

# PICCOLO+B

## PICCOLO is for Babies too

Lori Roggman, Ph.D.

The PICCOLO (Parenting Interactions with Children: Checklist of Observations Linked to Outcomes) is a measure of developmentally supportive parenting interactions that are theoretically and empirically linked with children's early development. PICCOLO has strong psychometric properties based on a sample of over 2,000 families, observed in 4,500 observations of parenting interactions with children ranging in age from 10–47 months, over 400 fathers observed with toddlers age 14–47 months, and 136 mothers observed with preschoolers age 52–73 months. The psychometric properties for these groups, reported in the *PICCOLO User's Guide*, are based on parenting interactions only with children over 9 months. Now we have tested PICCOLO with 87 mothers of infants age 3–9 months.

### Reliability

PICCOLO can be used reliably with babies. We established 85% inter-observer agreement, the intra-class correlations for the domains all exceeded .70, and the factor loadings for the items within each domain all exceeded .40, together indicating good reliability of the measure. Observers could readily identify almost all of the parenting behaviors in the measure. Importantly, variability across cases was good, so there were no "floor" effects, meaning that most parents are already beginning to show these behaviors in the early months of infancy.

We developed expanded notes for using PICCOLO with babies (see [PICCOLO Additional Considerations for Babies and Preschoolers](#)). Also, we now provide PICCOLO training that includes observation practice with younger babies, 3–9 months, along with our standard training for observing 10–47 months. After becoming reliable scoring PICCOLO from observations of toddlers 14, 24, and 36m, newly trained observers readily come to agreement on scoring observations with younger infants, but an understanding of early infancy helps.

### Validity

Content validity of PICCOLO with babies is supported by the alignment of the parenting behaviors described in the expansion notes with developmentally supportive parenting behaviors reported in the research literature with infants 3–9 months. Predictive validity—the associations of PICCOLO with children's development—has been tested from PICCOLO observations at these younger ages. *Preliminary analyses* from our ongoing research show that PICCOLO in babies is correlated with the developmental progress of 3–9-month-olds, as indicated on the Ages & Stages Questionnaires®, Third Edition (ASQ®-3). The associations were especially consistent for PICCOLO Responsiveness, which significantly predicted ASQ-3 results in communication, fine motor, problem solving, and personal-social skills.

### Guidance

The value of certain parenting behaviors, such as talking to a very young pre-verbal baby, may not be the immediate impact on the infant as much as the establishment of interaction routines that will become increasingly important toward the latter half of the first year. PICCOLO and adaptations of PICCOLO-D (for dads) and now PICCOLO+B (for babies) are all designed for observing and coaching parents to increase support for children's early development, but they are not diagnostic measures. Rather, they are tools to identify observable parenting behaviors that are sensitive to intervention. These tools are useful for programs aiming to increase parents' engagement in developmentally supportive interactions with their infants and young children.

Roggman, L. A., Cook, G. A., Innocenti, M. S., Jump Norman, V. K., Christiansen, K., & Anderson, S. (2013). *Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO)*. Baltimore: Paul H. Brookes Publishing.

\*With contributions by Jane Clarke, Ph.D., New Mexico

**Examples of original PICCOLO items with expanded notes for younger infants.**

Example items	Item Guidelines	Item Notes	Expanded notes for 3–9mo	
<b>Affection</b>				
1	<b>Speaks in a warm tone of voice</b>	Parent's voice is positive in tone, and may show enthusiasm or tenderness. A parent who speaks little but warmly should be coded highly.	Flat and toneless or sarcastic and demanding voices are not warm. Score as 0 unless there were some moments of warmth. Warmth may sound like <i>motherese</i> (e.g., exaggerated intonation, high pitch), . . .	Parent addresses infant in a voice that gets his/her attention by using a variety of high and low pitches or soft to loud tones that show enthusiasm or tenderness.
<b>Responsiveness</b>				
7	<b>Replies to child's sounds or words</b>	Parent repeats what child says or sounds child makes, talks about what child says or could be saying, or answers child's questions.	For a 2, the parent responds to most of the child's vocal sounds. If the child makes no sounds, score as 0. If the child makes only one or two sounds but the parent is consistently responsive, score as 2. Consider missed opportunities.	Parent Replies with vocalizations to infant's communication attempts that include any sounds—cooing, whining, laughing, babbling, etc. May reply with gestures, particularly if either has hearing deficits.
<b>Encouragement</b>				
2	<b>Encourages child to handle toys</b>	Parent offers toys or says positive things when child shows obvious interest in toys.	This item includes handing toys to child, showing toys to child, moving toys closer to child, demonstrating with the toy, highlighting toys by moving or using them, making noise with a toy to attract attention, or praising what the child does with the toys.	Parent provides opportunities for infant to reach out for, grasp, or inspect toys or safe objects.
<b>Teaching</b>				
5	<b>Engages in pretend play with child</b>	Parent plays make believe in any way – for example, by “eating” pretend food.	Pretending can occur by taking on a role (fighting in rough & tumble play, being the patient in doctor play), using an object to represent something else (pretending a block is a car by moving it on the floor & making car sounds). The parent needs to be actually pretending.	Early pretending may include playfully pretending to eat the baby, <i>gonna get you</i> games with self or objects ( <i>here comes the bear to get you</i> ), playing peekaboo or hide and seek with objects ( <i>Where did the doggie go?</i> ). A parent may pretend to be a baby to make the baby laugh, such as by pretending to drink from a bottle.

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