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Self-Regulation

A Cornerstone of Early Childhood Development

Imagine you are in your car waiting for another driver to pull out of a parking space. The car pulls out of the space, but before you can pull in, another car whips around the corner and takes it. You lay on your horn, roll down your window, and yell, “Can’t you see I was waiting for that parking space!” The driver gets out of his car, laughs, and walks away. You get out of your car and yell, “How dare you! Come back here!”

Your intense response in this situation could be considered a loss of self-control or a breakdown in emotional regulation. Even as adults, we can be overwhelmed by emotions, although we probably have learned some strategies to help us regain control. We may take a deep breath, count to ten, call a friend, or choose to let go of our frustration. We can think about what happened and why we reacted so strongly. But when very young children have such feelings, they are not yet able to do these things.

Babies are born with some ability for self-regulation, but they cannot always control their strong emotions. Infants and toddlers who are overwhelmed depend on the outside help, or external regulation, that responsive caregivers provide. Through caring relationships with adults, babies begin to develop their ability to self-regulate, an ability they will continue to work on and need throughout their lives.

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Developing self-regulation

What is self-regulation and why is it important? In the report *From Neurons to Neighborhoods: The Science of Early Childhood Development*, Shonkoff and Phillips (2000) define self-regulation as a child’s ability to gain control of bodily functions, manage powerful emotions, and maintain focus and attention. The growth of self-regulation is a cornerstone of early childhood development and is visible in all areas of behavior (Shonkoff & Phillips 2000). When caring for an infant or toddler, parents and caregivers act as extensions of or supports for the child’s internal ability to regulate. The adults put a young baby’s pacifier back in her mouth, provide a soft blanket for a toddler falling asleep, and use consistent routines to support self-regulation by helping very young children know what to expect.



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Feeding is one example of a daily routine that adults structure for infants and toddlers. The feeding process requires several aspects of self-regulation. Physically, it requires a baby to suck, swallow, and breathe. Emotionally, a baby's cries signal her distressed reaction to hunger. Cognitively, a baby attends to the task of feeding long enough to become full. Imagine the three scenarios that follow.

Hosea is 3 months old. His mother, Naomi, comes to the child care center during her lunch hour to breast-feed him. Naomi holds Hosea and offers him her breast. Hosea latches on to her nipple and nurses. He watches Naomi as he nurses. She smiles and talks to him in a low, soothing voice. Hosea pauses in his sucking to smile at his mother, who smiles back and gently jostles him to bring his attention back to the task of nursing.

When Naomi feeds Hosea, she meets his basic need for food. Perhaps he cried to signal that he was hungry. Although he may



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have had to wait a few minutes, his developing capacity to self-regulate is supported by his mother's response. Experiences with manageable challenges, like having to wait a short time to be fed, promote healthy emotional regulation (Shonkoff & Phillips 2000).

While feeding, Hosea gazes at his mother's face. Naomi talks to him soothingly, facilitating the feeding process by associating it with a pleasant atmosphere and warm feelings. Over time Hosea has repeated experiences of feeling hunger, signaling his distress by crying, and having his needs met by a caring adult. Although feeling hungry is uncomfortable, Hosea learns that this feeling will pass. He learns to trust that an adult will come, help him calm himself, and then provide the milk he needs. An attuned, responsive adult helps a child build the capacity to wait, knowing his needs will soon be met (Perry 2005).

Hosea, now 8 months old, sits in a high chair. He fusses because he is hungry. Eleanor, his caregiver, calls to him, "I'm fixing your food. I will feed you in a minute." Hosea quiets upon hearing her voice.

Eleanor arrives a few minutes later with a bowl of food, and Hosea bounces in his seat in anticipation. Eleanor dips the spoon into the bowl and brings the food to Hosea's mouth. He swallows and opens his mouth for more. After a few bites, Hosea grabs the spoon. Eleanor says, "I knew you were going to want that spoon. I will use another one to feed you."

Throughout this interaction Eleanor talks to and smiles at Hosea. Hosea responds with conversational sounds and smiles. At one point Hosea offers Eleanor imaginary food with his spoon, and she pretends to take a bite.

In this scenario Hosea's behavior shows his growth since he was 3 months old, in both the cognitive and emotional areas of self-regulation. He has gained more control over his body, emotions, and attention. Eleanor's verbal cue signals him that his food is coming, and her voice provides enough external regulation to help him stop fussing. When Hosea sees Eleanor with the bowl, he becomes excited; he knows from past experiences that his need for food is being met.

Eleanor talks to Hosea while feeding him, creating the positive social interaction he has come to expect as part of the mealtime routine. Hosea shows his beginning need for independence and his ability to imitate when he takes

the spoon from Eleanor and offers to feed her. Supporting Hosea's emerging independence, she lets him have the spoon. She also permits his continued dependence by recognizing that he still needs her to feed him. She fosters his developing empathy (part of his emotional development) by pretending to eat the imaginary food he offers her.

Hosea at 18 months sits in a booster seat at a table with other toddlers. Eleanor sits next to him at the table, eating her own meal. Holding his spoon in one hand, Hosea busily shoves food into his mouth with the other. Eleanor gives the children foods they can easily pick up. She encourages Hosea to use his spoon. Eleanor talks to Hosea about what he is eating: "Those strawberries are so good! You are really hungry." As his hunger subsides, Hosea uses his spoon to get the last few bites of fruit. Eleanor comments, "You used your spoon to get that last strawberry. Good for you!"

Even though Hosea can use a spoon, when he is really hungry, he goes back to using his hands. Eleanor is patient as Hosea acquires self-feeding skills. The teacher provides social interaction and emotional engagement as she sits with Hosea and talks about what he is eating. In the presence of his teacher's calm, supportive interactions, Hosea eventually uses his spoon, and Eleanor comments positively on this. Through consistent feeding routines, Hosea learns that people respond to him in positive, nurturing ways and that the world is a safe place. Caring, consistent relationships with adults provide external supports that serve as the basis for developing self-regulation.

One of a child's most important developmental tasks is moving from external regulation to self-regulation (Shonkoff & Phillips 2000; Perry 2005). Hosea's growing capacity for self-regulation integrates his cognitive, physical, and social-emotional abilities. The three vignettes show the beginnings of this process and how supportive, responsive adults facilitate it.

Temperament and goodness of fit

Imagine that when Naomi responded to Hosea's hungry cries in the first vignette, he arched his back and screamed. Or instead of latching on to the breast to nurse, he was distracted by the slightest sound or movement. Suppose this fussiness or distractibility continued, and Naomi became stressed trying to figure out how to meet Hosea's needs.

Caring, consistent relationships with adults provide external supports that serve as the basis for developing self-regulation.

Temperament Traits

The following list defines eight temperament traits; each trait exists along a continuum from *high* to *low*.

Activity level—amount of physical movement

Biological rhythms—regularity in eating, sleeping, and elimination

Approach/withdrawal—comfort in new situations

Mood—whether a child is mostly positive or negative

Intensity of reaction—how much a child reacts to situations or stimuli

Adaptability—ability to manage changes in routine or recover from being upset

Distractibility—how easily a child's attention is distracted

Persistence—how long a child stays with a difficult activity before giving up

Adapted, by permission, from A. Thomas and S. Chess, *Temperament and Development* (New York: Brunner/Mazel, 1977).

Hosea's view of the world would be different if Naomi could not read his cues and meet his needs. His capacity for self-regulation would be unlikely to develop as smoothly as the vignettes describe.

A baby's temperament can have an impact on a caregiver's ability to meet the baby's needs. *Temperament* refers to a person's characteristics or traits that are biologically based and consistent over time. Temperament influences how we respond to people and our surroundings (Thomas & Chess 1977). While Thomas and Chess's research shows that temperament characteristics tend to remain consistent over time, how they are expressed changes as a child matures. For example, a highly active child can become an extremely energetic adult who is able to accomplish many tasks in the course of a day. Temperament traits like mood, irritability, and adaptability can affect a baby's capacity for emotional regulation (Thompson 2001).

Temperament traits can be thought of as existing along a continuum from *high* to *low*. Such traits are not "good" or "bad," but when they fall at the high or low end of the continuum, a child may have some difficulty with self-regulation. For example, with the activity level trait (see "Temperament Traits"), a child's activity level may fall at the high end or the low end of the continuum, the child being either very active or not very active. Very active children may need adults who offer them opportunities to safely use their energy as well as calming strategies to help them quiet down and get ready for story or nap time. Children on the low end of the activity scale may need opportunities for quiet

play and extra support to enter into active play with other children.

Sometimes an adult's inability to understand and meet a child's needs is related to *goodness of fit*—how well a teacher or parent can recognize and respond or adapt to a child's temperament. Creating a good fit requires working with, not against, a child's temperament (Kristal 2005). It may mean the adult makes some changes in his own style of relating. It also may mean making changes in the environment that take the child's temperament into account.

Hosea's mother and teachers provided a good fit for Hosea. They tuned their own style and pace to his. They provided support to keep him from becoming frustrated as he worked on new skills. They offered him challenges, but not so many as to overwhelm him. These adjustments to adapt to Hosea's temperament further facilitated his development of self-regulation.

Goodness of fit and self-regulation

When teachers or parents have difficulty understanding and responding to a child's temperament, the child's development of self-regulation may be affected. A shy, quiet adult may be overwhelmed by an active, feisty child. Similarly, an active, outgoing adult may have difficulty providing the support that a shy or fearful child needs. Understanding the impact of temperament and considering goodness of fit can assist teachers in selecting strategies that support the development of self-regulation.

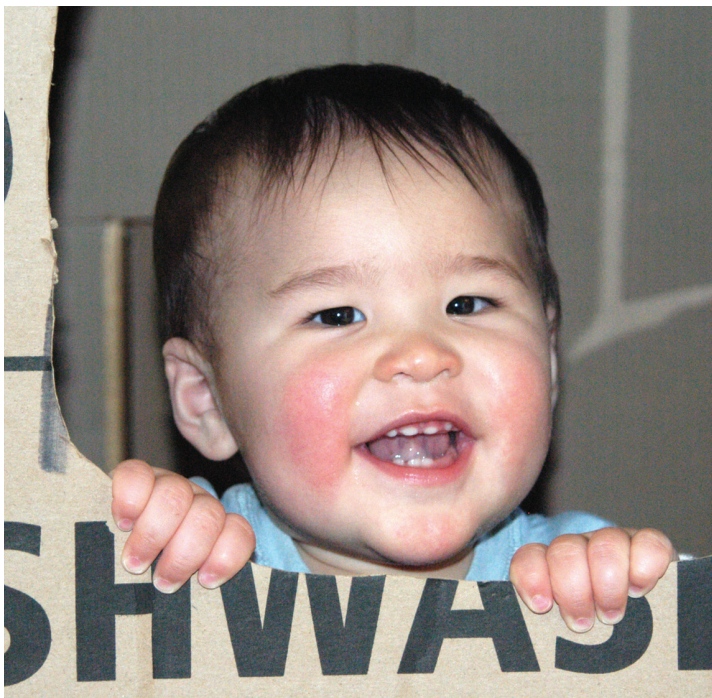
Understanding the impact of temperament and considering goodness of fit can assist teachers in selecting strategies that support the development of self-regulation.

Joe, a friendly, outgoing young teacher, walks up to Daniel, a new child in the toddler classroom. He kneels, puts his hands on Daniel's shoulders, and says in a loud voice, "Hey, big guy, glad to meet you! We're going to have lots of fun! Say good-bye to Daddy." Joe is mystified when Daniel bursts into tears and presses himself against his father's legs.

"Daniel is a little shy in new situations," Daniel's father explains. "He might do better if you bring out some toys and just sit next to him and play for a while." Joe does as Daniel's father suggests. At first, Daniel does not want to leave his father's side. But gradually he becomes interested in the toy trucks and school buses and joins Joe and two other children who have come over to play.

After a few minutes, Daniel's father says good-bye. Daniel cries a little, and Joe stays near him until he feels ready to play again. Over the next several weeks, Joe and Daniel's father talk each day to gauge their efforts in supporting Daniel's adjustment.

Joe connects to Daniel by adapting his style to the toddler's temperament. Joe uses information and help from Daniel's father to find a way to create a good fit between himself and Daniel. Joe's willingness to adapt his style and greeting routine support Daniel's growing ability to handle his emotional reaction to a new situation.



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Challenging behavior and self-regulation

When babies have trouble regulating their strong emotions, their families and teachers may see their behavior as challenging. It can be stressful to care for a baby who cries inconsolably or doesn't sleep day after day, or a toddler who hits, bites, or refuses to eat. Such children may be showing difficulty with self-regulation.

Vivian has just finished feeding, changing, and rocking 7-month-old Darnell. He is almost asleep. Vivian gently lays him in his crib, covers him, and quietly walks away. Within 10 minutes, Darnell is crying. This scenario plays out every time Darnell is laid down for a nap.

Giselle is 20 months old. Her family child care provider, Eliana, has just brought her, along with Eric and Bianca, who are both 2 years old, in from playing outside. Eliana helps them remove their coats. As she hangs up the coats, the toddlers scurry toward the kitchen for lunch. She is only steps behind them when she hears Bianca scream. In the kitchen she sees Giselle standing next to the crying Bianca. Bianca's arm has a bite mark. It is the second time this week that Giselle has bitten another child.

Teachers who work with infants and toddlers are familiar with such events. Thinking about the importance of self-regulation can help teachers be objective and understanding in responding to behaviors like this. Teachers can remember that, like Hosea, young children can learn self-regulation when they are exposed to manageable challenges that are part of everyday life (Perry 2005).

Darnell's teacher, for example, can continue to provide consistent nap time routines and allow Darnell to lie in his crib just before he falls asleep. If he wakes, Vivian can wait a short while to see if Darnell can manage to stop crying and fall back asleep. She might try staying nearby and patting his back if he continues to cry. While at first she may need to pick him up and rock him again, eventually he will be able to go from drowsy to asleep by himself. When Vivian keeps in mind the goal of helping Darnell learn to put himself to sleep, her approach facilitates Darnell's move toward self-regulation. This focus informs the way the teacher selects and uses strategies.

Eliana's first challenge is discovering why Giselle bites. Once she understands which frustrations lead to Giselle's loss of self-regulation, Eliana can provide external support for self-regulation. She can stay close enough to offer her another way to express her angry feelings in times of stress. She can show Giselle other ways to express her frustration, like stamping her feet or using words. Eventually Giselle will develop the ability to use these strategies herself.

Teachers can address the challenges in very young children's behavior by providing external support for self-regulation when they need it and by offering children the opportunity to take responsibility for self-regulation as they become able.

Strategies to help children self-regulate

Strategies (adapted from Bronson 2000) must be individualized for each child in a setting. With each of the strategies that follow, one example is offered. You may want to discuss with your coworkers how to apply these ideas to children in your classroom or home care setting.

Observe closely. Babies send cues that tell you when they are hungry, tired, or ready to play.

Sarah, a 4-month-old, signals her need for food very subtly by whimpering a little. Her caregiver knows this cue means she is ready for a bottle.

Respond. Be alert to individual differences in the need for regularity, novelty, and interaction.

Jacob's teacher knows he needs his favorite windup toy for sleeping. She always places it in his crib and covers him lightly with a blanket when she puts him down for a nap.

Provide structure and predictability. Babies need consistent caregivers and approaches to routines such as feeding, sleeping, and diapering or toileting.

The toddlers in Elizabeth's class know that as lunch ends, their teacher will be sitting in the book corner waiting to read to them before their nap every day. As children finish eating, they sit with Elizabeth and listen while she reads familiar stories.

Arrange developmentally appropriate environments. Low shelves, clear labels, and age-appropriate materials can provide some challenge and can be adapted to a child's quickly changing abilities.

In Emily's family child care home, two babies can crawl, and they are starting to cruise while holding on to furniture. Emily puts a few blocks and soft toys on a low, sturdy table, giving the babies something interesting to reach for when they pull up and stand.

Define age-appropriate limits. Help a child feel safe and help him know what is expected.

Sebastian, who is 21 months old, inches toward the classroom door. He looks toward Pilar, his teacher, as he reaches for the doorknob. Pilar says, "Sebastian, you know we don't go out in the hall by ourselves. Wait for me and we'll take a walk together."

Show empathy and caring. When caregivers recognize children's needs and treat them as important, children feel good about themselves and are better able to handle strong emotions.

Eight-month-old Sunil cries when his mother leaves in the morning. Mark, his teacher, talks softly to him: "It is so hard for you when Mommy leaves. You feel so sad. I know how hard it is." He holds Sunil gently until he settles down.

Thinking about the importance of self-regulation can help teachers be objective and understanding in responding to behaviors.

Conclusion

Self-regulation in early development is influenced by a child's relationships with the important adults in her life. Providing the experiences, support, and encouragement that help very young children learn to self-regulate is a critical element in quality care (Shonkoff & Phillips 2000).

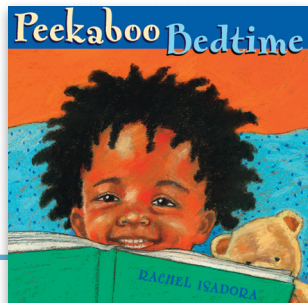
Thinking back to the parking lot vignette, you probably pulled yourself together, found another parking spot, and took care of your errands. You have had life experiences that helped you develop self-regulation. As an early childhood educator, you can provide those experiences to the very young children in your care.

The Reading Chair

***Peekaboo Bedtime*, by Rachel Isadora. 2008. New York: Penguin Young Readers. 28 pp. ISBN 9780399243844. Ages birth to 4.**

Rachel Isadora's body of work is remarkable in its diversity. Her books offer multicultural and geographic diversity (with settings from South Africa to Harlem), diversity of artistic style (stark black-and-white images in *Ben's Trumpet*, bright printed paper collage in *The Princess and the Pea*), and diversity of subject (ballet in *On Your Toes*, language in *Yo, Jo!*). One of Isadora's newest books (she has published many in the past year) is a notable return to what she has done well in the past.

Peekaboo Bedtime, a sequel to *Peekaboo Morning*, is a turn-the-page guessing game about all those whom a boy sees on his way to bed. "Peekaboo! I see . . . my mommy[.] Peekaboo! I see . . . my blankie[.]" Each page contains a visual clue about what he'll discover on the following page. Bright illustrations depict a three-generation family, with a couple of pets too. The book incorporates elements of routine—waving to the moon, taking a bath, and replacing shoes with slippers for bed—that are part of establishing a successful bedtime. Both the family and the routine make for a comforting book about getting ready for bed.



References

- Bronson, M.B. 2000. *Self-Regulation in Early Childhood: Nature and Nurture*. New York: Guilford.
- Kristal, J. 2005. *The Temperament Perspective: Working with Children's Behavioral Styles*. Baltimore: Brookes.
- Parlakian, R., & N.L. Seibel. 2002. *Building Strong Foundations: Practical Guidance for Promoting the Social-Emotional Growth of Infants and Toddlers*. Washington, DC: ZERO TO THREE.
- Perry, B.D. 2001. "Keep the Cool in School: Self-Regulation—The Second Core Strength." *Early Childhood Today* (November). http://teacher.scholastic.com/professional/bruceperry/self_regulation.htm.
- Shonkoff, J., & D. Phillips, eds. 2000. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. A report of the National Research Council. Washington, DC: National Academies Press. www.nap.edu/openbook.php?record_id=9824&page=1.
- Thomas, A., & S. Chess. 1977. *Temperament and Development*. New York: Brunner/Mazel.
- Thompson, R.A. 2001. "Development in the First Years of Life." *The Future of Children* 11 (1): 21–33.

When a Very Young Child Needs Additional Help

Very young children can suffer from developmental or mental health difficulties that may signal the need for referral to an early intervention or mental health professional. Such professionals can diagnose and treat early signs of developmental or mental health difficulties. They also can consult with early care and education professionals to help them support the child and family. Some signs that an infant or toddler may need additional help include behaviors that

- are unusual for the child
- cause the parents or other caregivers to see the child as "difficult"
- make it difficult for the child to have satisfying relationships with others
- are seen in different settings (i.e., at home, in the child care program) by different observers
- last for a long time

Adapted, with permission, from R. Parlakian and N.L. Seibel, *Building Strong Foundations: Practical Guidance for Promoting the Social-Emotional Growth of Infants and Toddlers* (Washington, DC: Zero to Three Press, 2002).

This article defines self-regulation and explains how temperament and goodness of fit affect its development. Additionally, it helps practitioners plan concrete strategies for supporting the development of self-regulation in infants and toddlers.

Key messages

- ▶ Young children's caring, consistent relationships with adults provide external supports that serve as the basis for developing self-regulation.
- ▶ Understanding the impact of temperament and considering goodness of fit can help teachers select strategies that support children's development of self-regulation.
- ▶ Children's challenging behaviors are sometimes related to their limited capacity for self-regulation.

In your view

1. What are the three most important themes or key ideas in this article? If possible, compare your choices with those of others who have read the article.
2. How is the content of this article related to applicable early learning standards or other curriculum or program requirements?

Reflect and revisit your practice

1. What ideas in this article affirm your practice? What questions does the article raise about your work with infants and toddlers? What new approaches might you try?
2. What kinds of supports do you and your colleagues need to try out these new ideas?

Let's talk

1. Discuss with a colleague examples of situations that require self-regulation, such as being able to concentrate when there is a lot of noise and controlling your behavior when you are angry or frustrated. What strategies do you use to manage your behavior in such situations?
2. Share your experience caring for a child with whom you did not have a good fit in terms of temperament. What adjustments did you make in your caregiving style so you could meet that baby's needs? For example, if you are enthusiastic and energetic, did you slow down for a child who might be slow-to-warm?
3. Think about one particular baby in your care. What are the day-to-day activities and routines you do with this baby? How do these activities and/or routines support the baby's emerging self-regulating skills, like waiting short periods for a bottle?

Steps you can take

1. Read the section on self-regulation in your state's infant/toddler early learning guidelines. (If your state does not have early learning guidelines, read another resource on self-regulation.) Next, observe and document the self-regulation capacities of three children in your care. Discuss with a colleague how they are similar and different.
2. Share your observations with the families of the three babies or toddlers. Ask them what they have noticed their child doing to help herself or himself fall asleep, transition from one activity to another, or recover from an event that makes them sad, scared, angry, or frustrated. Discuss strategies each of you use to support self-regulation skills.

Glossary

Goodness of fit—how well an adult can recognize and respond or adapt to a child's temperament.

Self-regulation—the ability to gain control of bodily functions, manage powerful emotions, and maintain focus and attention (Shonkoff & Phillips 2000).

Temperament—biologically based characteristics or traits that are consistent over time (Thomas & Chess 1977).

To increase your knowledge

Devereux Early Childhood Initiative. www.devereux.org.

Hatkoff, A. 2007. *You Are My World: How a Parent's Love Shapes a Baby's Mind*. New York: Harry N. Abrams.

ZERO TO THREE. n.d. "Challenging Behaviors: Tips and Tools." www.zerotothree.org/child-development/challenging-behavior/tips-tools-challenging-behaviors.html.

ZERO TO THREE. n.d. "Self-Control." http://main.zerotothree.org/site/PageServer?pagename=ter_par_012_selfcontrol.

References

- Shonkoff, J., & D. Phillips, eds. 2000. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. A report of the National Research Council. Washington, DC: National Academies Press. www.nap.edu/openbook.php?record_id=9824&page=1.
- Thomas, A., & S. Chess. 1977. *Temperament and Development*. New York: Brunner/Mazel.