

# Foundations of language development: love and attachment

## In this article, you will learn:

- i. basics of attachment theory
- ii. How attachment to caregivers impacts children's language development
- iii. why a foundation of love, security, and attachment is fundamental to life success
- iv. premises of giving your child a secure, loving emotional base
- v. strategies for how to form a secure attachment with your child as a foundation for a successful adult life

My husband and I never thought we could get pregnant, but one day I woke up and there was my precious baby boy. Because Mark was a surprise, I read all I could on how to care for babies. I read in a book that a research study followed babies into their 20s and looked at what variables contributed to their happiness as young adults. It turns out that physical affection shown by caregivers early in life was the #1 predictor of adult happiness. Physical affection, devoted attention, and love overcame challenges such as poverty, divorce, substance abuse, and other environmental problems. I realized that my number one priority with my baby was to build his foundation with love: to respond immediately and sensitively to his cries and signals, and shower him with physical affection. This would create a secure foundation of attachment, and I could build language skills from there. And, of course, as a speech-language pathologist, I knew I should talk and read with him and sing too!

In this article, I share pertinent research which gives us a scientific rationale and specific practical strategies for establishing strong, attached relationships with our babies. I demonstrate how the results of scientific studies conclusively prove that attachment in infancy provides the foundation of love and security (or not) that affects the baby's entire life trajectory. I show the relationship between love, attachment, and language development in infants and young children.

As I share this research, I summarize positive, straightforward strategies for creating these ideal relationships that will give our children a strong foundation for their whole life path. Let's start with attachment theory as it originated around 70 years ago. (\*Note: the research I am citing was primarily centered around biological mothers and their babies. But there is nothing—aside from breastfeeding—that cannot be done by a loving, attentive adult in the baby's life.)

## Attachment theory

### The research of bowlby and ainsworth

Attachment theory was developed in the 1950s and 1960s by British psychoanalyst John Bowlby and his colleague Mary Ainsworth from the University of Toronto.<sup>1,2</sup> When Bowlby began his work in the 1950s, parents were advised to interact with their babies based on the dominant theory of the day espoused by behaviorists. These behaviorists told parents to avoid “spoiling” babies by picking them up and comforting them when they cried. Parents were to leave their

Special Issue - 2018

Celeste Roseberry Mckibbin

USA

**Correspondence:** Celeste Roseberry Mckibbin, USA,  
Email Celesta@csus.edu

**Received:** September 20, 2018 | **Published:** December 31, 2018

children alone to “cry it out;” presumably, this helped the babies become stronger and more independent human beings in the process.

But Bowlby and Ainsworth carried out research in the 1960s and 1970s that showed that the behaviorists' advice did not bode well for the babies. Rather, babies whose parents responded immediately and with warmth and attention to their cries developed into more independent, secure preschoolers than babies whose parents had ignored them. In a nutshell, Bowlby and Ainsworth, as well as other researchers, showed that children who were lovingly and securely attached to their caregivers at one year of age were more socially competent, happy, and secure throughout their lives.

### The Minnesota study

Fast forward some years to the famous Minnesota study.<sup>3</sup> The Minnesota longitudinal study of children and their parents followed 180 individuals from 3 months before birth to age 34. The children were born into backgrounds of poverty and experienced multiple risk factors. The goal of the study was to assess the impact of early life experience on persons in childhood, adolescence, and adulthood.

The Minnesota study was especially robust; detailed measures were gathered throughout the study through both direct observation and formal assessments and parent interviews. For example, eight assessments were carried out in the first 18 months of the subjects' lives. The study tapped multiple domains of development, including language, cognition, socio-emotional development, and others. Aspects of parenting and the children's environments were examined as well.

The study found that the most significant links between early experience and later behavior in childhood, adolescence, and adulthood were based on patterns of parent-child attachment at 12 and 18 months of age. Attachment was strongly related to caregiver sensitive responsiveness. The children's temperament was not a clinically significant variable in the outcomes observed. The study found that securely attached children, whose caregivers were sensitive and responsive to them, had greater degrees of:

Independence

Willingness to explore

Self esteem

School achievement

Satisfying social relationships (including in adolescence and adulthood)

Resilience

Subjects in this study who were insecurely attached had caregivers who were not responsive and sensitive to their needs. These caregivers often let their babies “cry it out” unattended, and were unresponsive to their babies’ needs. Later in life, these babies manifested a higher incidence of:

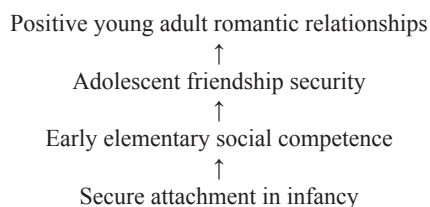
Dependence on teachers and counselors in preschool and middle childhood

Psychopathology in adolescence

Young adult self-injurious behavior

Adult borderline personality disorder

The Minnesota study found that factors built hierarchically upon one another.



In sum, the Minnesota study solidly confirmed the great importance of positive, warm, sensitive caregiving and attachment in early infancy and the impact of this across developmental stages of childhood and adolescence into adulthood. The researchers recommended that when babies needed attention, caregivers should respond immediately with sensitivity, warmth, and love.

### The national collaborative perinatal project

In the National Collaborative Perinatal Project, Maselko and colleagues examined the relationship between mothers’ affection with their infants and emotional outcomes in adulthood.<sup>4</sup> When the babies were 8months old, an observer rated infant-mother interaction quality. When the babies were adults, the researchers interviewed them about various subjects such as the amount of life distress they experienced, etc. The researchers interviewed 482 adults (average age 34years) to examine the relationship between adult mental health and objectively measured affective quality of mother-infant interaction.

Maselko and colleagues found that high levels of maternal affection when babies were 8months old were associated with significantly lower levels of distress in adulthood. The parameter impacted most was anxiety; adults with loving and responsive mothers experienced substantially less anxiety than adults whose mothers were less affectionate when they were infants. If their mothers were highly affectionate during infancy, the adults were much less likely to report psychosomatic symptoms, distressing social interactions, and hostility.

The researchers concluded that high levels of warmth and affection between mother and child seem to lessen the stress response and make children more resilient to difficulties later in life. The researchers concluded that the hormone oxytocin was probably responsible for this effect. When a person feels love and connection, the chemical oxytocin is released in the brain. Oxytocin calms the brain and helps the individual feel loved and secure.

In sum, research over the years has conclusively proven that the best way to give our children the very most optimal start in life is to respond immediately to their cries with warmth, love, and attention. When we do this, we give our children a secure foundation by setting them up from day one to be happy, secure, resilient, successful adults.

### Learning from our ancestors

The research of Dr. Darla Narvaez and her colleagues at Notre Dame University found that there was a strong relationship between child rearing practices in foraging hunter-gatherer societies and children having higher intelligence, better mental health, greater empathy, and development of a strong conscience.<sup>5</sup> In a series of studies, including one involving longitudinal data outcomes on over 600 adults, Narvaez and colleagues showed that the way we are raising our children in modern American society is increasingly depriving them of the practices that help them develop morally (a strong conscience) and experience a sense of wellbeing.

Unfortunately, today’s statistics indicate that the health and wellbeing of American children is worse than it was 50years ago. More children are experiencing anxiety and depression; aggressive behavior is on the rise. College students are showing decreased empathy, which is the backbone of moral, compassionate behavior. Narvaez tells us that children who don’t get enough nurturing early in life tend to be self-centered. They are not as compassionate as kids who were raised by responsive, warm families.

Narvaez and her colleagues explain that the U.S. has been on a downward trajectory on all these ideal care characteristics:

- i. Instead of being held and cuddled, more infants spend time in strollers and car seats
- ii. Only about 15% of mothers are breastfeeding at all by the time their babies are 12months old
- iii. Extended families are geographically broken up
- iv. Free play allowed by parents has dramatically decreased since 1970
- v. Babies are isolated in their own rooms
- vi. People believe that responding instantly to a baby will “spoil” it (Hello 1950s! The pendulum has swung back!!)

Narvaez et al.<sup>5</sup> recommend specific, practical strategies used by our ancestors to help our children today grow up to be happier, less stressed, more resilient adults:

- i. Provide a great deal of positive touch such as carrying, cuddling, and holding. Skin-to-skin contact is recommended.
- ii. Give immediate responses to a baby’s cries and fusses. You can’t spoil a baby! It is ideal to meet the baby’s needs before she gets upset and her brain floods with toxic chemicals. If the response to her cries is immediate and warm, this keeps her brain calm in the years when she is forming her personality and ability to respond to the world. The baby grows up to be a more compassionate and empathetic adult, with better socio emotional skills that are more necessary than ever in our technologically hypercompetitive world.
- iii. Implement breastfeeding, which ideally goes until the child is between 2-3years old. Breast milk provides building blocks for the child’s immune system.

- iv. Engage multiple adult caregivers (beyond just dad and mom) who also love the child—e.g. grandparents, older siblings, loving daycare providers.
- v. Provide free play opportunities with children of multiple ages. A lack of adequate play time may contribute to ADHD and challenges to mental health.
- vi. Expose our children to nature as much as possible. Children who are regularly exposed to nature tend to be calmer, happier, and more focused than children who remain indoors most of the time. More will be said about this in a later chapter.

In sum, implementing all of these suggestions will help our children, at the beginning of life, to gain a secure and strong base of attachment. This base is critical for helping them be happier, more secure, more resilient adults.

### The secure base

An important concept in attachment theory is the idea of the secure base.<sup>2</sup> According to Bowlby, when parents provide a secure base their children have more confidence to explore the environment; they become more independent. The secure base involves two intertwined components: 1) a secure base from which a child can explore, and 2) a haven of safety the child can come back to in times of distress.

In the secure base script, the child experiences a distressing event. Following this, he seeks and receives comfort and care from an available attachment figure. This Figure (stepmom, Dad, grandpa, daycare provider) provides comfort until the child is ready to resume exploration. Let's see how this might play out.

#### Scenario 1:

3-year old Justin is playing at the park. Mom is on a bench nearby. She is on her phone, but she is watching and available. A man with a large dog comes into the play area. The large dog comes up to Justin and growls at him. Justin starts crying in fear and runs to Mom. In this ideal scenario:

Mom (picking Justin up): Oh, wow! What a big dog! That was scary! (Mom labels the emotion, speaking calmly and soothingly).

Justin continues to cry and hold onto Mom.

Mom (continuing to hug and hold Justin): Mommy is here. I love you. I'm right here. You will be OK. (this may continue for several minutes while Justin and Mom hug each other tightly and Justin experiences comfort and care.)

Eventually, after some minutes go by, Justin's crying subsides and his body relaxes.

Mom: Are you ready to go back out and play again? (If Justin isn't ready, Mom continues to hold him close. If he is ready, Mom responds.)

Mom: That's my big boy. I love you and I am right here.

#### Scenario 2:

A man with a large dog comes into the play area. The large dog comes up to Justin and growls at him. Justin starts crying in fear and runs to Mom.

Mom: (distractedly looking up from her phone and patting Justin

on the shoulder) you'll be OK. You are a big boy. Shake it off. The dog is gone now. Go back out there. It's fine. (Mom returns to her phone, even though Justin still clearly needs comforting. Eventually, discouraged, he wanders timidly back to the playground, still afraid of the dog. Or, in the alternative, he fearfully clings to mom, stopping the healthy and fun play that he was engaged in.)

In Scenario 2, Justin has not been allowed to process his emotions. Mom has shut them down and stifled full emotional expression. After this and other similar episodes, Justin "toughens up." He stops coming to his mother for comfort because he's learned that she won't provide the response he needs.

Mom prides herself in raising a "tough guy." What Mom doesn't realize is that now, Justin has a diminished capacity to feel empathy for others. This will eventually impact his social skills, as he finds it harder to make friends because he is emotionally "walled off." He is not able to feel adequate empathy for others, which is at the heart of socio emotional skills. As an adult, he may lack the necessary socio emotional skills to function well on teams at work; this can contribute to difficulty holding down jobs.

#### Scenario 3:

A man with a large dog comes into the play area. The large dog comes up to Justin and growls at him. Justin starts crying in fear and runs to Mom.

Mom (picking Justin up and gasping) my poor baby!! Oh no!! That was so awful! That terrible dog! That was super scary!! Mommy will make sure that bad dog doesn't come near you again! Oh no!! This is so bad!!

In scenario 3, Mom overreacts. She makes a scary situation worse by becoming dramatic and losing her cool. Now she is part of the problem! Justin learns to be something of a "drama king" himself, over-reacting to normal incidences and becoming fearful and clingy.

It is ideal for the caregiver using the secure base script to be warm, loving, and calm. In Scenario One, Mom was loving and empathetic, remaining calm and in control. She spoke in a low, soothing voice. She let Justin have as much time as he needed to process his emotions through allowing him to let them out until he was satisfied. This was just what Justin needed to experience so he could eventually learn to regulate his own emotions and, in turn, be empathetic toward others.

Research has conclusively shown that if parents love, sensitive, responsive, and consistent in using the secure base script, their children are more successful over their lifetimes. They grow into adults who are more secure, resilient, independent, empathetic, compassionate, and less anxious, than those raised by unresponsive parents. What is striking about the studies put together is that the parents who are not attached to their children are not necessarily abusive people. They have not been shown to actually harm or physically abuse their young children. These unattached caregivers are simply nonresponsive; they allow babies to cry unattended, and they don't respond quickly or show much warmth to their little ones. How often are these caregivers attached to their phones and thus distracted from meeting their small children's needs? It's scary to think that ignoring our babies in favor of our phones can produce an adult who has a lifetime of emotional problems!

Now, I love my phone and can't live without it. I am as or more addicted to my phone than the next person, so I'm not scolding

anyone! But I have a deep concern that just claws at me on a regular basis, especially as a speech-language pathologist. I so often see children trying to get their parents' attention, but the parents are on their phones and ignoring their children.

I was in Las Vegas last year speaking for an international conference. Sitting eating my lunch at Denny's, I saw a little boy (around 2 years old) with his parents; they were both on their phones. The boy's paper and crayons dropped onto the floor, and he repeatedly tried to get his mother's attention to retrieve them. I watched in fascination and horror as finally, about the 8<sup>th</sup> time the child tried to get mom's attention, she absently glanced over at him. "Oh, it'll be OK," she said, waving her hand dismissively, and went right back to her phone. The parents chatted with each other, paid the bill, and left about 10 minutes later. The crayons and paper remained on the floor.

What did that little boy learn from that encounter? He learned that his parents' phones were more important than his own needs. He learned that his attempts at communication were not successful. He learned that trying to get mom's attention doesn't work. In short, he experienced being neglected. I hoped that this was an isolated incident and not representative of his usual experience.

## The impact of neglect

Research tells us that in terms of abuse and neglect of our children, neglect may be even more harmful—especially when children are infants and toddlers.<sup>6</sup> Neglect, or absence of responsiveness from caregivers, teaches children that their environment is chaotic, unstable, and unpredictable. Neglect impacts the brain's pre-frontal cortex in such a way that the stress-response system is impaired.<sup>7</sup> This can have impacts that last through childhood, the teen years, and into adulthood. If children have experienced long-term lack of stimulation, this can delay them in intellectual, language, and social development; they often demonstrate attention difficulties as well as trouble with organization and the ability to plan ahead. The ability to plan ahead and organize, called *executive functioning*, is critical to life success.

The brains of young children, especially babies, look for patterns in their environment. If their environments are continuously changing or unstable—for example, if adults are neglecting the children or behaving erratically—the children's brains are triggered to be on constant alert. Being on constant alert can flood the child's brain with cortisol, a stress hormone that has a multitude of negative impacts. Cortisol alters the anatomy and physiology of the brain and the immature brain is especially sensitive to its effects. The area of the brain most impacted by cortisol production is the medial temporal area, which is crucial to memory.<sup>7,8</sup>

In this vein, I think of an incident that occurred when Mark was in high school. I will never forget sitting with teenaged Mark in the hospital waiting room (I think he had a rash on his arm). There was a mom with two boys and a baby boy in the stroller. The two older boys played, and the baby was alone in the stroller looking around the room. He continuously looked toward his mother, who never once looked up from her phone. His eyes continued to roam around the room, seeking human contact. Mark, though he wasn't feeling very good, smiled and waved at the baby.

The baby roared to life. He started smiling, laughing, bouncing, and waving his arms in joy that someone finally paid attention to him. Within 2-3 seconds, Mark's smile and wave transformed an ignored,

desperate baby into a communicative, bubbly human being who had actually had someone look in his eyes and make warm, human, direct contact. I hoped that his mother's behavior was an exception rather than the rule!

(Go to you tube and type in Still Face Experiment. You will see a shocking video of what happens to babies when caregivers are nonresponsive. Notice that the mother in the video is not abusing her baby. She is simply not responding to her child. )

## A personal note

I'll never forget resigning from my job as a university professor to stay home full time after Mark was born. As a professor, I was accustomed to a full time job, benefits, a regular paycheck, and a great deal of respect and mental stimulation from my wonderful students and colleagues. I felt so appreciated! After I gave birth to my beautiful baby, I found myself home alone and isolated. My mother was wonderful and helped when she could, but she lived 4 hours away round trip. My husband took nine days off of work and then went back to his demanding full time job. I'd find myself alone 8-10 hours a day with my sweet baby and absolutely no one to help me or talk with me. It was an extremely hard adjustment, especially because I had deliberately planned to never have children. Obviously, my loving God had another plan—and I'm so thankful He did!

One day I was pushing Mark in the stroller and talking with our neighbor Patricia. As we walked along in the park across the street, I told her how lonely I was and how scared I was that I might never get a university job again. University professorships were extremely scarce, and no one could believe that I had actually resigned from a plum, full time university job to be "just a housewife." But I really believed that even though my sweet baby was a total surprise, he was a gift from God to be cherished. My husband and I called him our "Miracle Mark!"

I'll never forget Patricia's words. "It is important to be a joyful servant," she said. "You pay now or you pay later. You pay the price now of staying home and meeting Mark's needs, and you will have a happy, resilient young man. You can go back to work full time now, and pay the psychiatrist's bills when he is in his teens and addicted to drugs and possibly getting into trouble with the law. It's your choice." Patricia is no longer with us—she passed recently due to Parkinson's disease. And while her words maybe were a bit drastic, they were filled with wisdom.

I realized at that time that what was required of me to be the most affectionate, loving, responsive mother possible was to be full time at home with my little one. I know that not everyone can afford this luxury, and I have no negative judgments of mothers who are forced to go back to work full time due to financial need. But I knew that for myself personally, I needed to be at home to create the secure, loving base that would be the foundation for Mark's whole life. I needed to establish a consistent breastfeeding routine that would benefit him in multiple ways. I wanted to massage him every day, and I did for the first year of his life. I realized that—gasp!!—I needed to make major sacrifices.

No one talks much about the word "sacrifice." Ideally, in this have-it-all world, I should have been able to give birth to Mark and quickly go back to work in a similar academic job. The university where I worked when I got pregnant with Mark was several hours away



(about 7 hours round trip), and I stayed with a lovely widow in that city several nights a week. There was no university job close to home, so I commuted for several years. But after Mark was born, I knew I could not continue that kind of commute and be present for my baby.

Instead, I chose to resign from my job and be at home with him. When a university job opened close to home shortly before his second birthday, I applied and was hired. But because I had taken the “mommy track,” I lost all my years of service credit that I put in before Mark was born. I had taught at the university level for 6-7 years and was eligible to be a full professor with tenure. But when I got the new job, I had to press hard to start at the rank Associate Professor (which I was when I stopped working after Mark was born), and all seven years of university experience melted like snow in July as I started right back at Square One.

“That’s so unfair!” I thought to myself. But in hindsight, these years later, I will say that staying home with Mark when he was a baby and setting his strong life foundation was one of the very best decisions I ever made in my life. Yes, I made sacrifices. Yes, it was highly unfair to me professionally. And yes, a man probably would have been treated much better. But when I look at my six foot tall son today, and experience the loving and trusting relationship we have, I know I did the right thing.

All those hours of nursing him, holding him, letting him sleep with us, responding immediately to his needs, and giving him that strong start in life have paid off better than I could have ever imagined. I’m so blessed and grateful that we could afford for me to stay home and give Mark that lifetime foundation of love and security. I quickly learned this after Mark was born: with children, we do not get a second chance. When they need us most, we are there or we’re not. And hopefully, armed with research to guide us to best practices, we will be there when our children need us the most.

Before I conclude, it’s important to me to address the question that people often ask: what if mom needs to go back to work for financial reasons when the baby is still very little? What if the baby has to go into full time day care when he is only a few weeks old? Or what if the baby is being raised in a home by grandma or two dads? Research has consistently shown that no matter whom the caregivers are high quality responsive and loving care in early infancy and childhood provides excellent, long-lasting results for children that extend into adulthood.

Although (as I said earlier in this chapter) many past studies explored infant-biological mother relationships, other studies have evaluated the benefits of loving, high quality care outside the home with nurturing, experienced caregivers.<sup>9,10</sup> These studies have shown that even if caregivers are not biologically related to babies and young children, nurturing and responsive caregiving provides the same kinds of long lasting benefits to children.

I think of a trip we took to China several years ago. We were part of a tour group, and got to know each other quite well over the course of the two weeks we were together. Bill and Dave (all names have been changed) were the fathers of Scotty, a 4 year old boy. Two grandmas (one was Bill’s mother), were along for the ride. It was incredibly enlightening to me to observe the relationship between these five people; the tour provided me multiple opportunities to observe them in very close quarters!

Scotty was happy, secure, loved, and very well cared for. His dads

were incredibly devoted to him, often sacrificing sleep to be up with him when he was unable to sleep due to the dramatic time change between China and Canada. I never once saw them express frustration, impatience, or anger with Scotty, no matter how difficult conditions were sometimes (e.g. scorching heat, pouring rain, long bus rides). They never complained.<sup>11,12</sup> On the contrary, they and the grandmas were incredibly patient with Scotty, showing unconditional love and support at all times. I am so pleased that today, we are connected on social media and I get to observe Scotty getting older and continuing to be a happy, well-adjusted child!

## Conclusion

When we are working to give our children a strong and secure beginning in life, it is so easy to overlook the foundation: love and attachment. But a number of research studies have conclusively shown that babies and young children who experience this loving attachment base turn out to be much happier, more productive adults. They also tend to have better socio emotional skills, which are so important to success in our world today. Love and attachment are key to optimal language development, which we will discuss more in the next chapter.

### \*\*Tips and Takeaways\*\*

- i. \*Affectionate, loving, responsive caregivers produce children with higher self esteem, improved academic performance, better parent-child communication, more highly developed language skills, and fewer behavior and psychological problems. These children are more empathetic and resilient; they are also less anxious. Hugs are the best!
- ii. \*Skin to skin contact is ideal during infancy. The more, the better!
- iii. \*When a baby cries, respond immediately and with warmth. Don’t let the baby cry it out unattended!!
- iv. \*If possible, several years of breastfeeding is ideal.
- v. \*Massage is a nice way to connect with our children, creating a strong bond. I massaged Mark from the early days until he was 1 year old and kept crawling away from me!
- vi. \*Provide a secure base for your child. Encourage him to explore. If he experiences a distressing event, provide him with a safe haven where he can receive calm, soothing comfort and then go back out exploring again.
- vii. \*Your child can benefit from having multiple, loving caregivers to whom she can become attached. Examples include Mom, Dad, Grandma, Grandpa, a day care provider, a neighbor, and older siblings or even aunts and uncles.

## Discussion questions

- A. I thought I should let my baby just “cry it out.” Won’t it spoil her if I respond immediately when she cries? Why is an immediate loving response so important?
- B. I don’t get what the big deal is about being on my phone and not responding to my baby’s every whim. I need a break too! Doesn’t my baby need to learn to be independent? How can I balance time on my phone with meeting my baby’s needs?
- C. When my child gets upset about something, I think I should tell

him to shake it off and act like a man. Isn't that better than turning him into a wimp by babying him?

- D. In what areas of my life might I need to make sacrifices so I can be emotionally more available to my children? Are there any habits or past times I indulge in at their expense?
- E. What can I start doing right now to be more responsive to my child?
- F. Are there 1-2 other loving adults in my child's world who might be able to help me with caregiving? Who are these people? How might I enlist them to help me care for my child so she learns to love several different caregivers and I get a much-needed break?

## Acknowledgements

None.

## Conflict of interest

Author declares that there is no conflict of interest.

## References

1. Bowlby JA. *Attachment*. New York: Basic Books; 1969.
2. Bowlby JA. *A secure base*. New York, NY: Basic Books; 1988.
3. Sroufe LA, Cofino B, Carlson EA. Conceptualizing the Role of Early Experience: Lessons from the Minnesota Longitudinal Study. *Developmental Review*. 2010;30(1):36–51.
4. Maselko J, Kubzansky L, Lipsitt L, et al. Mother's affection at 8 months predicts emotional distress in adulthood. *Journal of Epidemiology and Community Health*. 2011;65(7):621–625.
5. Narvaez D, Wang L, Cheng Y. The evolved developmental niche in childhood: Relation adult psychopathology and morality. *Applied Developmental Science*. 2016;20(4):294–309.
6. Tough P. *Helping children succeed*. New York: Houghton Mifflin Harcourt; 2016.
7. Blair C, Granger DA, Willoughby M, et al. Salivary cortisol mediates effects of poverty and parenting on executive functions in early childhood. *Child Development*. 2011;82(6):1970–1984.
8. Cuteli JJ, Wiik KL, Herbers JE, et al. Cortisol function among early school-aged homeless children. *Psychoendocrinology*. 2010;35(6):833–845.
9. Loeb S, Fuller B, Kagan SL, et al. Child care in poor communities: Early learning effects of type, quality, and stability. *Journal of Child Development*. 2004;75(1):47–65.
10. Carolina Abecedarian Project. *Home executive summary*. 2006.
11. Tough P. *How children succeed*. New York: Houghton Mifflin Harcourt; 2012.
12. Adapted with permission from Roseberry-McKibbin C. *Love, Talk, Read to Help Your Child Succeed*. Carlsbad, CA: Crescendo Publishing; 2018.