

APPENDIX B

Q-CCIIT MEASUREMENT FRAMEWORK

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Our goal in assessing the quality of the caregiver-child interaction is to evaluate those areas of caregiver practice that lead to more positive outcomes for infants and toddlers. In order to select constructs that make up the Q-CCIIT measure, we examined the literature on parent-child interaction, social play, language and cognitive development, and practices in child care settings. Based on the literature, the following constructs emerged. These constructs will form the basis of the Q-CCIIT measure and item development.

Constructs Related To Social-Emotional Outcomes

Sensitive and Responsive Caregiving

Caregiver responsiveness is the most consistently supported construct in the research on caregiver-child interaction and has been demonstrated across studies to relate to positive child outcomes (Bornstein & Tamis-LeMonda, 1989; Mahoney, Spiker, & Boyce, 1996; Tamis-LeMonda, Shannon, Cabrera, and Lamb 2004; Poehlmann and Fiese 2001; Ryan, Martin, and Brooks-Gunn 2006). Responsiveness involves being sensitive to the child's engagement and disengagement cues and responding contingently. Responsiveness will be measured in how caregivers respond and adapt to children's individual needs both physically and verbally. In Q-CCIIT we will also examine how the caregiver provides sensitive and responsive caregiving when balancing the needs of multiple children.

Warmth

Warmth includes measuring aspects of positive affect/regard and nurturing touch. Displays of positive affect/regard may vary cross-culturally and communication of positive feelings will likely vary among children in child care settings. However, some displays of positive affect and warmth are thought to be universal. The importance of nurturing touch for children's social-emotional development has been clearly established in studies demonstrating a relation between touch and physical, emotional, and neurological development (Beck, 2007; Carlson, 2006; Drehobl & Fuhr, 2000; Kaler & Freeman, 1994; Perry & Pollard, 1997; Perry & Sxalavitz, 2007; Schneider, 2006; Skuse, 1992; field & Grizzle, 1996; Field et al., 1997, Hernandez-Reif et al., 2001; Ramey & Tidius, 2002). In the Q-CCIIT measure, positive touch will include hugs, holding, and carrying (particularly for non-mobile infants).

Support of Self-Regulation

Support for self-regulation includes practices such as the use of routines, positive limit-setting, consistency in use of behavioral guidelines, talking about emotion and how to verbalize feelings, and discussion of the relationship between the child's actions and the resulting effect (Cook, Klein, & Tessier, 2004). Routines provide consistency in the child's life and allow the infant or toddler to anticipate events and interactions (Cook, Klein, & Tessier, 2004; Winton, McCollum, & Catlett, 2008). In addition to supporting individual children, overall classroom management is an important part of helping children manage their own behavior and aids in peer interaction and pacing of activities. Classroom management will be included in the Q-CCIIT measure as an aspect of self-regulation.

Support for Peer Interaction

Although peer interaction is not examined in the parent-child interaction literature, it should be examined in early childhood settings that include multiple children, sometimes of the same age and sometimes cross-age. Peer play for infants and toddlers usually involves toys and moves from reciprocal play and peer imitation among one-year olds to social pretend play among two-year olds (Howes, 1988). Caregivers support social play and peer interaction by ensuring fair distribution of materials, encouraging early peer imitation, commenting positively on shared interests among children, providing play opportunities that pair children with similar interests, and modeling and encouraging peer interaction (Cook, Klein, & Tessier, 2004; Guralnick, Neville, Connor, & Hammond, 2003; Ladd, 1992; Parke, Profilet, & Ladd, 1992).

Negative Aspects of the Caregiving Environment

In addition to positive aspects of the caregiving environment, it will be important to measure negative interactions. Negative behaviors are often more salient than positive behavior for observers. The negative traits most consistently associated with poor child outcomes include intrusiveness, negative regard, negative affect, harshness, and over-controlling behaviors. We will also observe aspects of the environment such as noise and visual and auditory overstimulation.

Constructs Related To Language Outcomes

Joint Attention

Joint attention refers to the parent and child's shared attention to an object or event and is associated with positive child outcomes, particularly for infants (Feldman, Eidelman, Sirota, & Weller, 2002; Feldman Eidelman, & Rotenberg, 2004; Landry, 1986, Ruff, 1986). Joint attention may be measured as the amount of time that parent and child look at an object or share attention over an object (Dodici, Draper, & Peterson, 2003) or the number of joint attention episodes (Markus, Mundy, Morales, Delgado, & Yale, 2000).

Support for Language Development

The amount (more utterances) and the diversity of parent language (more diverse vocabulary as well as different types of talk) is related to child cognitive and language outcomes across a variety of ages (Dodici, Draper, and Peterson, 2003; Hart & Risley, 1995; Huttenlocher, Haight, Bryk, Seltzer, & Lyons, 1991; Huttenlocher, Vasilyeva, & Cymerman, 2002). The following dimensions of language stimulation will be included in the Q-CCIIT measure: conversational turn-taking; diverse vocabulary; questioning; parallel language; decontextualized talk and other narratives; and reading.

Constructs Related To Cognitive Outcomes

Support for Cognitive Development

The Q-CCIIT constructs related to supporting cognitive development include support for children's object exploration, scaffolding higher levels of play, concept development, helping the children to reason (learn about cause-effect, spatial relations, and problem solving), to understand different perspectives and develop a theory of mind, along with broadening

knowledge of the world. Caregivers should support these aspects of cognitive stimulation through some explicit, more direct teaching as well as activities that expand the child's skills and abilities (Martin, Ryan, & Brooks-Gunn 2007). Cognitive skills and challenges vary across the developmental period of birth to three. Items and training will need to support observers in determining whether the type and level of support and scaffolding provided to the child is appropriate and supportive of child outcomes.

Opportunities for Exploration and Learning

Adults can support object exploration by positioning young infants and as well as by providing and directly helping infants to explore objects. More active exploration of objects is associated with earlier means-end knowledge in infants (Lobo & Galloway 2008). As children develop fine and gross motor skills, they are able to further explore their world and adults support cognitive development by providing opportunities to increase understanding of cause-effect relationships, to explore attributes of objects (including object permanence), to problem-solve, and to learn new ways to act on their environment. Caregivers model and demonstrate new ways to use objects within the environment as well as introduce new objects and experiences. As children reach toddlerhood, at least some of these experiences are provided in ways that support the understanding of relationships among ideas, typically by presenting some materials and activities that share a common theme.

Scaffolding Higher Levels of Play

When caregivers scaffold higher levels of play, they model and expand the child's play. For example, when introducing objects, caregivers can scaffold play by illustrating object attributes, indicating different ways to manipulate and use materials, and later helping toddlers to move from functional to representational play. Scaffolding can involve actions such as stabilizing objects for the child, incorporating new objects into ongoing activity, simplifying or reducing steps.

Explicit Instruction

Among infants and toddlers, explicit instruction is sometimes related to directiveness. The Q-CCIT measure will be designed to capture the individual needs of children and the amount of support or direct, more didactic instruction caregivers provide. Negative forms of directiveness, such as intrusiveness, will be measured separately. Didactic approaches to play have included structuring play through provision of props and verbal prompts, establishing and arranging the play context, guiding children in taking on and maintaining roles or actions, demonstrating, engaging as a play partner, and giving feedback (Fenson & Ramsey, 1980; O'Reilly & Bornstein, 1993).

Support for Concept Development

Caregivers can provide support for children's learning of both pre-academic concepts (letters, colors, shapes, number) as well as other important concepts such as feelings, attributes, spatial concepts, and categories. This support can occur through verbal interactions, play, peer-interaction, and motor activities. More intentional and explicit approaches are often used to introduce children to new concepts and ideas, for example, using a book or story to learn about zoo animals, providing a movement experience to teach up and down.

Observation Methods

Naturalistic Observation/Event Sampling:

Observations will be conducted in the same manner across all types of child care settings. In order to capture children's average experiences, all caregivers providing direct child care in a particular classroom will be observed. Measurement of interactions occurring naturally in the environment require longer periods of observation, particularly when observing multiple caregivers. The Q-CCIIT observations will last approximately 3 hours in order to capture as much variability as possible while also contributing to minimal classroom disruption. Event sampling (feeding, free play, diapering, outside time, story time) will allow for an aggregated estimate of the classroom interactions of the caregivers that is not as biased by differences in activities (that is, occasion variance). Observers will use global ratings for the observed classroom interactions and code most of the dimensions (detailed above) within each event or activity observed (play, book sharing, feeding, etc.) as well as provide an overall, summary rating for some of the areas.

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