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Emotional trauma in infancy[1]

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Introduction

Infants and toddlers who are abused or neglected can be emotionally traumatized by these experiences. Trauma in infancy differs from adult trauma in many important ways. The causes and symptoms of infant trauma differ from that of older children and adults because very young children are upset or frightened by different things than adults, and preverbal children cannot manage intense emotions independently. Additionally, the chronic stress associated with multiple traumatic episodes can profoundly affect the child's physical, cognitive and emotional development.[2] It is important that child welfare caseworkers understand these fundamental differences. The aim of this information sheet is to explain the impact of stress and trauma on infant development, and help child welfare caseworkers understand how to address the needs of traumatized infants and their caregivers.

What is traumatizing to an infant?

Babies have limited abilities to remove themselves from distressful situations or to understand or manage their emotional states. They are entirely dependent on their caregivers to recognize their needs and respond with comforting gestures. Some stress is normal and even healthy for children, but stress becomes traumatic or damaging when the child endures frequent, prolonged periods of strong emotional arousal without receiving comforting from an adult caregiver. Physiological and psychological damage caused by *repeated unmanageable distress* profoundly affects the developing young child.[3]

The brain pathways for memory develop over time so babies do not have the same ability to recall specific events as older children or adults. However, this does not mean that they are immune to the effects of stressful experiences. The neural circuits that deal with stress are particularly malleable during early childhood.[4] Experiences shape how these neural circuits develop, how easily they are activated, and in turn, how quickly the psychological and physiological arousal associated with stress (such as breathing, heart rate, blood pressure) can be contained. While chronic stress and trauma can change the adult brain, they can seriously alter the *organization* of the infant brain.[5]

Stress hormones, including the hormone cortisol, are released into the brain when infants are distressed.[6] Through the infant-caregiver relationship, caregivers help babies manage the stress associated with unpleasant emotions, such as physical discomfort, fear, or distress, and this modulates the amount and duration of cortisol release. However, when very young children feel unsafe with their caregiver(s), as in situations of domestic violence or abuse, or when they do not get a predictable response to their distress cues, as in situations of neglect, their stress response systems are activated with no resolution. Long term exposure to ongoing elevated stress results in large amounts of cortisol in the brain, which can be toxic to the developing brain and may cause permanent changes in brain structure (see box on page 2).[6]

Caregiver behavior can amplify or dampen the effects of stress for the very young child, particularly for children under five. Parents mediate the negative consequences of stress by responding to babies' cues with soothing and comfort, thereby limiting the harmful impact of these experiences on the very young child. Unfortunately, some parents may have difficulty responding sensitively to their infant, while others may even be the source of stress to the baby. For example, when parents are profoundly depressed or preoccupied with other issues, they may be unable to respond to their infant's cues. In some instances, the baby's crying may trigger a stress response in the parent that the parent has difficulty controlling. When parents are frightening to infants, such as by being physically or emotionally abusive

Definitions of positive, tolerable, and toxic stress

"Positive stress" refers to moderate and short lived stress responses that are a normal part of healthy development if they occur in an environment of caring and supportive relationships. The stress associated with handling frustration, coping with a minor injury, or entering a new classroom are examples of positive stress.

"Tolerable stress" describes stressful events that could be emotionally costly, but are generally briefer than toxic stress, allowing the brain time to recover from potentially harmful effects. These may include major adverse experiences, such as the loss of a loved one, provided the stress occurs in a safe environment and the child is equipped with adequate emotional support. Tolerable stress can become toxic stress in the absence of supportive and nurturing care.

"Toxic stress" is a term researchers use to describe strong, frequent and prolonged activation of the stress response system. In extreme situations, such as in cases of severe, chronic abuse, toxic stress may result in the development of a smaller brain. Less extreme exposure to toxic stress can change the stress system so that it responds at lower thresholds to events that might not be stressful to others, thereby increasing the risk of stress-related physical and mental illness.

From: National Scientific Council on the Developing Child. (2005). *Excessive stress disrupts the architecture of the developing brain.* Working Paper No. 3. Retrieved March 8, 2009 from www.developingchild.net/pubs/wp/excessive_stress.pdf

to the infant, violent to one another, or consistently unresponsive to their baby's cues and signals of stress, as in situations of chronic or severe neglect, babies experience intense stress as described above.[7] This type of trauma is referred to as 'cumulative' or 'relational' trauma and has been linked to significant lifelong psychological harm, and in extreme cases, to substantial neurological harm.[8]

What symptoms of trauma should caseworkers be concerned about?

Because the stress associated with chronic trauma interferes with optimal brain development, these infants and young children can show delays in the achievement of physical milestones (e.g., sitting, walking, talking, etc.). Consistently unresponsive caregiving frequently leads to problems with the development of social-emotional competence as well (i.e., the ability to give consistent and accurate cues to caregivers, the ability to engage in social interactions through gestures, smiling, cooing, babbling, etc.). Additionally, impairments to the young child's stress response system can lead to significant difficulties in self-regulatory skills.[9]

Trauma and self-regulation

Within a few weeks of receiving dependable caregiving, a healthy newborn baby will typically (although not always) acquire fairly consistent sleep/wake cycles, evenly modulated playful/alert/quiet cycles throughout the day, and predictable feeding routines. These developments mark the beginnings of self-regulation. As babies and toddlers gain confidence that their caregivers will help them manage periods of discomfort or distress, they are increasingly able to cope with these states in a consistent and predictable way without becoming overwhelmed. This ability is called self-regulation.

Babies and young children who are afraid of their caregiver, or who haven't developed the expectation of a comforting response to distress cues, often have problems with self-regulation. These difficulties can initially appear as problems with feeding (with older babies, this can appear as hoarding, stuffing food in cheeks, or food refusal), digestion problems, erratic sleep, inconsolable crying that is not related to colic or illness, extreme passivity or listlessness, primitive and persistent self-soothing behaviors (head-banging, excessive rocking, compulsive chewing not related to teething, excessive masturbating), and/or dissociation (distinct periods of disorientation or freezing).[10]

It is very important that infants or toddlers with any of these warning signs be seen by an infant mental health or health care specialist, since many other explanations or health concerns can produce similar symptoms in babies. For example, some babies experience colic for a few months early in life, and others can have sensitive temperaments that are difficult for some caregivers to handle effectively. Gastroesophageal Reflux Disease (GERD) is a good example of a health problem that can cause some similar physical symptoms as well. Specialized training and caregiver support is necessary to treat severe and persistent dysregulation in infants, whatever the cause.

What are the effects of chronic stress or trauma?

With chronic stress, babies cease to give accurate distress cues and have problems with self-regulation. Consequently their behaviors are more difficult to understand and they are less engaging to caregivers. Researchers describe the impact of chronic stress or trauma in the following ways:

1) Problems within the attachment relationship. Traumatized infants frequently have problems forming a secure relationship with their primary caregiver.[11] This problem often appears during times of stress when the child is in need of comforting, but does not seek comfort in expected ways, such as reaching for the caregiver. Observers should pay attention to parent-infant interactions during times of distress, such as when the young child is hurt, ill or upset.
2) Increased physical or medical problems, such as frequent colds and illnesses, upset stomachs, or other stress related problems.[12]
3) Problems with managing strong feelings or emotions, including dissociation or excessive tantrums that do not respond to common behavior management strategies. Some experts describe young children with numbing/avoidance symptoms, hyper-arousal and/or the tendency to reenact traumatic events through play.[13]
4) Cognitive problems, particularly language and attention difficulties.[14]
5) Behaviour problems, such as defiance, hitting, biting, kicking other children and adults, over-activity, difficulties with waiting, and difficulty in listening.[15]

Chronic stress beginning early in life predicts more adverse outcomes in each of these areas.

The most effective intervention for infant emotional trauma is exposure to high quality, stable, predictable caregiving relationships as early in life as possible.

What are the components of an effective case plan for traumatized infants and their parents?

1. Address domestic violence

Intervention cannot be effective unless the caregiver and the infant are physically and psychologically safe. Treatment in the context of ongoing exposure to family violence, continued severe neglect, or placement instability is unlikely to be effective. It may not be understood by caregivers or other professionals that infants and toddlers do not generally distinguish between the victim of the violence and the perpetrator. They can develop a fearful response to *both* of their caregivers. Parents who have been the victim of violence may experience attachment difficulties with their infant children, even if they were not violent towards the baby themselves.

2. Involve health care and early childhood specialists

Caseworkers who suspect an infant is experiencing trauma need to seek advice from health care specialists who are familiar with the signs and symptoms. Completing a checklist for healthy development in infants may assist in determining when to seek additional advice.[16] Health care professionals such as pediatricians, public health nurses, and early child development specialists can help a case worker evaluate the developmental status and condition of the child in question. In cases of severe trauma, a multi-disciplinary approach will be necessary for an effective case plan

3. Devise a plan for managing attachment problems and dysregulation

Caregivers may need specific advice for handling the behaviors associated with dysregulation or attachment disorders. Sometimes the behavior of the traumatized infant or toddler is puzzling for caregivers. Many behavior management approaches that are commonly used with emotional toddlers, such as letting the baby cry briefly, or have some time alone for a short while, might be ineffective or even damaging for the traumatized child. Caregivers might find it helpful to obtain specific interventions to engage and comfort the attachment disordered child effectively. Effective interventions target the caregiver-infant relationship and include both the child and caregiver in the treatment.

4. Minimize other risk factors

Sometimes the most effective intervention is to reduce the overall stress level on the family by addressing their other adversities. Caseworkers can increase the likelihood of a positive outcome for traumatized infants and young children by helping the family obtain treatment for mental health or addictions problems, safe and affordable housing, stable employment, and high quality childcare.

5. Plan carefully to avoid multiple placements

Infants and young children cannot tolerate frequent placement changes or multiple caregivers. Even two to three changes in caregivers within the first year

of life can traumatize an infant. The most effective intervention for infant emotional trauma is exposure to high quality, stable, predictable caregiving relationships as early in life as possible. Thus, initial decisions about where to place a very young child must be made with great care and should consider the long-term needs of the infant. Concurrent planning for young children in foster care is critically important.

Additional resources

National Scientific Council on the Developing Child. Retrieved March 17, 2009 from: www.developingchild.net

National Child Traumatic Stress Network. Retrieved March 17, 2009 from: www.nctsnet.org

Infant Mental Health Promotion. Retrieved March 17, 2009 from: www.sickkids.on.ca/imp

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1 This information sheet was peer reviewed by experts in the field of child welfare.

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