I'm giving them…helping the speech get better or helping the language get better…then they start believing that my suggestions are good."

Less-than-ideal Circumstances

Other perceived barriers that practitioners reported were difficult family situations, including low socio-economic status, single parenthood, and having a child with complex needs in addition to hearing loss. They shared that they were empathetic to families' struggles and understood that not all of them would be able to fully engage in coaching. Brenda shared, "there are families who…never bought in…maybe it's too much work and they are already overwhelmed with other things...their kids are maybe more complex…are not as successful."

Discussion

The results of this study contribute to the literature by explicating the perspective of LSL practitioners utilizing caregiver coaching in their work with families of children who are DHH. It is clear that LSL practitioners value caregiver coaching and believe it is an effective means for impacting child outcomes, and they work to actively engage caregivers during intervention sessions. Our findings indicate that the underlying beliefs that practitioners hold about

caregivers' capability and their own coaching competency impact their coaching practices and how they partner with caregivers in LSL intervention. Our study highlights practical actions practitioners can take to facilitate caregiver coaching.

While the conceptualization and practices of coaching varied between sites, the common thread was active caregiver participation during intervention sessions. This supports previous research that reported EI practitioners' perspectives that active engagement in coaching promotes caregiver competence and leads to empowerment as caregivers realize their crucial role in supporting their child's development (Meadan et al., 2018). In our study, how practitioners engaged caregivers was linked to the practitioners' underlying beliefs in the caregivers' willingness and ability to engage in their child's intervention. This aligns with principles of adult learning, particularly the need for caregivers to practice skills in a meaningful context and receive feedback on their performance (Dunst & Trivette, 2009b). All practitioners maintained that caregivers can and should be involved in the coaching process, although their expectations for the extent of involvement varied. Expectations of caregiver participation ranged from leading the sessions to actively 'taking a turn' following practitioner demonstration. However, some of the practitioners discussed the challenges of engaging caregivers and shared what they felt were valid reasons for lack of participation, indicating an implicit belief that active engagement in caregiver coaching is the exception and implying that some caregivers may be unwilling or unable to participate. This aligns with recent research in which practitioners reported difficulty getting caregivers to engage and step out of their comfort zone in sessions (Douglas et al., 2020). Practitioners in the present study who successfully engaged caregivers reported that they did so by establishing clear expectations and matching goals to caregiver priorities.

Our results indicate that practitioners must believe in a caregiver's willingness and ability to engage meaningfully in coaching, as well as have confidence in their own coaching abilities, to establish a consistent and successful coaching relationship. These two fundamental beliefs are inexplicably linked; as practitioners become convinced of caregivers' capacity, their feelings of self-efficacy increase because they experience coaching as successful. Likewise, as their self-efficacy increases, they are better able to engage with caregivers in ways that facilitate their active engagement in sessions. Research relating to self-efficacy suggests that it is a malleable concept that can be influenced by intensive and specialized professional development and training (Bruder et al., 2013). Our results support this finding, as practitioners reported that underlying beliefs can change, either through successful coaching experiences or professional development specifically targeted at improving caregiver coaching skills.

However, our results suggest that knowledge of coaching alone is not enough to change practitioner behavior. It is evident from our results that pairing knowledge with accountability and a community of practice (CoP) facilitates the implementation of caregiver coaching. A CoP is a group of individuals with shared expertise and a desire to learn together (Li et al., 2009; Wenger, 2010; Wenger & Snyder, 2000) and has been recommended as a means to bridge the research-to-practice gap in a variety of health contexts, including audiology and speech-language pathology (Li et al., 2009; McCurtin & O'Connor, 2020; Moodie et al., 2011). CoPs can be informal or formal in structure, and have been utilized to provide mentorship, learn and share new knowledge, and foster a sense of belonging between members (Li et al., 2009). This aligns with early childhood intervention professional development research that found several key components of successfully implementing newly learned practices: (a) opportunities to discuss and reflect on practice experiences, and (b) coaching, mentoring, and performance feedback

during training, and (c) ongoing follow-up by supervisors, mentors, and peers to reinforce learning (Dunst, 2015). All of these can be accomplished through establishing a reflective community of like-minded practitioners who are working to implement coaching practices in their work with families and the accountability that stems from actively learning and growing together.

Several of the practitioners shifted their understanding of coaching, but not enough to change their belief in caregiver capacity. The way that they described their coaching practices and level of confidence did not align with a change in their underlying beliefs. Whether practitioners adopted caregiver coaching due to extrinsic or intrinsic factors or started this work convinced that caregiver coaching works or had to be convinced, their underlying beliefs guided their coaching practices. Our results suggest that while practitioners can decide to change their behavior, fully embracing the fundamental beliefs of caregiver capacity and their own self-efficacy may be what facilitates a lasting change in coaching practices. Therefore, intentionally adding accountability and a reflective CoP into a program may scaffold the shift in underlying beliefs that facilitate caregiver coaching.

Although not designed as a comparative study, we noted a few important differences in how practitioners talked about caregiver coaching between the three sites. The literature has long reported a lack of operationalized definitions and practices in caregiver coaching (Friedman et al., 2012b), and more recent research indicates that this lack of standardization persists in both the EI and LSL literature (Noll et al., 2021; Ward et al., 2020). Similarly, the practitioners in our study differed in their conceptualization of coaching. Practitioners from one site defined coaching narrowly and the practitioners operated from a very specific set of procedures. These practitioners expressed confidence in their approach because they knew exactly what they were

expected to do and were held accountable for doing so. Another site defined coaching more broadly and the practitioners described their practices more variably. Both of these sites loosely based their practices on the Rush and Shelden (2005, 2019) framework for caregiver coaching. The final site, however, did not use the same language when talking about their coaching practices, and reported that they coached according to the conventions of AVT, even though they did not all hold LSLS AVT certification. It is likely that differences in training and background tradition at the three sites accounted for some of these differences. Interestingly, the specific conceptualization of coaching seemed to have a lesser impact on practitioner confidence in the implementation of coaching than having a clear understanding of the distinct practices they considered to comprise coaching, suggesting that well-defined and clearly articulated coaching practices may facilitate caregiver coaching.

The practitioners at one of the sites were more likely to talk about coaching as conditional and seemed to have less confidence in their ability to engage the caregivers in coaching consistently. Previous research suggests that practitioners sometimes find coaching challenging due to conflicting expectations or family circumstances, such as a perceived lack of motivation, stress, or socioeconomic factors, which they consider barriers that may preclude families from actively engaging in coaching (Douglas et al., 2020; Meadan et al., 2018). In this study, some practitioners talked about coaching with more variability and less certainty than others, using words like “awkward” and “indirect modeling” when talking about their interactions with families, indicating ambiguity in what coaching should entail, which likely impacted their ability to implement it with confidence and consistency. The practitioners who talked about coaching this way also detailed a lack of confidence in their ability to coach. Aligned with previous research that indicates that clearly-defined procedures facilitated

practitioners' confidence in implementing coaching practices (Salisbury et al., 2018), the practitioners who articulated clear expectations for coaching practices reported greater confidence in their coaching ability. This indicates a need for the development of clear standards of practice and high-quality professional development to address caregiver coaching in LSL practice.

Implications for Practice

It was clear from our results that caregiver coaching was facilitated at sites that had established well-defined coaching practices. As suggested by previous researchers (King et al., 2021), a need exists for the establishment of a standard of practice for caregiver coaching among programs offering LSL services to families. This presents an opportunity for professional preparation programs to evaluate whether they are developing proficiency specific to caregiver coaching in future LSL practitioners, as well as for the establishment of targeted professional development and mentoring programs to support practitioners working with families. There have been recent efforts by seven national professional organizations, including the American Speech-Language-Hearing Association, to establish cross-disciplinary competences for EI practitioners, including family-centered practices, although not specific to caregiver coaching (Bruder et al., 2019). Certification bodies specific to LSL practice such as AG Bell may wish to consider establishing standards and embedding targeted training for coaching caregivers in the certification process, as well. Because, according to the practitioners in this study, coaching caregivers requires different skills than teaching children who are DHH**,** there is a need to define practitioner competencies for effectively teaching adult learners and the development of robust and highly specialized pre-service and in-service professional development programs.

Our results suggest that underlying perceptions can impact coaching practice, so the inclusion of intentional reflective practices may facilitate a change in practice. Additionally, establishing a CoP, which facilitates peer-to-peer reflection, problem-solving, and learning, as well as accountability practices that promote caregiver coaching may improve practitioners' confidence in coaching caregivers. Programs that provide LSL services to families of children who are DHH can incorporate these elements into their practice to foster the development of coaching skills, as well as develop consistency and fidelity of implementation.

This study was not without limitations. The Canadian practitioners were interviewed after their sessions shifted to online service delivery due to Covid-19 restrictions. While most practitioners indicated that tele-intervention was a facilitator for their coaching, it was not without its challenges, and may have impacted their perceptions about the coaching experience. Covid-19 restrictions also limited the number of videos we obtained due to privacy concerns arising from recording intervention sessions conducted on Zoom. The videos we did receive were fairly well distributed across all three sites, added depth to our interviews, and strengthened our analysis of coaching practices. Utilizing video for reflective discussions on a broader scale would be an interesting direction for future research.

Personal connections were utilized to access the intervention sites and the first author was familiar to some of the practitioners due to shared professional experiences. While this may have impacted how freely practitioners shared their experiences, intentional procedures were followed to reduce bias and ensure that practitioners understood the non-evaluative intentions of the inquiry. While shared disciplinary understanding of clinically-relevant issues is a hallmark of Interpretive Description and the researcher's pre-understandings are critical for generating meaningful and practical findings (Thorne, 2016), we took steps to ensure rigor, including

careful reflexivity, frequent debriefing, transparency, and maintaining strict confidentiality (McDermid et al., 2014; Shenton, 2004). As a result, we believe the author's disciplinary experience provided deep insight and resulted in practically applicable findings that provide new understanding of caregiver coaching in LSL practice.

Additionally, while it was valuable to elicit the perspectives of practitioners from three different sites, a larger study would provide more information about coaching practices of LSL practitioners, and comparative case studies would be beneficial to understand the differences among intervention sites. It would also be interesting to examine the perspectives of practitioners following the wide-spread implementation of tele-intervention due to Covid-19 restrictions. Future research could include an examination of differences in training (speech-language pathology versus deaf education), service delivery models, LSLS certified vs non-certified, and characteristics of the demographic of caregivers served. Additionally, there is a significant need for studies that measure caregiver and child outcomes as a result of caregiver coaching.

Our study provides a unique contribution to the LSL literature by examining caregiver coaching from the perspective of the practitioners who implement it. The results indicate an interplay between practitioners' underlying beliefs and their practices, including how they engage caregivers in intervention. Our results suggest that a practitioner's beliefs, especially about caregiver capacity and self-efficacy, are the key to implementing caregiver coaching with confidence and consistency. If practitioners have a clear understanding of coaching components, build skills through professional development and a supportive CoP, and are held accountable for implementing coaching practices, they are more likely to report positive experiences with coaching caregivers. Ultimately, increasing practitioners' self-efficacy may lead to more fully

engaging caregivers in intervention, which is likely to improve LSL services and optimize child outcomes.

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Chapter 5: Integrated Discussion

The aim of this dissertation was to gain a greater understanding of the principles and practices of caregiver coaching in listening and spoken language (LSL) practice through an examination of the literature and interviews with practitioners and caregivers of children who are deaf or hard of hearing (DHH). In this chapter, I briefly summarize the context and findings from my three dissertation inquiries and integrate these results by presenting a new conceptual framework for caregiver coaching in LSL practice. I then situate my findings in the context of current literature and present three important concepts from my research that represent implications for applied practice: (a) principles and expectations, (b) shared conceptual and procedural understanding and (c) comprehensive training and support. I conclude by outlining the strengths and limitations of this work.

Summary of Dissertation Findings

The multiple methods utilized to explore this under-researched topic, including a scoping review and interviews with caregivers and practitioners, strengthened the findings and broadened the understanding of how caregiver coaching is implemented in LSL practice. The variations that exist in the literature with regard to caregiver coaching practices, conceptualizations, and training uncovered by the scoping review (Chapter 1) informed the qualitative interviews (Chapters 3 and 4), as I investigated experiences with caregiver coaching from the perspective of caregivers and practitioners. The interview component of this research was informed by interpretive description: a flexible, applied practice methodology that aligns with the overall purpose of this research to answer a clinically relevant question with clinically applicable knowledge and actionable steps that can be used to improve practice (Thorne, 2016). A summary of each inquiry follows.

Inquiry 1: Scoping Review

My first study consisted of a scoping review of the literature following the framework developed by Arksey and O'Malley (2005) and subsequent procedural recommendations that built upon this framework (Levac et al., 2010; Peters et al., 2015) (Chapter 2). The aim of this review was to synthesize the current literature on coaching caregivers of children who are DHH. The initial search yielded 1819 articles, and 22 met the inclusion criteria, only one of which was a published, peer-reviewed empirical research study, indicating a remarkable gap in the research. I identified three themes in the literature: coaching practices, training for coaching, and effectiveness of coaching. Key findings included a lack of consensus on the definition or practices of coaching, a need for more training in caregiver coaching for LSL practitioners, and very little evidence of its effectiveness in this population. According to the literature, caregiver coaching in LSL practice should be individualized, context-driven, collaborative, and strengths-based. I identified commonalities among the eight models of coaching represented in the literature to develop a consolidated model that illustrates the recommendations and process of caregiver coaching in LSL practice (Figure 2, Chapter 2).

This coaching framework provides common terminology and new insight upon which future research can be based, and has the potential to improve the consistency of coaching practices across LSL programs. With validation, this model of caregiver coaching may inform the work of current LSL practitioners, guide training programs for the next generation of LSL practitioners, and ultimately impact the quality of LSL services for families. Most importantly, the use of this new framework may impact the outcomes of children who are DHH by equipping and empowering their caregivers through coaching.

Inquiry 2: Caregiver Interviews

My second article summarized the findings from semi-structured qualitative interviews with 13 caregivers participating in LSL services at three intervention sites: one in Canada and two in the United States (Chapter 3). The purpose of this study was to increase understanding of caregivers' experiences of coaching in the context of LSL intervention services delivered through three different service delivery models. Results indicate that the caregivers interviewed perceived coaching to be a positive experience and reported three factors that contribute to this: practitioner characteristics, how expectations are set and maintained, and the adaptation of coaching to changing caregiver needs over time. This paper adds to the literature by prioritizing the underrepresented voice of the caregiver participating in services for their child who is DHH, and presents functional steps practitioners can implement to improve their coaching practices.

This new insight has the potential to empower current and future caregivers of children who are DHH to advocate for a partnered, collaborative approach to caregiver coaching. Additionally, this study supports practitioners working to establish and maintain positive caregiver coaching relationships. Practitioners can utilize this new understanding of the role of practitioner characteristics, the importance of establishing explicit expectations, and the need to adapt their coaching over time to improve their coaching interactions with families. This understanding has the potential to impact the work of practitioners currently coaching caregivers as well as pre-service professionals learning to implement caregiver coaching with families of children who are DHH. See Table 1 for a brief overview of the themes from the caregiver interviews.

Table 1.
Themes from Caregiver Interviews

Theme	Sub-theme	Codes
It Takes a Special Kind of Person		
Building on Expectations	Expectations of Practitioner	Practitioner-as-expert
		Practitioner-as-partner
	Expectations of Self	Being an observer
		"I'm the student"
		"It's all on me"
	Expectations of Success	Caregiver learning as a measure of success
		Child performance as a measure of success
Figuring it Out Along the Way	Establishing a Foundation	Building trust
		Establishing expectations
		Information sharing
		Overwhelming at times
	Ongoing Trust and Unguardedness	Mutual respect
		Openness
		Rapport
		Transparent communication
	Shared Development of Knowledge and Skills Leads to Empowerment	Explaining the "why"
		"I've learned a lot"
		"It makes me feel empowered and confident"

Inquiry 3: Practitioner Interviews

The third study consisted of semi-structured qualitative interviews with 14 practitioners at the same three intervention sites, 8 of whom also submitted a self-selected video clip that we reviewed together and discussed in our interview (Chapter 4). The purpose of the practitioner interviews was to gain insight into practitioners' perspectives and practices with regard to coaching in LSL services. The video observation component supported the practitioners' ability to articulate how they define and implement coaching in their interactions with caregivers. Results highlighted new understanding about caregiver coaching in LSL practice: the underlying beliefs held by practitioners impacted their coaching practices and how they engaged caregivers

in coaching. I further divided the three central themes – principles, process, and participation – into sub-themes, as depicted in Figure 1, Chapter 4. See Table 2 for a brief overview of the themes from the practitioner interviews.

Table 2.
Themes from Practitioner Interviews

Theme	Sub-theme	Codes
Principles	Caregiver Capacity	Of course they can
		Coaching is conditional
	Conceptualizing Coaching	Defining coaching
		Evidence of progress
		Time is of the essence
	Perspective Shifting	Are we doing what we say we're doing?
		I had to be convinced
		Practice makes you a better coach
Process	Shared Understanding: Concepts and Procedures	
	Equipping	Coaching requires different skills
		Accountability
		Community of Practice
Participation	Built on Relationship	A foundation of trust
		It's a dance
	Engagement Leads to Empowerment	It's a process
		Handing it over
		Taking the lead
	Recognizing Challenges	Convincing the caregiver
		Less-than-ideal circumstances

While caregiver coaching was not conceptualized or implemented uniformly across sites, I identified a few important similarities. All practitioners considered caregiver engagement central to the coaching process and worked to engage caregivers meaningfully and consistently in intervention sessions, to varying degrees of perceived success. Across sites, two important elements impacted practitioners' coaching practices: their self-efficacy regarding their coaching skills and the underlying beliefs they held about caregivers' capacity to actively and effectively

engage in coaching. These implicit beliefs impacted practitioners' coaching practices (process) and how they engaged caregivers in sessions (participation). However, the coaching practices differed among sites, suggesting a need for standardization of coaching procedures and the identification of practitioner competencies related to coaching caregivers of children who are DHH. These findings contribute the valuable perspective of practitioners to the existing literature, and present actionable steps for improving professional development and supporting practitioners in their coaching practices at the agency level.

In summary, the results of these three inquiries contribute understanding to an understudied field of practice and prioritize the voice of the primary stakeholders of caregiver coaching – the families and practitioners who serve them.

Integrated Discussion

The systematic examination of the literature and stakeholder interviews completed for this dissertation result in a new understanding of caregiver coaching in the field of LSL practice. Examining caregiver coaching from the perspective of those directly impacted by it adds a unique contribution to the literature and furthers the understanding of principles and practices of coaching being implemented in the context of LSL intervention services. I synthesized the findings across studies and developed a proposed conceptual framework for caregiver coaching in LSL practice. In addition, I present applied disciplinary implications with the potential to inform and advance caregiver coaching in this field of practice.

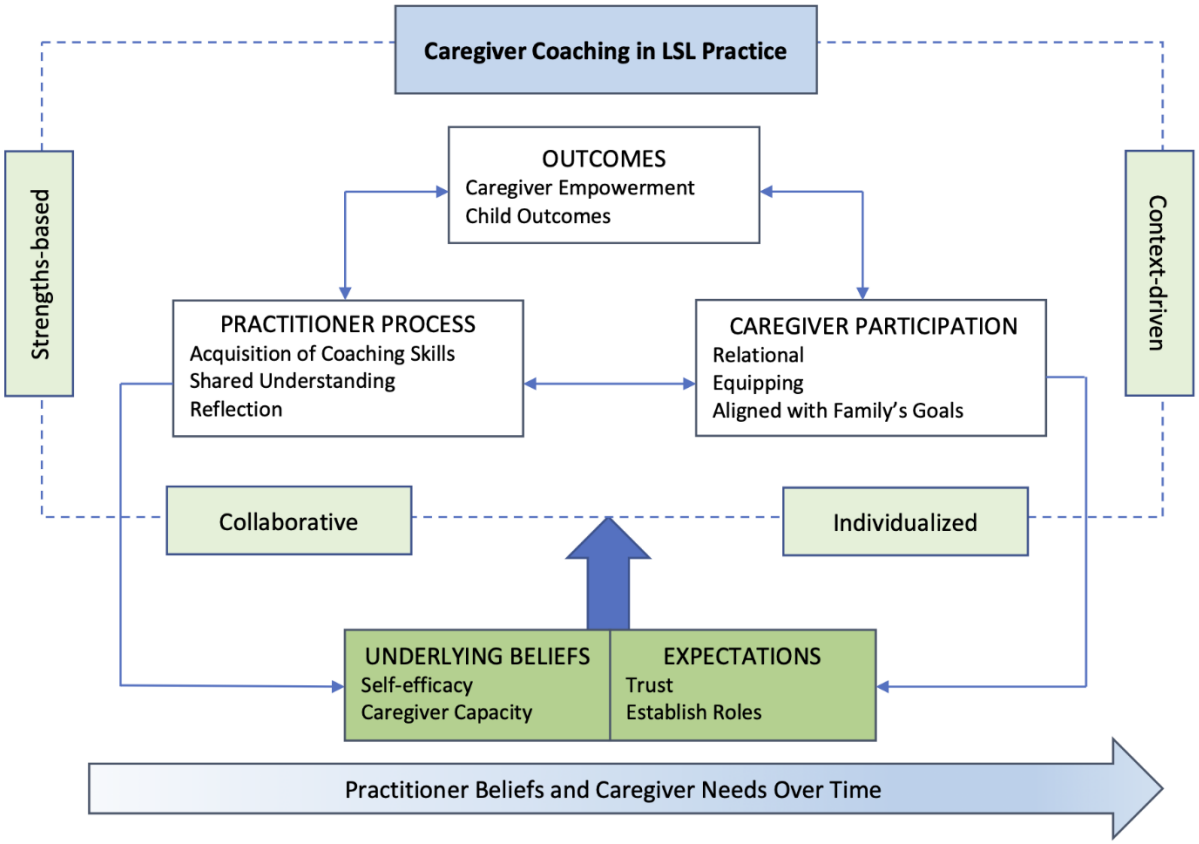
Proposed Conceptual Framework

The Participatory Adult Learning Strategy (PALS) that informed this research (Figure 1, Chapter 1) outlines the adult learning components of caregiver coaching that set it apart from other types of parent training, including adult learner involvement and reflection. PALS portrays

caregiver coaching as bidirectional and reciprocal, and includes four phases: 1) introduction and illustration of the targeted knowledge or skill, 2) an opportunity to apply the new learning and receive feedback, 3) reflection on and assessment of mastery of the new learning to promote informed understanding, and 4) the use of this informed learning to decide next steps in the learning process (Dunst & Trivette, 2009; Raab et al., 2013). Components of the PALS framework, specifically adult learner involvement and reflection, provided a reference for the research questions in this program of study and informed the development of the scoping review protocol and interview guides.

While the PALS framework (Dunst & Trivette, 2009) served as a starting point for the development of this research and my results support the idea that reflection and active learner participation are important components of caregiver coaching, this framework was not sufficient to capture the complexity of the results of my examination of caregiver coaching in LSL practice. Therefore, I have developed a new conceptual framework that represents an integration of the findings from all three phases of my study (Figure 1).

Figure 1.
Conceptual Framework for Caregiver Coaching in LSL Practice



The results of my research provide compelling evidence that the application of caregiver coaching by LSL practitioners goes beyond coaching practices and adult learning principles to include underlying beliefs about the experience of coaching and requires specialized skills that must be developed and maintained over time. My scoping review results indicate that caregiver coaching should be strengths-based, collaborative, individualized, and context-driven, as indicated in the model. The dotted line upon which these recommendations sits represents the foundational principles of caregiver coaching this research contributes to the field of LSL practice.

Contained within the dotted lines are three components that comprise this conceptualization of coaching: outcomes, practitioner process, and caregiver participation. My

results indicate that a clear understanding of coaching practices facilitates confidence in implementation; therefore, the process of coaching includes the practitioners' acquisition of coaching skills, encompassing training specific to coaching caregivers, and a shared understanding of coaching concepts and procedures. Outcomes are comprised of caregiver empowerment and child outcomes, both of which are the aim of caregiver coaching. Both practitioners and caregivers grouped indicators of a successful coaching relationship into these two categories, which provides insight into what they hope to achieve through coaching. Finally, reflection is included as part of the coaching process because, even though practitioners indicated that it is challenging, most agreed that it is necessary for caregiver learning.

The third component of coaching is caregiver participation. My results showed that coaching is relational, equips caregivers with knowledge and skills, and needs to be closely aligned with the family's goals for their child. Practitioners and caregivers agreed that the relational component of coaching requires trust, and caregivers described practitioner characteristics that facilitate trust-building. The caregivers' level of engagement impacts how equipped they become to affect child outcomes, and practitioners reported that aligning goals with caregiver priorities is one way to increase engagement.

Outcomes, process, and caregiver participation influence one another, as indicated by the directional arrows. For example, practitioners and caregivers both reported that positive outcomes reinforced participation and the process of coaching. My results indicate that the acquisition of coaching skills and a shared understanding of concepts and procedures increased practitioners' self-efficacy, leading to more confidence in engaging caregivers, resulting in better outcomes. Finally, the incorporation of reflection as a coaching practice is important for

caregiver learning and may result in greater levels of participation, and ultimately, better outcomes.

In the framework, coaching is built on a foundation of underlying beliefs and expectations. Expectations include the trust that is required for a positive coaching relationship and the establishment of roles, which, according to my results, should be explicitly specified in the beginning of the coaching relationship. The underlying beliefs held by practitioners include feelings of self-efficacy with regard to coaching and their views about caregivers' capacity to successfully engage in coaching. These fundamental concepts comprise the foundation for the whole of the coaching experience, as indicated by the bold arrow. Practitioners and caregivers indicated that their perspective can change as a result of positive experiences with coaching, as indicated by the small directional arrows.

The arrow beneath the model represents caregiver coaching as a collaborative process that evolves over time. Practitioners indicated that their underlying beliefs may change over time due to new learning and positive experiences with coaching, which, in turn, may impact how they engage with caregivers. Additionally, caregivers indicated that their needs change over the course of intervention. For example, they shared a greater need for information and support at the beginning of the intervention process, and that practitioners who adapt to their changing needs contribute to a positive coaching relationship. Ultimately, as both parties experience the coaching relationship over time and adjust in response to each other, they co-create the coaching relationship as it evolves.

Implications for Listening and Spoken Language Practice

The integration of this dissertation work highlighted three important implications for the field of LSL intervention: (1) underlying beliefs and expectations as the foundation of caregiver

coaching, (2) the role of shared understanding of concepts and procedures in the implementation of caregiver coaching, and (3) the need for comprehensive training and support for practitioners utilizing caregiver coaching.

Underlying Beliefs and Expectations

Results from the caregiver and practitioner interviews indicate that underlying beliefs and expectations are the foundation for the caregiver coaching relationship in LSL practice. The impact of these two constructs indicate that caregiver coaching is a reciprocal, collaborative 'dance' that requires engagement from both partners. These constructs, which represent the fundamental experience of caregiver coaching, were not evident in my scoping review and therefore represent new understanding with implications for LSL practice.

My results indicate that caregivers' expectations are linked to their level of engagement and considering themselves partners in the process facilitates a collaborative coaching relationship. This supports recent research indicating that, for families receiving pediatric rehabilitation services, caregivers' expectations about their role in intervention were a key construct that determined their engagement and progress in therapy, and understanding the practitioners' expectations of them was an important factor in their level of engagement (G. King et al., 2020, 2021). Additionally, my results corroborate research that suggests that caregivers enter intervention services with preconceived expectations, which can change when practitioners explicitly establish expectations for their participation (Phoenix et al., 2020), and directly addressing caregivers' expectations can increase engagement, and as a result, child outcomes (Smart et al., 2019). Taken together, this provides compelling evidence that practitioners can impact caregiver engagement by explicitly establishing expectations for participation, equipping caregivers to actively participate in the reciprocal 'dance' of coaching. This, in turn, may lead to

stronger and more collaborative coaching relationships, which may improve caregiver and child outcomes.

Similarly, the practitioner interviews provided evidence that underlying beliefs about their coaching competency and caregivers' capabilities were foundational to their coaching practice. Recent research has examined the practitioners' perspectives on a variety of aspects of caregiver coaching, including the feasibility of specific interventions (Salisbury et al., 2018), the benefits and challenges of coaching (Meadan et al., 2018), the implementation of coaching via tele-intervention (Cole et al., 2019), and whether practitioners felt their training prepared them for caregiver coaching (A. King et al., 2021). Researchers in pediatric rehabilitation found that practitioners considered caregiver engagement necessary for progress in intervention, and that positive relationships, expectations about roles, and perception of a caregivers' situation impacted levels of engagement (G. King et al., 2020, 2021). In addition, practitioners considered mismatched expectations to be a barrier to caregiver engagement (G. King et al., 2021). This aligns with my results indicating the importance of establishing clear expectations for developing a positive coaching relationship, However, to my knowledge, no studies have explicitly explored the practitioners' belief system with regard to coaching self-efficacy or perceptions of caregiver capacity until now. This represents a significant contribution to the overall understanding of caregiver coaching in LSL practice.

My results suggest an interplay between caregiver and practitioner elements, linked to shared conceptual/procedural understanding and expectations, that may impact caregiver engagement. Practitioners must invite caregivers to participate and equip them to do so by first building trust, then explicitly establishing roles and engaging caregivers collaboratively in the coaching process. This includes facilitating caregivers' engagement through coaching practices

such as joint planning, opportunities to practice LSL strategies, feedback, and reflection. This requires practitioners to believe in caregivers' capacity and willingness to engage in coaching, even in the presence of obstacles. Caregivers' capacity to engage may be influenced by external factors, such as access to resources and support. Ultimately, caregivers must feel equipped to participate in coaching and choose to do so. This further supports the notion that explicitly examining underlying beliefs and expectations facilitates practitioners' incorporation of practices that promote caregivers' active engagement in the coaching relationship, inviting them into the 'dance' of caregiver coaching.

Overall, my results indicate that the beliefs held by both partners in the coaching relationship have a significant impact on the experience of caregiver coaching. By intentionally examining and reflecting on their underlying beliefs, practitioners can challenge implicit assumptions that are misaligned with collaborative coaching practices. This intentional practice may lead practitioners to explicitly establish expectations with caregivers about their engagement in coaching, and revisit them as needed to increase and support active caregiver involvement. An increase in caregiver involvement may increase practitioners' self-efficacy and ultimately improve the co-created caregiver coaching relationship.

Due to the limited research in this area, it is important to continue to explore these constructs through future studies. Recent efforts to develop measurement tools for caregiver engagement in intervention may prove useful to evaluate caregiver engagement in coaching in LSL practice. One example is the Pediatric Rehabilitation Intervention Measure of Engagement-Observation (PRIME-O), which captures affective, cognitive, and behavioral engagement in practitioner/caregiver interactions in rehabilitation sessions (G. King et al., 2019). Additionally, future research should examine the impact of mentoring programs and targeted professional

development activities on practitioner self-efficacy regarding engaging caregivers through coaching.

In addition, a focus on caregiver outcomes as the result of caregiver coaching is needed. While caregiver coaching claims to focus on building caregivers' capacity to impact child outcomes, few studies report measures of the effectiveness of coaching on caregiver capacity (Ward et al., 2020). In a recent systematic review of coaching practices utilized in FCEI, Ward et al. (2020) found no objective measures of caregiver outcomes, including caregiver confidence, competence, capacity, or ability to reflect and apply learning to future situations; all of which are the focus of caregiver coaching. While recent research has addressed aspects of the caregiver experience, such as caregiver engagement (G. King et al., 2020, 2021), beliefs and self-efficacy (Ambrose et al., 2020), the feasibility of a highly structured coaching intervention (Salisbury et al., 2018), and caregiver responsiveness following coaching (Artis et al., 2021), a gap exists regarding the role of coaching and its effect on caregiver capacity to master and implement LSL strategies with their children. My scoping review and practitioner interviews reinforce the absence of measurement of one the essential purposes of caregiver coaching in LSL practice, indicating an important direction for future research.

Shared Understanding of Coaching Concepts and Procedures

The practitioner interviews support the scoping review findings indicating the absence of a defined coaching model in LSL practice. The delineation of coaching practices and practitioner competencies would provide a baseline from which to evaluate professional preparation programs, equip practitioners for caregiver coaching through specialized mentoring and licensing requirements, and evaluate the effectiveness of caregiver coaching in LSL practice.

While there is a need for the development of shared definitions, practices, and practitioner competencies at the systems level, my findings suggest a need for the establishment of a shared conceptual/procedural understanding at the agency level, as well. My interview results indicate that consistency at the agency level contributed to the practitioners' level of confidence in coaching practices; therefore, establishing a standard of practice would be beneficial to clarify coaching practices and inform training programs and research. The development of agency-specific procedures allows for coaching to be individualized, taking into account cultural and demographic diversity between sites and allowing practitioners to adjust their practices to most effectively meet the needs of the population they serve. This aligns with the results of my scoping review indicating that caregiver coaching should be tailored to meet the needs of individual families and children, rather than prescribed and universally applied. In recent research utilizing a highly structured caregiver coaching model, FCEI practitioners indicated that targeted professional development and clearly-defined coaching practices facilitated their implementation of the model with fidelity and confidence (Salisbury et al., 2018). The value of agency-specific conceptual understanding and clear procedures are evidenced by the practitioners in my study from different sites who successfully implemented coaching informed by differing coaching traditions – the Rush and Shelden model (2019) versus the AVT model (MacIver-Lux et al., 2020; Rosenzweig, 2017). The key factors that bolstered the implementation of caregiver coaching with confidence and consistency were clear and defined coaching practices shared by the practitioners at each agency. This facilitated a collaborative environment where practitioners problem-solved, supported, and learned from one another.

Notably, practitioners reported that the most challenging and inconsistently applied components of coaching were reflection and eliciting active caregiver participation, which

represent two important adult learning principles that set coaching apart from other types of parent education (Dunst & Trivette, 2009; Meadan et al., 2017). Several of the practitioners I interviewed indicated that actively engaging caregivers in sessions is sometimes challenging and they do not like to 'push too hard,' suggesting a lack of clearly-established expectations and an underlying belief that caregivers are unwilling or unable to fully participate. And, while all practitioners described themselves as self-reflective, several did not consistently incorporate reflection into their coaching practice with caregivers. As a metacognitive skill, reflection is important for internalizing new skills and knowledge and allows for continual evaluation of progress and is therefore crucial for effective caregiver coaching (Dunst & Trivette, 2009; Inbar-Furst et al., 2020; Woods et al., 2011). My findings indicate a need to better define these coaching practices to achieve shared understanding of coaching concepts and procedures and present an opportunity for the development of robust professional development to ensure that LSL practitioners are competent and comfortable with the application of adult learning principles in the context of coaching caregivers.

My findings align with a growing body of evidence that FCEI practitioners find reflection a critical, yet challenging component of caregiver coaching (Douglas et al., 2020; Inbar-Furst et al., 2020; Meadan et al., 2018; Salisbury et al., 2018). The role of reflection in caregiver coaching is less understood and less represented in the literature than other coaching practices (Lorio et al., 2020, 2021), and FCEI practitioners report using it less consistently than other coaching practices (Douglas et al., 2020; Meadan et al., 2017). The results of my scoping review suggest that reflection is inconsistently utilized in LSL practice and there is not a shared understanding of its meaning, purpose, or how it should be implemented. Also aligned with recent research (Douglas et al., 2020), practitioners in my study reported that incorporating

reflection was a challenging component of their coaching practice that they were actively working to improve. Because adult learning principles are associated with positive coaching outcomes (Trivette et al., 2009), Meadan and colleagues (2018) suggested that by underutilizing reflection, practitioners may not be fully supporting caregivers. Future research should investigate how to best support practitioners in implementing adult learning principles in their coaching practices, including active caregiver engagement and reflection, and examine the effectiveness of professional development activities aimed at these aspects of caregiver coaching.

Future studies should also investigate the differences in the implementation of caregiver coaching between practitioners informed by Rush and Shelden's (2019) model of coaching and those following the tradition of AVT (MacIver-Lux et al., 2020). This would improve conceptual and procedural clarity in LSL practice as a whole and provide a foundation from which to study caregiver coaching efficacy utilizing different coaching approaches.

Comprehensive Training and Support

The results of my research indicate a need for comprehensive training and support for practitioners implementing caregiver coaching in LSL practice, including pre-professional training and job-embedded professional development. Caregiver coaching requires a specialized skillset that may not be developed in pre-professional training programs designed to prepare Teachers of the Deaf (ToDs) and Speech Language Pathologists (SLPs) to teach children who are DHH (A. King et al., 2021). My scoping review illuminated this issue, and the practitioners in my study supported this notion, indicating that their training did not adequately equip them to coach caregivers. My findings support recent research that found that 74% of FCEI practitioners interviewed felt that their training, both pre-service and in-service, was inadequate to support their caregiver coaching practices (Douglas et al., 2020). Kemp (2020) argued that there is a lack

of adequate pre-service practicum experiences relating to FCEI, which would provide learning opportunities related to caregiver coaching, and questioned the lack of quality-monitoring of in-service professional development. Specific to caregiver coaching in LSL practice, A. King et al. (2021) found that many ToDs and SLPs felt ill-equipped to coach caregivers of children who are DHH, and they valued mentorship and job-embedded training to support their development of coaching skills. Additionally, 70% of LSL practitioners interviewed reported a desire for professional development specifically related to caregiver coaching (A. King & Xu, 2021).The practitioners I interviewed echoed the need for ongoing training and mentoring to support their caregiver coaching skills. Even the practitioners who received coaching instruction in their graduate programs indicated that caregiver coaching is a skill that needs to be developed and supported over time.

Practitioners discussed ongoing supports that facilitated caregiver coaching, including professional development, mentoring, accountability, and participating in a community of practice (CoP). Professional development includes the maintenance and sharpening of coaching skills, which practitioners reported as facilitative for their coaching practice, even if they had previously acquired coaching skills. Mentoring includes ongoing peer support for coaching practices, which facilitates coaching beyond the parameters of professional development activities, according to practitioners. Accountability from peers and supervisors and a community of supportive colleagues with shared expertise contributed to practitioners feeling confident and supported in their coaching practices.

Practitioners indicated that participating in professional development activities supported their continued learning and growth, and findings from my scoping review suggest a need for training specifically targeted at the development of caregiver coaching skills. Recent research

indicates that practitioners view LSL services for children who are DHH as different from other FCEI services, requiring specializing training and mentoring (A. King et al., 2021). Additionally, in agreement with my results, Pellecchia et al. (2022) found significant variability in coaching strategies among practitioners and suggested that training focused on individual coaching components, instead of coaching as a whole, may be required to improve coaching fidelity. Several of the practitioners I interviewed reported actively pursuing professional learning opportunities to strengthen their coaching skills, and for certified practitioners, this included continuing education units required to achieve and maintain Listening and Spoken Language Specialist (LSLS) certification (AG Bell Academy, 2017b), although this requirement is not specific to caregiver coaching. Alternatively, some practitioners reported that they developed coaching skills through internal, site-specific professional development, including activities such as reading articles and trying new strategies as a staff, suggesting a lack of standardized, readily-available, high quality training opportunities. This presents an opportunity for agencies providing LSL intervention to develop robust learning opportunities, and for the broader LSL governing bodies to develop standardized training tools to support this effort.

Additionally, caregivers and practitioners reported that caregiver coaching is a dynamic process that changes over time, further confirming a need for ongoing support for practitioners coaching families of children who are DHH. In a study designed to evaluate a highly structured coaching approach, Salisbury et al. (2018) incorporated targeted professional development, ongoing coaching, and performance-based feedback to improve practitioner competence and increase the likelihood that they would implement the coaching practices with fidelity. The authors suggested that adequate time and practice are needed to develop new coaching skills and advocated for more research to determine how much professional development is required to

impact practitioner competency and what types of supports would sustain fidelity over time. This aligns with my recommendation that ongoing training and mentoring may provide more adequate support than one-time professional development activities.

Under the larger umbrella of professional development, my results suggest that additional support in the form of mentoring, accountability, and a supportive CoP facilitate caregiver coaching practices. The LSLS certification process includes 3-5 years of mentoring as a pathway to certification; however, not all LSL practitioners seek certification. Those who pursue certification do so on-the-job, as one requirement for certification is contact time with children and families (AG Bell Academy, 2017b). Because many practitioners indicated that they did not receive training specific to caregiver coaching in their pre-professional programs, this indicates a need for mentoring and training activities specifically designed to build coaching skills for early career professionals, prior to or in lieu of the LSLS certification process.

A CoP is a group of individuals with shared expertise who endeavor to learn together through regular interaction, creating a social structure for learning and accountability (Barwick et al., 2009; Li et al., 2009; Wenger & Snyder, 2000). CoPs provide an avenue for mentorship, sharing knowledge, and fostering a sense of belonging between members (Li et al., 2009). Many practitioners indicated that colleagues act as learning partners, collaborative problem-solvers, and mentors, and they value the sense of being "in this together." Two of the three intervention sites in my study have developed a CoP consisting of regular meetings with colleagues and supervisors where they reflect on their coaching practices and pursue learning together, and the practitioners reported that this supported their coaching practices. This suggests that more formalized CoPs may facilitate the development of coaching skills and offer ongoing

accountability, monitoring, and support for caregiver coaching practices. This would be an interesting direction for future research.

Programs could address these needs through the development of a comprehensive program that includes mentorship, supervisory accountability through regular reflective meetings and video observations, and the support and accountability inherent in an effective CoP. CoPs provide a social structure for learning and exchanging ideas (Li et al., 2009), establishing a supportive environment in which to share challenges with peers. Additionally, Wenger (2010) describes CoPs as providing mutual accountability among peers that stems from a commitment to collective learning. At the systems level, this presents an opportunity for certifying agencies such as AG Bell to develop comprehensive, standardized trainings related to caregiver coaching and make them easily accessible and widely-available to even those practitioners who are not certified. Finally, professional preparation programs need to evaluate whether they are adequately preparing practitioners to meet the needs of adult learners in addition to developing the skills needed to teach children who are DHH.

Strengths and Limitations of Research

A strength of this research was the inclusion of three intervention sites in two countries, representing three different service delivery models, and the inclusion of practitioners with differing disciplinary backgrounds. This allowed for an exploration of LSL practice beyond the scope of a single intervention site and permitted me to present a snapshot of LSL practice implemented by ToDs and SLPs. All practitioners at each site agreed to participate, which helped to illuminate individual and site-specific similarities and differences indicative of applied clinical practice. The inclusion of practitioners and caregivers was an additional strength. This permitted a broad exploration of the experiences and practices of caregiver coaching and privileged the

voices of the stakeholders directly involved, which have until now been underrepresented in the LSL literature. In addition, beginning with a scoping review of the literature provided the foundation upon which to build the remainder of my research, highlighting the gaps in the current understanding of caregiver coaching in LSL practice. Finally, the utilization of an applied practice methodology in the qualitative inquiries, Interpretive Description, strengthened this research by providing an avenue through which to explore topics of clinical interest to LSL practitioners and produce findings that can be utilized to improve practice.

Limitations are presented in terms of standards for qualitative rigor, including credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985; Thomas & Magilvy, 2011). While my familiarity with LSL practice provided contextual understanding and my data interpretation was supported with direct quotes from the participants, member checking was not utilized, which may have impacted the credibility of my interpretation. The inclusion of three sites representing different service delivery models strengthens this research; however, transferability to the international LSL community may be limited because I included participants only from the US and Canada. Dependability was addressed by creating a detailed research plan, carefully maintaining an audit trail throughout all phases of the research, and discussing the data analysis with members of the research team; however, I did not utilize a second coder to confirm my analysis. I addressed confirmability by maintaining thoughtful, reflective field notes and participating in frequent reflexive conversations with members of the research team. However, my familiarity with some of the practitioners may have introduced bias into the interview or analysis process.

An additional limitation of this research was the interruption in data collection by the onset of Covid-19. Due to Covid-19 restrictions, the number of video clips submitted was limited

and interviews with the Canadian practitioners were completed via Zoom. These restrictions required a substantial shift in the implementation of intervention and introduced a significant amount of stress for the practitioners. This may have impacted the information the Canadian practitioners chose to share in our interviews and influenced their opinions about caregiver coaching.

Conclusions

This dissertation, consisting of a scoping review of the literature and qualitative interviews with practitioners and caregivers of children who are DHH, addresses a significant gap in the understanding of caregiver coaching in LSL intervention. I identified a need with clinical implications and endeavored to produce novel, actionable, and clinically relevant understanding to inform the coaching practices of LSL practitioners with the potential strengthen coaching relationships and potentially improve outcomes for caregivers and children.

A scoping review of the literature confirmed a lack of empirical evidence for the effectiveness of coaching, inconsistencies in the literature regarding coaching practices, and a lack of reporting on professional preparation for LSL practitioners coaching caregivers. I synthesized these results into a proposed consolidated model for coaching representing the current understanding of coaching practices and recommendation in the LSL literature. This provides solid evidence for the need for further empirical research specifically related to caregiver coaching, and a strong foundation for future studies addressing a widely-accepted and expected practice for LSL practitioners working with families of children who are DHH.

Few studies have investigated caregiver coaching from the perspectives of both participants in the caregiver coaching relationship, and to my knowledge, this is the first study to examine the experiences of practitioners and caregivers in the context of LSL services.

Caregivers and practitioners' perceptions support a lack of consistency in coaching practices, highlighting the need for comprehensive training and support for practitioners who may be ill-equipped to engage with adult learners. The caregiver interviews provide new insight into factors that contribute to a successful coaching relationship, including professional dispositions, a need to adapt coaching according to their changing needs, and the importance of expectations. The practitioner interviews shed light on the foundation of the coaching relationship, including the importance of their underlying beliefs, which drive the coaching process and impact how they engage caregivers. The richness and depth of this new understanding of the experience of caregiver coaching results in the development of a proposed conceptual framework of caregiver coaching in LSL services. In summary, as the first study to examine caregiver coaching in LSL services from the perspective of its primary stakeholders, this research establishes a foundation for future studies and provides an important step toward improving coaching practices, ultimately impacting caregiver and child outcomes.

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Appendix A

Coaching in Listening and Spoken Language Practice: A Scoping Review Protocol

Background

Families need support and information when their child is diagnosed with a hearing loss. As a result of population-based early hearing detection and intervention (EHDI) initiatives, children with hearing loss are identified, fit with appropriate hearing technology, and enrolled in early childhood intervention programs in the first few months of life. However, without appropriate follow-up in the form of high-quality, specialized intervention, hearing screening is largely meaningless in mitigating the long-term effects of hearing loss (Yoshinaga-Itano, 2014). More than 90% of babies diagnosed with hearing loss are born to two parents with normal hearing (Mitchell & Karchmer, 2004; Sass-Lehrer, 2015), and as a result, an increasing number of families are choosing to pursue spoken language development through the use of hearing technology and participation in intensive, specialized listening and spoken language (LSL) services (Alberg et al., 2006; Gallaudet Research Institute, 2003, 2010).

LSL practice capitalizes on early diagnosis and advanced technology, including digital hearing aids and cochlear implants, to enable children with hearing loss to gain auditory access to sound and develop spoken language through audition. The primary goals of LSL practice are for children to learn to listen and talk with conversational competence, to attend mainstream schools, and to be unlimited in their education and social choices throughout their lives (Estabrooks, 2012).

Caregiver coaching is utilized in LSL practice to empower parents to take on the role of primary facilitators of language development for their children within the meaningful context of their day-to-day activities (Simser & Estabrooks, 2012). Coaching in LSL practice empowers parents to be the primary facilitators of listening and spoken language strategies and capitalize on everyday learning opportunities to help their child develop speech and language. Through coaching, caregivers actively participate in planning intervention sessions, observe and practice strategies during sessions, and engage in reflective discussions with LSL practitioners to evaluate their understanding (Rhoades & MacIver-Lux, 2016).

However, there is a lack of agreement on the definition or specific practices of coaching in the LSL literature, and a dearth of research on its principles or effectiveness. Additionally, key LSL practice guidelines, principles, and best practice documents provide insight into the centrality of coaching to LSL practice but also highlight the lack of specificity regarding coaching skills and strategies (Kendrick & Smith, 2017).

The Participatory Adult Learning Strategy (PALS) is an adult learning strategy developed from a compilation of meta-syntheses of adult learning methods undertaken to identify the evidence-based characteristics and conditions that are optimally effective for adults to learn (Dunst & Trivette, 2009b; Raab, Dunst, & Trivette, 2013), and will be used as a theoretical framework to inform the examination of coaching in this study. This framework represents the current understanding of coaching best practices in EI and will serve as a starting point from which to understand coaching in LSL practice.

Study Objectives

The objective of this scoping review is to gain a better understanding of the relevant research and professional practice recommendations and identify gaps in the knowledge base regarding coaching caregivers in LSL practice. The primary research question to be addressed is: What is known from the existing literature about caregiver coaching in LSL services for families of children with hearing loss?

Additionally, the following sub-questions will be addressed: What is known about:

a. coaching practices in LSL services?
b. training for coaching in LSL services?
c. professional practice recommendations for coaching in LSL practice?
d. the effectiveness of coaching in LSL practice?

6. What is the definition(s) of coaching presented in the LSL literature?
7. What are the characteristics of coaching outlined in the LSL literature?
8. What does the literature say about active learner participation in the caregiver coaching process?
9. What does the literature say about reflection as it relates to caregiver coaching?
10. How do the characteristics of caregiver coaching in LSL practice presented in the literature compare to the evidence-based components of the PALS model?

Methods

Literature reviews are an important tool for rigorously and systematically synthesizing existing empirical evidence in order to convey the depth and breadth of knowledge within a field of study (Levac et al., 2010; Peters et al., 2015). Scoping reviews aim to rapidly map the fundamental concepts underpinning a research topic, the types of evidence available, and gaps in the literature related to a field by "systematically searching, selecting, and synthesizing existing knowledge" (Colquhoun et al., 2014, p. 1294). They are particularly useful for complex topics or those that have not been comprehensively reviewed previously, and allow for a broad scope to summarize the current state of the literature (Arksey & O'Malley, 2005; Peters et al., 2015). Scoping reviews may be especially relevant when dealing with emerging evidence and in fields with a dearth of randomized controlled trials, such as rehabilitation science, and more specifically, LSL practice (Levac et al., 2010).

This scoping review will be based on the framework outlined by Arksey and O'Malley (2005) and subsequent recommendations for increasing the clarity and rigor of the methodology made by Levac, Colquhoun, and O'Brien (2010). Arksey and O'Malley's (2005) framework consists of five key phases: 1) identifying the research question, 2) identifying relevant studies, 3) study selection, 4) charting the data, 5) collating, summarizing, and reporting the results.

Phase 1: Identifying the research questions

The first stage of this study is the development of research questions. The primary research question was developed using the structure of Population, Concept, and Context (PCC) to provide information about the focus and scope of the review (Peters et al., 2015). The population includes both parents of children with hearing loss, ages birth-3, and LSL practitioners. The concept is caregiver coaching, and the context is LSL services for the development of listening and spoken language.

Phase 2: Identifying relevant studies

Following Arksey and O'Malley's framework (2005), the second stage in the identification of studies to be included in the review. The purpose of a scoping review is to be as comprehensive as possible to provide a broad overview of the topic of interest, through both published and unpublished sources (Arksey & O'Malley, 2005). As such, this review will include primary studies as well as grey literature significant to the field of LSL practice, including professional book chapters, best practice and guidance documents, and professional position statements. Additional strategies will include hand-searching of key journals and reviewing reference lists of identified studies to identify any relevant studies that may have been missed in the initial search.

Inclusion Criteria

The inclusion criteria will follow the structure of PCC to include studies of parents of children with hearing loss, ages birth-3, and LSL practitioners (population), caregiver coaching (concept), and LSL services for the development of listening and spoken language (context). Included literature will include primary studies, literature reviews, and professional commentaries that are: a) published in English, b) contain information specific to coaching or teaching caregivers, and c) specific to listening and spoken language or LSL services for children with hearing loss, ages birth-3, and their caregivers. Dissertations or theses will be included if the title or abstract meet the inclusion criteria. In order to gain a broad understanding of the practice of coaching caregivers since the inception of LSL practice, no date constraints will be set.

Grey literature will be included that pertains to the implementation of early childhood intervention services targeting the development of listening and spoken language for children with hearing loss.

Search strategy

An initial search strategy was developed in consultation with a research librarian at the University of Ottawa (see Appendix B). Based on JBI recommendations (2015) a comprehensive, iterative three-step search strategy will be employed to identify articles. The initial search will include a search of relevant databases, including Web of Science, PsychINFO, CINAHL, ERIC, Medline, and ProQuest. This will be followed by an analysis of text found in the title and abstracts, as well as the index terms. A second search will be completed utilizing these terms. Finally, reference lists and key journals, such as *Volta Voices,* and *Journal of Deaf Studies and Deaf Education,* will be hand-searched to identify further pertinent articles (Peters et al., 2015).

Phase 3: Study selection

The third stage of Arksey and O'Malley's (2005) framework involves the identification of studies that will be included in the review. Once duplicates have been removed, two independent reviewers will screen the titles and abstracts to exclude those that do not meet the inclusion criteria. The remaining articles will be retrieved for full-text screening, and two reviewers will determine whether the full articles meet the inclusion criteria. Disagreements will be resolved by discussion, and if consensus is not achieved, a researcher experienced in the field of LSL practice will be consulted. The process of study selection will be reported using a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart.

Phase 4: Charting the data

A data collection form will be developed to extract contextual or process-oriented information from included studies (Colquhoun et al., 2014). Study characteristics will be abstracted, including: a) journal title, author, year of publication, and country where the study was conducted, b) aims of the study, c) methodological information, including sample size, population, type of study, and type of analysis, d) coaching information, including definition or description, setting, frequency and type of coaching, and e) key findings, conclusions, and limitations.

A separate data collection form will be developed for grey literature sources to extract relevant and meaningful information pertaining to caregiver coaching. This information will include: a) definition or description of coaching, b) role of the practitioner in the coaching exchange, c) role of the caregiver in the coaching exchange, and d) coaching recommendations, such as frequency or type.

The initial data collection forms may be further refined as the review progresses to chart any unforeseen but relevant data that may be discovered (Levac et al., 2010; Peters et al., 2015).

Phase 5: Collating, summarizing, and reporting the results

The final stage in Arksey and O'Malley's (2005) scoping review process involves the analysis and presentation of the findings. To add rigor to Arksey and O'Malley's framework, Levac and colleagues (2010) recommended a three step process for reporting the results of the scoping review. In accordance with this recommendation, three steps will be taken in this stage of the review: a) analysis, or collating and summarizing, that involves a descriptive summary and thematic analysis, b) reporting findings in a format that is meaningful to readers, tied to the purpose of the scoping review, and c) applying meaning to the results, including the broader implications for research, policy, and practice (Colquhoun et al., 2014). Results will be presented descriptively, using tables and charts, as appropriate. This scoping review will provide a comprehensive overview of the state of the literature regarding coaching in LSL practice and highlight areas that have not been adequately researched and may require further investigation.

Appendix B

Scoping Review Search Strategy Worksheet

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Search statement or topic
What is known from the existing literature about caregiver coaching in LSL services for children with hearing loss?

Major concepts			
Identify the main concepts of your topic.			
1. Caregiver coaching	2. Auditory-verbal practice/Listening and Spoken Language services	3. Early intervention	4. Hearing loss

Search strategy				
Use the main concepts and translate these into keywords and synonyms (don't forget about **" "** and *****).				
	Concept 1 AND	**Concept 2 AND**	**Concept 3 AND**	**Concept 4**
	Coaching	Auditory-verbal practice	Early intervention	Hearing loss
OR	"Parent-implemented"	"Listening and Spoken Language"	"Early childhood intervention"	Deaf*
OR	"Caregiver-implemented"	"Auditory-verbal therapy"	"Early intervention"	"Hearing impaired"
OR	"Caregiver coaching"	"Auditory-verbal education"	"Early hearing detection and intervention"	"Hearing deficit"
OR	"Parent* engagement"	"Auditory-verbal practice"	EHDI	"Hard of hearing"
OR	"Collaborative consultation"	LSLS		"Hearing loss"
OR	"Family-centered"	AVT		
OR	Coaching	AVEd		
OR	"Parent education"			

Source: Rielding, A.M. (2002). Learning to Learn. New York NY: Neal-Schuman Publishers.

Appendix C

Scoping Review Search Strategy

1. family/ or exp parents/ or exp parent-child relations/ or parenting/
2. Caregivers/
3. 1 or 2
4. Mentoring/ or Counseling/
5. Education/
6. Teaching/
7. 4 or 5 or 6
8. 3 and 7
9. ((famil* or parent* or mother* or father* or mom? or dad? or caregiver*) adj4 (coach* or educat* or training or mentor* or engag* or counsel* or support* or involv* or (collaborat* adj2 consultat*) or advis* or relation* or interact* or participat* or role*)).ti,ab,kf.
10. (family-centered or family-centred).ti,ab,kf.
11. 9 or 10
12. 8 or 11
13. exp Hearing Loss/
14. (hearing adj2 (loss or lost or losing or impair* or deficit* or disorder* or disab*)).ti,ab,kf.
15. deaf*.ti,ab,kf.
16. hard of hearing.ti,ab,kf.
17. 13 or 14 or 15 or 16
18. child, preschool/ or exp infant/
19. (infant* or baby or babies or newborn* or child* or toddler* or p?ediatric* or juvenile* or kid or kids or boy? or girl?).ti,ab,kf.
20. 18 or 19
21. "Early Intervention (Education)"/
22. program development/ or Program Evaluation/
23. (program* or intervention* or class or classes or course? or workshop*).ti,ab,kf.
24. 21 or 22 or 23
25. 12 and 17 and 20 and 24
26. limit 25 to English language

Appendix D

Scoping Review Hand-Searched Sources

Journals	Journal of Early Intervention* Volta Review* Journal of Deaf Studies and Deaf Education Journal of Early Hearing Detection and Intervention International Journal of Audiology Communication Disorders Quarterly Canadian Journal of Speech-Language Pathology and Audiology American Journal of Speech-Language Pathology Seminars in Speech and Language Exceptional Children Infants & Young Children Topics in Early Childhood Special Education Child Development Pediatrics
Websites	National Center for Hearing Assessment and Management (NCHAM)** AG Bell Association for the Deaf and Hard of Hearing* AG Bell Academy* Early Hearing Detection & Intervention (EHDI) Annual Meeting website* American Academy of Pediatrics (AAP)* Hands & Voices* The Division for Early Childhood (DEC) of the Council of Exceptional Children* Council on Education of the Deaf (CED) VOICE for Children who are Deaf and Hard of Hearing The National Institute on Deafness and Other Communication Disorders (NIDCD) The American Speech-Language-Hearing Association (ASHA) Canadian Paediatric Society Ontario Infant Hearing Program (IHP) World Health Organization (WHO) National Acoustics Lab: Longitudinal Outcomes of Children with Hearing Impairment (LOCHI) Study website American Academy of Audiology (AAA) Speech-Language & Audiology Canada
Additional Source	Newly released field-specific textbook: *Auditory-verbal therapy: Science, research and practice***

*resulted in reference(s) uploaded for screening

**resulted in included reference(s)

Appendix E

Scoping Review Included References

Authors	Year	Reference type	Empirical research study (n=6)	Model of coaching referenced	Setting
Blaiser	2012	Peer-reviewed journal		None specified	Telepractice
Brooks	2017	Dissertation	✓	Rush & Shelden	Center-based
Brown & Nott	2005	Book chapter		SOLAR	Natural environment
Bruce	1986	Report		SKI-HI	Natural environment
Clark & Watkins	1985	Curriculum manual		SKI-HI	Natural environment
Daczewitz	2015	Dissertation	✓	PiCS	Telepractice
DesJardin	2017	Book chapter		Rush & Shelden	Natural environment
DesJardin et al	2006	Peer-reviewed journal		None specified	Natural environment
Estabrooks et al	2020	Book chapter		AVT	Center-based
Hamren & Quigley	2012	Peer-reviewed journal		Doyle	Telepractice
Houston	2020	eBook chapter		Doyle	Telepractice
Houston	2011	Peer-reviewed journal		None specified	Telepractice
King	2017	Dissertation	✓	Friedman, Woods & Salisbury	Natural environment
MacIver-Lux et al	2020	Book chapter		Rush & Shelden	Not specified
Martin-Prudent	2018	Dissertation	✓	Rush & Shelden	Natural environment
Morrison	2017	Book chapter		Roberts & Kaiser	Natural environment
Nardine	1974	Peer-reviewed journal		None specified	
Nevins & Sass-Lehrer	2015	Book chapter		Rush & Shelden	Not specified
Rhoades & MacIver-Lux	2016	Book chapter		None specified	Center-based
Roberts	2019	Peer-reviewed journal	✓	PICT	Natural environment
Stredler-Brown	2015	Dissertation	✓	FCEI	Telepractice
Voss & Stredler-Brown	2017	eBook chapter		FCEI	Natural environment

Appendix F

Stages of Coaching in the Literature

Stage of coaching		Blaiser 2010	Brooks 2017	Brown & Nott (2005)	Bruce (1986)	Clark & Watkins (1985)	Daczewitz (2015)	DesJardin (2017)	DesJardin et al (2006)	Estabrooks et al (2020)	Hamren & Quigley (2012)	Houston (2020)	Houston (2011)	King (2017)	MacIver-Lux et al (2020)	Martin-Prudent (2018)	Morrison (2017)	Nardine (1974)	Nevins & Sass-Lehrer (2015)	Rhoades & MacIver-Lux (2016)	Roberts (2019)	Stredler-Brown (2015)	Voss & Stredler-Brown (2017)
Setting the stage																							
	Planning the session (n=15)	✓	✓	✓		✓	✓	✓		✓	✓	✓			✓	✓	✓			✓		✓	✓
	Initiation (n=14)		✓	✓	✓			✓		✓		✓	✓	✓	✓		✓		✓	✓		✓	✓
	Introducing the strategy (n=13)			✓	✓	✓	✓			✓		✓	✓	✓		✓				✓	✓	✓	✓
Application																							
	Observation (n=17)	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓
	Modeling (n=19)	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
	Practice (n=20)	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Feedback (n=20)	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	Evaluation (n=13)	✓	✓	✓	✓	✓		✓			✓	✓			✓	✓	✓					✓	✓
Wrap-up																							
	Planning for carryover (n=12)	✓			✓	✓			✓	✓		✓	✓			✓	✓	✓		✓			✓
	Final discussion (n=6)						✓					✓	✓					✓			✓		✓

Appendix G

Coaching Recommendations from the Literature

Reference	Coaching Recommendations			
	Individualized (n=20)	Context-driven (n=19)	Collaborative (n=19)	Strengths-based (n=13)
Blaiser (2012)		✓	✓	
Brooks (2017)		✓	✓	✓
Brown & Nott (2005)	✓	✓	✓	✓
Bruce (1986)	✓	✓		✓
Clark & Watkins (1985)	✓	✓		✓
Daczewitz (2015)	✓		✓	✓
DesJardin (2017)	✓	✓	✓	✓
DesJardin et al (2006)	✓	✓	✓	✓
Estabrooks et al (2020)	✓	✓	✓	
Hamren & Quigley (2012)	✓	✓	✓	
Houston (2020)	✓	✓	✓	
Houston (2011)	✓	✓	✓	
King (2017)	✓	✓	✓	
MacIver-Lux et al (2020)	✓	✓	✓	✓
Martin-Prudent (2018)	✓	✓	✓	✓
Morrison (2017)	✓	✓	✓	
Nardine (1974)	✓	✓	✓	✓
Nevins & Sass-Lehrer (2015)	✓		✓	
Rhoades & MacIver-Lux (2016)	✓	✓	✓	✓
Roberts (2019)	✓	✓		
Stredler-Brown (2015)	✓		✓	✓
Voss & Stredler-Brown (2017)	✓	✓	✓	✓

Appendix H

Interview Guides

Caregiver Interview Guide

Study ID _____ Date_____

Purpose: The purpose of this interview is to learn more about your experiences with the early intervention services your child receives, specifically related to his/her hearing loss. I would like to know about your relationship with your provider, the kinds of things you've learned through the intervention process, and how you feel about the experience.
Procedure: Before we begin, I'll ask you to fill out a short information sheet about your child's hearing loss. Next, I will ask you some questions to guide our conversation, but please feel free to talk openly about your experiences and add anything that you think is important. Please don't hesitate to ask questions.

Interview information:
Location of interview: □ Home □ Clinic/School □ Other: _____
Informant: □ Mother □ Father □ Both □ Other: _____

Interview questions:

1. Please tell me what a typical therapy/intervention session looks like.

   Prompt: Who typically participates in the sessions?
   Prompt: Where do you normally have sessions?
   Prompt: What kinds of activities do you do during sessions?
   Prompt: Tell me a little about the sequence. What happens at the beginning, in the middle, and at the end of sessions?

2. Can you describe your role in the early intervention/AV therapy process?

   Prompt: What do you feel are your responsibilities during and in-between sessions?
   Prompt: Tell me about the interactions with your child during sessions.
   Prompt: Tell me about how targets or goals are selected for the session. By targets or goals, I mean the specific skills you're working on with your child. How do you pick what comes next?
   Prompt: How do you spend most of your time during sessions?

3. Tell me about how you and your provider work together.

   Prompt: How comfortable do you feel sharing concerns or asking questions?
   Prompt: What happens when you share concerns or ask questions?
   Prompt: Can you give me an example of a time you have shared a concern?

4. I'm interested in the coaching process during sessions. By coaching, I am referring to a provider teaching the parent, rather than teaching the child. Is this something you have experienced during your sessions?

    Prompt: Tell me what that looks like in a typical session.
    Prompt: What do you think about this method?

5. Tell me about what happens during the week, in between sessions.

    Prompt: Do you feel comfortable using the same strategies with your child that the provider uses during sessions? Why or why not?
    Prompt: Do you feel like you have learned new skills through this process?
    Prompt: Is there anything your provider could do differently to help you learn?

6. Tell me about how you talk about how things are going with your practitioner.

    Prompt: What does the end of the session "wrap-up" look like?
    Prompt: When you're learning new skills in a session, how and when do you talk about how it's going? Do you talk about how your child is doing? Do you talk about how you're feeling about what you're learning?
    Prompt: How often do you discuss your child's progress? What about *your* progress with learning new strategies? What does that look like?

7. What do you feel works well in the services you receive? What do you think could be improved?

8. If you could describe your experience with just a word or short phrase, what would it be?

9. What would you say is the most important thing for a good provider/parent relationship? What is most important for good services overall?

10. Is there anything more you'd like to tell me about your experience with the services you and your child receive?

Practitioner Interview Guide

Study ID _____ Date_____

Purpose: The purpose of this interview is to learn more about your experiences implementing AV/LSL services for families of children with hearing loss. Specifically, I am interested in learning about how you 'coach' or teach caregivers to implement intervention strategies themselves, throughout their daily routines, in-between intervention sessions. I am also interested in learning about how you learned to coach caregivers.
Procedure: Before we begin, I'll ask you to fill out a short information sheet about your work. Next, I will ask you some questions to guide our conversation, but please feel free to talk openly about your experiences and add anything that you think is important. Please don't hesitate to ask questions.

Interview information:

Location of interview: □ Clinic □ School □ Other: _____
Informant's professional background: □ SLP □ TOD □ Other: _____
LSLS certified: □ Yes □ No □ Working toward certification

Interview questions:

1. How long have you been in this field? How long have you been working with the birth-3 population specifically?

2. I know that all sessions are different, but can you describe a somewhat 'typical' session?

   Prompt: Who participates in sessions, generally?
   Prompt: Where do you normally have sessions?
   Prompt: What kinds of activities do you do during sessions?
   Prompt: Can you tell me a little about the structure and sequence of your sessions?

3. Can you describe an 'ideal' session?

   Prompt: Where would it be located? Who would participate?

4. What do you like about working with this age group? What do you find challenging?

5. I'm specifically interested in learning more about coaching in AV/LSL services. How would you define "coaching"?

   Prompt: What does this look like in a typical session?
   Prompt: In your opinion, what are key characteristics of coaching in an intervention session?

6. How did you learn about caregiver coaching?

   Prompt: Did you learn about coaching during your graduate training? Through professional development trainings at your workplace or conferences?
   Prompt: Please tell me more about how you learned to coach.

7. Do you use a particular model of coaching in your work?

   Prompt: Did you learn about coaching models in your training? If so, which ones?

8. How do you incorporate reflection in your practice?

   Prompt: What role did reflection play in your training?
   Prompt: Did someone teach you how to reflect? What did that look like?
   Prompt: Do you incorporate reflection in your sessions with parents? What does that look like?

9. When you began working with the birth-3 population, how confident were you in working with caregivers?

   Prompt: How has your confidence changed with experience?
   Prompt: What did you do to increase your confidence?
   Prompt: How confident are you now?

10. Has your practice changed over time? If so, in what ways?

    Prompt: Has your philosophy changed at all since you started practicing? If so, in what ways?

11. What do you think the caregivers' role should be in the early intervention or therapy process? How would you describe your role?

    Prompt: How are targets for sessions determined?
    Prompt: How are the overarching long-term goals determined, such as IFSP goals?
    Prompt: What kinds of strategies do you use to establish roles or encourage caregivers to take on the role you feel is important in the intervention process?

12. How do you encourage caregivers to be actively involved in sessions? In the early intervention or therapy process in general?

    Prompt: How do you elicit participation during an activity?
    Prompt: What do you do if a caregiver is not actively involved?

13. What is your opinion about coaching caregivers as an intervention strategy?

    Prompt: What do you think are the benefits of coaching? What are the challenges?

14. What would you say is the most important thing for a good coaching relationship? What is most important for effective services overall?

15. Is there anything you'd like to discuss about coaching caregivers that we haven't covered?

Practitioner Video Observation Guide

Study ID _____ Date_____

Purpose: The purpose of this observation is to provide you with an opportunity to explain your thoughts and decision-making process within a coaching interaction. My purpose is not to evaluate your coaching, but to better understand your thought process during a coaching exchange with a caregiver. In addition to the information you provided during our interview, this will add to my understanding of your coaching practices in intervention sessions with caregivers. I am also interested in how you reflect on your practices as we watch the video together.
Procedure: We are going to watch a 10-minute clip of an intervention session that you provided to me. I will stop the video at certain points to ask questions, and please feel free to ask me to stop it when you'd like to comment or explain something. I am specifically interested in talking about how you are coaching or teaching the caregiver in the interaction. Again, I will ask you some questions to guide our conversation, but please feel free to add anything that you think is important and don't hesitate to ask questions.

Session information:
Location: □ Home □ Clinic □ Other: _____
Caregiver(s): □ Mother □ Father □ Both □ Other: _____
Age of child: _____
Length of time working with the family: _____

Video observation questions:
Before

1. Have you ever watched your sessions on video before? If so, for what purpose (performance evaluation with your supervisor, personal reflection, peer reflection, certification purposes, etc.)?

   Prompt: Have you found this useful in your work?

2. Is there anything you would like to tell me about this family or interaction before we begin?

During
Throughout the observation, the following prompts may be utilized, where appropriate:

- Can you explain to me what was happening there?
- I noticed that you paused there. What were you thinking?
- What prompted you to make that decision?
- What just happened there?
- How did that compare with what you were aiming for?

After

1. What are your general thoughts about this coaching interaction?

   Prompt: What do you think went well? What do you think could have been better or different?

Prompt: How effective do you think this interaction was in achieving the goals for the session?

2. Do you think this is a good example of a coaching interaction? Why or why not?

3. How is this coaching exchange similar or different from your typical sessions with this family? What about with other families?

   Prompt: Do you use similar or different coaching strategies with each family?
   Prompt: How do you decide which strategies to use with each family?

4. Is there anything else you would like to share about this coaching interaction? Or about the video observation process in general?

Appendix I
Demographic Forms

Practitioner Demographic Form

Study ID _____ Date_____

Practitioner Demographic Information

1. What is your position title?
2. How many years have you been working in LSLS or AV practice?
3. How long have you been helping families of children ages birth-3 develop listening and spoken language skills?
4. Do you have LSLS certification?
5. Where did you receive your professional degree?
6. In what discipline did you obtain your degree (SLP, Deaf Education)?

Caregiver Demographic Form

Study ID _____ Date_____

Caregiver Demographic Information

Please answer the following questions about your child(ren) with hearing loss.

1. How old is your child?
2. At what age was your child diagnosed with hearing loss?
3. What type of hearing loss does your child have?

   □ Conductive □ Sensorineural □ Mixed

4. What is the degree of your child's hearing loss?
5. What type of device(s) does your child wear?

□ Cochlear Implant(s) □ Hearing aid(s) □ Both □ BAHA □ No device

6. How long have you been receiving services for listening and spoken language?
7. Have you received other services in the past? If so, what type?
8. How often do you receive services?
9. How long do your sessions typically last?

Appendix J

Consent Forms

Family Consent to Contact

A Multi-Methods Study of Caregiver Coaching in Listening and Spoken Language Practice

Family Consent to Contact

You are being invited to join in a research study to learn more about caregiver coaching in listening and spoken language (LSL) practice. You are being invited to join this study because you are participating in LSL services for your child with hearing loss at the Children's Hospital of Eastern Ontario (CHEO) Audiology clinic. Researchers at the CHEO Research Institute and at the University of Ottawa are running this research study.

Before agreeing to take part in this study, it is important that you read and understand this document. Please see the attached information letter for detailed information.

If you are interested in learning more about the study, the researchers would be happy to contact you to answer any questions that you have. If you agree to have us call or e-mail you please complete this form. You will be contacted by a member of our research team shortly.

CONSENT FOR CONTACTING YOU

Please see the back of this consent for cautions about using e-mail for communication. In our e-mail communications with you, we will not use your child's name or date of birth for confidentiality purposes.

Child's full name: (please print): _____

Child's Date of Birth: ___ ___/___ ___ ___/___ ___ ___ ___/
DAY/MONTH/YEAR

Your Name (PRINT) and your relation to the participant: _____

Telephone: _____

E-mail address - please **print** clearly: _____

What means of communication would you prefer? ☐ EMAIL ☐ PHONE

What is the best time of day to call you: ☐ morning ☐ afternoon ☐ evening

I have read and fully understand this consent form. I give permission for the researchers to contact me to answer any questions I may have about this study.

Signature of Parent/Caregiver: _____ Date: _____

Principal Investigator
Elizabeth Fitzpatrick, PhD, AUD(C); Faculty of Health Sciences, University of Ottawa and the CHEO Research Institute
Telephone: 613-562-5800, ext. 4545 or email: elizabeth.fitzpatrick@uottawa.ca

Co-Investigator
Dorie Noll, MSDE, LSLS Cert. AVEd, PhD Candidate; Faculty of Health Sciences, University of Ottawa and the CHEO Research Institute

Research Coordinator
JoAnne Whittingham, M.Sc. CHEO Research Institute

Risks of using email communication:

- Email is not encrypted on the CHEO email system. Security and privacy can never be completely guaranteed.
- To increase the security and privacy of Patient Information when shared via email, we require that all Patient Information be sent in a password-protected attachment. These password-protected attachments must be in agreed upon format for your recipient to be able to open them.
- CHEO employees and on-line services have a legal right to inspect and keep emails that pass through their system.
- Email can be delayed for technical reasons beyond the control of the research staff.
- When emails are deleted; back-up copies may still exist on a computer or in cyberspace.
- Emails can be forwarded, intercepted, circulated, stored or even changed without the knowledge or permission of the research staff or family. Email senders can easily misaddress an email, resulting in it being sent to many unintended and unknown recipients. It is impossible to verify the true identity of the sender, or to ensure that only the recipient can read the email once it has been sent.
- Email can introduce viruses into a computer system, and potentially damage or disrupt the computer.
- Do not use email to communicate emergency or urgent health matters. Use of email to discuss sensitive information can increase the risk of such information being disclosed to third parties.
- Email can be used as evidence in court.

CONSENT FOR EMAIL COMMUNICATION

I understand the risks associated with using email communication between the research staff and myself. I consent to the conditions outlined herein, as well as any other instructions that the research staff may impose to communicate with families by email. I acknowledge the research staff's right to, with written notice, withdraw the option of communicating through email. Any questions I may have had were answered. I consent to communicating by email with the research staff.

_____ Date: _____
(Signature of Parent/Caregiver)

Caregiver Consent

Caregiver Information & Interview Consent form

Protocol Title: A Multi-Methods Study of Caregiver Coaching in Listening and Spoken Language Practice
Investigator: Elizabeth Fitzpatrick, PhD
Address: CHEO Research Institute
401 Smyth Road, Ottawa, ON K1H 8L1

Telephone Number: (613) 737-7600 Ext 4545
As a Substitute Decision Maker, you are being asked to provide informed consent on behalf of a person who is unable to provide consent for him/herself. If the participant gains the capacity to consent for him/herself, your consent for them will end.

You are being invited to join in a research study about caregiver coaching in listening and spoken language (LSL) practice. You are being invited to join this study because you are participating in LSL services for your child with hearing loss. Before agreeing to take part in this study, it is important that you read and understand this document.

Taking part in this study is voluntary. Your decision to participate or not in this study will not affect the care your child receives at CHEO. You are free to withdraw from the study at any time and there will be no penalty to you or your child.

Why is this study being done?
An important part of LSL practice is teaching caregivers to use strategies for listening and language development with their children. In this way, your child learns through everyday activities, in-between therapy sessions. This study is being done because not much is known about how therapists use caregiver coaching in LSL practice. Even though most LSL therapists use caregiver coaching which is considered an important part of early intervention, how therapists actually coach parents has not yet been studied. The goal of this study is to better understand caregiver coaching practices in LSL services for families of children aged up to 3 years with hearing loss.

In this study, we plan to interview caregivers and LSL therapists to better understand their experiences with caregiver coaching. We want to understand what kind of coaching practices therapists use, your relationship with your provider and how the caregivers feel about learning new skills and strategies this way. This will help us agree on coaching strategies that may best help caregivers become their child's most important language teacher.

How many people will participate?
At CHEO, we expect to interview 4-5 families and 4-5 therapists. We expect to interview the same number of families and therapists at two additional sites in the United States: Central Institute for the Deaf and the Moog Center for Deaf Education in St. Louis, MO.

This will help us get a broader picture of caregiver coaching in different LSL programs. The study is expected to be recruiting from October 2019 to February 2020.

What will I have to do?
If you agree to participate, we will ask you to take part in an interview. The interview is expected to take approximately 60 minutes. The interviews will be audio-recorded and transcribed. The interview will take place in person at a time and place that is convenient for you.

The questions for the interview will ask about your experiences with LSL services, how you learn new skills to help your child learn to listen and talk, and how you feel about the intervention process. We will also ask you for information about your family and your child's hearing loss.

Are there any risks to participating?
A potential discomfort may include you feeling uncomfortable with some of the questions being asked if they are sensitive or difficult to talk about. If you feel uncomfortable, you may choose not to answer a question.

Are there any benefits to participating?
If you decide to participate, you may or may not benefit from participating in this study. However, we hope to use the information we learn about caregiver coaching to help therapists teach and support families of children with hearing loss participating in LSL services.

Will I be paid to participate?
You will not be paid to take part in this study.

Can I Withdraw?
You can withdraw from the study at any time without any impact to your child's current or future care at CHEO. Please discuss with the investigator if you would like to withdraw. If you withdraw your consent, the investigator will no longer collect your information for the purpose of this study. Information that was already collected will still be used by the Investigator.

Will I be told about new information?
We will inform you of any new information that might change your decision to continue to participate in this research project. We will ask you again if you still want to be in the study.

You can receive a copy of the study results at the end of the study. Please let the study team know if you like to receive a copy.

What about confidentiality and privacy?

The information from the interviews will be used to describe how LSL therapists teach caregivers new knowledge and skills through coaching. Comments by the therapists and caregivers from the interviews may be quoted but you will not be identified.

For this study we will be collecting some personal identifiers for the research purposes described in this consent form. Your personal information will be kept strictly confidential except as required or permitted by law. You/your child's name and your contact information (parent name, telephone number, and email address) will be kept in a document that links this information with a study ID, called a master list. The study ID will be used in all of the research documents to protect your privacy. The master list will be stored separately from the research data. It will be stored with password protection on a restricted computer securely stored in the Child Hearing Lab at the CHEO Research Institute with access restricted to the researcher and the research team.

Representatives from the CHEO Research Ethics Board and a quality reviewer from CHEO Research Institute may look at your records at the site where these records are held, to check that the study is following the proper laws and guidelines.

The research data and audio recordings produced from this study will be stored with password protection on a restricted computer in the Child Hearing Lab at the Children's Hospital of Eastern Ontario Research Institute. Members of the research team and the individuals described above will have access to the data. Following completion of the study the research data, audio recordings and master list will be kept for 7 years after the last publication of this study. They will then be destroyed. You will not be identified in any publication or presentation of this study.

This study is taking place at multiple sites but all study data will be stored at the Child Hearing Lab at CHEO Research Institute. Any personal information about you that leaves the institution will be coded with a study ID so that you cannot be identified by name. This is called de-identified data. The de-identified research data will be sent securely to the Child Hearing Lab, CTC Room 201 and carefully stored with password protection on a restricted computer for 7 years.

A copy of the signed consent form will be provided to you.

Is the research team benefiting from the study?
The research team members are not benefiting personally, financially or in any other way from this study.

What if I have questions?
If you have any questions concerning participation in this study, contact: Dorie Noll or JoAnne Whittingham.

This study has been reviewed and approved by the CHEO Research Ethics Board. The CHEO Research Ethics Board is a committee of the hospital that includes individuals from different professional backgrounds. The Board reviews all human research that

takes place at the hospital. Its goal is to ensure the safety of people taking part in research. The Board's work is not meant to replace a caregiver or child's decisions and choices that are best for them. You may contact the Research Ethics Board, for information regarding a patient's rights in research studies at (613) 737-7600 (3272), although the Board cannot provide any health-related information about the study.

Consent form Signatures

By signing this consent form I agree that:

- I am voluntarily agreeing to participate in this research study;
- I understand the information within this consent form;
- All of the risks and benefits of participation have been explained to me;
- All of my questions have been answered;
- I allow access to my personal information as described in this consent form; and
- I do not give up my legal rights by signing this form.

Signatures

Obtain the appropriate signatures, which should be based on capacity.

Printed Participant's Name	Participant's Signature	Date
Printed Name of Person Who Conducted Consent Discussion	Signature of Person Who Conducted Consent Discussion	Date

Video Consent for Caregivers

Information & Video Consent Form

A Multi-Methods Study of Caregiver Coaching in Listening and Spoken Language Practice

Principal Investigator: Elizabeth Fitzpatrick, Ph.D., Thesis Supervisor
Co-Investigator: Dorie Noll, MSDE, Ph.D. Candidate
Research Coordinator: JoAnne Whittingham, M.Sc.

Dr. Elizabeth Fitzpatrick
Children's Hospital of Eastern Ontario Research Institute – RI1133
401 Smyth Road
Ottawa, ON K1H 8L1
Telephone Number: 613-562-5800 Ext. 4545
Email: Elizabeth-fitzpatrick@uottawa.ca

For simplicity, the word "you", when used in this form, means "yourself" or "your child".

You are being invited to join in a research study about caregiver coaching in listening and spoken language (LSL) practice. You are being invited to join this study because you are participating in LSL services for your child with hearing loss. Before agreeing to take part in this study, it is important that you read and understand this document.

Taking part in this study is voluntary. Your decision to participate or not in this study will not affect the care you receive at CHEO. You are free to withdraw from the study at any time and there will be no penalty to you or your child.

Why is this study being done?
An important part of LSL practice is teaching parents and caregivers to use strategies for listening and language development with their children. In this way, your child learns through everyday activities, in-between therapy sessions. This study is being done because not much is known about how therapists use caregiver coaching in LSL practice. Even though most LSL therapists use caregiver coaching, which is considered an important part of early intervention, how therapists actually coach parents has not yet been studied. The goal of this study is to better understand caregiver coaching practices in LSL services for families of children aged up to 3 years with hearing loss.

In this study, we will ask therapists to video record one of your intervention sessions. We will choose a 10-minute section of the video that includes a coaching exchange between you and your therapist. We will watch that section with your therapist, to give her/him a chance to explain her/his coaching practices. We will record this discussion with your therapist.

We will also interview parents and LSL therapists as a part of our study. Along with the interviews, the video discussion will help us understand what kind of coaching practices

therapists use. It will give them a chance to explain their thinking and decisions while teaching families new skills through coaching. This information will help us agree on coaching strategies that may best help parents become their child's most important language teachers.

How many people will participate?
At CHEO, we expect to ask 4-5 therapists who have already agreed to take part in interviews to submit a session video. We expect to ask for videos from the same number of therapists at two sites in the United States, too, to help us get a broader picture of caregiver coaching in different LSL programs. The study is expected to be recruiting from September 2019 to February 2020.

What will I have to do?
If you agree to participate, we will ask you to allow your therapist to record and submit a video from one of your typical LSL intervention sessions. The video discussion will be audio-recorded and transcribed.

Are there any risks to participating?
There are no known risks associated with taking part in this study.

Are there any benefits to participating?
If you decide to participate, you may or may not benefit from participating in this study; however, we hope to use the information we learn about caregiver coaching to help therapists teach and support families of children participating in LSL services.

Will I be paid to participate?
You will not be paid to take part in this study.

Can I Withdraw?
You can withdraw from the study at any time without any impact to your current or future care at CHEO. Please discuss with your therapist if you decide you do not want your video recording used in the study.

Will I be told about new information?
We will inform you of any new information that might change your decision to continue to participate in this research project. We will ask you again if you still want to be in the study.

You can receive a copy of the study results at the end of the study. Please let the study team know if you like to receive a copy.

What about confidentiality and privacy?
We will not keep a copy of the video. The recording and transcription of the discussion with your therapist will not contain any identifying information. The information from the video observation discussion will be used to describe how LSL therapists teach caregivers new knowledge and skills through coaching. All information will be kept

strictly confidential. Your identity, or that of your child, will not be disclosed to any person, except as required or permitted by law. Your name will not be identified in any publication, report or presentation. Comments by the therapists from the video observation discussions may be quoted but you or your child will not be identified.

Representatives from the CHEO Research Ethics Board and a quality reviewer from CHEO Research Institute may look at your records at the site where these records are held, to check that the study is following the proper laws and guidelines.

The research data and audio recordings produced from this study will be stored with password protection on a restricted computer in the Child Hearing Lab at CHEO Research Institute. Only members of the research team and the individuals described above will have access to the data. Following completion of the study the research data, audio recordings and master list will be kept for 7 years after the last publication of this study. They will then be destroyed. You will not be identified in any publication or presentation of this study.

A copy of the signed consent form will be provided to you.

Is the research team benefiting from the study?
The research team members are not benefiting personally, financially or in any other way from this study.

What if I have questions?
If you have any questions concerning participation in this study, contact: Dorie Noll or JoAnne Whittingham.

This study has been reviewed and approved by the CHEO Research Ethics Board. The CHEO Research Ethics Board is a committee of the hospital that includes individuals from different professional backgrounds. The Board reviews all human research that takes place at the hospital. Its goal is to ensure the safety of people taking part in research. The Board's work is not meant to replace a parent or child's decisions and choices that are best for them. You may contact the Research Ethics Board, for information regarding a patient's rights in research studies at (613) 737-7600 (3272), although this person cannot provide any health-related information about the study.

Consent form Signatures
By signing this consent form I agree that:

- I am voluntarily agreeing to participate in this research study;
- I understand the information within this consent form;
- All of the risks and benefits of participation have been explained to me;
- All of my questions have been answered;
- I allow access to my medical records and/or personal information as described in this consent form; and
- I do not give up my legal rights by signing this form.

A copy of the signed Information Sheet and/or Consent Form will be provided to me.

Signatures
Obtain the appropriate signatures, which should be based on capacity.

Printed Participant's Name	Participant's Signature (as applicable)	Date
Printed Parent's Name	Parental Signature	Date
Printed Name of Person Who Conducted Consent Discussion	Signature of Person Who Conducted Consent Discussion	Date

Research Team:

Dorie Noll, MSDE / Ph.D. Candidate
Faculty of Health Sciences,
University of Ottawa

JoAnne Whittingham, M.Sc. / Research Coordinator
CHEO Research Institute

Elizabeth Fitzpatrick, PhD, AUD(C) / Thesis Supervisor
Faculty of Health Sciences, University of Ottawa,
Investigator, CHEO Research Institute
Telephone:613-562-5800, extension 4545
email: elizabeth.fitzpatrick@uottawa.ca

Audiology Disclosure Consent

CONSENT FOR DISCLOSURE
FOR CHILD'S AUDIOLOGIST

I hereby authorize: _____
(Name of Audiologist/Agency Releasing Information)

_____
Address

_____
City/Prov/Postal Code

To release to:
JoAnne Whittingham, M.Sc., Research Coordinator
Audiology Research Lab, Children's Hospital of Eastern Ontario Research Institute
401 Smyth Rd., Room R1133
Ottawa ON K1H 8L1

The following information (Description of Information to be released: therapeutic, education, medical, psychosocial): *Information about my child's hearing loss including the age of my child when diagnosed and the type of the hearing loss, and a recent audiogram.*

From the records of: _____ _____
(Name of Child) (Date of Birth)

I understand this information is to be used by the recipient for the purposes of data collection for the study "A Multi-Methods Study of Caregiver Coaching in Listening and Spoken Language Practice". *This consent allows both written and verbal communication. It can be withdrawn at any time by notification in writing.*

_____ Date _____
Signature of person authorized to sign on behalf of the child

Relationship to Child: _____

Name of witness _____
(printed)

Signature: _____ Date _____

Note: Authorization must be signed by the client if incapable, by the parent or legal guardian, whichever is the appropriate legal authority. In the case of a person who is physically or mentally disabled to such a degree as to be incapable of giving consent, the next-of-kin may authorize release of information.

Practitioner Consent

Practitioner Information & Consent Form

Protocol Title: A Multi-Methods Study of Caregiver Coaching in Listening and Spoken Language Practice

Investigator: Elizabeth Fitzpatrick, PhD
Address: CHEO Research Institute
401 Smyth Road, Ottawa, ON K1H 8L1

Telephone Number: (613) 737-7600 Ext 4545

We are inviting you to participate in a research study about caregiver coaching in listening and spoken language (LSL) practice. You are being invited to join this study because you work with families of children up to 3 years of age with hearing loss. The purpose of this project is to learn about how LSL practitioners incorporate caregiver coaching in their practice. We will gather the perspectives of caregivers and LSL practitioners participating in LSL services. Researchers at the University of Ottawa and the Children's Hospital of Eastern Ontario Research Institute (CHEO) are conducting this research project. Two sites in the United States are also conducting this study: Central Institute for the Deaf and the Moog Center for Deaf Education in St. Louis, MO. Before agreeing to take part in this study, it is important that you read and understand this document.

Taking part in this study is voluntary. Your decision to participate or not in this study will not affect your professional standing. You are free to withdraw from the study at any time and there will be no penalty to you.

Why is this study being done?
An important part of LSL practice is teaching caregivers to use strategies for listening and language development with their children, so their child learns through their everyday activities, in-between therapy sessions. Even though most LSL practitioners use caregiver coaching, and it is considered an important part of this type of early intervention, how they actually coach caregivers has not yet been studied. The goal of this study is to better understanding caregiver coaching practices in LSL services for families of children aged birth up to 3 years with hearing loss.

In this study, we plan to interview practitioners and the caregivers that they work with to better understand their experiences with caregiver coaching. We want to understand what kind of coaching practices LSL practitioners use, the relationship between the caregiver and the practitioner and how the caregivers feel about learning new skills and strategies this way. This will contribute to a better understanding of coaching practices and provide an opportunity to improve clinical practice for LSL practitioners and families.

How many people will participate?
At CHEO, we expect to interview 4-5 families and 4-5 therapists. We expect to interview the same number of families and therapists at two sites in the United States as well, to

help us get a broader picture of caregiver coaching in different LSL programs. The study is expected to be recruiting from October 2019 to February 2020.

What will I have to do?
If you agree to participate, we will ask you to take part in an interview. The interview will take about 40 to 60 minutes. The interview will be audio recorded. The interview will be scheduled during the day and will be done in person. We can schedule a time that works best for you. The questions for the interview will ask about your experiences using caregiver coaching practices with families in your LSL sessions.
We will also ask you to obtain caregiver permission to video record an LSL session. The research team will choose a 10-minute segment that includes at least one coaching interaction between you and the caregiver. We will view the selected segment together with you, to allow you to examine, explain, and reflect on the coaching interaction. This discussion will be audio recorded. The purpose of this discussion is to better understand your thought process during a coaching exchange with a caregiver, rather than evaluating your coaching practices. The video observation and discussion are expected to take approximately 20-30 minutes. You will be given the option of participating in the video observation and discussion immediately following your interview or scheduling another time that is convenient.
In addition, we will ask you to invite a select group of the families you serve to participate in an interview. We will provide an information package for you to give to families. If families are interested, we will ask you to have them sign a 'consent to contact' form, after which the researchers will contact them directly to answer any questions, confirm consent to participate and to schedule an interview
Are there any risks to participating?
A potential discomfort may include you feeling uncomfortable with some of the questions being asked if they are sensitive or evocative. If you feel uncomfortable, you may choose not to answer a question.

Are there any benefits to participating?
If you decide to participate, you may or may not benefit from participating in this study; however, we hope to use the information we learn about caregiver coaching to help therapists teach and support families of children with hearing loss participating in LSL services.

Will I be paid to participate?
You will not be paid to take part in this study.

Can I Withdraw?
You can withdraw from the study at any time. Please discuss with the investigator if you would like to withdraw. If you withdraw your consent, the investigator will no longer collect your information for the purpose of this study. Information that was already collected will still be used by the Investigator.

Will I be told about new information?

We will inform you of any new information that might change your decision to continue to participate in this research project. We will ask you again if you still want to be in the study.

You can receive a copy of the study results at the end of the study. Please let the study team know if you like to receive a copy.

What about confidentiality and privacy?
The information from the interview and video observation discussion will be used to describe how LSL therapists teach caregivers new knowledge and skills through coaching. All interview recordings and transcripts will be stored with a unique study ID only, excluding any identifying information. Comments from the interviews and video observation discussions may be quoted but you will not be identified.

For this study we will be collecting some personal identifiers for the research purposes described in this consent form. Your personal information will be kept strictly confidential except as required or permitted by law. Your name and contact information (name, telephone number, and email address) will be kept in a document that links this information with a study ID, called a master list. The study ID will be used in all of the research documents to protect your privacy. The master list will be stored separately from the research data. It will be stored with password protection on a restricted computer securely stored in the Child Hearing Lab at the CHEO Research Institute with access restricted to the researcher and the research team.

Representatives from the CHEO Research Ethics Board and a quality reviewer from CHEO Research Institute may look at your records at the site where these records are held, to check that the study is following the proper laws and guidelines.

The research data and audio recordings produced from this study will be stored with password protection on a restricted computer in the Child Hearing Lab at the Children's Hospital of Eastern Ontario Research Institute. Members of the research team and the individuals described above will have access to the data. Following completion of the study the research data, audio recordings and master list will be kept for 7 years after the last publication of this study. They will then be destroyed. You will not be identified in any publication or presentation of this study.

This study is taking place at multiple sites but all study data will be stored at the Child Hearing Lab at CHEO Research Institute. Any personal information about you that leaves the institution will be coded with a study ID so that you cannot be identified by name. This is called de-identified data. The de-identified research data will be sent securely to the Child Hearing Lab, CTC Room 201 and carefully stored with password protection on a restricted computer for 7 years.

A copy of the signed consent form will be provided to you.

Is the research team benefiting from the study?

The research team members are not benefiting personally, financially or in some other way from this study.

What if I have questions?
If you have any questions concerning participation in this study, contact: Dorie Noll or JoAnne Whittingham.

This study has been reviewed and approved by the CHEO Research Ethics Board. The CHEO Research Ethics Board is a committee of the hospital that includes individuals from different professional backgrounds. The Board reviews all human research that takes place at the hospital. Its goal is to ensure the safety of people taking part in research. The Board's work is not meant to replace a caregiver or child's decisions and choices that are best for them. You may contact the Research Ethics Board, for information regarding a patient's rights in research studies at (613) 737-7600 (3272), although the Board cannot provide any health-related information about the study.

Consent form Signatures
By signing this consent form I agree that:

- I am voluntarily agreeing to participate in this research study;
- I understand the information within this consent form;
- All of the risks and benefits of participation have been explained to me;
- All of my questions have been answered;
- I allow access to my personal information as described in this consent form; and
- I do not give up my legal rights by signing this form.

<u>Signatures</u>
Obtain the appropriate signatures, which should be based on capacity.

Printed Participant's Name	Participant's Signature	Date
Printed Name of Person Who Conducted Consent Discussion	Signature of Person Who Conducted Consent Discussion	Date

Audiologist Request for Data

Coaching in LSL Practice Study ID- ___ ___ ___

Audiologist Request for Data

Date of Birth: ___ ___/___ ___ ___/___ ___ (ALL DATES ARE DD/MMM/YY) Gender: ☐Male ☐Female

Date of Report: ___ ___/___ ___ ___/___ ___

Most current audiometric threshold information (Date: ___ ___/___ ___ ___/___ ___)

☐ ABR (dB EHL) ☐ VRA (dB HL) ☐ Play (dB HL) ☐ Conventional (dB HL)

	Audiometric Thresholds					Tymp Results	Nature of HL
Ear	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz		
R							
L							

Has the hearing loss progressed since diagnosis, e.g., an increase in the pure tone average greater that 20 dB

☐ Yes ☐ No If yes, describe briefly and provide previous threshold information

Previous audiometric threshold information (Date: ___ ___/___ ___ ___/___ ___)

☐ ABR (dB EHL) ☐ VRA (dB HL) ☐ Play (dB HL)

	Audiometric Thresholds					Tymps	Nature of HL
Ear	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz		
R							
L							

Previous audiometric threshold information (Date: ___ ___/___ ___ ___/___ ___)

☐ ABR (dB EHL) ☐ VRA (dB HL) ☐ Play (dB HL)

	Audiometric Thresholds					Tymps	Nature of HL
Ear	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz		
R							
L							

Diagnosis Information

ROUTE TO REFERRAL	
☐Screened	☐Not screened (Referred)

SCREENING		
☐ UNHS-NICU	☐ UNHS-WBN	☐ UNHS-COMM
☐ Pass	☐ Refer	☐ No Result/Incomplete

Appendix K

Ethics Approval

CHEO

CHEO Research Ethics Board Approval - Delegated Review

REB Protocol No: 19/106X
ROMEO File No: 20190457
Principal Investigator: Elizabeth Fitzpatrick
Project Title: CHEOREB# 19/106X - A Multi-Methods Study of Caregiver Coaching in Auditory-Verbal Practice
Protocol Status: Active
Approval Date*: November 04, 2019
Approval Expiry Date:** October 15, 2020

Documents Reviewed & Approved:

Document Name	Comments	Version Date
Protocol	Protocol (clean)	2019/10/31
Consent Form	Consent to access audiological data	2019/08/12
Other Document	Video observation protocol (clean)	received 2019/10/31
Consent Form	Video consent (clean)	2019/10/31
Consent Form	Caregiver consent (clean)	2019/10/31
Consent Form	Practitioner consent (clean)	2019/10/31
Recruitment Materials	Recruitment Information for Therapists	2019/10/09
Consent Form	Family Consent to Contact	2019/10/09

This is to notify you that the Children's Hospital of Eastern Ontario Research Ethics Board has granted approval to the above named research study on the date noted above. Your project was reviewed within the delegated stream, which is reserved for projects that involve no more than minimal risk to human

participants.

Final approval is granted for the above noted study, with the understanding that the investigator agrees to comply with the following requirements:

1. The investigator must conduct the study in compliance with the protocol and any additional conditions set out by the Board.
2. The investigator is responsible for complying with all applicable guidelines and regulations regarding the ethical conduct of research with humans, as applicable to the research project.
3. Approval for studies that include an investigational device(s) is contingent upon the investigator securing an Investigational Testing Authorization notice from Health Canada.
4. Investigators must obtain annual renewal approval prior to the expiration date stated above.
5. The investigator must not implement any deviation from, or changes to, the protocol, consents or assents without the approval of the REB except where necessary to eliminate hazard to the research subject, or when the change involves only logistical or administrative aspects of the study (e.g., change of telephone number or research staff). As soon as possible, however, the implemented deviation or change, the reasons for it, and, if appropriate, the proposed protocol amendment(s) should be submitted to the Board for review and approval.
6. The investigator must, prior to use, obtain approval from the Board for changes to the study documentation, e.g., changes to the informed consent letters, recruitment materials.
7. Investigators must obtain approval from the Board of French version(s) of the consent/assent form(s), unless a waiver has been granted. An interpreter should be offered to participants as required or at the request of the participant throughout the course of research.
8. The investigator must promptly report to the REB all unexpected and untoward occurrences (including the loss or theft of study data and other such privacy breaches).
9. Investigators must notify the REB of any change in study status (closed to accrual, temporary, premature or permanent).
10. Investigators must submit a study closure event form at the conclusion of the study.

Should you have any questions or concerns, please do not hesitate to contact the Research Ethics Board Office at 613-737-7600 ext. 3350 or 2128.

Regards,

Richard Carpentier, PhD
Chair, Research Ethics Board
Président, Comité d'éthique de la recherche

* The final approval date for initial delegated study applications approved with or without modifications will be the date the REB has determined that the conditions of approval have been satisfied.

** The expiry date of REB approval for initial study applications will be as follows:

- If the date of approval was **on or before** the 15th of the month, the expiry date will be the 15th of the month prior to the date of review and approval by the Chair and/or delegate *in the following year*;
- If the date of review and approval was **after** the 15th of the month, the expiry date will be the 15th of the month in which the date of review and approval by the REB *in the following year*.

University of Ottawa

07/11/2019

Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

Lettre d'approbation administrative | Letter of administrative approval

Numéro de dossier / Ethics File Number	H-11-19-5210
Titre du projet / Project Title	A Multi-Methods Study of Caregiver Coaching in Auditory-Verbal Practice
Type de projet / Project Type	Thèse de doctorat / Doctoral thesis
CÉR primaire / Primary REB	CHEO / CHEO
Statut du projet / Project Status	Approuvé / Approved
Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)	07/11/2019
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	15/10/2020

Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Dorie NOLL	École des sciences de la réadaptation / School of Rehabilitation Sciences	Chercheur Principal / Principal Investigator
Elizabeth FITZPATRICK	École des sciences de la réadaptation / School of Rehabilitation Sciences	Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments:

CHEO REB Protocol No: 19/106X; ROMEO File No: 20190457

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Ottawa (Ontario) K1N 6N5 Canada Ottawa, Ontario K1N 6N5 Canada

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