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An Exploration of Reflective Conversations in Early Intervention Caregiver Coaching Sessions

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Abstract

This descriptive study included a systematic examination of provider and caregiver reflective conversations during caregiver coaching sessions focused on embedded intervention. Transcribed videos from 31 provider–caregiver dyads in two groups (Embedded Practices and Interventions with Caregivers [EPIC] vs. business-as-usual [BAU]) were used for data collection, resulting in a total of 93 transcripts across three different time points. Using methods of directed content analysis, a coding scheme describing various components of shared reflection was developed and used to code transcripts. Coding data were used to explore the rate per minute and relative frequency of types, topics, and spontaneity of reflection. Although there were no statistically significant differences in the frequency and rate of reflective versus nonreflective conversational turns, there were group differences in the reflective topics and specific types of reflective comments and questions posed by participants. Results from this study and others can help the field further define reflection as a coaching strategy and consider the potential utility of different reflective comment and question types to increase caregiver capacity to embed interventions in home routines. Further research is recommended to explicate further definitions and processes for reflection specific to caregiver coaching, including methods used to code reflective conversations and evaluate how reflection impacts caregivers' intervention implementation.

Keywords

home visiting, Part C services, parent training, family collaboration and support, professional development

Research on caregiver coaching in Part C early intervention (Individuals with Disabilities Education Act; Public Law 108-446, 2004) has identified promising outcomes for providers' use of coaching strategies, caregivers' implementation of embedded intervention with their children, and developmental gains for children. Caregiver coaching is a relationship-based tool used by

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early intervention providers to collaborate with and guide caregivers as they work to meet their child's developmental needs; caregiver coaching focuses on family-identified priorities and embedded interventions in everyday routines and activities (Friedman et al., 2012; Woods et al., 2018). As Salisbury and colleagues (2018) noted, however, very few studies have examined the process features of caregiver coaching. Most studies of caregiver coaching have focused on child outcomes, early intervention provider coaching fidelity, caregiver intervention fidelity, and the social validity of the coaching approach (e.g., McDuffie et al., 2013; Wainer & Ingersoll, 2015; Wright & Kaiser, 2017). These variables are important for furthering and refining the use of caregiver coaching, but researchers and providers need additional information about coaching processes and the reciprocal interactions occurring between providers and caregivers. Because coaching strategies have the prospect to affect bidirectional and reciprocal interactions between providers and caregivers, this type of information will advance understandings about the extent to which different coaching strategies are implemented by providers and how specific coaching strategies affect provider and caregiver interactions.

Reflection and Its Use in Early Intervention Caregiver Coaching

One caregiver coaching strategy that supports reciprocal interactions between providers and caregivers is reflection. Reflection is typically included in relationship-directed caregiver coaching approaches (Kemp & Turnbull, 2014) and is defined as the review and assessment of an experience, including one's self-application of knowledge and practice (Bransford et al., 2000; Friedman et al., 2012). Reflection is considered a metacognitive process, involving descriptions of knowledge or experiences, acknowledgment of similar or different perspectives, generation of potential actions or behaviors, and evaluations of how something worked or did not work (Bransford et al., 2000; Friedman et al., 2012). Metacognitive skills, like reflection, involve thinking about one's own thinking and are dependent on one's knowledge and experiences. As Bransford and colleagues (2000) noted, "it is difficult to engage in self-regulation and reflection in areas that one does not understand" (p. 98). This highlights the importance of collaborative shared reflection between providers and caregivers to share one's own thinking with another through reflective conversations.

When caregivers are first learning intervention strategies and information related to their child's development, they may not be able to independently reflect on their knowledge and practices. They might need support from providers in reflecting on their application of new knowledge and how they can modify their intervention strategy use across different routines and settings not targeted during home visiting sessions (Bransford et al., 2000). As such, in early intervention, reflection is described as useful for supporting caregivers' implementation of embedded intervention because it provides opportunities to (a) evaluate their use of intervention strategies, (b) identify why a strategy did or did not work or how it can be changed to facilitate improved outcomes, (c) acknowledge their perspectives related to the coaching session or child outcomes, and (d) seek validation from the provider while reflecting on their actions or behaviors (Brown & Woods, 2015; Moore et al., 2014; Rush & Shelden, 2020; Wright & Kaiser, 2017). Opportunities for reflection are hypothesized to improve caregivers' confidence and capacity to implement interventions within and across everyday routines and activities while also supporting the provider in enhancing their own coaching practices (Dunst & Trivette, 2009).

Despite the use of reflection in caregiver coaching approaches, it has not been well defined or characterized in the early intervention caregiver coaching research literature to date (Lorio et al., 2020). In a scoping review of 39 caregiver coaching articles, Lorio and colleagues (2020) found 16 of the 39 articles included reflection as a coaching strategy. Of these 16 articles, definitions of reflection were limited and varied across articles. For example, not all articles described reflection as being conducted collaboratively, and the purpose of reflection varied from supporting

caregiver practice (e.g., Brown & Woods, 2015) to reviewing the session (e.g., Rivard et al., 2014). Some coaching approaches were noted to use more of a structured process to guide reflective conversations (e.g., Schertz et al., 2018; Wright & Kaiser, 2017) whereas others used a fluid process, providing opportunities for reflection, as needed, to support caregiver learning and practice (e.g., Moore et al., 2014; Wetherby et al., 2018). In early intervention, reflection is often initiated by providers through questions to guide caregivers in evaluating an experience, identifying intervention issues and potential solutions, or discussing perspectives about intervention topics (Douglas et al., 2020; Rush & Shelden, 2020). However, in the scoping review, seven articles mentioned the use of questions to support reflection, but the specific questions posed were often not reported (Lorio et al., 2020). Most articles described reflective questions as focusing on what was working or what was challenging for the family (e.g., Moore et al., 2014; Schertz et al., 2018). The resulting types of caregiver reflection, after questions were posed by providers, were also not discussed. In general, the overall frequency, topics, and spontaneity of caregiver and provider reflection during home visit sessions were unclear. The lack of details related to the reflection process in early intervention makes replication of the reflection strategy difficult in both practice and in research.

Reflection During Embedded Practices and Interventions With Caregivers (EPIC)

One caregiver coaching approach including opportunities for shared reflection between caregivers and providers is EPIC. EPIC was derived from Family Guided Routines Based Intervention (FGRBI; Kashinath et al., 2006; Krick Osborn & Johnson, 2015; Windsor et al., 2019; Woods et al., 2018) and includes professional development for providers to enhance coaching practices with caregivers. EPIC focuses on supporting caregivers in implementing interventions with their children within and across naturalistic routines through provider use of the SOOPR coaching framework and the Five Question Process (5Q). The SOOPR coaching framework includes Setting the stage (S), Observation and Opportunities for practice (OO), Problem-solving and planning (P), and Reflection and review (R). The framework encourages providers to systematically use family-centered coaching practices throughout the home visit to (a) support family members as decision makers, (b) embed interventions into everyday routines, (c) provide multiple opportunities for caregiver practice with feedback, and (d) facilitate conversations with caregivers to solve problems and reflect on intervention implementation (Woods et al., 2011, 2018). The 5Q specifically guides providers and caregivers in having conversations about intervention topics and helps caregivers learn, understand, and plan strategies for embedding learning opportunities with their children. The 5Q includes the following five questions: (a) WHAT are the desired child outcomes; (b) WHY is this outcome a priority for the family and/or the child's overall development; (c) HOW will the outcome be targeted; (d) WHEN, WHERE, and with WHOM will the outcome be targeted; and (e) IS IT WORKING (Woods et al., 2018)?

Both the SOOPR framework and the 5Q process in EPIC support providers and caregivers in engaging in shared reflection during home visit sessions. For caregivers, this shared reflection fosters understanding of the importance of reciprocal interactions between the caregiver and child and highlights the relationship between the caregiver's support and the child's learning. The SOOPR framework and 5Q process provide caregivers with opportunities to consider their knowledge on a particular topic, identify what is working/not working, and consider how they might make intervention changes to improve future interactions with their child. For providers, reflections within the SOOPR framework and 5Q support them in refining their use of caregiver coaching and enhance their ability to implement coaching strategies that meet individual caregiver learning needs.

Additional research is needed to further understand the role of reflection in caregiver coaching, including the processes used to support reflection and the types of reflection occurring

between providers and caregivers across caregiver coaching approaches. The absence of this information leads to challenges for researchers and providers, including (a) difficulties with replication, preventing researchers from expanding understanding of reflection by building upon previous studies; and (b) confusion among providers in how to use reflection as a coaching strategy, impacting their ability to achieve desired capacity-building outcomes with caregivers in the field (Douglas et al., 2020; Salisbury et al., 2018).

Present Study

In this exploratory descriptive study, we used an existing data set to systematically examine reflective conversations between two groups of provider–caregiver dyads during early intervention home visit coaching sessions. One group received EPIC professional development, and the business-as-usual (BAU) group received no further professional development, continuing their coaching sessions as usual. Using data derived from a direct behavioral observation coding system with codes applied to transcripts of home visiting sessions, the present study was designed to explore the rate and relative frequency (RF) of different aspects of reflection occurring during provider–caregiver conversations. Because the EPIC intervention emphasizes the importance of reflection as a coaching strategy, we expected to see reflection in the EPIC group and sought to compare these reflective conversations to the BAU group. The following research questions were addressed:

Research Question 1 (RQ1): What were the rates and relative frequencies of reflective and nonreflective conversational turns during embedded intervention caregiver coaching sessions, and did these differ across groups?
Research Question 2 (RQ2): What were the rates and relative frequencies of reflective comments and questions posed by providers and caregivers during embedded intervention caregiver coaching sessions, and were these different across groups?
Research Question 3 (RQ3): What were the rates and relative frequencies of reflective conversational topics during embedded intervention caregiver coaching sessions, and were these different across groups?
Research Question 4 (RQ4): What were the rates and relative frequencies of prompted and spontaneous reflective conversational turns by caregivers during embedded intervention caregiver coaching sessions, and were these outcomes different across groups?

Method

Description of Full Data Set From Larger Study

The existing data set was from a larger study, which used a small *n* randomized controlled design to evaluate the EPIC intervention (Woods et al., 2018). Participants were recruited from early intervention agencies in one eastern and one mid-western state. Families were recruited first followed by provider recruitment. Families were included in the study if their children (a) had a current individualized family service plan, (b) were below 24 months of age, and (c) had significant developmental disabilities, which were confirmed using the ABILITIES Index (Simeonsson & Bailey, 1991). Providers across multiple disciplines were identified by the program administrator and confirmed to meet the inclusion criteria through questionnaires completed by the administrator and provider. Inclusion criteria included (a) completion of professional development in caregiver-implemented interventions and caregiver coaching within the last 12 months, (b) at least 2 years of experience providing coaching to at least five different families, and (c) use of triadic coaching practices that emphasize embedded intervention into family routines and activities with caregiver identified outcomes for intervention sessions. Coaching was defined as (a) guiding the practices of the caregiver to support the child's learning rather than providing

services directly with the child; (b) using the family's every day routines, activities, and materials rather than the provider's materials (e.g., toy bag); and (c) targeting outcomes based on the family's identified priorities rather than assessment items. The study initially enrolled 40 provider–caregiver dyads, which were randomly assigned to the EPIC ($n = 21$) or BAU ($n = 18$). Due to attrition, the study ended with a total of 31 dyads (EPIC = 18, BAU = 13).

Providers in the EPIC group received professional development in the EPIC intervention, which incorporated SOOPR and the 5Q, to support caregivers in embedding interventions into daily family routines (Salisbury et al., 2018; Woods et al., 2018). The EPIC providers' professional development lasted 19 to 25 hr over approximately 7 months, including 1-hr virtual coaching sessions, an average of 6.69 times (range = 3–9 times) with external coaches who had expertise in the EPIC intervention. Families were not present during the virtual coaching sessions for EPIC providers. EPIC providers used a frontloading approach with families that were new to their caseload, including a higher frequency of home visit sessions in the beginning of the larger study, with sessions decreasing in frequency as the caregiver showed competence and confidence with strategy use. The BAU group continued to implement established coaching practices with existing families. Due to agency concerns about changing interventions for families already being served, only providers in the EPIC group began the study with new families whereas the BAU providers continued with families they were already serving.

In total, 20 sessions were planned to be implemented with each caregiver/child in the larger study. On average, 17.6 intervention sessions were implemented (range = 8–20) across 18.4 weeks (range = 7.9–23.4). Dependent variables included provider intervention fidelity, caregiver implementation fidelity, and child communication and motor outcomes. Data for the present study were collected through a series of video recordings conducted in the families' homes. Both groups of providers were asked to film a home visit session at the beginning, middle, and end of the study (T1, T2, and T3). Providers did not self-select the sessions. Sessions to be recorded were identified by the research project coordinator based on the number of sessions completed, and recording devices were provided. Average session lengths for T1, T2, and T3 were 25.5, 29.3, and 35.1 min, respectively, and the average number of weeks between the first and last home visit recordings was 19.6 (range = 15.3–23.6). For providers in the EPIC group, the first recording (T1) was collected no more than 2 weeks after receiving professional development.

Provider implementation fidelity. All videos were coded for provider implementation fidelity using the *Caregiver Coaching Definitions Measure*. This measure included mutually exclusive event codes, corresponding to 10 general and specific coaching strategies (Friedman et al., 2012; Windsor et al., 2019). These event codes were timed, and the onset of one code ended the previous code, meaning codes could not overlap. General coaching strategies included information sharing, observation, and joint interaction. Specific coaching strategies included direct teaching, demonstration with narration, guided practice, caregiver practice, feedback, problem-solving, and reflection. Coding was completed using The Observer XT Version 12.5 software by Noldus©, resulting in a mean of 8.84 and 3.62 SOOPR implementation fidelity across the three time points for providers in the EPIC and BAU groups, respectively. Interrater agreement measures were randomly collected for 30% of videos coded by three undergraduate research assistants resulting in an average of 85% agreement (range = 69%–97%). Disagreements were discussed and recoded.

Description of the Data Subset for This Study

The data subset for this study focused on aspects of reflective conversations between providers and caregivers. Provider, caregiver, and child outcome data were collected as part of the larger study (Woods et al., 2018). All 31 dyads that completed the larger study were included in this study (EPIC = 18, BAU = 13; Table 1). There were no statistically significant differences across participant groups by age (providers: $t = 0.08$, $df = 26$, $p = .94$; caregivers: $t = -0.58$,

Table 1. EI Provider and Caregiver Participant Demographics.

	EPIC dyads (n = 18)		BAU dyads (n = 13)	
Demographics	Provider	Caregiver	Provider	Caregiver
Gender	Female = 18	Female = 18	Female = 13	Female = 12 Male = 1
Age (years) *M* (range)	45 (31–64)	33 (22–43)	45 (28–61)	32 (23–41)
Race/ethnicity	White = 17 No answer = 1	Black = 1 White = 14 Multiracial = 1 Hispanic = 2	White = 13	Asian = 1 White = 11 Hispanic = 1
Geographical location	East = 10 Midwest = 8		East = 4 Midwest = 9	
Highest level of education	Bachelor's = 5 Master's = 9 Other = 3 No answer = 1	Some HS = 1 HS Graduate = 7 Associate's = 2 Bachelor's = 5 Post-grad = 3	Bachelor's = 4 Master's = 7 No answer = 2	Some HS = 1 HS Graduate = 2 Associate's = 3 Bachelor's = 4 Post-grad = 3
Role	SLP = 4 PT/OT = 5 ECE/SI = 7 Nurse = 2	Mother = 18	SLP = 3 PT/OT = 2 ECE/SI = 7 Nurse = 1	Mother = 11 Father = 1 Guardian = 1
Experience in EI *M* (range)	11 (2–36) years		12 (1–24) years	
Hours of caregiver coaching training *M* (range)	26 (2–120)		13 (6–30)	
Languages used in the home	English = 18	English = 16 English + Spanish = 2	English = 13	English = 9 English + Spanish = 1 English + Tagalog = 1 English + SL = 2

Note. EI = early intervention; EPIC = Embedded Practices and Intervention with Caregivers; BAU = business-as-usual; *M* = mean; HS = high school; SLP = speech-language pathologist; PT/OT = physical therapist/occupational therapist; ECE/SI = early childhood educator/special instructor; SL = sign language.

$df = 29, p = .57$) and education level (providers: $t = -1.23$, $df = 26$, $p = .21$; caregivers: $t = 1.0$, $df = 29$, $p = .32$). Providers represented a variety of disciplines, but did not differ significantly in their years of experience in early intervention ($t = -0.37$, $df = 26$, $p = .71$), hours working in early intervention per week ($t = -0.47$, $df = 26$, $p = .64$), or their amount of training in caregiver coaching before the study began ($t = -1.54$, $df = 26$, $p = .15$).

Video transcripts. Each dyad had three videos of home visit sessions collected across three different time points (T1, T2, T3), resulting in a total of 93 home visiting videos used in this study. Videos were transcribed in Microsoft Excel™ spreadsheets using the caregiver coaching codes and time codes in The Observer XT as a guide. Undergraduate research assistants served as transcribers and reviewed the incidents coded as information sharing, problem-solving, and reflection within transcripts. These coaching strategies were chosen for their conversational nature

between the provider and the caregiver, and for their potential to include the various types of reflection. Transcription began 10 s before the occurrence of each excerpt coded as information sharing, problem-solving, or reflection, and ended 10 s after each coded segment. Transcripts were segmented into conversational turns, which were defined as having one speaker and one conversational topic. To confirm transcription accuracy and reliability, a secondary transcriber reviewed 30% of randomly selected transcripts while watching the corresponding home visit video. When transcription errors were found, the secondary transcriber updated the transcript as needed. Transcription errors were often minor, rarely affecting the information within the transcript. An example of a transcription error included typing "*We will*" when the speaker said "*We'll."* Transcription reliability was calculated by taking the number of correctly transcribed conversational turns divided by the total number of conversational turns, multiplied by 100. The average transcription reliability was 98% (range = 93%–100%).

Development of the Reflection Conversation Coding Scheme

All provider and caregiver conversational turns were coded in the transcripts, and coding categories included speaker, reflection type, topic of reflection, and initiation of caregiver reflection. Nonreflective turns, unintelligible turns, and repeated reflections were also coded. The following paragraphs outline how individual codes were identified. These codes were based on the current literature (Table 2). In addition, a five-step process used for content analysis is reviewed (Hsieh & Shannon, 2005; Krippendorff, 2019).

Review of the literature on reflection. A thorough review of the literature within and outside the discipline of early intervention was conducted before developing the coding scheme for this study. Many early intervention researchers have included reflection within caregiver coaching approaches, but according to Lorio et al. (2020), none have specifically developed a coding scheme to measure and evaluate the use of reflection during home visit sessions. Based on the findings from Lorio and colleagues' (2020) review of problem-solving and reflection as coaching strategies, we explored the literature outside the discipline of early intervention, including higher education, teacher professional development, nursing, and mental health. We sought out studies that coded specific types of reflection, using combinations of search terms such as *reflect, reflection, adult learning, code*, and *coding*. Our search resulted in 15 studies that included a coding scheme specific to reflection. These coding schemes were examined and compared to identify how reflection was characterized and to inform the development of a reflection coding scheme for use in early intervention caregiver coaching (Table 2). Across the studies reviewed, reflective coding schemes were organized into different levels, phases, categories, forms, or types. Three types of reflective comments appeared to be consistent across schemes: objective, interpretive, and critical. The definitions of these types of reflection also appeared to align with the goal of reflection in early intervention. For example, objective reflections included descriptions of facts based on current or previously observed experiences, which could support providers and caregivers in reviewing sessions and describing what happened. Interpretive reflections included judgments or analyses of experiences, which could include providers and caregivers discussing what worked or did not work in a session, and the feelings related to an approach or outcome. Critical reflections focused on moving forward and improving outcomes, including discussions of how a strategy, skill, or experience could be improved by investigating potential solutions before deciding next steps. In caregiver coaching, critical reflections can encourage providers and caregivers to solve problems and identify strategies for continued progress. Within the examined coding schemes, reflection was most often quantified using hierarchical codes, with critical reflection typically being the highest level and objective being the lowest. Collin and colleagues (2013) warned against viewing reflection as a hierarchy, however. They explained viewing reflections

Table 2. Reflection Coding Schemes Reviewed From the Literature.

		Types of Reflective Comments Included in Coding Scheme		
Label	Authors	Objective *Descriptions of observed experiences that have already happened or are currently occurring*	Interpretive *Judgments, evaluations, and analyses of past or current experiences; discussing feelings and what went well or not well; comparing and contrasting experiences or idea*	Critical *Problem-solving to facilitate progress; investigating strategies or solutions; making decisions and connections to outcomes*
LEVELS	Nolan & Sim, 2011	• Returning to experience = describing events	• Attending to feelings = awareness of feelings about event • Association = relating new knowledge to pre-existing understanding; involves multiple perspectives • Integration = synthesizing old and new knowledge • [a]Appropriation = awareness of the effects of personal presuppositions; reflection is occurring more naturally	• [a]Validation = conceptualizing how the new knowledge can be applied
	Pihlaja & Holst, 2013	• Technical = description	• Practical = description and quality • Critical = why the situation occurred	
	Kember et al., 2008	• Habitual action = nonreflective; providing information without trying to understand • Understanding = attempting to understand a topic but no application to personal experience	• Reflection = applying understanding to theory or personal experience; providing personal insights • Critical = perspectives are transformed; evidence of evolving thought processes	
	Jensen & Joy, 2005	• Reflectivity = awareness of perceptions, behaviors, or habits and the meanings associated	• Affective reflectivity = awareness of feelings • Discriminant reflectivity = assessment of efficacy • Judgmental reflectivity = making judgments • Conceptual reflectivity = awareness of concepts used to understand or judge • Psychic reflectivity = awareness of how interests and anticipation influence self	• Theoretical reflectivity = awareness of assumptions related to culture or personal thinking; recognizing other perspectives that may be more functional

(continued)

Table 2. (continued)

Label	Authors	Types of Reflective Comments Included in Coding Scheme		
		Objective *Descriptions of observed experiences that have already happened or are currently occurring*	Interpretive *Judgments, evaluations, and analyses of past or current experiences; discussing feelings and what went well or not well; comparing and contrasting experiences or idea*	Critical *Problem-solving to facilitate progress; investigating strategies or solutions; making decisions and connections to outcomes*
PHASES	Bruster & Peterson, 2012	• Descriptive = description of events	• Inquisitive = questioning practices and effectiveness • Interdependent = connecting theory to practice	• Investigative = exploring alternatives and potential solutions • Global = considering ethical, moral, political impacts
	Hatton & Smith, 1995	• Descriptive = description	• Descriptive reflection = description of what happened and why; alternative viewpoints • Dialogic reflection = judging the experience, considering alternatives for explaining • Critical = consideration of multiple perspectives and outside influences	
CATEGORIES	Hendrickson et al., 2004	• Simple = add little to no meaning to the conversation; may include discussions of observable information or emotions	• Complex = focuses on making predictions related to the underlying meaning	
	Hoffman & Powell, 1989	• Nonpersonal = describing a situation or experience and the perceived experiences of self or others		• Personal = questioning and/or analyzing a situation or experience; searching for answers or solutions

(continued)

Table 2. (continued)

Label	Authors	Types of Reflective Comments Included in Coding Scheme: Objective *Descriptions of observed experiences that have already happened or are currently occurring*	Interpretive *Judgments, evaluations, and analyses of past or current experiences; discussing feelings and what went well or not well; comparing and contrasting experiences or idea*	Critical *Problem-solving to facilitate progress; investigating strategies or solutions; making decisions and connections to outcomes*
FORMS	Husu et al., 2008	• Habituation = comments and descriptions	• Introspection = reconsidering thoughts and feelings • Association = linking prior knowledge with new knowledge • Integration = using multiple perspectives/ resources to justify viewpoints • Validation = considering pros and cons, testing old and new ways of thinking • Appropriation = considering identity and professional self	• Transformation = commitment to action, plan to change behavior
TYPES	Minott, 2008; Valli, 1997	• Technical = thoughts related to one's use of techniques or skills	• Reflection-in-action = using values, beliefs, and contexts as sources of knowledge for action in the moment • Reflection-on-action = using values, beliefs, and contexts as sources of knowledge to evaluate an experience that already happened	• Deliberative reflection = considering a problem and engaging in decision-making • Personalistic reflection = considering personal growth, relationships with others involved, and how to improve the experience • Critical reflection = considering outside factors that could affect an experience; understanding and improving the quality of an experience
	Williams, 2001	• Content = What?; description of what happened	• Process = How?; considering problem solving strategies used • Premise or Critical = Why?; questioning the problem itself	

[a]Interpreted to be more of as an outcome of reflection than a type of reflection.

through hierarchical levels inevitably results in labeling a reflection as being either "good" or "bad" (p. 110). As noted by Zeichner (1994), "all of the domains of reflection are important and necessary" (p. 14). Only one study reviewed included specific types of reflective questions (Sofo et al., 2010), providing a list of 10 action learning questions to support learners in evaluating experiences; examining personal feelings, biases, or opinions; identifying problems, potential solutions, and hypothesizing outcomes; assessing personal understanding and learning needs; and determining how to implement proposed solutions.

Directed content analysis. Using findings from Lorio et al. (2020) and the review of reflective coding schemes described above (Table 2), the current coding scheme was developed in five distinct steps, following recommended methods of directed content analysis (Hsieh & Shannon, 2005; Krippendorff, 2019). In Step 1, the authors determined manifest content analysis procedures were the most appropriate for coding transcripts (Kondracki et al., 2002). Using manifest content analysis, coders focused on the qualitative nature of what providers and caregivers were saying, using only the text from transcripts and the coding scheme to make coding decisions. In Step 2, the authors identified the unit of analysis for coding, which was one conversational turn. Conversational turns were defined as having one speaker and one conversational topic; turns that included both a question and a comment were separated into two units. For example, if the provider talked about a specific intervention strategy across two different sentences before the caregiver responded, both sentences would be counted as one conversational turn, with a new turn starting with the caregiver's response. However, if the provider talked about a specific intervention strategy and then asked a question about that intervention strategy, that turn would be divided into two units and coded separately.

Step 3 involved the identification of coding categories and the development of a preliminary list of codes within each category. The preliminary codes were developed deductively using the extant literature. Reflective comments codes were primarily based on the findings from the review of coding schemes used in previous studies (Table 2), and reflective question codes were based on Sofo et al. (2010). Codes for speaker, conversational topics, reflection spontaneity, and nonreflective or uncodeable units were also included.

Codes in each category were mutually exclusive: meaning only one code from each category could be coded for each conversational turn (Table 3). Step 4 consisted of testing the codes on a set of 10 caregiver coaching transcripts that were not included in this study, and Step 5 involved revising the coding scheme as needed. Findings from the practice transcripts revealed a need for additional codes and merging of current codes. For example, some reflective questions from Sofo et al. (2010) were merged due to similarity in definitions. Anticipatory and Task questions were similar as both supported the caregiver taking specific action during an intervention activity. The same was true for Supposition and Hypothetical questions; both required caregivers to predict or speculate outcomes of an intervention. It was also determined that Reflexive and Challenging questions could be combined, as both questions focused on caregivers' beliefs, assumptions, and feelings. Evaluative and Qualifying questions could be combined given both concerned outcomes and progress. Finally, Probing and Seeks Further Detail questions were combined due to the probing nature of both question types. The final list of codes for reflective questions included Anticipatory, Reflexive, Evaluative, Supposition, and Probing (Table 3).

Codes for the topic of reflection were initially separated into six codes, five of which were related to the 5Q. Given it was often difficult to determine when a conversation turn changed from one 5Q-related topic to the next, it was decided all 5Q topics would be merged into one code. As a result, topics of reflection related to either the 5Q (e.g., intervention topics) or "other" (Table 3). Finally, a code for "Restate/Clarify" was added to prevent exaggerated reflective turn rates. For example, some providers and caregivers repeated themselves or summarized another speaker's comment. In these cases, the original reflection was coded, and any repetitions or summarizations of that same reflection were coded as "Restate/Clarify."

Table 3. Final Reflection Coding Scheme.

Categories/codes	Definitions	Examples
SPEAKER		
Caregiver	The parent or guardian of the child	
Provider	The early intervention provider who offers coaching to the parent	
REFLECTION TYPE = comment, question, nonreflective		
Comment		
Critical	Turns that include problem-solving, investigating strategies or solutions, and making decisions or connections to goals or next steps; related to the future	"I might need to use more prompting to get him to be independent. I'm going to try that during our next routine." "While it's easy to think 'play' in our sessions, we really need to start thinking outside of play. Think story time, think mealtime."
Interpretive	Turns that judge, analyze, critique, or evaluate what went well or not well; comparing and contrasting; discussing the pros/cons; sharing feelings regarding an experience; related to past experiences	"When I used that strategy during snack time it worked great. I felt like it was easy." "He did a nice job when your husband was changing his diaper of like babbling and like kicking."
Objective	Turns that are objective, descriptive, or involve retrieval of information; related to past experiences	"He tried to do it by himself." "She was taking a turn with sounds." "I know at daycare they were right by him and he did hold on to the railing. They were watching very carefully because he is the youngest one."
Question		
Anticipatory (Task)	Used to help the learner choose the best action or intervention to change a situation; may encourage the learner to complete a specific task	"What do you think you could do to help him better understand his role in the routine?" "Do you think it would help if you offered him a bit more time to follow through?"
Reflexive (Challenging)	Introspective questions related to the learner's personal emotions or behaviors and their effects on others	"How does that make you feel?" "How do you feel about that?"
Evaluative (Qualifying)	Encourages judgments about worth or value; good or bad; working or not working; compare and contrast; evaluations of progress made	"How do you think that activity went?" "So, when he goes to Grandma's, has she seen a difference with speech or his play skills?"

(continued)

Table 3. (continued)

Categories/codes	Definitions	Examples
Supposition (Hypothetical)	Supports the learner's reflection and problem-solving in hypothetical situations and predicting or speculating why something happened or what might happen next	"You did a great job helping him through that here at home. What would you do if he had a meltdown at Walmart?"
Probing (Seeks further detail)	Supports the learner in identification of information that may have been omitted or forgotten or used to expand on information the learner has already provided	"I'm glad you noticed that she is grunting to get your attention, but what else is she doing to communicate that need?" "So, tell me more about that." "Do you do floor time with him at least once a week?" "What's new since we last met?"
Restate/clarify	Reflective turns that are a continuation of a previous turn by the same speaker and related to the same topic; may also restate what another speaker previously said without adding new information	
Nonreflective	Turns that are not reflecting on a particular topic or experience; often these turns are an affirmation or directed toward the child; can be question or comment	"Right, that's true." "I agree." "Go get your milk." (to the child) "Okay, uh-huh."
TOPIC		
5Q *(Outcomes, Purpose, Strategies, Routines, Progress)*	Topic is related to family priorities or intervention outcomes, routines, and strategies; may include discussions related to child or caregiver progress or the purpose of interventions	"We really want her to be able to tell us when she needs to go potty." "I didn't see much change from the last session to this session." "What words might you model for her during this routine?"
Other	Topic does not fall into one of the 5Q categories.	"Her doctor's appointment this week was rough." "How many teeth did you say he has?"
SPONTANEITY		
Prompted	The early intervention provider asks a question or makes a statement to prompt the caregiver's reflection.	
Spontaneous	The caregiver independently reflects without the early intervention provider offering any prompting to do so.	
UNCODEABLE	Turn is unintelligible and cannot be coded due to audio quality, background noise, and so on.	"XXX." "He XX and then we XX."

Note. Codes in italics and parentheses were part of the preliminary coding scheme but later merged into the main codes within the final coding scheme; 5Q = 5-Question Process.

These revisions resulted in the final coding scheme used in this study, which was embedded into QSR International's NVivo 12©, a computer software program for text-based data analysis (NVivo, 2018). The coding scheme was organized into "parent" and "child" codes. Parent codes included the specific coding categories: Speaker, Reflection Type, Topic, Spontaneity, and Uncodeable. The mutually exclusive "child" codes were the main codes used for coding transcripts and were organized within the parent codes (Table 3).

Procedures

Transcript coding. The first level of data analysis included qualitative transcript coding, resulting in quantitative data for further exploratory analyses. Two undergraduate research assistants, blind to participant group assignment, were trained in the qualitative reflection coding procedures and coded all transcripts in this study. Training included individual meetings, identification of examples and non-examples of reflection, an introduction to NVivo, and training transcripts. When coders coded five training transcripts independently to a criterion of at least .60 Cohen's (1960) kappa, they began coding transcripts from this study. Cohen's kappa agreement checks were conducted throughout the study. Of the 93 transcripts, 50% were randomly selected and independently coded by a secondary coder, resulting in an overall kappa agreement of .68 (SD = .07, range = .55–.84), suggesting substantial levels of agreement (Cohen, 1960).

Quantitative data analyses. After coding all transcripts in NVivo, the first author conducted a thorough review of the transcripts to confirm all units were coded. Raw data from the NVivo program were organized in a Microsoft Excel spreadsheet by group with individual providers and caregivers having quantitative data related to total number of conversational turns and frequencies of the different types of reflection, topics of reflection, and initiation of reflection. Using The Observer XT, the total length of each video in minutes was recorded to allow calculation of rate per minute (RPM) for each reflection variable coded.

RPM and RF were calculated for each participant across the three different time points for the following variables: (a) total reflective and nonreflective conversational turns, (b) reflective comment types (critical, interpretive, or objective), (c) reflective question types (anticipatory, evaluative, supposition, reflexive, or probing questions), (d) reflective topic types (5Q, other), and (e) spontaneity of caregiver reflection (prompted or spontaneous). RPM was calculated by summing the number of times the code occurred in a transcript divided by the total length of the video in minutes for each occasion of measurement. RF was calculated by summing the number of times the code occurred in a transcript divided by the total number of times each code within the category occurred, multiplied by 100. Mean RPM and RF for each outcome measured were reported across all three measurement occasions.

Mixed-effects modeling. Because mixed-effects modeling allows analysis of data nested within participants and groups, and it is robust against homoscedasticity and sphericity, it was used to examine differences across groups (Quené & Van den Bergh, 2004). Models that included random intercepts and slopes, main effects, and interactions were conducted in R (R Core Team, 2018) for the following outcomes: RPM of type of conversational turn (reflective vs. nonreflective), RPM of topic of reflection (5Q vs. other), and RPM of initiation of caregiver reflection (Prompted vs. Spontaneous). The fixed effects included the outcome variables and group assignment. The random effects included participant identification number and dyad assignment. The Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and Wald chi-square test values were computed and used together to compare overall model fit and to identify the most parsimonious model (McCoach & Black, 2008). The models that best fit the data are described in the results. All methods and procedures for the present study were approved by the university's Institutional Review Board.

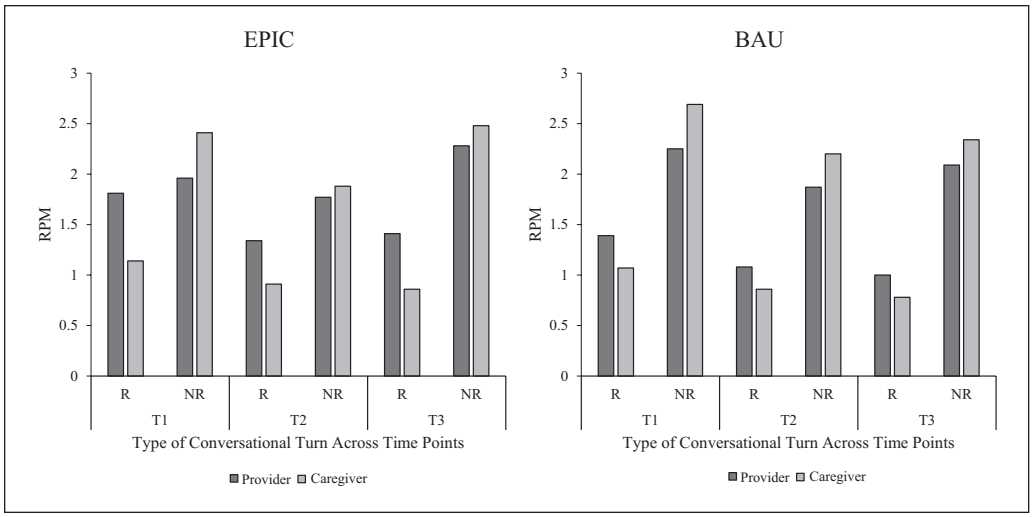

Figure 1. Mean rate per minute (RPM) of reflective (R) and nonreflective (NR) conversational turns across three measurement occasions (T1, T2, T3).
Note. EPIC = Embedded Practices and Intervention with Caregivers; BAU = business-as-usual.

Results

Data were collected using transcripts of provider–caregiver conversations during home visit coaching sessions. The total number of reflective and nonreflective conversational turns, as well as the frequencies of different types of reflection (comments and questions), topics of reflection (5Q and other), and initiation of reflection (prompted and spontaneous) across each time point and participant is presented in the following paragraphs.

Reflective Versus Nonreflective Conversational Turns

Based on mean RPM and RF computations, there appeared to be little to no difference between the EPIC and BAU groups on reflective versus nonreflective turns, suggesting reflection is used by providers in early intervention across coaching approaches. Providers and caregivers in both groups had higher rates of nonreflective conversational turns than reflective turns, and providers were noted to have slightly higher rates of reflective turns than the caregivers (Figure 1). In the EPIC group, the RF of reflective turns was slightly higher (EPIC = 43%, Control = 37%), and there was a slight decrease in the RF of EPIC provider–caregiver reflective turns over time (T1 = 43%, T2 = 35%, T3 = 34%). The RF of reflective turns remained relatively stable for caregivers and providers in the BAU group. The mixed-effects model examining the effects of the mean RPM of conversational turn type (reflective vs. nonreflective) on group revealed a statistically significant difference between turn type in the main effects model ($b = –.91$, $SE = .09$, $p < .001$). However, in the interaction model, group assignment did not predict turn type ($b = .06$, $SE = .19$, $p = .76$).

Reflective Comments and Questions

Provider–caregiver dyads in the EPIC group produced a higher rate of critical reflections than dyads in the BAU group, whereas the mean RPM of interpretive and objective reflections were consistent across groups (Figure 2). The RF of objective reflections was highest in both groups (EPIC = 45%, BAU = 55%), followed by interpretive reflections (EPIC = 31%, BAU = 32%)

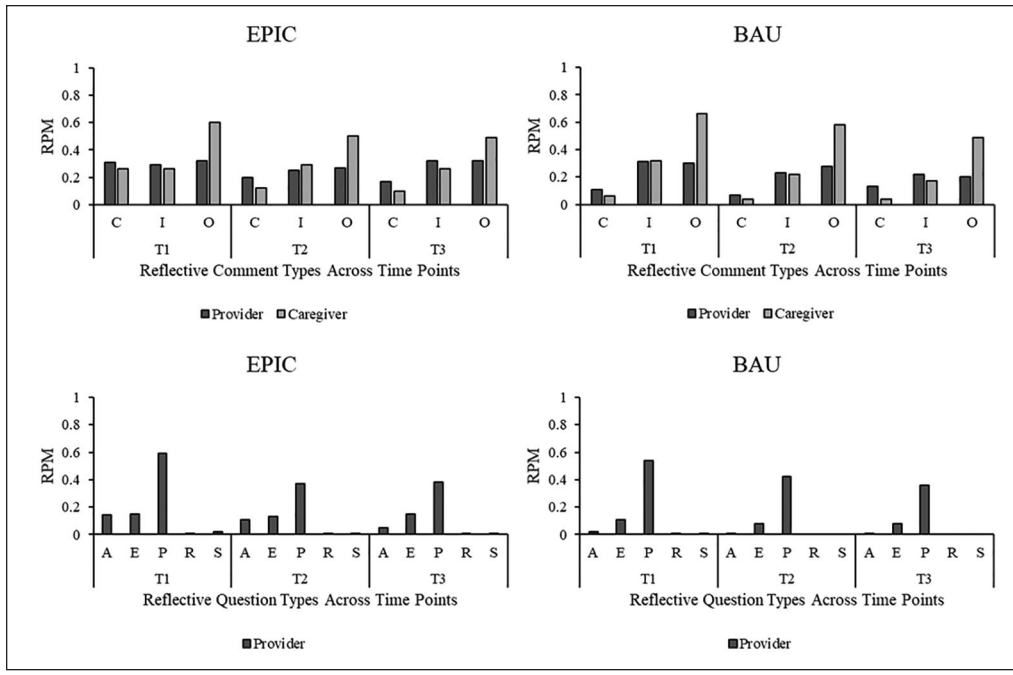

Figure 2. Mean rate per minute (RPM) of provider and caregiver comment types (C, I, O) and provider question types (A, E, P, R, S) across three measurement occasions (T1, T2, T3).
Note. EPIC = Embedded Practices and Intervention with Caregivers; BAU = business-as-usual; C = critical; I = interpretive; O = objective; A = anticipatory; E = evaluative; P = probing; R = reflexive; S = supposition.

and critical reflections (EPIC = 20%, BAU = 10%). There were limited differences in the types of questions asked by providers across groups. Both groups of providers asked probing questions at the highest rate, followed by evaluative questions (Figure 2). Providers in the EPIC group had slightly higher rates of evaluative and anticipatory questions than providers in the control group. Differences were noted in the RF for anticipatory (EPIC = 12%, BAU = 3%) and evaluative (EPIC = 22%, BAU = 16%) questions, with reflexive (EPIC = 1%, BAU = 0%) and supposition (EPIC = 2%, BAU = 0%) questions being rarely used. Mixed-effect models were not conducted for reflective comments and questions due to the limited data available for each turn type.

Reflective Conversational Topics

Dyads in the EPIC group had higher rates of reflective conversational turns related to the 5Q when compared with the control dyads (Figure 3). EPIC dyads also had a higher RF of turns related to the 5Q (EPIC = 74%, Control = 60%) as compared with other topics (EPIC = 23%, Control = 38%). A mixed-effects model predicted the effects of group on the RPM of reflective topics (5Q vs. Other), revealing a statistically significant difference between the mean RPM of topic types ($b = .50$, $SE = .04$, $p < .001$). The interaction model revealed a statistically significant interaction between topic by group ($b = .40$, $SE = .08$, $p < .001$). Plotting the interaction revealed a greater discrepancy between 5Q and other topics for dyads in the EPIC group as compared with the BAU group. Model fit indices indicated the interaction model was the best fit for the data, with lower AIC and BIC values and a significant Wald chi-square test, main effects: AIC = 431.56, BIC = 455.07; Interaction: AIC = 410.60, BIC = 438.03; $\chi^2(df) = 22.96$ (1); $p < .001$.

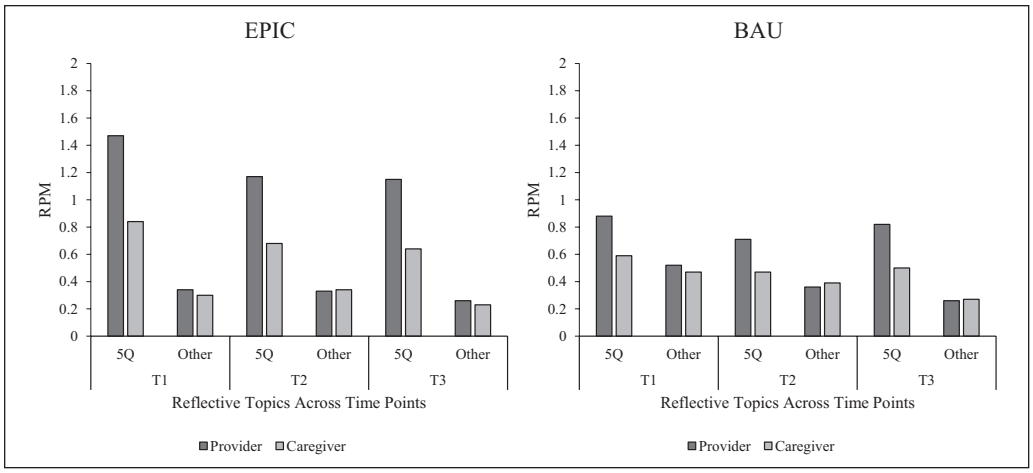

Figure 3. Mean rate per minute (RPM) of provider and caregiver reflective conversational turns by topic (5Q, Other) across three measurement occasions (T1, T2, T3).
Note. EPIC = Embedded Practices and Intervention with Caregivers; BAU = business-as-usual; 5Q = 5 Questions/intervention topics; Other = nonintervention topics.

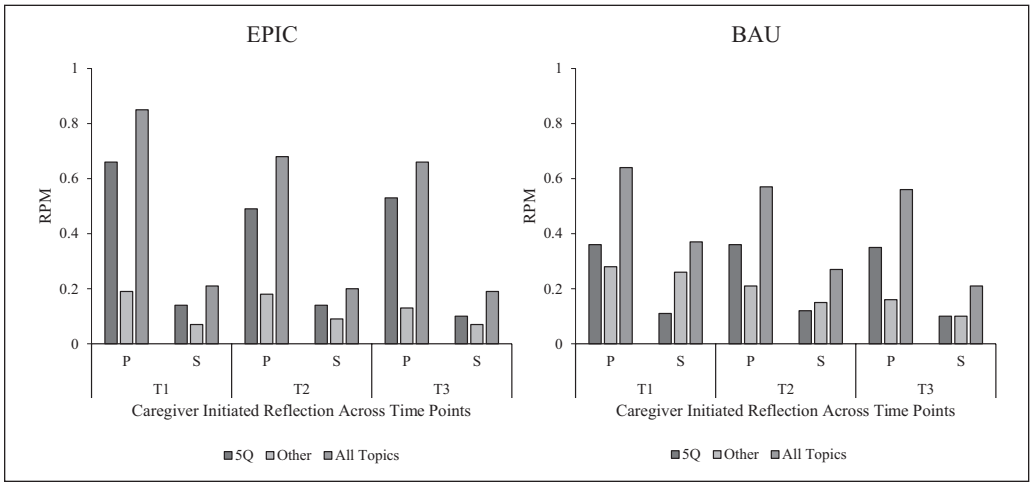

Figure 4. Mean rate per minute (RPM) of caregiver prompted (P) and spontaneous (S) reflective conversational turns by topic (5Q, Other, All Topics) across three measurement occasions (T1, T2, T3).
Note. EPIC = Embedded Practices and Intervention with Caregivers; BAU = business-as-usual; 5Q = 5 Questions/intervention topics.

Initiation of Caregiver Reflection

Both groups had more provider-prompted caregiver reflections than caregiver-initiated reflections, with the mean RPM of prompted reflections being slightly higher in the EPIC group, specifically at the T1 measurement occasion (Figure 4). A higher rate of prompted versus spontaneous caregiver turns were related to 5Q topics versus Other; this pattern was strongest in the EPIC group. The overall RF of prompted and spontaneous caregiver reflections were 76% and 20% for the EPIC caregivers and 67% and 30% for the BAU caregivers, respectively. After conducting mixed-effects modeling, the main effects model revealed a statistically significant difference in prompted and spontaneous caregiver reflections ($b = -.43$, $SE = .04$, $p < .001$), and the

spontaneity by group interaction was also statistically significant ($b = –.24$, $SE = .08$, $p < .001$). Plotting the interaction of spontaneity by group revealed a slightly greater discrepancy between prompted versus spontaneous caregiver reflections in the EPIC group as compared with the BAU group. Model fit indices indicated the interaction model was the best fit for the data, Main Effects: AIC = 71.97, BIC = 88.09; Interaction: AIC = 64.67, BIC = 84.03; $\chi^2(df) = 9.29$ (1); $p < .01$.

Discussion

The results of this study provide the field with an initial understanding of the frequency, types, topics, and spontaneity of provider and caregiver reflection during early intervention home visit sessions. This information is important as the field continues refining how and when reflection is used for building caregiver capacity to support the development and learning of young children with or at risk for disabilities, and for improving the fidelity with which providers implement caregiver coaching approaches that include reflection as an active ingredient. The sections that follow further interpret the results of this study, exploring practice implications and identifying directions for future research.

Types of Conversational Turns

This study found reflection was used in both conditions, and there were no statistically significant or noteworthy differences in the number of reflective versus nonreflective conversational turns for providers in the EPIC and BAU groups. Several factors potentially explain this finding. First, the professional development for EPIC was relatively short, and research suggests learning a curriculum or intervention model requires more than 100 hr of training across more than 6 months (Banilower et al., 2006; Blank & de las Alas, 2009). The EPIC professional development program was 19 to 25 hr over approximately 7 months, including coaching for EPIC providers by external coaches: an average of 6.69 times (range = 3–9 times) for 1 hr each time. Additional professional development, including opportunities for practice with feedback, might be necessary to explicitly teach providers specific types of reflection and for providers to gain confidence in using and facilitating reflective conversations with caregivers. While EPIC providers were coached to use reflection as they implemented SOOPR, it might be that they did not increase reflection overall, but rather used it differently during their coaching sessions.

Another explanation could be the relationship established between providers and caregivers. Providers in the EPIC group started the professional development program with new families, which might have affected the amount and type of reflection that occurred during home visits as these providers were building relationships with their families while implementing the EPIC approach. In contrast, providers in the BAU group worked with families who were already on their caseloads and likely had established relationships with these families.

Finally, the inclusion of affirmations (e.g., *uh-huh, okay, yeah, that's great*) as nonreflective turns in the coding scheme might have resulted in an overrepresentation of nonreflective turns. Many providers and caregivers used affirmations during reflective conversations, and in a previous study, Jayaraman and colleagues (2015) proposed nonreflective acknowledgements were part of the reflective process. The nonreflective acknowledgments represented a two-way interaction between the provider and caregiver, with both individuals speaking, listening, and acknowledging the thoughts and ideas of the other. Similarly, the results of this study may suggest providers and caregivers in both groups were equally participating in conversations, and the affirmations during reflective conversations merely overrepresented the rate and frequency of nonreflective turns.

Reflective comments and questions. Reflection is more than a review of what occurred during a home visit session; it includes acknowledgment of feelings and perspectives, evaluation of

progress, and identification of problems and next steps (Friedman et al., 2012). To cover all areas of reflection in a home visit and meet the caregiver's learning needs, providers may need to use a variety of reflective questions and facilitate multiple opportunities for various reflective comments (Sofo et al., 2010; Zeichner, 1994). Although there were no statistically significant differences in the frequency and rate of reflective versus nonreflective conversational turns, there were differences in the types of reflective comments and questions. In this study, providers and caregivers in the EPIC group produced more critical comments and anticipatory questions when compared with dyads in the BAU group. The rate and frequency of critical comments and anticipatory questions also appeared to decrease across the three measurement occasions for the EPIC group, and this same trend was not noted in the BAU group. Asking an anticipatory question, such as how a caregiver can embed an intervention strategy into a new routine, sets up opportunities for caregivers to think ahead, solve problems, and make decisions about future practice (i.e., critical comments). Given EPIC providers used more anticipatory questions, they might have set up more opportunities for critical comments, which is consistent with the data collected on EPIC caregiver critical comments. In addition, the need for critical comments and anticipatory questions might have been greater at the beginning of the intervention when caregivers and providers were establishing a collaborative relationship and child outcomes were being identified and targeted. Over time, they might have prioritized the child outcomes, leading to less need for anticipatory questions and critical comments. Toward the end of the EPIC intervention, reflections might have focused more on identifying what worked or did not work (evaluative questions, interpretive comments), as there was a slight increase in evaluative questions for the EPIC group across the three measurement occasions.

The rates of reflexive and supposition questions, which are more indirect and do not focus on identifying or evaluating specific intervention strategies, were slightly higher in the EPIC group, but relatively low across both groups in comparison with the other question types. This finding suggests (a) these question types may not be relevant to specific families or the caregiver coaching approach or (b) providers needed more support in using these question types. Given that reflexive and supposition questions are less direct, these types of questions may not be viewed as useful to providers during home visit sessions, especially if there is an explicit focus on increasing intervention implementation and evaluating its effects on caregivers and children. The high frequency of probing questions across both groups suggests providers may need multiple exemplars and coaching support to identify other types of questions that can be used to facilitate caregiver reflection (Salisbury et al., 2018). Our reflection coding scheme was based on research from a variety of disciplines, including higher education, teacher professional development, nursing, and mental health. With further analysis, the field can identify the specific types of reflective questions that fit caregiver learning needs, child outcomes, and coaching approaches in early intervention.

Reflective Conversational Topics

There was a statistically significant difference in reflective conversational topics across groups, with providers and caregivers in the EPIC group having a higher rate of reflective conversational turns on the 5Q topics (e.g., intervention topics). Through participation in the EPIC professional development program, providers in the EPIC group were specifically taught to use the 5Q to increase caregiver understanding, planning, use, and evaluation of embedded instruction during and between home visit sessions. The greater focus on the 5Q in the EPIC group potentially explains the differences in reflective topics as well as reflective comments and questions. All five questions in the 5Q process can be used to encourage caregivers to think about ways to increase the quality of intervention and evaluate its effects, or, in other words, to engage in critical and interpretive reflection. Through the guidance of the 5Q, providers and caregivers in the EPIC

group might have engaged in higher rates of reflection on intervention topics and used more anticipatory questions, and critical and interpretive comments to enhance intervention implementation and evaluation. Using tools, such as the 5Q, may support conversations that include reflection and problem-solving during home visit sessions and prevent conversations from deviating toward topics less directly related to caregivers' intervention priorities.

Spontaneity of Caregiver Reflection

The EPIC group had a significantly higher rate of prompted caregiver reflections. This finding was expected as providers in the EPIC group were taught to prompt caregiver reflection and regularly used the 5Q to focus conversations on intervention topics. To continue building caregiver capacity, however, providers must eventually support caregivers in initiating reflection independently (Rush & Shelden, 2020; Woods et al., 2011). Based on the descriptive data, there was not a change in initiated caregiver reflections across time, but there were differences in the rate of caregiver spontaneous reflections by topic. In the EPIC group, caregivers had a higher rate of spontaneous reflections related to the 5Q in comparison with their rates of reflection related to Other topics. This suggests that caregivers in the EPIC group independently reflected on topics focused on the intervention at a higher rate than caregivers in the control group, which would be a positive outcome that may support caregiver capacity building and ultimately independence in intervention strategy use.

In coaching, providers are often taught to decrease caregiver prompting to support caregiver independence in intervention implementation and evaluation (Snyder et al., 2015; Wetherby et al., 2018). It would be expected providers would prompt caregivers less as intervention progressed; however, this was not observed in this study. Stable levels of caregiver prompting might be due to changes in child targets or intervention routines, with new targets and routines requiring more intensive problem-solving and reflection, leading to increases in prompting. The frequency of prompting might also be related to caregiver participation, with some caregivers needing prompts to share their reflections aloud, especially early in the relationship. To better capture the spontaneity of caregiver reflections, refinement of the coding scheme with different levels of prompting, rather than prompted or spontaneous, may help identify differences in the use of prompted reflection across time.

Practice Implications for Early Intervention

Defining Reflection as a Coaching Strategy

Several caregiver coaching models include reflection as a coaching strategy; however, these models rarely provide adequate definitions or procedural descriptions of how reflection should be facilitated (Lorio et al., 2020). The absence of definitions and procedural descriptions likely impact how providers use reflection as a coaching strategy and may also impact providers' use of other coaching strategies. By defining different types of reflection and when and how reflection should be conducted, providers can have more success in facilitating various types of reflection that are matched to the caregiver's learning needs. Providers in the EPIC professional development program were taught to facilitate reflective conversations throughout the home visit session. Other models of caregiver coaching focus on reflective conversations at a specific time in the intervention session, such as the beginning or end (e.g., Wright & Kaiser, 2017). More research is needed to compare how reflection changes when facilitated throughout a home visit versus during a specific time of the visit. Setting aside a separate time for reflection could decrease the frequency of provider and caregiver reflections during practice opportunities. If reflection is defined as a strategy that can be embedded throughout the caregiver coaching session, providers may be better equipped to support reflections during practice opportunities,

encouraging caregivers to make intervention changes in the moment while also increasing the overall frequency of reflection across the session.

Improving the definitions of reflection as a coaching strategy and different types of reflection will require a focus on the fluid nature of reflection and the different reflective comments and questions explored within this study. Although other disciplines have defined various types of reflective comments and questions, these definitions may or may not be appropriate for caregiver coaching. Of the various models of reflection used to develop the current coding scheme, few included a type of reflection that focused on making decisions, improving intervention quality, or identifying solutions. Definitions of reflection may need to be specific to reflection in early intervention caregiver coaching with emphasis on the types of reflections and related reflective processes that are required to support caregiver capacity, confidence, and independence with intervention implementation and evaluation.

Professional Development for Providers

Effective caregiver coaching requires knowledge of various coaching strategies, including when, where, and how to use strategies to support caregiver intervention implementation (Friedman et al., 2012). The ability to facilitate reflective conversations is one skill early intervention providers need to provide coaching services. As such, preservice preparation and professional development in caregiver coaching should explicitly teach and model the different types of reflection that can occur throughout a home visit session (Inbar-Furst et al., 2020; Salisbury et al., 2018). Discussions of the purposes for using reflection as a coaching strategy and how it can support the development of family capacity and caregiver independence is also critical. Merely giving providers a list of potential reflective questions is likely insufficient. Providers need to know how reflective questions differ and the types of caregiver reflection that can result from a specific reflective prompt (Lorio et al., 2020). They also need to know that their use of reflective questions and comments will likely vary based on a family's cultural, linguistic, and socioeconomic background, their intervention preferences and priorities, as well as the individual caregiver's level of motivation, learning needs, and capacity to initiate independent reflections (Collin et al., 2013). Increasing providers' explicit understanding of reflection will help them choose relevant reflective questions or model reflective comments in ways that support caregivers' initiation of reflection.

Limitations

Due to the exploratory nature of this study, several limitations exist. First, the study used existing data from a larger study focused on examining the effects of the EPIC intervention. Although reflection was part of the caregiver coaching approach used in EPIC, providers were not taught the different types of reflective comments and questions coded in this study. Future caregiver coaching studies with explicit instruction for providers in the different types or forms of reflection may result in different findings. Second, caregivers were recruited before providers, which might have impacted the providers' decision to participate in the study. In addition, all providers and caregivers volunteered to participate in the study and might have been more motivated and interested in learning coaching strategies or being coached. Differences in provider–caregiver relationship may have also impacted study results as dyads in the EPIC group were new to each other, and dyads in the BAU group had established relationships. Furthermore, some attrition occurred across both groups, which might have resulted in data from providers and caregivers with higher levels of motivation. Finally, the results of the study represent a small sample of providers and caregivers and one coaching approach (EPIC). Consequently, the results of this study may not generalize to providers and caregivers in other areas of the United States with less experience in caregiver coaching or to other dyads using other coaching approaches.

Directions for Future Research

Although the results of this study provide preliminary data, it remains unclear when, how, and how often providers should facilitate reflective conversations with caregivers during home visit sessions (Kemp & Turnbull, 2014; Lorio et al., 2020). As noted by Salisbury and colleagues (2018), there is much more to learn about the provider–caregiver relationship and the features of caregiver coaching models that support reflective conversations. Continuing this line of research will support providers in their use of reflection as an evidence-based coaching strategy and help the field better define reflection, including the different types of effective reflection and reflective practices.

The current coding scheme may serve as a draft for a tool that can be used to evaluate the frequency, quality, and effectiveness of provider and caregiver reflections in early intervention. Our coding scheme was based on the available reflection research within and outside the early intervention discipline; however, in future studies, additional codes can be added to better characterize reflection as it relates to early intervention caregiver coaching. The reflective coding scheme can be revised to evaluate directedness of provider reflective prompting and definitions of reflective comments and questions can be refined to match how they are used in the field. In addition, affirmations should be eliminated from the nonreflective code so responsiveness during reflective conversations can be better analyzed. Future studies on reflection should explore if reflection differs across early intervention provider disciplines (e.g., speech-language pathology, physical therapy, and nursing) and intervention outcomes, and collect measures of therapeutic alliance (e.g., strength of provider–caregiver relationship and overall agreement on intervention approaches), provider and caregiver dispositions, and sequences of coaching strategies, which could support researchers in evaluating how provider–caregiver background, relationships, dispositions, motivations, and coaching strategy sequences affect reflective conversations (Crits-Christoph et al., 2013; Manning, 2010). Finally, research on reflection in early intervention should explore how reflective conversations change within and across coaching sessions and identify when and where more prompting is needed to support caregivers in reflecting on their practices. In this study, the 5Q visual model potentially guided the reflective conversations among dyads in the EPIC group. Visual models or checklists have been found to be powerful tools for enhancing service delivery and intervention practices (Oliver et al., 2015; Rispoli et al., 2017); therefore, the use of such tools for guiding reflection should be further analyzed.

Conclusion

This exploratory study was one of the first to examine the frequency and different types of reflective comments and questions posed during caregiver coaching home visit sessions. The research on reflection and strategies to support reflection is limited across disciplines, including early intervention. Rather than basing reflective strategies on those used in other fields, early intervention researchers need to identify reflective strategies based on the needs of families, the outcomes targeted, and coaching models used. The coding scheme and content analyses employed in this study serve as a starting point for this line of research, and the findings from this study should be compared with other studies on reflection to refine and deepen understanding of the nature of reflection within early intervention caregiver coaching.

Authors' Note

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Declaration of Conflicting Interests

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: C.M.L. and P.S. receive salaries from their respective universities. No other conflicts of interest were declared.

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