# Coordinated Teacher and Parent Interventions for Early Head Start

## Supporting Interactions and Children's Development

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**Abstract**

Interventions that support quality interactions between infants and their caregivers enhance early development. Few interventions support consistent, quality interactions across both home and early childhood centers in a coordinated way. The Early Head Start Parent–Teacher Intervention Consortium (EHS-PTIC) was created by the Administration for Children and Families to understand how early childhood programs could improve children's development by promoting high-quality caregiver–child interactions across home and early childhood centers, via coordinated interventions for both parents and teachers. Four EHS-PTIC sites that developed, implemented, and are evaluating coordinated interventions to support caregiver–child interactions are highlighted in this article.

Infants and toddlers develop in the context of relationships. The quality of the interactions that they have with their caregivers, and their caregivers have with each other, influence all aspects of their development (National Research Council & Institute of Medicine, 2000). Early Head Start (EHS), a federally funded early childhood program for low-income families with children up to 3 years old, encourages high-quality interactions between children and their caregivers (teachers and parents) and between children's parents and teachers. There is a need for coordinated interventions in EHS center-based programs because (a) the development of infants and toddlers is highly responsive to experience, as such it may be a prime time for interventions (National Scientific Council on the Developing Child, 2007); (b) there are few formal caregiving curricula for center-based infant and toddler care, and those that exist have little evidence for whether or how they support development; and (c) center-based EHS programs have been found to be less effective than the home-based option at supporting parenting (Love et al., 2002).



In an effort to strengthen caregiving quality for infants and toddlers in EHS center-based care, the EHS Parent–Teacher Intervention Consortium (EHS-PTIC; see Box 1, next page), comprising four research sites from different geographic regions, is testing coordinated teacher- and parent-focused interventions within center-based EHS programs. All the interventions target high-quality caregiver–child interactions that support infant/toddler development. However, the interventions offered across each site approach coordination differently. Some interventions align the content that teachers and parents receive by providing parallel interventions that target the same interaction skills and use a shared vocabulary. Others provide teachers with professional development that supports high-quality interactions with children in the classroom and skills to partner and collaborate with parents, to promote high-quality interactions at home.

The interventions developed by the consortium sites will (a) inform the field about best practices in implementing coordinated interventions and (b) provide evidence for effectiveness across a range of caregiver and child outcomes. In this article, we describe the rationale for the development of the EHS-PTIC, provide an overview of the four interventions, and highlight the consortium's shared research questions.

## Box 1. Early Head Start Parent–Teacher Intervention Consortium Members

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# The Importance of Coordinated Interventions in Center-Based Infant–Toddler Care

High-quality interactions between adults and young children are characterized by behaviors that are sensitive and responsive, supportive of children's autonomy, and appropriately encourage young children's learning (Helmerhorst et al., 2014). In high-quality interactions, adults follow the child's lead, engage in turn-taking, demonstrate sensitivity in their interactions, establish and sustain the child's interest and engagement, and provide structures and limits.

The goal of coordinated interventions is for children to be exposed to high-quality interactional experiences at home with their parents and at school with their teachers. Coordinated interventions for parents and teachers capitalize on training across home and school/early childhood education center contexts, so that children are exposed to consistent and high-quality interactional experiences across settings (Landry et al., 2017). Although there is evidence that interventions aimed only at either teachers or parents support high-quality caregiving interactions, few interventions are designed for parents and teachers targeting both environments where children spend the majority of their time. There are a handful of coordinated interventions for preschool children and their caregivers, and these interventions show promising outcomes (e.g., Biringen et al., 2012; Helmerhorst et al., 2017; Moreno et al., 2015). However, most interventions for caregivers of infants and toddlers target either teachers or parents.

### Interventions for Teachers

Teacher–child interactions are significant for young children. High-quality teacher–child interactions are positively associated with infant–toddler language and social–emotional development (Choi et al., 2019; Mortensen & Barnett, 2014) with some positive outcomes sustaining into adulthood (Reynolds et al., 2010). Further, there is evidence that high-quality interactions between children and teachers can buffer the effect of environmental risk on child outcomes (Goelman et al., 2014; NICHD ECCRN, 2003; Vernon-Feagans et al., 2013). Interventions aimed at improving teacher–infant/toddler interactions, such as sensitive responsiveness, developmental stimulation, and verbal communication, have been found to be effective (Biringen et al., 2012; Helmerhorst et al., 2017; Moreno et al., 2015). However, interventions that target teacher–child interactions have been studied mainly in preschool samples. In a meta-analysis of classroom-based interventions to improve quality of care for preschool children, Werner et al. (2016) found that individualized training experiences for teachers yielded greater improvement in the quality of teacher–child interactions. Each EHS-PTIC intervention is individualized, offering some degree of coaching.

### Interventions for Parents

Across studies, parenting warmth and sensitivity and children's attachment security are associated with children's language, executive functioning, and prosocial behaviors (Bernier et al., 2015; Fearon et al., 2010; Madigan et al., 2019). Further, parental sensitivity buffers against the impact of cumulative risk on children's outcomes (Ruberry et al., 2017). Enhancing the quality of the home environment, including strengthening parent–child relationships, is a focus of EHS. However, the effects of EHS on parenting are most pronounced for those in home-based programming.

Although there are many parenting interventions focused on quality parent–child interactions, few are available for center-based EHS. Center-based programs can support parents directly via workshops and coaching, and indirectly by supporting the teacher's ability to work with parents. Because teachers already have a relationship with parents and know how to support development, they can provide one-on-one support to parents that is individualized to their children's needs. To date, there has been little research conducted on how to best support parents within center-based programs. Therefore, there is a significant need for coordinated interventions that provide support for parent–child, teacher–child, and parent–teacher relationships in infant/toddler center-based program settings.

### Interventions for Teachers and Parents

Bronfenbrenner's ecological model provides a theoretical framework for understanding parents' and teachers' individual influence on children's learning and development as well as their joint contributions (Bronfenbrenner & Morris, 1998). In addition to their independent influence, when teachers and parents both hold child-centered beliefs, respect child autonomy, and respond to children with sensitivity and warmth, children's language, literacy, and social–emotional skills improve (Barbarin et al., 2010). Shared beliefs and values can impact the quality of the relationship between parents and teachers and have a positive impact on children's developmental skills (Sheridan et al., 2019). The coordinated interventions that have been developed for teachers and parents are limited and reviewed in the following paragraphs. The positive outcomes of these interventions provide support for the need to develop coordinated interventions for infant/toddler caregivers.

Although the content, focus, and delivery methods vary across the limited coordinated interventions for caregivers of children, results of these interventions are promising. Some interventions provide teachers and parents with content that is aligned between the home and classroom. For example, Justice and colleagues (2015) provided teachers and parents with the same reading materials and a schedule to use materials across contexts. The ParentCorps intervention (Brotman et al., 2013, 2016) provides aligned content to parents and teachers across separate training programs and is effective at improving parent knowledge, behavior management skills, and involvement. ParentCorps teachers demonstrated more nurturing interactions with children; children showed improved academic achievement into second grade and were less likely to develop emotional or behavior problems (Brotman et al., 2013, 2016; Dawson-McClure et al., 2014). Another intervention that aligns content between the home and classroom was evaluated by Landry and colleagues (2017, 2021). They evaluated the effects of The Early Education Model in Head Start classrooms and the Play and Learning Strategies (PALS) intervention for Head Start parents and found improvements in adult–child interactions. There was an added benefit for children in the combination of The Early Education Model and PALS interventions on their interactive behavior. These interventions have been tested in preschool settings.

Some interventions provided coaching support directly to teachers as well as parents. For example, the Research-Based, Developmentally Informed intervention provides coaching to Head Start teachers using the Promoting Alternative Thinking Strategies curriculum and activities to build language and literacy skills while parents participate in a home-based intervention where they are trained to use the same strategies with their children. Integrating parents into the intervention, which was originally designed solely for teachers, helped to sustain the positive effects of classroom-only intervention (Bierman et al., 2017). Children who received the aligned Research-Based, Developmentally Informed intervention showed higher scores on literacy, academic performance, and social competency that continued into third grade (Bierman, et al., 2018; Loughlin-Presnal & Bierman, 2017).

Other interventions focus simultaneously on teachers and families to support their collaboration and shared child development goals. The Getting Ready intervention (Sheridan et al., 2008) promotes children's learning and development by enhancing relationships and strengthening partnerships among families and teachers, which results in increased parent engagement with teachers and children, and increased school readiness (Knoche et al., 2012; Sheridan et al., 2010, 2011). Getting Ready has been applied in infant/toddler home-based and center-based preschool settings.

As demonstrated in these studies, coordinated interventions have potential to improve parent– and teacher–child interactions and to improve the parent–teacher relationship. Given the importance of high-quality parent–child and teacher–child interactions and consistent caregiving across contexts, there is a significant need for coordinated interventions that promote consistent, high-quality interactions for infants and toddlers across home and early childhood education center environments. Center-based EHS programs are an ideal place to implement and test these interventions.

## EHS as a Context for Quality Caregiving

EHS is a federally funded, community-based, early childhood program for low-income pregnant women and families with infants and toddlers up to 3 years old. Center-based EHS, including EHS Child Care Partnerships (CCPs), is designed to encourage the physical, social, emotional, cognitive, and language development of children and promote high-quality interactions in center-based programming. Recognizing the immense influence that families have on the growth and development of children, EHS center-based programs and CCPs are expected to support the families of children in their care by working with each family to identify goals and develop individualized family plans that focus on the child's developmental needs and the family's social and economic needs. Through their interactions with families, EHS staff promote parents' roles as their child's first teacher and place a high value on supporting the parent–teacher relationship. EHS promotes family engagement in infant–toddler settings and encourages strong teacher–child interactions to support school readiness outcomes.

## The EHS-PTIC

In response to the need for coordinated interventions for infant–toddler caregivers, the Administration for Children and Families funded four intervention projects in 2015 supporting both teachers and parents within center-based EHS and EHS CCPs. The EHS-PTIC was specifically designed to contribute to a knowledge base regarding how early childhood programs could improve children's development by promoting high-quality caregiver–child interactions at home and early childhood education care centers, via coordinated parent and teacher interventions. EHS-PTIC projects are led by researchers working

in partnerships with EHS center-based and CCP programs and aim to implement and evaluate coordinated interventions. Activities for each project include an implementation study and testing of intervention effectiveness in a randomized controlled trial in which participants were randomly assigned to one of two groups. One group receives the training and the other does not. This research design allows researchers to understand whether changes participants made were the result of the training.

The projects are assessing the unique contributions of their intervention via qualitative and quantitative methods to examine questions related to implementation (e.g., What conditions are necessary for successful implementation? What are challenges to implementation?) and effectiveness (e.g., Does the intervention impact caregiving practices? Which caregivers and children benefit most from the intervention?). In addition to these independent analyses, the projects are answering shared research questions via a set of common measures. The shared questions across sites provide an important context for understanding implementation and efficacy findings. The consortium will address questions such as: What are the training/professional development experiences of EHS teachers? How are teacher professional development and teacher well-being associated with qualities of teacher–child interaction? How do cumulative, high-quality relational experiences across home and center environments contribute to the outcomes of infants/toddlers in EHS center-based care? How are parent–teacher relationships associated with infant/toddler well-being in EHS center-based care? Table 1 describes the measurement for

*Table 1. Shared Measures Across Consortium Sites*

| Teachers | | | | |
|---|---|---|---|---|
| **Construct** | **Measure** | **Data source** | **Sites** | **References** |
| Demographics and training | Early Head Start Parent-Teacher Intervention Consortium Demographics | Teacher report | FL, MI, NE, TX | Developed by Consortium |
| Classroom quality | Quality of Caregiver-Child Interactions for Infants and Toddlers | Observation | MI, TX | Atkins-Burnett et al. (2015) |
| | Classroom Assessment Scoring System | Observation | FL | LaParo et al. (2011) |
| | Infant/Toddler Environment Rating Scale | Observation | NE | Harms et al. (2006) |
| | Caregiver Interaction Scale | Observation | NE, TX | Arnett (1989) |
| Parent–teacher relationship quality | Family and Provider/Teacher Relationship Quality Questionnaire | Teacher report | FL, NE<br>Short form: MI | Kim et al. (2015) |
| | Parent Caregiver Relationship Scale | Teacher report | FL, MI, NE | Elicker et al. (1997) |
| Stress and mental health | Center for Epidemiologic Studies—Depression | Teacher report | MI, TX | Radloff (1985) |
| | Childcare Worker Job Stress Inventory | Teacher report | FL, MI, NE, TX | Curbow et al. (2000) |
| | Adverse Childhood Experiences | Teacher report | FL, MI | Fellitti et al. (1998) |
| Caregiving beliefs | Parental Modernity Scale | Teacher report | TX | Schafer & Edgerton (1985) |
| Child development | MacArthur-Bates Communicative Development Inventories | Teacher report | FL | Fenson et al. (2007) |
| | Preschool Language Scales | Observation | FL, NE, TX | Zimmerman et al. (2011) |
| | Brief Infant Toddler Social-Emotional Assessment | Teacher report | FL, MI, NE, TX | Briggs-Gowan & Carter (2006) |
| | Ages & Stages Questionnaire | Teacher report | FL, NE | Squires et al. (2009) |
| Demographics | Early Head Start Parent-Teacher Intervention Consortium demographics | Parent report | FL, MI, NE, TX | Developed by P/T Intervention Consortium |
| | Household Economic Insufficiency | Parent report | FL, MI, NE, TX | Raver et al. (2013) |
| Parent–teacher relationship quality | Family and Provider/Teacher Relationship Quality Questionnaire | Parent report | Long form: FL, NE<br>Short form: MI | Kim et al. (2015) |
| | Parent Caregiver Relationship Scale | Parent report | FL, MI, NE | Elicker et al. (1997) |
| Stress & mental health | Center for Epidemiologic Studies—Depression | Parent report | FL, MI, NE, TX | Radloff (1985) |
| | Parenting Stress Index (4th ed.) | Parent report | FL, MI, NE, TX | Abidin (2012) |
| | Adverse Childhood Experiences | Parent report | FL, MI | Fellitti et al. (1998) |
| Child development | Brief Infant Toddler Social-Emotional Assessment | Parent report | FL, M, NE, TX | Briggs-Gowan & Carter (2006) |
| | MacArthur-Bates Communicative Development Inventories | Parent report | TX, NE | Fenson et al. (2007) |

shared constructs, including teacher–child interactions, teacher–parent relationship quality, parent stress, child social–emotional development, and child language development.

## Coordinated Interventions Tested

Four coordinated interventions were developed for use in EHS sites. The interventions are described in the following sections, and Table 2 provides an overview of each intervention's guiding framework, duration, key features, and the ways in which the interventions are coordinated.

### CoachingUP

CoachingUP is a responsive approach that uses inquiry to set goals for children and facilitate responsive interactions among teachers and children, as well as teachers and families. The approach was developed by the University of Miami team, led by Veronica Fernandez and Daryl Greenfield. CoachingUP is unique in that goals are centered around children's engagement and learning, and action plans reflect the interactions that support developmentally appropriate goals. By building collaborative partnerships through responsive dialogue, the approach shifts the focus from evaluating adult interactions to a shared commitment to children's development. CoachingUP uses theoretical foundations delineated in practice-based coaching and cognitive coaching. The approach was tailored to build on teachers', families', and children's strengths.

CoachingUP has two phases focused on supporting teachers' and families' knowledge and practice. During phase one, coaches establish and maintain collaborative partnerships with teachers by engaging in weekly 1-hour meetings. The meetings facilitate iterative cycles consisting of observation, goal-setting and flexible planning, and reflection. During the meetings, coaches support teachers' knowledge of child development, observation skills, and ability to connect their effective practices to children's

*Table 2. Description of Interventions*

| Intervention title | Site | Guiding frameworks | Duration | Delivery format | Key features | What makes the intervention coordinated? |
|---|---|---|---|---|---|---|
| CoachingUP | Florida | Ecological theory, Inquiry-based learning theory | Teachers: 7 to 22 coaching sessions each about an hour long; Parents: 1 to 11 contacts during pick-up or drop-off | Teachers: in-person weekly meetings facilitated by a coach, Parents: bi-directional communication initiated by teachers (with support from a coach), focused on positive observations and inquiries about children. | Child-focused goals; use of inquiry; strength-based approach; co-constructs goals with teachers; incorporates knowledge building and transfer to practice; video guided reflection; intentional learning within children's classroom routines. | One component of the intervention was a focus on bi-directional communication between teachers and parents (supported by a coach). The teachers and parents were encouraged to notice and share children's strengths, abilities, and interests. |
| Hearts and Minds on Babies (HMB) | Michigan | Attachment theory | Teachers: 7–14 sessions (28 hours) + 3 coaching sessions.<br>Parents: 3 sessions (4.5 hours)<br>Administrators: 4 sessions (20 hours) | Co-facilitators deliver content for teachers and administrators in groups of 10–12; parent groups are facilitated by a teacher and HMB facilitator. | Modeling of a reflective stance and parallel process for meeting needs for connection and exploration; visuals and role play to support HMB concepts; mindfulness stress reduction techniques | The parents and teachers are introduced to the same concepts. Teachers are supported to share concepts by leading parent groups and share content at drop-off and pick-up |
| Getting Ready 0-3 | Nebraska | Ecological Theory | Teachers: Monthly coaching and classroom observation for 2 years<br>Parents: 6 meetings with teachers/year | Teachers: 1-day in person training followed by individualized, monthly coaching sessions.<br>Parents: embedded in all interactions that take place with teachers. | 8 Getting Ready strategies; a collaborative structure to guide interactions with families; 5 adult–child practices; ongoing coaching support for teachers. | The parent and teacher use the same adult–child interaction practices during interactions with children. Teachers and parents work as partners to set developmental goals for children and determine appropriate, coordinated supports at center and home. |
| Supporting Sprouts | Texas | Attachment theory, Adult learning theory | Teachers: 15 sessions<br>Parents: 11–14 session | Online self-instructional courses with support from remote coach | Guided self-reflection, exemplar videos demonstrating key behaviors | Teachers and parents were exposed to the same adult–child interactions strategies through online self-paced learning modules and the use of exemplar videos that demonstrated high-quality interactions. Coaches support both parents and teachers through guided self-reflection of their own interactions with the child(ren). |

Infants and toddlers develop in the context of relationships.
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development. Coaches ask questions to prompt teachers' reflection on children's skills, abilities, and interests; set developmentally appropriate goals for children; and co-construct plans for responsive and intentional interactions, embedded into existing routines. After teachers implement plans, coaches facilitate teachers' reflection, highlighting teachers' effective interactions and supporting them in building and extending their existing capacities. During phase two, coaches add an emphasis on bidirectional home–classroom connection. Coaches support teachers in writing positive notes about children and asking families to share about their routines, cultures, and children's abilities and interests. Coaches and teachers collaborate to incorporate families' perspectives into responsive classroom experiences.

The CoachingUP randomized control trial sample consisted of 21 EHS-CCP center-based programs across three agencies and 74 classrooms (35 intervention; 39 control), with participation from 141 teachers, 336 families, and 435 children. Teachers (100% female) ranged from 25 to 65 years old ($M$ = 41.62), 42.6% identified as Black, 37.6% identified as White, and 5.7% identified as mixed race. Teachers represented 17 countries, and 55.3% identified as Latina. Sixty-three percent attended at least some college and 34.1% held a high school diploma or equivalency. Most parents were mothers (88.7%), ranging from 20 to 60 years old ($M$ = 32.18). Forty-four percent of parents identified as Black, and 16.0% identified as White. Parents represented 22 countries and 35.0% identified as Latino. Most parents held at least a high school diploma or equivalency (66%). Almost half of parents (47.9%) were not married or living with a partner. Children ranged between 13 and 43 months old ($M$ = 29.24) and were predominantly identified as Black (43%) and Latino (39%). Teachers participated in an average of 14 coaching sessions (ranging from 7 to 22 sessions).

The primary outcome assessed was teacher–child interaction quality and teacher–family relationship quality. In addition to the consortium-wide assessments, the Miami team included measures of organizational leadership, benevolent childhood experiences, teachers' perceptions of CoachingUP's impact, and lesson planning practices.

## Hearts and Minds on Babies

Hearts and Minds on Babies (HMB) is an attachment- and mindfulness-based intervention that aims to improve infant/toddler social–emotional development via improved caregiver reflective functioning, adult–child interactions, and the parent–teacher relationship. The project is co-led by principal investigators Ann Stacks (Wayne State University), Claire Vallotton (Michigan State University), and Maria Muzik (University of Michigan) and co-investigators Holly Brophy-Herb (Michigan State University) and Katherine Rosenblum (University of Michigan). HMB is adapted from Mom Power, a parenting and mental health intervention, initially developed for mothers of young children, that improves mental health and reflective capacity, caregiving representations, and reduces parenting stress (Muzik et al., 2015; Rosenblum et al., 2017, 2018). HMB is grounded in attachment theory and helps teachers and parents make the connection between meeting children's need for comfort and closeness and their growing ability to explore and learn; it also supports the parent–teacher relationship. Depending on the format that works best for EHS, teachers engage in 7 to 14 group sessions of varying length and format and 3 coaching sessions. EHS administrators attend a training as a group to learn the HMB concepts and how to support teachers in implementing those concepts.

Across the 5-year funding period, the Michigan team adapted Mom Power into a program of professional development, pilot tested, and adapted the intervention in response to feedback from EHS partners. The team then tested the parallel parent and teacher interventions in an open trial and discovered that the 10-week parenting intervention was not feasible for EHS parents. With input from parents and teachers, the parent intervention was further adapted into a three-session group led by the EHS teachers. Groups were co-facilitated by infant mental health professionals outside of EHS. Next, the coordinated intervention was tested in a randomized controlled trial. Implementation interviews with participants informed adaptations to make the intervention acceptable and feasible within the EHS context across the study. Finally, EHS sites were trained to deliver the intervention.

Eight EHS center-based and CCP programs across five Michigan counties participated in the study, including 134 teachers and 66 parents. Participant teachers were predominately female (97.7%). Teachers identified as either Black (53.6%) or White (47.4%) and the majority (97.9%) were not of Hispanic origin. Half of the teachers reported having at least a bachelor's degree (51.1%), 26.7% held an associate's degree, and 16.8% had attended some college. Only 5.4% of teachers had a high school diploma or equivalent. Parents were primarily mothers (85.1%) and ranged from 19 to 50 years old ($M$ = 30.2). Most parents were Black (89.5%) and 73.8% reported being single parents. The primary outcomes assessed were parent and teacher reflective functioning, caregiver–child interactions, and the parent–teacher relationship. In addition to consortium measures, the Michigan team assessed parents' and teachers' reflective functioning, attachment, mindfulness, and trauma history.

The goal of coordinated interventions is for children to be exposed to high-quality interactional experiences at home with their parents and at school with their teachers.
Photo: Dragon Images/shutterstock

## Getting Ready 0-3

Getting Ready 0-3 (GR03) is a strength-based intervention aimed at enhancing the language and social–emotional development of young children. It is a 2-year intervention that focuses on strengthening relationships in children's lives, including relationships between parents, teachers, and young children. The study lead investigators are Lisa Knoche and Susan Sheridan (University of Nebraska-Lincoln). GR03 aims to support developmentally appropriate, child-focused practices across home and center to support and maintain children's development. The GR03 (Sheridan et al., 2008) intervention is a process of interacting with families that occurs during all exchanges (e.g., home visits, conferences, informal interactions, drop off, pick up, text messages, phone calls). It is defined by eight strategies (Marvin et al., 2019), five adult–child interaction practices, and a collaborative structure used to guide all parent–educator contacts. Structured collaborative planning procedures (including observation review, parent–child interaction, and the creation of home-center plans) are incorporated into family contacts that occur six times annually across 2 years of program involvement to promote shared responsibility between parents and teachers for encouraging children's development. The intervention builds on culturally relevant family and child strengths. It is not a curriculum or a packaged, stand-alone program, but an intentional approach for infusing meaningful parent engagement and educator–child relationships into all environments experienced by children.

Teachers participated in a 1-day training on blending developmental objectives with effective parent–child and teacher–child interactions. Following training, teachers in the intervention group were assigned a master coach who observed the teacher during classroom interactions for 8 hours/monthly in year 1 and 4 hours/monthly in year 2. The same coach also provided the teacher with 90 minutes of one-on-one monthly coaching to support their use of strategies that promote adult–child (parent–child and teacher–child) interactions and parent–teacher partnerships.

The intervention was tested in a randomized controlled trial in seven community agencies in two states that operated EHS center-based programs in nine rural and urban communities. Data were collected at four time points across the 2-year intervention. The study included 56 classrooms that offered full-day, year-round services. The sample included 87 teachers and 152 children and their parents. Randomization occurred at the level of the classroom. All teachers were female. The most common race/ethnicity for teachers was White (91%), followed by Black (3.8%). Approximately 16% of teachers identified as Hispanic/Latine. The majority had either an associate's (34.6%) or bachelor's degree (53.1%). The majority of parents who participated were mothers (86.4%) and identified as White (53.1%), African American (23.8%), American Indian or Alaska Native (9.8%), Asian (1.4%), or other race (10.5%). Approximately 43% of parents identified as Hispanic/Latine and 50.4% of the sample were single/not partnered. Participating children were 14 months old at baseline and 49.4% were female. The primary outcomes assessed across intervention and comparison participations included observed parent–child and teacher–child interactions, self-reported parent–teacher relationship, and child developmental outcomes. In addition to consortium measures, the Nebraska team collected measures of infant/toddler social–emotional and language development, and parenting efficacy.

## Supporting Sprouts

Supporting Sprouts is a responsive caregiving parent and teacher program developed by the Children's Learning Institute at the University of Texas Health Science Center at Houston. The study principal investigators on this intervention are Bethanie Van Horne, Ursula Johnson, Janelle Montroy, and Susan Landry. Supporting Sprouts includes two aligned but independent interventions: Strategies for Early Education and Developmental Success, which targets infant and toddler teachers in center-based care, and Play and Learning Strategies (PALS), which targets families with children from birth to 3 years. Both interventions were developed using attachment principles and adult learning theory. Both have a similar delivery format including 11–15 online sessions followed by reflective coaching, and both interventions include the same core strategies for use in the home and center-based environments. Sessions include a review of the prior topics/skills and introduction to a new skill with exemplar videos from the target environment (home or center), knowledge testing with closed and open-ended questions, and remotely delivered guided practice and self-reflection with a trained coach.

Over the 5 years that the project was funded, investigators adapted the SEEDS and PALS interventions into online training modules for EHS parents and teachers (year 1), conducted a randomized controlled trial to test effectiveness (years 2–4), and developed a toolkit (see Learn More box, p. 8) to assist with implementation in other center-based programs for infants and toddlers (year 5). Project investigators are currently evaluating whether the interventions improved caregiver's responsiveness


Enhancing the quality of the home environment, including strengthening parent–child relationships, is a focus of Early Head Start.

and instructional practices as well as children's development and the mechanisms of these changes. For example, how changes in caregiver behaviors mediate the effects of the interventions on child outcomes and factors that moderate the effectiveness of the interventions. A total of 104 teachers and 293 parent–child dyads from 18 EHS programs participated in the study. All teachers were female. The most common race/ethnicity for teachers was African American (44.9%), followed by Hispanic/Latina (37.8%). The majority of teachers had either some college (36.7%) or an associate's degree (31.7%), and 58.2% were monolingual English speakers. The majority of parents who participated were mothers (93%). Approximately two thirds of the parents identified as Hispanic/Latinx and 21% identified as Black/African American. Nearly three quarters of the parents (71%) reported a family income of $20,000 or less, and 54% had at least a high school diploma. Their children were on average 2.38 years old and identified as Hispanic (66.7%), African American (21.4%), or multiracial (10.7%). The primary outcomes assessed were caregiver–child interactions and child development and moderators of these outcomes, including depression, stress, and life experiences. In addition to consortium measures, the Texas team assessed child self-regulation and cognitive development as well as parental contingent responsiveness and rich language use.

## Conclusions

The development of infants and toddlers is related to the quality of their interactions with caregivers, and the quality of their caregivers' interactions with each other. The EHS-PTIC is building and testing coordinated interventions in EHS center-based and CCP settings that support and capitalize on these interactions. Findings will yield important guidance for infant/toddler center-based programs as they implement coordinated interventions for teachers and parents. To date, preliminary findings have been presented at conferences, and presentations are available from the authors (see Box 2, p. 9). Teams are actively analyzing data and published reports are expected by late 2022 or 2023.

### Learn More

Implementation Toolkit
https://public.cliengage.org/tools/quality/early-head-start

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## Authors

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**Johayra Bouza**, **PhD,** is a postdoctoral associate at the University of Miami. In general, her research focuses on buffering the negative effects of poverty for racially and ethnically diverse children from birth to 5 years old. She is interested in developing, implementing, and evaluating community-based intervention research that supports teachers and families working collaboratively to support children's social–emotional and cognitive skills. Additional research interests include developing and evaluating measures appropriate for use with ethnically diverse early childhood program participants (directors, teachers, families, and children).

**Lisa L. Knoche, PhD,** is a research associate professor in the Nebraska Center for Research on Children, Youth, Families and Schools at the University of Nebraska–Lincoln where she directs the Nebraska Academy for Early Childhood Research. Her research interests are in the design, development, and evaluation of early childhood intervention and prevention programs to support children's development and family engagement in early learning. She is interested in identifying and supporting effective professional development strategies for early childhood professionals.

**Veronica A. Fernandez, PhD,** is an assistant scientist in the Psychology Department at the University of Miami. Her research focuses on understanding and improving the quality of early

## *Box 2. Conference Presentations From the Parent-Teacher Intervention Consortium*

| CoachingUp | Hearts and Minds on Babies |
|---|---|
| CoachingUP Positively Impacts Teacher-Child Interaction Quality<br><br>CoachingUP: An Inquiry-Based Responsive Coaching Model Focused on Improving Early Child Development for Infant and Toddlers<br><br>CoachingUP: A Catalyst for Professional Development to Improve Teacher-Child Interactions<br><br>For presentation slides, contact vfernandez17@gmail.com | Promoting Parent-Teacher Relationships in EHS: The Role of an Integrated Relationship-Based Intervention<br><br>Adverse Childhood Experiences Among EHS Teachers: Associations With Quality Interactions and Relationships<br><br>Teacher Reflective Functioning Predicts Early Head Start Classroom Quality<br><br>For training information, please visit https://zerotothrive.org/strong-roots-programs/hearts-minds-on-babies<br><br>For presentation slides, contact amstacks@wayne.edu |
| **Getting Ready 0-3** | **Supporting Sprouts** |
| Creating Connections Between Infant/Toddler Educators and Families: Effects of the Getting Ready 0-3 Approach<br><br>Professional Development and Teacher Practices: Exploring a Parent–Teacher Partnership Intervention for Infants/Toddlers in Center-Based Early Head Start Programs<br><br>Practices and reflections of experienced, expert early childhood coaches<br><br>For training information, please visit https://gettingready.unl.edu/about<br><br>For presentation slides and publications, contact lknoche2@unl.edu | Ghosts in the Infant/Toddler Classroom: Relationship-Based Professional Development to Promote Caregiver Responsiveness<br><br>The Impact of a Parenting Intervention on Parental Stress and Depression<br><br>Contextual Factors That Affect Implementation of an Online Teacher Training Program<br><br>To access the online training, please visit https://public.cliengage.org/tools/quality/early-head-start/<br><br>For presentation slides contact Bethanie.VanHorne@bcm.edu |

learning experiences and promoting equity for culturally, linguistically, and racially diverse children. Through research and practice, she uses intentional inquiry and play as mechanisms to facilitate joyful, experiential learning. Dr. Fernandez has experience engaging families, teachers, and school leaders through coaching and interactive workshops. She also has expertise in measurement development, advanced statistical analyses, and program evaluation.

**Bethanie S. Van Horne, DrPH,** is an assistant professor of pediatrics at Baylor College of Medicine and the director of research for the Section of Public Health and Child Abuse Pediatrics at Texas Children's Hospital (current affiliation). Her research and programmatic work have been focused broadly around improving child and family well-being by identifying community needs and trends, helping community programs collect better evaluation measures to make informed decisions, and by helping bring research-based interventions into practice. Current projects and areas of interest include: early childhood caregiver support, postpartum depression, perinatal substance use, behavioral health, child abuse and neglect, and services and programs for foster and at-risk families.

**Kathleen M. Dwyer, PhD,** is a senior social science research analyst in the Office of Planning, Research, and Evaluation (OPRE), Administration for Children and Families (ACF), within the U.S. Department of Health and Human Services. A primary focus of her work is understanding approaches to building adult capacities to promote child development, particularly in the context of early adversity. She has a doctorate in human development with a specialization in developmental sciences from the University of Maryland.

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