

# Research Opportunities in the Area of Early Childhood: Birth Through 5 Years

## MeSH TERMS

- early medical intervention
- evidence-based practice
- occupational therapy
- pediatrics
- research

The American Occupational Therapy Association (AOTA) Evidence-Based Practice Project has developed a table summarizing the research opportunities on early childhood. The table provides an overview of the state of current available evidence on interventions within the scope of occupational therapy practice and is based on the systematic reviews from the AOTA Evidence-Based Practice Guidelines Series. Researchers, students, and clinicians can use this information in developing innovative research to answer important questions within the occupational therapy field.

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Planning a research project requires consideration of many factors. Level of interest and knowledge in a specific area, access to appropriate populations of participants, support of mentors and other researchers, and funding availability all help determine the focus of a future project. An additional component to be considered is whether adequate, up-to-date research has already been completed on a topic; if sufficient evidence is available in a given core area, this area might not be the best choice for another research project.

The best research topic may be one in which either little research has been done or the research to date is insufficient, inconclusive, or mixed. In addition, when research conducted to date provides a low level of evidence and is of limited quality, additional high-quality research in the area is needed.

The “Research Opportunities Table on Early Childhood: Birth Through 5 Years” provides an overview of the state of current available evidence on interventions within the scope of occupational therapy practice. The table is based on the systematic reviews from the AOTA Evidence-Based Practice Guidelines Series. The table lists specific interventions and indicates either that the evidence is sufficient to support the intervention or that moderate, mixed, or few studies support the intervention and therefore it is a priority research area. Please refer to *Occupational Therapy Practice Guidelines for Early Childhood: Birth Through 5 Years* (Clark & Kingsley, 2013) and the *American Journal of Occupational Therapy* Special Issue on Occupational Therapy and Early Intervention/Early Childhood (Case-Smith, 2013) for more information on the topic area and the systematic review process.

This table also is posted online for researchers to use to inform the occupational therapy community about their work. The table is linked to Google Drive and offers a place for researchers to include information on recently completed and ongoing research. It is hoped that this information will make the research planning process easier, minimize duplication of research efforts, and stimulate discussions among researchers with similar interests, which can then facilitate the creation of research networks and multisite studies. Researchers, students, and clinicians can use this information in developing innovative research to answer important questions within the occupational therapy field. To add current or ongoing research to the table, visit <http://www.aota.org/researchopportunitiesables>.

Researchers are also encouraged to enter their projects into AOTA’s Researcher Database at <http://myaota.aota.org/research/>. This database provides

## Research Opportunities Table on Early Childhood: Birth Through 5 Years

Theme	Specific Intervention	Strength of Evidence
Social–Emotional Functioning		
Touch-based interventions	Infant massage to improve sleep and relaxation, reduce crying, and reduce hormones affecting stress (no cognitive or behavioral component)	Research sufficient
	Massage before bed to improve attention, reduce restless and impulse behavior, and decrease stereotypical behaviors	Priority research area
	Kangaroo Care to promote social–emotional development, eye–hand coordination, and speech	Priority research area
Relationship-based interventions	Caregiver-facilitated play to reduce anxiety in children and parents and to increase developmentally competent play	Priority research area
	Responsive teaching methods by parents to increase attention, persistence, interest, cooperation, initiation, joint attention, affect, and social–emotional functioning	Priority research area
Interactive or play-based activities	Discrete trial combined with either semistructured play sessions or pivotal response training to improve structured play	Research sufficient
	Discrete trial combined with either semistructured play session or pivotal response training to improve symbolic play	Priority research area
Naturalistic interventions	Mixed play groups (children with and without disabilities) to improve responsiveness to peers and improve total positive behavior for both groups	Priority research area
	Instruction of preschool pairs in using a computer to increase active waiting, turn taking, and positive affect	Priority research area
	Visually scheduled and scripted instructor-guided play to improve dyad engagement	Priority research area
Instruction-based interventions	Modeling, play-based activities, rehearsal of social behaviors, and prompting to improve social behaviors	Research sufficient
	Direct teaching with video modeling and applied behavior analysis to improve social skills	Research sufficient
	Pivotal response training and environmental arrangement to prolong social interaction	Research sufficient
	Social Stories to reduce inappropriate behaviors and increase appropriate behaviors	Priority research area
Therapist-selected toys and objects	Social toys to promote cooperative play and positive social outcomes	Priority research area
	Mixed-level play groups for children with disabilities and peers with better play skills to improve social outcomes	Priority research area
Feeding, Eating, and Swallowing		
Behavioral-based interventions	Behavioral interventions to increase calorie intake	Priority research area
	Behavioral interventions to wean from tube feeding	Priority research area
Parent-directed educational interventions	Individualized behavioral feeding intervention to increase physical growth of infants	Priority research area
	Parent education and parent-directed intervention to reduce maternal stress	Priority research area
	Behavioral interventions to increase food acceptance during mealtimes	Priority research area
Physiological interventions	Parent education and parent-directed intervention to improve mealtime behaviors and reduce problem behaviors	Priority research area
	Oral stimulation programs to increase nonnutritive sucking pressure and quantity of milk ingested during oral feeding	Research sufficient
	Oral stimulation programs, skin-to-skin contact, and sensory–motor and oral–motor interventions to reduce length of hospital stay	Research sufficient
	Tactile and multisensory interventions to improve nipple feeding	Priority research area
	Oral stimulation, early introduction of oral feeding, and Votja therapy to improve the transition from tube to oral feeding	Priority research area
Cognitive Interventions		
Neonatal intensive care unit (NICU) interventions	Use of Newborn Individualized Developmental Care and Assessment Program to improve infant cognitive development	Priority research area

(Continued)

**Research Opportunities Table on Early Childhood: Birth Through 5 Years (cont.)**

Theme	Specific Intervention	Strength of Evidence
NICU- and home-based interventions	Multisensory approach addressing auditory, tactile, visual, and vestibular input in the hospital and at home until 2 mo corrected age to improve mental or motor performance	Priority research area
	Use of a parent education program that includes information on behavior, interaction with infants, and activities to promote development	Priority research area
	Early intervention program for preterm infants to improve cognitive outcomes in infancy and preschool	Priority research area
Interventions to promote joint attention	Intervention incorporating joint attention to improve maintenance of coordinated looks and increased acknowledgment of novel objects	Priority research area
	Early intervention program started in the hospital and continued with home visits to improve joint attention and initiation of object requests	Priority research area
	Discrete trial training and pivotal response training when addressing joint attention to improve social limitations, spontaneous speech, and play skills	Priority research area
	Comparison of joint attention interventions and interventions using symbolic play and applied behavioral analysis	Priority research area
<b>Motor Performance</b>		
Developmental interventions for at-risk infants	Caregiver-delivered home program for infants updated at 1, 2, and 3 mo to improve motor performance	Priority research area
	Developmental motor interventions to improve motor outcomes	Priority research area
Interventions for children with or at risk for cerebral palsy (CP)	5-wk parent education program that models appropriate motor development	Priority research area
	Constraint induced movement therapy to improve motor performance	Priority research area
	Neurodevelopmental treatment to improve motor performance	Priority research area
	Child-focused and context-focused intervention to improve motor performance	Priority research area
Visual-motor interventions for children with developmental delays	Conductive education to improve motor performance	Priority research area
	Therapist-led sensorimotor therapy to improve gross motor functional skills	Priority research area
	Child-led sensorimotor therapy to improve fine motor skills	Priority research area
	Occupational therapy for preschoolers to improve visual-motor and fine motor skills, manipulation, and motor accuracy	Priority research area
Settings	Direct or indirect occupational therapy to improve visual-motor skills	Priority research area
	<b>Service Delivery in Early Childhood</b>	
	Interventions at more than one setting (e.g., classroom and home) to improve performance outcomes	Priority research area
	Participation in a Head Start program at age 2 yr rather than 3 yr to reduce maternal depression	Priority research area
Routine-based interventions	Longer duration of home-based behavioral treatment to improve outcomes in children with autism or pervasive developmental disorder	Priority research area
	Family-centered help giving that incorporates support to strengthen the family and improve satisfaction, parenting behavior, personal and family well-being, social support, and child behavior	Priority research area
	Routines-based or contextualized interventions to improve affect and engagement	Priority research area
	Everyday learning opportunities to improve parenting competence, parental well-being, and parent judgment of child progress	Priority research area
Parent training	Interventions during family routines to extinguish target behaviors and improve generalization of skills	Priority research area
	Family-centered service delivery to improve satisfaction and reduce family stress	Priority research area
	Parenting programs to improve parent-based outcomes (e.g., parent stress, anxiety, depression)	Research sufficient
	Early Head Start parenting classes to improve cognitive outcomes in early childhood	Priority research area
	Brief therapist-led parenting education to improve behavioral outcomes in young children	Priority research area
	Parent training to improve satisfaction and quality of life	Priority research area
	Community-based parenting group to reduce child difficulty and conduct problems	Priority research area

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Intervention/Early Childhood (Case-Smith, 2013) and the *Occupational Therapy Practice Guidelines for Early Childhood: Birth Through 5 Years* (Clark & Kingsley, 2013), all from the AOTA Evidence-Based Practice Project.

## References

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