

# CRYING BABIES

Answering the call of infant cries

by Melodi Faris and Elizabeth McCarroll

**A** 3-month-old baby wakes up from napping and begins to cry. Her caregiver continues working to finish her tasks before responding to the baby's cries. In another setting, a 3-month-old baby awakes from napping and begins to cry. Her caregiver rushes to her, quickly picks her up, and comforts her in a soothing voice.

Is the response to the baby's cry a function of the caregiver's beliefs about spoiling a baby? Is the response influenced by cultural beliefs? Does it really matter how quickly the caregiver responds? Are there any benefits to responding quickly to a baby's cries?

## Crying communicates a message

Crying is a baby's primary way to communicate. In the first few days of life, a newborn's cries are in reaction to both internal and external stimuli with the purpose of strengthening the heart and lung function. After the baby is born, her cries will be in response to needs such as temperature change, hunger, and pain or discomfort (Brazelton 1962).

Few parents or caregivers would disagree with the concept that babies cry to communicate a message. However, the way that caregivers respond to an infant's cries can set into motion either a positive or an unstable foundation for future development.

## Erik Erikson: Trust vs. mistrust

A German-born psychologist, Erik Erikson (1950), presented eight stages of psychosocial development. Each of these stages involves a task that must be completed if children are to move to the next stage

successfully. Erikson's first stage of psychosocial development, trust vs. mistrust, occurs in the first year of life. The task during this stage is accomplished when babies develop a sense of trust in other people, in themselves, and in the world around them.

Erikson believed that there are two actions by the infant's caregiver that help babies develop a sense of trust: Feeding and the caregiver's response to the infant's cries. When babies are held closely and have warm physical contact when they are being fed, they learn to trust that their need for food will be met. The second action is when the caregiver responds right away to the infant's distress of crying or fussing (Mooney 2000). Erikson believed that in the earliest years of life, mainly during infancy, patterns of trust or mistrust are formed that control, or at least influence, a person's actions or interactions for the rest of life (Erikson 1950).

## Attachment

The sense of trust that develops when a baby's needs are responded to is the basis for attachment.

Attachment is the bond that forms between a primary caregiver, most often the mother, and a baby. John Bowlby (1970) recognized that on this foundation of trust and security, a child's emotional life is built.

Bowlby's attachment theory came from his work with children that showed deviant, or troubled behavior. While working with teens, Bowlby found striking similarities in their family histories. Many of the teens had unstable home lives in their early years and more specifically, they had no stable mother figure. He



CRYING IS THE WAY  
THAT INFANTS  
COMMUNICATE  
THEIR NEEDS TO THE  
CAREGIVER.



believed that the first relationships, as early as infancy, have a direct effect on later behaviors. As he studied the mother-child relationship, he formulated ideas that are now called attachment theory.

When an infant is forming these early relationships, crying plays an important role in establishing the bond between the caregiver and baby. Owings and Zeifman (2004) have stated that “the unique potency of human infant crying to mobilize a response by most adults, even compared to other alarming sounds, is striking.” Infants will cry to begin interaction with the caregiver; when the caregiver responds properly, the crying will encourage attachment behaviors (Fannin and Hamblett 2006).

### **Reading a baby’s cries**

Crying is the way that infants communicate their needs to the caregiver (Soltis 2004). Therefore, learning to read a baby’s cries is an important skill for caregivers to develop. The cries may indicate that the baby is hungry, uncomfortable, lonely, in pain, overstimulated, or tired. A baby’s cries always carry a message, so the caregiver must evaluate every cry for the meaning behind it. If the baby has recently been fed and has had proper rest but draws up her legs as the intensity of the cry grows, the caregiver might decide that the baby is in pain.

Cries, particularly those of the youngest infants, should be viewed as cries of distress (Schon and Silven 2007). Young infants do not have enough experience to soothe themselves when they are upset. If a baby wakes up in a darkened room and his stomach is hurting because he is hungry, his cry is a cry of panic and should be attended to quickly.

### **Brain development and ignored cries**

Ideally, a caregiver would evaluate the infant’s cries, choose a method of care to ease the infant’s distress, and respond quickly. This process, if consistent, should instill security and trust in the infant. Unfortunately, this does not always occur. When a baby’s cries are ignored, the baby will increase the intensity of the cry to get the caregiver’s attention (Chuong-Kim 2005). This seems to be a survival adaptation that serves the infant well. However, this survival method, an increase in the intensity of the cry, also creates activity in the brain that over time can affect normal brain development (Bergen and Coscia 2001).

Infants between the age of birth and 3 months are in a transition period in which they are moving from reflexes as a means of survival to a more organized way of processing information (Berne 2006). A baby's reflexes and early movements are controlled by the *brain stem* (Gogtay et al. 2004), which is located at the base of the brain where the spinal cord connects to the brain.

During periods of intense crying, the brain stem can be damaged. Bruce Perry's research (1997) explains how this damage occurs and the effect it can have on a person in later years. The brain stem controls the release of *adrenaline*, a hormone that moves the body into quick action when danger or excitement is present. He found that continual stress (such as when a baby is continually left to cry alone) overstimulates the release of adrenaline and in time can cause an overactive adrenaline system. A child with an overactive adrenaline system will display increased aggression, impulsivity, and violence later in life because the brain stem floods the body with adrenaline and other stress hormones at inappropriate and frequent times (Perry 1997).

As the other parts of the brain begin rapid development, stress, often seen in the form of ignored cries and unmet needs, causes damage to the developing areas of the brain that make up the *limbic system*. The limbic system sits on the divide between the cerebral cortex and the brain stem. The purpose of the limbic system is to manage emotions. It is made up of several parts that are growing and maturing particularly in the first five years of life (Eliot 1999).

One part of the limbic system are the *amygdalae*, two almond-shaped structures that sit one in each hemisphere of the brain that have the job of processing emotional information. During intense periods of stress, the amygdalae are engulfed in *cortisol*, a stress-related hormone (Charney 2004). Allan Schore (1996) of the UCLA School of Medicine, found that during periods of intense crying, the brain of an infant produces too much cortisol. This rise in cortisol levels can stunt or even destroy brain connections in critical areas of the brain.

At Yale University, researchers have found that intense stress early in life can alter the brain's *neurotransmitter* (message sending) systems and can cause changes in the brain that are similar to those seen in adults with depression (Kaufman and Charney 2001). This finding confirms what Erik

Erikson theorized about the first stage of psychosocial development, trust vs. mistrust. He theorized that when the caregiver fails to meet an infant's primary needs, the child will develop basic mistrust, which could result in depression, withdrawal, and maybe even paranoia later in life (Boeree 2006).

This growing body of research, both in attachment theory and brain development, justify a caregiver's quick response to an infant's cries. However, many factors still affect the response time to these cries. These factors involve the caregiver's cultural beliefs, attitudes about spoiling a baby, and incorrect information about responding to a baby's cries.

## **Cultural beliefs about spoiling**

In some cases, a caregiver's cultural beliefs dictate how quickly or how slowly the caregiver responds to these cries of distress. In most non-Western cultures, the caregiver, usually the mother, has her baby near her at all times in the first year of life allowing her to respond to her baby's cries immediately (Hewlett 1996). In non-Western, pre-industrialized countries, concerns about infant survival may be the explanation for the attention that mothers show their infants. These mothers tend to feed their babies on demand, sleep with the babies nearby, and immediately respond to their cries to increase the chances of survival in places where living conditions may raise the infant mortality rate (Owings and Zeifman 2004).

Another possible explanation for the quick response in non-Western cultures are the crowded living conditions in many areas around the world. In these places, the mother or other caregiver, usually a relative, is almost always near the baby (Hewlett 1996). In many cultures, the very young are regarded as totally helpless and completely dependent on their caregivers. This belief influences the response time in meeting the baby's needs. A caregiver's attitude, even in a Western culture, could be influenced by these practices if they were raised in this type of environment.

In Western cultures, babies are often separated from their mothers and are carried in a baby carrier, laid in a cradle, or placed in their own bedrooms. Since the baby is not near the caregiver, the response time to the baby's cries is increased over non-Western cultures. Attitudes about indulging, or spoiling, babies vary from culture to culture. In cultures that value independence, caregivers feel that responding

rapidly to a baby's cries will cause the child to be clingy or dependant on the caregiver (Commons and Miller 1998, Hewlett 1996).

Commons and Miller (1998) found that American mothers are relatively tolerant of infant crying and are, as a result, slower to respond to their babies than mothers in non-Western cultures. Since self-reliance and independence of their children is a goal valued by most American parents, their babies will often receive less touching and holding than non-Western babies.

Hewlett (1996) found that American children often have lower self-confidence than non-Western children. This may be a result of less secure attachments in infancy. Commons and Miller (1998) feel that American parents are on the wrong track when they resist being attentive to their infants for fear that they will become overly dependent on the parent. They feel that their research supports that strong attachments in infancy will make children more secure and ultimately, better able to form healthy relationships in adulthood.

## Can you really spoil a baby?

Another reason for a slow response to a baby's cries is incorrect information about spoiling a baby. The research over the last two decades as it relates to attachment, crying, and brain development cannot undo, in some cases, bad information that was communicated by experts over the last 50 years.



Dr. Benjamin Spock (1966) stated that if a mother continually gives in to the cries of her infant, the infant will "realize after a while that he has his poor, tired mother under his thumb and he will become increasingly disagreeable and tyrannical in demanding this service." In this example, Dr. Spock was referring to a 3-month-old baby. Dr. Spock revised his advice on many issues related to infant care, but if a caregiver was influenced by previous information given by Dr. Spock, even a revised edition of his child care book might not undo the information learned previously.

Child care books that are based upon current research will almost always advise caregivers to attend promptly to the needs of infants, especially if the infant is younger than 12 weeks of age. However, if a caregiver is influenced by outdated and incorrect attitudes from 40 or 50 years ago, then a slow response, or no response, to a baby's cries will be the action taken, and negative consequences could follow.

In considering the possibility of spoiling a baby, the caregiver needs to understand that until babies reach the point where they have even a basic understanding of cause and effect, usually around the age of 8 to 10 months (Brazelton 1992, Oakes 1994), babies will not associate their crying with the caregiver's response as something within their control. Babies understand, only on a primitive level, that when they cry someone takes care of them, or they will receive the message when their cries are ignored, that no one takes care of them.

## But ignoring the cries seems to stop the crying

A caregiver with this attitude about spoiling a baby might feel that her technique works because in many cases when babies are left to cry it out, they will indeed stop crying. However, a disturbing cycle actually takes place when a baby's crying is repeatedly ignored and then the crying stops. A series of studies conducted by Bowlby and his colleagues found that when infants are left to cry it out, their cries go through a predictable sequence of behaviors.

The first phase, called protest, is characterized by loud cries and extreme restlessness. The second phase, despair, consists of a monotonous cry accompanied by inactivity and gradual withdrawal. The third phase, detachment, is marked by a renewed interest in the baby's surroundings albeit, a remote, withdrawn, distant kind of interest. As seen by these

three phases, a baby, left to cry it out, will eventually stop crying. But it won't be because distress has been eliminated but rather the baby learns that there is no longer any hope that the caregiver will provide comfort (Bretherton 1992, Chuong-Kim 2005).

## **Long-term benefits of responding to cries**

When a caregiver responds quickly to an infant's cries and a secure attachment is formed, the benefits extend far beyond the first year of life. Infants and toddlers who develop secure attachments with their caregivers are observed to be "more mature and positive in their interactions with adults and peers than are children who lack a secure attachment" (National Research Council and Institute of Medicine 2000).

Even beyond social benefits, securely attached young children tend to have a more balanced self-concept, better language skills, and better problem-solving skills, and they show a greater conscience development than insecurely attached children (Sroufe 1988). Securely attached infants have a far greater chance of becoming successful children and teenagers. As shown in the longitudinal research of Waters et al. (2000), the majority of infants that showed early attachment security went on to have attachment stability in adulthood.

## **Attachment to non-parent child care providers**

Since babies may spend a majority of their day with a non-parent caregiver, it is important that attachment forms in this relationship. Children can, and do, form attachments with a variety of adults over the first few years of life. As long as these relationships provide security and healthy interaction, they will have a positive impact (Eliot 1999).

In the absence of the mother, the caregiver must accept the responsibility of bonding with the infant in her care. If the caregiver is detached, inconsistent, or rejecting, undue stress will be placed on the infant (National Research Council and Institute of Medicine 2000).

Howes (1999) proposes three criteria to identify attachment figures other than the mother. The attachment figure (1) provides physical and emotional care, (2) shows continuity or consistency in the child's life, and (3) has an emotional investment in the child.

The non-parent child care provider needs to accept this important role in an infant's life. Child care

THE BABY LEARNS  
THAT THERE IS  
NO LONGER ANY  
HOPE THAT THE  
CAREGIVER WILL  
PROVIDE COMFORT.



DURING PERIODS  
OF INTENSE CRYING,  
THE BRAIN STEM  
CAN BE DAMAGED.



providers need to see themselves not as bottle holders, diaper changers, and toy providers but rather individuals helping to lay the foundation for healthy social-emotional development that will affect children for the rest of their lives.

The type of response a caregiver gives to a baby's cries is a complex issue. Cultural influence, attitudes about spoiling a baby, and outdated information about responding to cries can determine, or at least greatly influence, the type of response.

The first step to providing the appropriate response is self-examination by the caregiver. Beliefs and attitudes that are inconsistent with what research has shown to be best practices need to be addressed by the caregiver and those that train caregivers. Providing a safe, secure environment for infants in which all needs are met in a way that allows babies to develop strong attachment will benefit them not just during infancy but in later years as well.

## References

- Bergen, Doris, and Juliet Coscia. 2001. *Brain Research and Childhood Education: Implications for Educators*. Olney, Md.: Association of Childhood Education International.
- Berne, Samuel A. 2006. The primitive reflexes: Considerations in the infant, *Optometry and Vision Development* 37(3): 139-145.
- Boeree, C. George. 2006. Personalities in Theories: Erik Erikson. [www.webspaceship.edu/cgboer/perscontents.html](http://www.webspaceship.edu/cgboer/perscontents.html).
- Bowlby, John. 1970. *Child Care and the Growth of Love* (2nd ed.). Baltimore: Penguin.
- Brazelton, T. Berry. 1992. *Touchpoints: The Essential Reference*. New York: Addison-Wesley.
- Brazelton, T. Berry. 1962. Crying in infancy. *Pediatrics* 29: 579-588.
- Bretherton, Inge. 1992. The origins of attachment theory: John Bowlby and Mary Ainsworth, *Developmental Psychology* 28: 759-775.
- Charney, Dennis S. 2004. Psychobiological mechanisms of resilience and vulnerability: Implications for successful adaptation to extreme stress, *American Journal of Psychiatry* 161 (2): 195-216.
- Chuong-Kim, Margaret. 2005. Cry it out: The potential dangers of leaving your baby to cry. <http://drbenkim.com/articles-attachment-parenting.html>.

- Commons, Michael L., and Patrice M. Miller. 1998. Emotional learning in infants: A cross-cultural examination. [www.naturalchild.org/research/](http://www.naturalchild.org/research/).
- Eliot, Lise. 1999. *What's Going on in There? How the Brain and Mind Develop in the First Five Years of Life*. New York: Bantam Books.
- Erikson, Erik H. 1950. *Childhood and Society*. New York: W.W. Norton & Company, Inc.
- Fannin, Ron, and Tiffany Hamblett. 2006. Babies' brains: What caregivers can do, *Early Years* 28(1): 11-13.
- Gogtay, Nitin, Jay N. Giedd, Leslie Lusk, Kiralee M. Hayashi, Deanna Greenstein, A. Catherine Vaituzis, Tom F. Nugent III, David H. Herman, Liv S. Clasen, Arthur W. Toga, Judith L. Rapoport, and Paul M. Thompson. 2004. Dynamic mapping of human cortical development during childhood through early adulthood, *Proceedings of the National Association of Sciences* 101(21): 8174-8179.
- Hewlett, Barry. 1996. *Diverse Contexts of Human Infancy*. New York: Prentice Hall.
- Howes, Carollee. 1999. Attachment relationships in the context of multiple caregivers. In *Handbook of Attachment*, 671-687. New York: Milford Press.
- Kaufman, Joan, and Dennis Charney. 2001. Effects of early stress on brain structures and function: Implications for understanding the relationship between child maltreatment and depression, *Development and Psychopathology* 13(3): 451-471.
- Mooney, Carol Garhart. 2010. *Theories of Attachment: Bowlby, Ainsworth, Berber, Brazelton, Kennell, and Klaus*. St. Paul, Minn.: Redleaf Press.
- Mooney, Carol Garhart. 2000. *Theories of Childhood: An Introduction to Dewey, Montessori, Erikson, Piaget, and Vygotsky*. St. Paul, Minn.: Redleaf Press.
- National Research Council and Institute of Medicine. 2000. *From Neurons to Neighborhoods: The Science of Early Childhood Development*, Jack P. Shonkoff and Deborah A. Phillips (eds.). Washington, D.C.: National Academy Press.
- Oakes, Lisa M. 1994. Development of infants' use of continuity cues in their perception of causality, *Developmental Psychology* 30(6): 869-879.
- Owings, Donald H., and Deborah M. Zeifman. 2004. Human crying as an animal communication system: Insights from an assessment/management approach. In D. Kimbrough Oller and Ulrike Greibel (eds.), *Evolution of Communication Systems: A Comparative Approach*. Cambridge, Mass.: MIT Press.
- Perry, Bruce D. 1997. Incubated in terror: Neurodevelopmental factors in the 'cycle of violence.' In Joy Osofsky (ed.), *Children, Youth, and Violence: The Search for Solutions*. New York: Guilford Press.
- Schon, Regine A., and Maarit Silven. 2007. Natural parenting—back to basics in infant care, *Evolutionary Psychology* 5(1): 102-183.
- Schore, Allan. 1996. The experience-dependent maturation of a regulatory system in the orbital prefrontal cortex and the origin of developmental psychopathology, *Development and Psychopathology* 8: 59-87.
- Soltis, Joseph. 2004. The signal function of early infant crying, *Behavioral and Brain Sciences* 27(4): 443-490.
- Spock, Benjamin. 1966. *Baby and Child Care*. New York: Pocket Books.
- Sroufe, L. Alan. 1998. The role of infant-caregiver attachment in development. In Jay Belsky and Teresa Nezworski (eds.), *Clinical Implications of Attachment*. Hillsdale, N.J.: Erlbaum.
- Waters, Everett, Susan Merrick, Dominique Treboux, Judith Crowell, and Leah Albershein. 2000. Attachment security in infancy and early adulthood: A twenty-year longitudinal study, *Child Development* 71(3): 684-689.

### About the authors

Melodi Faris is a doctoral student in child development at Texas Woman's University in Denton, Texas. She has taught in kindergarten and elementary school and in the child development department at Tarrant County College. She conducts workshops for preschool teachers on brain development in young children, developmentally appropriate practice, and math for young children.

Elizabeth McCarroll, Ph.D., is an assistant professor at Texas Woman's University. She teaches a variety of classes including infant and toddler development, early childhood development, and childhood guidance. Her research interests include social and emotional development and competence in young children as well the impact of health on various developmental domains.