The Health Effects of Early Childhood Adversity
Kathleen Kendall-Tackett, PhD, IBCLC, FAPA

Neuroscience, Molecular Biology, and the Childhood Roots of Health Disparities: Building a New Framework for Health Promotion and Disease Prevention
Jack P. Shonkoff; W. Thomas Boyce; Bruce S. McEwen JAMA. 2009;301(21):2252-2259

“Adult disease prevention begins with reducing early toxic stress”

“An increasing amount of research in neuroscience, social epidemiology, and the behavioral sciences suggests that a reduction in the number and severity of early adverse experiences will lead to a decrease in the prevalence of a wide range of health problems.”

Child Maltreatment
CSA, CPA, CEA, Neglect

Parental Impairment
Substance abuse, mental illness, partner violence, criminal activity

Parental Loss
Death or divorce

Low Socioeconomic Status
Community violence, unsafe housing, lack of access to food or medical care

Study of 1,581 pregnant women

- 25% reported depression, PTSD, or other
- 36% reported interpersonal trauma
- 93% reported at least one traumatic event

Seng et al. 2014, Psychological Trauma, 6(1), 41-49
**PTSD**


**Prenatal Depression**


- **Urban**
- **Suburban**

**Lifetime Abuse**


1,521 pregnant women in Peru

History of childhood physical or sexual abuse

Barrios et al. 2015, *PLoS One*

16% Rape

25% CSA

32% Parental Substance Abuse

34% Physical Abuse

36% Parental Depression

6,410 mothers

Survey of Mothers’ Sleep and Fatigue

- **Survival Mode**
- **Learning Mode**

Early life adversity

Moffit et al. 2013, *Dev Psychopathol, 25*(4 0 2)
Attachment is essential to survival above and beyond food and shelter.

Proximity and caregiver responsiveness promote secure attachment.

Maternal Depression as Early Adversity

Still-Faced Mother Paradigm
Prenatal adversity increased inflammation for the baby in adulthood by 3 times

Slopen et al. 2015, Psychoneuroendocrinology, 51, 403-413

Cortisol

Grant et al. 2009, Dev Psychobiol, 51, 625-637

Prenatal adversity increased inflammation for the baby in adulthood by 3 times

Slopen et al. 2015, Psychoneuroendocrinology, 51, 403-413

Health Effects of Early Adversity

Age 15
Increased stress

Age 15-20
Increased Depression

Age 20
Increased physical health problems

Raposa et al. 2014, Health Psychol, 33(5), 410-418

Secure Attachments Decrease Adult Health Problems

Puig et al. 2013, Health Psychology, 32(4), 409-417

Insecure attachments at 12-18 months associated with inflammation-based illness at age 32

Gorka et al. 2014, Biol Mood Anx Dis, 4, 12

Child trauma associated with reduced gray matter in medial prefrontal cortex and left hippocampus, increasing sensitivity to stress in later life

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Breastfeeding lowers risk of intergenerational abuse and trauma

Infant sleep difficulties
Maternal depressed mood

Minutes to Fall Asleep

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Hours Mothers Sleep

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Mothers’ Daily Energy

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Maternal Mental Health

Groer & Kendall-Tackett (2009) Breastfeeding protects women’s health throughout the lifespan, Amarillo, TX: Hale Publishing
Feeling Down, Depressed or Hopeless

![Graph showing feelings](image)

Anhedonia

![Graph showing anhedonia](image)

Mothers’ Depression

![Graph showing depression](image)

Mothers who breastfed for 4 months were 3.8 times less likely to neglect their children. And 2.6 times less likely to physically abuse them.

And 2.6 times less likely to physically abuse them.

The Impact of Sexual Assault
Total Sleep Time

Minutes to Get to Sleep

Physical Health

Current Depression

Anxiety

Does breastfeeding help these mothers?
Exposure to early adverse experiences has long-term implications for health.

Responsive early care is key.

Effective treatment downregulates the stress response.
“It is easier to build strong children than repair broken men”
Cautionary Notes on Implications of Early Autonomy

Presentation Goals

- Examine *Importance of Responsiveness in Early Caregiving*
- Examine *Risks of Trauma when Early Care Focused Away from the Infant*

Responsiveness is an Essential

Yet, there is a trend away from...

- Responsiveness
- Synchrony
- Touch
- Soothing
- Calming
- Support in Regulation

Respecting what we know as a...

Guide for Practices and Care

Fragility of Infants' Systems and Strengths of Infants Preparedness

The beauty of care
Sense that responding

- Harms infants’ capacity to be self-regulating
- Compromises infants’ social well-being
- Negatively impacts parents’ capacity to care

Responsiveness

- Supports Communication
- Guides Regulation from external to internal capacity

Supporting physiological, emotional, social, and neurological growth

So essential that babies contribute by being socially responsive, interactive, communicating states of being—alertness, distress, fatigue, hunger.

The essential nature of comfort

- Crying and soothing

The beauty of care

is sometimes hidden in a complexity of

“by this age, babies should…..” and
“parents should…” and
“parents need…. and
“babies don’t need…” and...
“you’ll know what is best”

from birth...each infant is a

- Wonderfully Competent Communicator
- Engages Caregivers
- Key to development is Synchronous Responding baby at birth

The Natural Gifts of Responsiveness

- Hearing mothers’ voice while in the womb

Bardige and Bardige 2008
Physiological Base of Responsiveness and Attunement

- **Infant Crying/Distress**
  - Impacts stress levels and cognitive performance of adults: parents and nonparents. Hechler, Beijers, deWeerth, 2014

- **Nature of Response to Cries**
  - Maternal dysregulation of HPA axis and perception of signaling as concerning or irritating impact infants' developing HPA axis function. Ablow & Measelles, 2014

Importance Communication Response for Infants

- **Hearing mothers' voice while in the womb** Bardige and Bardige 2008
- Developing regulatory systems
- Developing neurological circuitry
- Stress Response System and Calming
- Lack of responsiveness to cues can dampen or extinguish communication

Responsiveness Supports Development and Well-Being

- **Cortisol and Colic**
  - The importance of responsiveness even in the face of continued distress

- **Early Synchrony as associated with**
  - Childhood outcomes
  - Adolescent/adulthood health
  - Executive functioning/learning

Without Responsiveness — Trauma?

- Best practice approaches focused away from responsiveness compromise this intricate system supporting healthy development.

Without Responsiveness — Trauma?

- But without the responsive and synchronous care required of all mammals, outcomes are compromised, health and well-being compromised.

  All may appear well.

  See Middlemiss, Granger, Goldberg, Nathans (2012)

Goals of Non-Responsiveness

- **Reduce Infant Crying**
  - Without Soothing
- **Supports Scheduled Responses**
  - Feeding, Sleeping
  - Without Supporting Infants' Signaling of Regulatory, Physiological Function

- **Reduce Nightwakings**
  - Without Assuring Infants' Comfort, Regulation

- **Reduce Parent Presence**
Focus on Parent = Trauma for Infant

- Parent and Infant Self-Regulated Focus
  - Parental Well-Being
  - Sadeh, Mindell, … McDaniels
  - Within this Frame: Responsiveness is Intrusive and Maladaptive

  How pervasive is this message?

Physiologically, We are primed to respond--
Not responding has a cost

- Research shows the normative pattern and biophysiological necessity of responsiveness, closeness, and synchrony

Trauma-Related Outcomes of this View of Care

- Physiological and Neurological Costs
- Socioemotional Costs
- Reducing Skills and Capacity

Looking within the Contextual System of Care

- Importance of Caregivers’ Wellbeing—Particularly as Key to Care
  - Literature provides insight into focus on protection of mothers’ time Sadeh, Mindell … McDaniels … site on fatigue
  - Sociopolitical implication working fmla …
  - Rights of infants any literature

Supporting Culture of Non-Response

- Devices for carrying
- Devices for holding
- Devices for rocking
- Use of technology for distraction
Removing Responsiveness

• Moving away from responsiveness entails
  – Directly not responding
  – Discomfort with providing infant-centered care
  – Understanding normative role of caregiver as guiding infant emotionally, physiologically, and cognitively through early experiences

Is Mothers’ Perception of Infants’ Distress at the Time of Separation associated with Infants’ Physiological Stress Level?

Yes.

Mom’s rating

→ infants’ crying as distressing for infant was associated with
  → lower levels of infant salivary alpha amylase.

Day 1-initiation. \( r(38) = -.408, p = .011 \)
Day 2-initiation. \( r(37) = -.324, p = .050 \)

Perception that separation would be distressing was associated with lower levels of physiological stress response for infants as infants transitioned to sleep.
Middlemiss, Granger, Goldberg, Nievar, 2009

Constraints of Parent-Centered Care

Role of flexibility and adaptability to fluctuating infant demands, needs, developmental level

Mothers’ rating themselves as

→ not comfort with the “idea” of shared sleep irrespective of preferred or planned or current sleep location was associated with
  → higher levels of both mothers and infant distress with normative experience of nightwakings

Rating of Comfort with Idea

• Correlated with other measures of responsiveness in care and infant-centered care
• JMMR….list

Nightwakings and Stress

Mothers Comfortable with idea of shared sleep...
  No association with stress

Mothers Not Comfortable with idea of shared sleep...

Association with Mothers’ salivary cortisol

\( r (16) = .54, p = .03 \)

Association with Infants’ salivary cortisol

\( r (13) = .60, p = .03 \)
Parent Presence, Sleep Training, and Attachment Behaviors

Problem Helping Infant Sleep and Mothers’ Stress

Perception of Nightwaking as Problematic and Maternal Stress

Moving Away from Focus on Infant can Cause Harm

When Mothers are Encouraged to move away from responsiveness

- Less clear sense of parenting
  - Middlemiss, Stevens, 2014

Moving Away from Infant-Centered Care

- Increases infants’ stress
- Long-term health implications
- Implications for mothers
- Outcomes for infants include:
  - Poorer regulatory functioning
  - Higher levels of obesity, poorer social skills, lower levels of executive function
Focus of Best Practices & Research

Recommendations nighttime wakings from a healthcare frameworks are problematic (Blunden et al., 2011)

- Parents are seeking treatments of infant’s sleep “disturbances” because parents are having trouble sleeping
- “Treatments” are “successful” if an infant desists in disturbing the parent’s sleep.
- Huey, Middlemiss, AME, 2012

Re-Focusing on Responsiveness

- Removing Costs of:
  - Parent-Centered vs. Infant Centered Care
  - Questioning the importance of infants’ communication
  - Viewing signaling and bids for synchronous care as something to help infants “learn not to need” or to something to extinguish