

PARENTING MATTERS!

Buffering Toxic Stress through Parenting Interventions



*Brenda Jones Harden, University of Maryland
Buffet Early Childhood Institute ~ Parenting Matters Symposium*

ROADMAP OF PRESENTATION

- What is toxic stress and what are its effects?
- How can positive parenting buffer children against the effects of toxic stress?
- What evidence exists re: parenting interventions for families experiencing toxic stress?



Shonkoff's Three Levels of Stress

Positive

Brief increases in heart rate,
mild elevations in stress hormone levels.

Tolerable

Serious, temporary stress responses,
buffered by supportive relationships.

Toxic

Prolonged activation of stress response systems
in the absence of protective relationships.



Toxic Stress: Risks and Contexts

Poverty

Sociodemographic risk (e.g., teen mother, single parent, < HS education)

Intimate Partner Violence

Parental mental illness

Parental substance use/abuse

Compromised parenting and child maltreatment

Toxic Stress

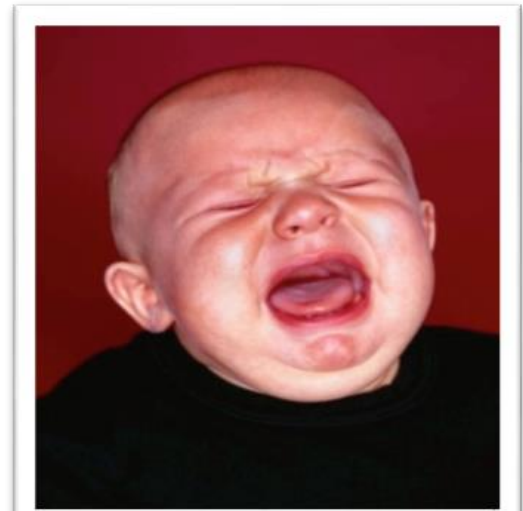
(Gunnar et al., 2009; Fernald & Gunnar, 2009; Cicchetti et al., 2010; Fischer et al., 2011)

- Child toxic stress: strong, frequent, prolonged activation of children's stress-response system
 - increased heart rate/blood pressure
 - release of stress hormones (cortisol)
 - Atypical production in response to stress
 - Atypical diurnal pattern
 - Blunted pattern
 - Lower threshold for response to stress
 - Stress response mediated by caregiving



Toxic Stress (Shonkoff et al., 2009)

- Negative physiologic outcomes
 - Disrupted brain architecture and functioning
 - Effects on other organ systems
 - Premature/LBW African American infants
- Negative child outcomes
 - Health/cognition/mental health
- Root of adult disparities between SES groups re: physical and mental health



Psychological Consequences of Toxic Stress for Young Children



- Increased arousal
 - Increased distress sensitivity to non-stressful events
- Developmental delays
- Executive functioning issues
 - Concentration, Impulse control
- Cognitive/Language delays
- Academic challenges (school readiness)
- Internalizing problems
 - anxiety, depression
- Externalizing problems
 - tantrums, oppositionality, defiance, aggression

Toxic Stress



Three Core Concepts in Early Development

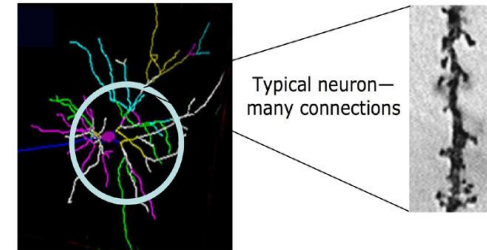
3 Toxic Stress Derails Healthy Development

NATIONAL SCIENTIFIC COUNCIL ON THE DEVELOPING CHILD
Center on the Developing Child HARVARD UNIVERSITY

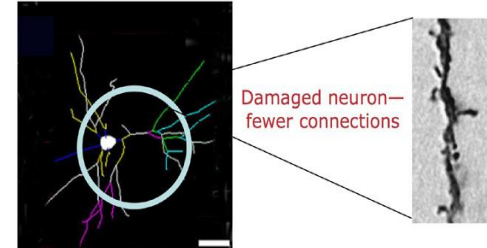
 Center on the Developing Child
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Persistent Stress Changes Brain Architecture

Normal



Toxic stress



Prefrontal Cortex and
Hippocampus

Sources: Radley et al. (2004)
Bock et al. (2005)

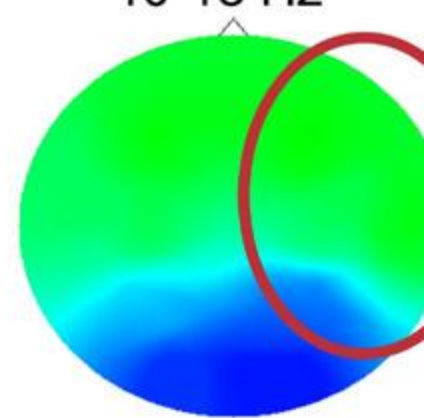
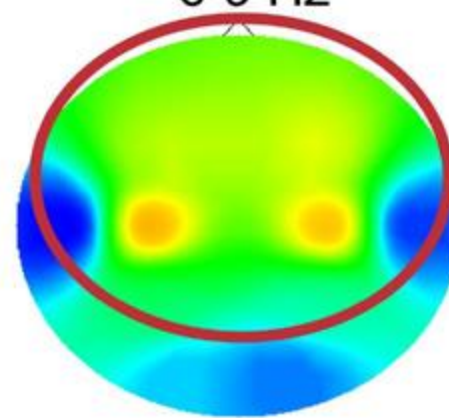
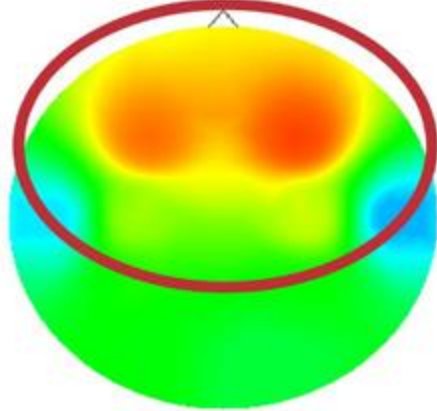
Extreme Neglect Diminishes Brain Power

3-5 Hz

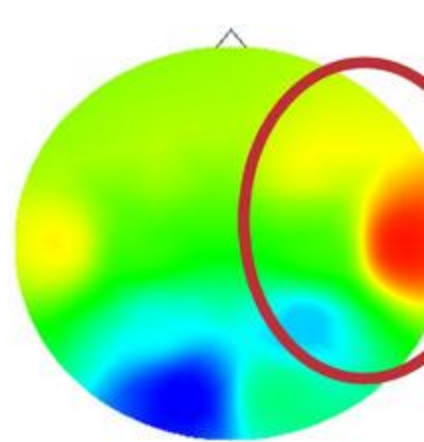
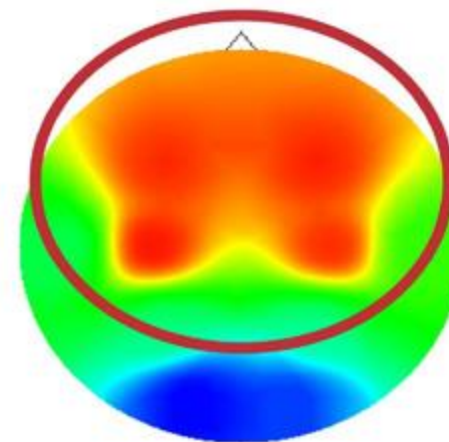
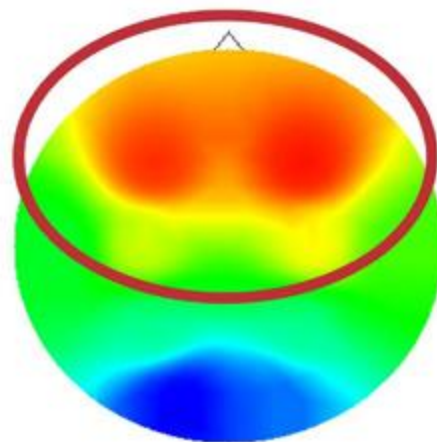
6-9 Hz

10-18 Hz

Institutionalized

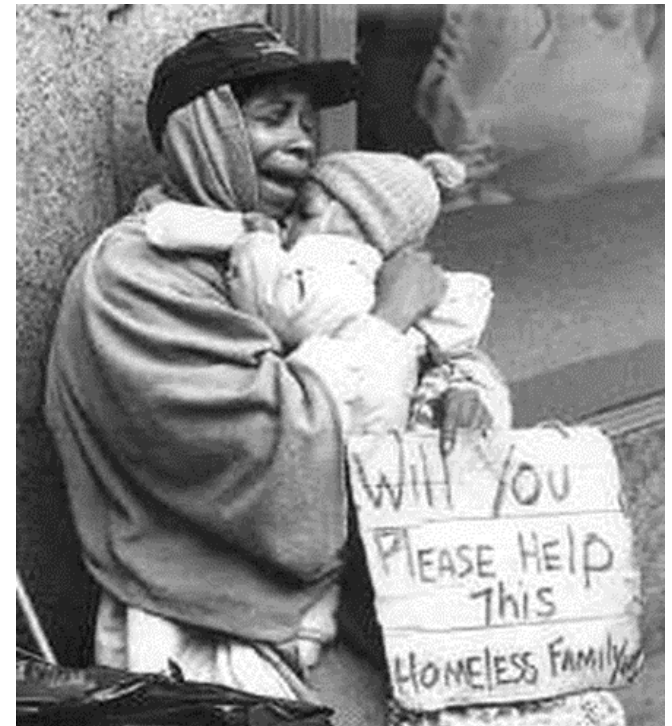


Never Institutionalized



Adverse Childhood Experiences Study (ACES)

- Adverse Childhood Experiences (ACEs):
 - Emotional, physical or sexual abuse
 - Domestic violence against the mother
 - Household member with mental illness
 - Household member with substance abuse
 - Household member ever imprisoned
- Predict the 10 leading causes of adult death/disability

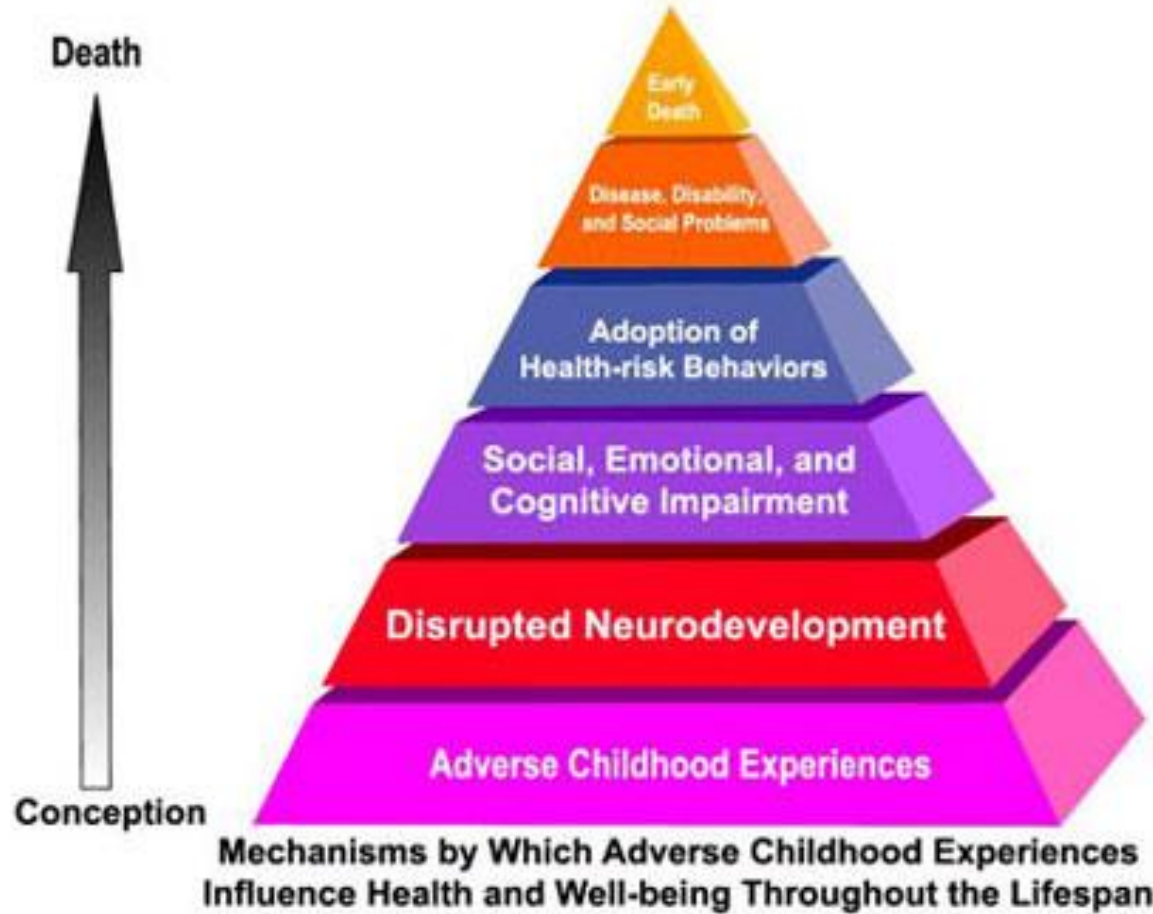


Adverse Childhood Experiences Study (ACE Study; Fellitti et al., 1998; Anda et al., 2006)

Compared to those with 0 ACEs, people with 4+ adverse childhood experiences were:

- 2.2 times more likely to be smokers
- 4.6 times more likely to be depressed
- 12.2 times more likely to attempt suicide
- 7.2 times more likely to be alcoholics
- 4.5 times more likely to be drug users
- 5.5 times more likely to abuse their partners

Lifespan Effects of ACEs to Health & Well Being



Parenting and Child Development

- Parents major socialization agents for young children (Collins et al., 2000)
- Parenting young children (Berlin et al., 2002; Edwards & Liu, 2002; Ispa et al., 2004; Tamis-LeMonda et al., 2011)
 - *Positive parenting linked to host of positive child outcomes in high-risk families*
 - High rates of negative parenting among high-risk parents
 - Strong link to negative child outcomes
 - Need to disentangle negative parenting



Parenting Practices & Child Outcomes

(National Academy of Sciences, 2016)

- contingent responsiveness (“serve and return”)
- warmth and sensitivity
- routines and reduced household chaos
- shared book reading and talking to children
- practices promoting children’s health/safety
- use of appropriate (less harsh) discipline



Interventions to support positive parenting practices (NAS, 2016)

- Formal sources of parenting support
 - well-child care
 - center-based child care (Head Start and Early Head Start)
 - home visiting programs
- Interventions targeted to specific populations of parents
 - parents of children with special needs
 - ***parents facing adversities (Toxic Stress)***
- Federal efforts to support parents
 - income assistance
 - nutrition assistance
 - health care
 - housing programs



Elements of Effective Interventions

(NAS, 2016)

Specific elements necessary to address Toxic Stress

- viewing parents as equal partners in service determination
- *tailoring interventions to meet the specific needs of families*
- *integrating services for families with multiple service needs*
- creating opportunities for parents to receive peer support
- *addressing trauma*
- making programs culturally relevant
- enhancing efforts to involve fathers



THREE PATHWAYS TO ADDRESS TOXIC STRESS

PRIMARY PREVENTION

Decreasing poverty, and fostering community and social well-being

Community-based public health, universal education, and income support approaches

SECONDARY PREVENTION

Reducing environmental risks for toxic stress

Programs that provide early care and education, parent education, family support, income support

TERTIARY PREVENTION

Providing interventions for children exposed to toxic stress

Child, parent, dyadic, family, classroom interventions

Evidence-Based Parenting Interventions

- Triple P – Positive Parenting Program
 - Multi-level intervention to improve parenting skills and reduce behavior problems
- Parent-Child Interaction Therapy (Chaffin et al.)
 - Coaching parent to improve parent-child relationship & parental behavior management skills
- Attachment and Biobehavioral Catch-up (Dozier et al.)
 - Short-term intervention with specific targets
 - nurturance and responsivity to infants
 - “overriding” one’s past experience of caregiving



Evidence-Based Parenting Interventions

- **Child-Parent Psychotherapy** (Lieberman et al.; Toth et al.)
 - Infant/early childhood mental health dyadic treatment focused on enhancing parent-child relationship
- **Child FIRST** (Lowell et al.)
 - Relationship-based infant mental health approach
 - Parent-child psychotherapy and case management
- **Promoting First Relationships** (Kelly, Spieker et al.)
 - Infant mental health approach, use of video-coaching



Evidence-Based Parenting Interventions

- **Family Check-Up** (Dishion, Shaw et al.)
 - Short-term intervention to promote positive parenting and behavior management
- **Safe Care** (Lutzker et al.)
 - Parent-child interaction; safety; maltreatment reduction
- **The Incredible Years** (Webster-Stratton et al.)
 - Parent management, group-based intervention



BUFFERING TOXIC STRESS RESEARCH CONSORTIUM

ACF's Early Head Start –
University Partnerships

New York
University

University of
Colorado

University
of
Delaware

University
of Denver

Washington
University

University
of Maryland

GOALS

- Validate toxic stress (physiologic measures of child stress regulation)
- Implement and evaluate evidence-based parenting intervention within EHS

UM BUFFERING TOXIC STRESS PROJECT DESIGN

Randomized Trial

EHS + Attachment and Biobehavioral Catch-up (ABC)

EHS + Book-of-the-Week (BOW)

Implementation Study

Pilot Study & RCT

Qualitative & Quantitative

Validating Toxic Stress

Baseline and Post-Test Risk Data

Child Physiologic Data at Post-test

Attachment & Biobehavioral Catch-up (ABC) Program

- Developed by Mary Dozier, University of Delaware
- Grounded in attachment theory and research
- Manualized intervention
- Two randomized trials with children in child welfare
 - Foster & Birth parents
- 10 sessions with mother-infant dyads at home
- ***Use of videotape and in-the-moment commenting***



ABC Content



Parental nurturance



Following child's lead with delight



Reducing threatening and/or frightening caregiving behavior



“Overriding” one's own history and/or non-nurturing instincts



Exclusive focus on these “target” behaviors

Benefits of ABC



Randomized control trials

- *Infants/toddlers in foster care*
 - More likely to be securely attached to foster parents
 - More normal diurnal patterns of cortisol production
- *Infants/toddlers in Child Protective Services (alternative response)*
 - Mothers showed more sensitivity to infants
 - Infants less likely to have disorganized attachment and more likely to be securely attached

Dozier et al., 2006; 2007; 2008; 2009; Bernard & Dozier, 2012

Integrating ABC into Home-Based EHS

- Supplemental parenting intervention feasible
- Resources for service delivery
 - Videotaping/Technology
- Training of EHS staff
 - Home visitors
 - Mental health consultants
- EHS \neq ABC
- Sustainability (fidelity)



RANDOMIZATION/PARTICIPANTS

($N = 208$)

	ABC ($n = 104$)	Control ($n = 104$)
Mom Latina	88%	87%
Mom Age (Mean [SD])	30.7 (6.4)	31.2 (6.5)
Partner (1 = married/w. partner)	82%	78%
Mom Education (1 = HS/GED+)	53%	57%
Mom Employed (1 = yes)	41%	37%
Child Age (Mean [SD])	12.6 (4.1)	13.2 (4.0)
Child Sex (1 = female)	47%	55%

PARTICIPANT DESCRIPTIVES

PARTICIPANT TOXIC STRESS

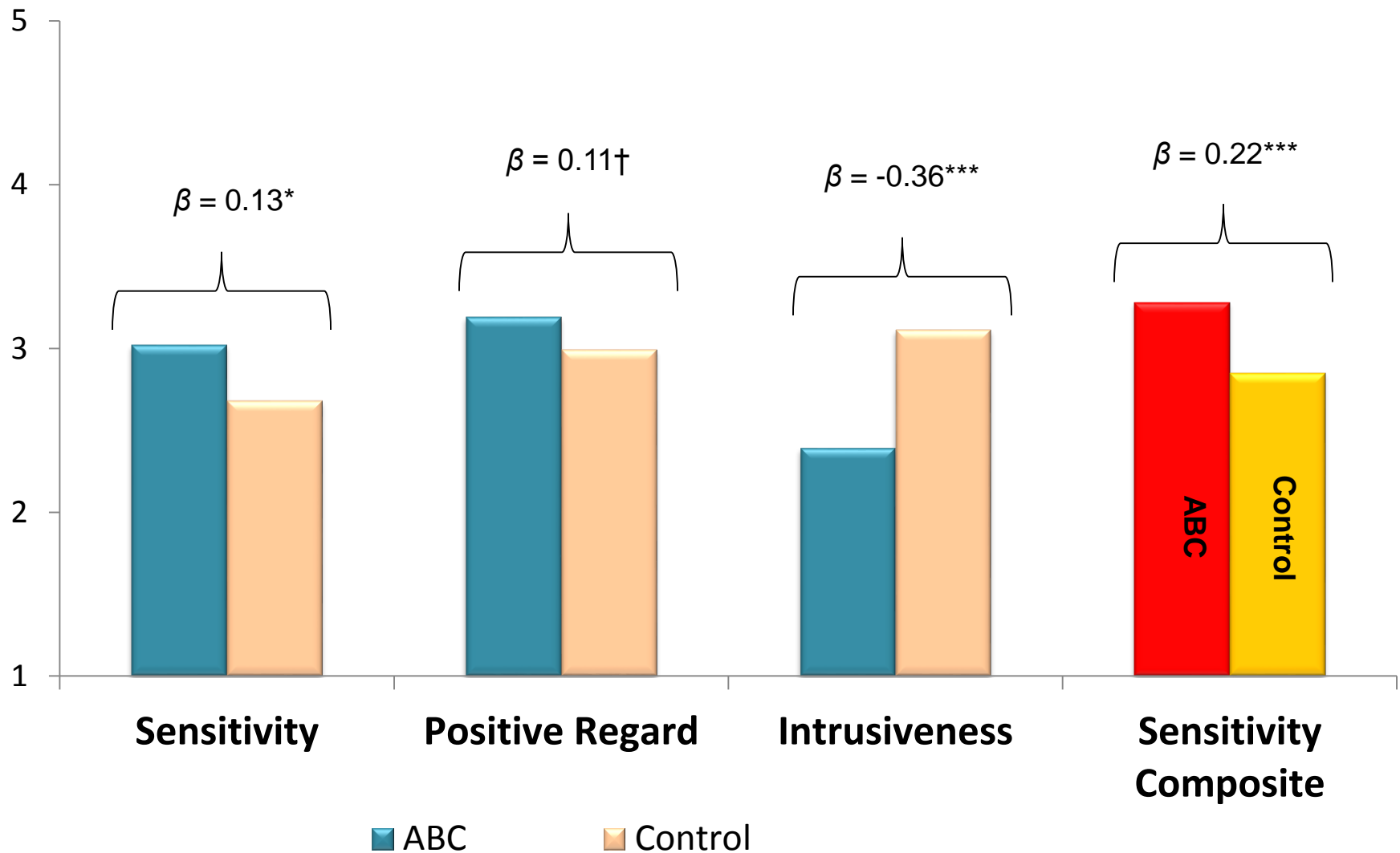
- Maternal history of child maltreatment (CTQ): 38%
- Intimate partner violence (HITS): 21%
- Self-reported “parenting stress” (PSI): Modest (mean of 65 on scale of 36-180)
- Symptoms of clinical depression (CES-D \geq 16): 21%

INTERVENTION/RESEARCH

- Completion of Early Head Start + ABC: 87%
- Average duration for 10 ABC sessions: 13 weeks
- Completion of post-intervention assessments:
 - ABC Group: 96%
 - Control Group: 99%

RESULTS

Post-Intervention Parenting Behaviors



Note. Regression analyses controlled for pre-intervention parenting behaviors.

RESULTS

Post-Intervention Parenting Behaviors

	ABC Group (Pre-Post Difference)	Effect Size (Cohen's f^2) (ABC vs. Control)	
Sensitivity	0.24	0.02	<i>Small</i>
Positive Regard	0.23	0.05	<i>Small</i>
Intrusiveness	0.54	0.19	<i>Medium</i>
Sensitivity Composite	0.34	0.09	<i>Small- Medium</i>

Note: $f^2 = .02$, $f^2 = .15$, and $f^2 = .35$ = small medium, and large effect sizes (Cohen & Cohen, 1983).

CONCLUSIONS

- Toxic stress detrimental to early development and leads to negative physical, developmental, and mental health sequelae in adulthood
- Promoting positive early parent-child relationship critical goal of parenting interventions
 - Can reduce effects of toxic stress
- Evidence-based parenting intervention promising strategy for buffering children against toxic stress

