

Infant-Toddler Social-Emotional Development: The Heart of Early Learning

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The “Unfinished” Brain of the Human Infant

The brains of humans are not fully formed at birth. Unlike other species, human infants remain physically and emotionally vulnerable for a long period of time.

Early Helplessness as a Strength

During the very early years of life the brain builds crucial structures and pathways that serve as the foundation for future social, emotional, language and intellectual functioning.

During this period of dependency human infants and toddlers use their time with others to structure their brains for future survival and functioning.

Babies are Preprogrammed to Learn from Those Who Care for Them

During interactions with other people, sets of neurons cluster, fire, and eventually wire together to help babies to prepare for, and react and respond appropriately to similar future experiences.

Learning Windows and Synaptic Connections

- **Seeing/Hearing:** Peaks at 4-8 months of age and continues to be important throughout early childhood
- **Receptive Language/Speech Production:** Peaks at about 9 months of age and continues to be important throughout early childhood
- **Higher Cognitive Function:** Peaks at about 1.5-2 years of age and continues to be important throughout early childhood

The timing and quality of early experiences shape brain architecture (2007). *National Scientific Council on the Developing Child*. Working paper No.5.

Pathways to School Readiness: Later Experiences Build on Earlier Experiences

“Early learning lays the foundation for later learning and is essential (though not sufficient) for the development of optimized brain architecture.”

National Scientific Council on the Developing Child. (2007). Working Paper #5. The timing and quality of early experiences combine to shape brain architecture.

Pathways to School Readiness: Later Experiences Build on Earlier Experiences

“Because low-level circuits mature early and high-level circuits mature later, **different kinds of experiences are critical at different ages for optimal brain development.**”

National Scientific Council on the Developing Child. (2007). Working Paper #5. The timing and quality of early experiences combine to shape brain architecture.

Pathways to School Readiness: Developmentally Appropriate Experience

“When adults or communities expect young children to master skills for which the necessary brain circuits have not yet formed, they waste time and resources, and may even impair healthy brain development by inducing excessive stress in the child.”

National Scientific Council on the Developing Child. (2007). Working Paper #5. The timing and quality of early experiences combine to shape brain architecture.

Social Emotional Interaction Is Essential to Brain Growth

The emotional quality of early relationships is so crucial to the map of the brain that, next to a caregiver's provision of basic needs for food, health and safety, relationships are the primary environmental ingredient for healthy brain development.

Quality of Care (and Education) for Young Children

“Quality of care ultimately boils down to the quality of the relationship between the child care provider or teacher and the child.”

Shonkoff, J. P., & Phillips, D. A. (2000). *From neurons to neighborhoods: The science of early childhood development.*

Importance of Caregivers



The quality of the early care babies receive from caregivers influences their ability to successfully or unsuccessfully:

- attach to other human beings,
- regulate their impulses,
- learn how to communicate with others, and
- search for an intellectual understanding of the world into which they are born.

Learning . . .

begins in relationships,
is
informed by relationships,
and is
stimulated by relationships

Emotional Motives Drive Skill Development

The pleasure and delight that babies get from interaction with people drives them to relate to people more frequently and more skillfully. (the beginning of language and cognitive enrichment)



What We Know from Research

- Social-emotional development and first relationships are the foundation for all development during the first five years
- Young children learn through their senses, making meaning, and active discovery; they are competent, motivated learners
- Connection to family and culture is fundamentally important

Science-Based Image of the Infant – Great Vulnerability

The young child is dependent on adults for:

- physical survival,
- emotional security,
- safe base for learning,
- regulating, modeling and mentoring social behavior,
- information and exchanges about the workings of the world and rules for living.



Science-Based Image of the Infant – Great Competence



- Curious, motivated, self starting
- An imitator, interpreter, integrator
- An explorer, inventor
- A communication initiator
- A meaning seeker
- A relationship builder

Image of the Young Child

The young child . . .

- desires to acquire knowledge,
- has much capacity for curiosity and amazement,
- yearns to create relationships with others and to communicate, and
- is open to exchange and reciprocity.

Loris Malaguzzi
Founder of the Reggio Emilia Schools

Experience

creates

Expectation

which alters

Perception

Day to Day Care Shapes Babies Brains

Whether through intentional choice or not, parents and infant care teachers shape the day-to-day emotional climate that babies experience. Their methods of expressing their emotions and responding to situations act to socialize children into understanding which emotions are appropriate to express in various situations and how vociferous they can be in expressing themselves (Denham, 1998).

The Need for Connections

- Mechanisms by which we become and stay attached to others are biologically primed and discernable in the basic structure of the brain.
- Nurturing experiences, or the lack of them, affect the development of brain circuitry.
- Nurturing touch promotes growth and alertness in babies.
- Presence of a secure attachment protects toddlers from biochemical effects of stress.

*Field, 1986; 1995
Gunnar, 1989; 1996*

Ingredients of Emotionally Positive Relationships for Young Children

- Responsiveness
- Warmth
- Respect
- Reciprocity
- Emotional and Physical Availability
- Resonance



Context for Enriching Relationships, Experiences, and Environments

Care provided in safe, interesting, and intimate settings where children have the time and opportunity to establish and sustain secure and trusting relationships with knowledgeable caregivers who are responsive to their needs and interests.

The Influence of Social/Emotional Interactions on Learning

What is created during the first two years of life through caregiver/child interactions are brain structures that influence:

- a child's use of relationships in learning,
- the confidence of a child to engage in the challenge of learning,
- the ability of a child to persist while learning, and
- the trust of a child to use adult models for learning.

Intellectual Growth From Interactions with Infant Care Teachers

Through shared experiences—whether initiated by caregivers or themselves—babies learn about new behaviors and objects, examining their caregivers for cues as to whether to engage in or avoid interactions or how to determine various objects' functions.

Early Language Development is Fundamental for Learning and Development in All Domains

- Concepts and skills in mathematics, literacy, social and emotional development, and self regulation depend on young children's language development
- Children learn language in the context of relationships with others
- Responsive interactions that include rich language enhance early language development
- Engaging, developmentally appropriate experiences with books starts infants, toddlers, and preschoolers on a path toward later literacy

Importance of Peer Relationships

During early childhood, children develop:

- increasingly coordinated interactions with age-mates
- capacity to share emotions
- capacity to imitate another's actions



--all important skills for establishing and maintaining friendships later in childhood (Asendorph, 2002; Nielsen, 2006; Brownell & Kopp, 2007).

Sharing Meaning with Young Children

Sharing meaning is how we create relationships with young children. We join with them in the creation of shared meaning by following their lead.

Caregiving Practices for Enriching Growth in All Domains of Development

- Sensitivity to the needs and messages of the child
- Timeliness in responding to those messages (particularly messages of distress)
- Accurate reading of a child's cues
- The provision of appropriate levels of stimulation

(Belsky & Fearon, 2008)

Stage I: Security – The Young Baby

Because very young infants can't physically move to adults, it's important that caregivers make themselves available and stay close in the early stages of development. Adults need to take responsibility for ensuring closeness: listening for messages from the baby, providing for the baby's physical needs, and keeping the baby out of harm's way (Marvin & Britner, 2008).

The Young Baby's Need to Be Understood

“‘Feeling felt’ may be an essential ingredient in attachment relationships. Having the sense that someone else feels one’s feelings and is able to respond contingently to one’s communication may be vital to close relationships”

Siegel, D. J. (1999). *The developing mind: How relationships and the brain interact to shape who we are*. New York: The Guilford Press.

The Early Building of Sense of Self

Starting very early, babies develop perceptions of whether they are lovable or unlovable based on how caregivers have responded to them. Babies develop internal working models for how to engage others based on these perceptions.

What the Young Child Learns about Self from Interaction



- I am listened to or not.
- What I choose to do is valued or it isn't.
- How I express my emotions is accepted or it isn't.
- I am allowed to explore or I am not.
- Mostly my needs are met or they are not.

Stage II: Exploration - The Mobile Infant

As babies reach their seventh month, they enter a second stage of development, during which their efforts become more coordinated, purposeful, and social in nature. With increasing physical competence, they gain greater independent movement.

Exploration: Using the “Home Base”

It's common to see 9- to 15-month-old babies in motion throughout the day, repeatedly setting out on “adventures” in their environment, returning to the “home base” that their caregivers provide, and then leaving again. Moving away for self-interest and returning for support and connection, they learn a great deal about how to separate and stay connected.

The Need to Be Apart and Stay Connected

As babies distance themselves from caregivers and become absorbed in exploring an object or mastering a skill, they do a lot of “checking in,” looking at their caregivers from afar to see if the caregiver is watching and acknowledging their efforts.

What the Mobile Infant Gets From Rich Relationships, Experiences & Environments

As they learn about what they are and are not allowed to explore, they also begin to understand what types of help they can expect in exploring and whether or not certain caregivers will be available to offer support when solo exploration becomes frightening.

Moving from Guided Self-Regulation to Self-Regulation

Children use the lessons they've learned from caregivers to begin to identify risks on their own, such as a poisonous berry on a bush, an un-gated stairway or a hostile stranger. The caregiver sees her or his role as preparing the mobile brain for life that doesn't revolve entirely around caregiver support.

Interacting with the Mobile Infant Around Exploration

Based on an infant care teacher's reactions to a child's actions and objects in the environment the child gains an understanding of what types of independent explorations are socially appropriate ideas for experimentation, and which dangers they should avoid in the environment.

Stage III – Identity-The Older Toddler

With the help of their caregivers, and based on their relationships with others, including peers, older toddlers are learning to process information that will prepare them to develop moral and ethical codes, to better control their impulses and emotions, and to learn the rules of the culture, society, and family into which they were born.

The Impact of Interactions with Others on the Older Toddler

Child at this age are very sensitive to the judgments of others. Based on their interactions with others, particularly trusted caregivers, they will form opinions of themselves and their worth, begin to judge the behaviors of others, and feel shame and embarrassment about their behaviors and appearance.

Older Toddlers - Choice & Responsibility

At around 20 months of age, with the emergence of one's understanding of a separate self, comes the understanding of choice. Becoming aware that one has choices is quite liberating. However, following closely on the heels of this awareness is a dawning awareness of one's responsibility for choices made. How this tension is handled by caregivers is central in the developing self definition of the older toddler.

Learning About Self in Relation to Others

How caregivers act toward a child during this period of tension greatly affects how the child will come to see his or her rights and the rights of others. Sensitive caregivers behave and communicate in ways that assure the child that his or her rights to desire, hope, explore, show preference, and initiate are honored and at the same time help the child learn to honor similar right in others.

Conclusion

Much of what gets in the way of successful functioning in later years can be linked to missed lessons, undeveloped skills, and detrimental experiences that shaped the early development of the brain. It is now no longer debatable that experiences in infancy have a long-lasting impact, and that, as children get older, their brains operate on the foundations structured in infancy through interactions with their caregivers. Even in later life, when called on to process experiences the adult brain will depend on and use the early foundational structures developed in early childhood to effectively process new information (Dawson, Ashman, & Carver, 2000).