

# Early Head Start University Partnership Grants: Buffering Children from Toxic Stress, Research Grantees

## **New York University**

*Project Title:* The Playing and Learning Strategies (PALS) Intervention in Early Head Start Programs: Reducing the Effects of Toxic Stress for Children in Poverty

*Principal Investigator:* Clancy Blair

*Co-Principal Investigator:* Cybele Raver

*Project Funding Years:* 2011 – 2016

*Project Abstract:* The primary purpose of this study is to implement an evidence-based parenting intervention, Playing and Learning Strategies (PALS) to evaluate the role of parenting quality in buffering children from toxic stress associated with poverty. Specifically, the project will: (1) measure young children's exposure to 15 indicators of poverty related hazards, constituting "toxic stress" and determine the extent to which exposure to these dimensions are associated with lower levels of parenting quality and elevated levels of stress physiology biomarkers for children; (2) implement the ABC parenting intervention and document how the intervention can be adapted and implemented within existing EHS activities; and (3) evaluate the efficacy of the PALS parenting intervention. For the third goal, families will be randomly assigned to either (1) home-visiting services where they will receive 10 weeks of intervention in addition to regularly delivered services or to a (2) 'business as usual' control condition. Results from this study are expected to advance applied developmental neuroscience and contribute to the field's knowledge base regarding the role of Early Head Start in supporting parenting and buffering children from the effects of toxic stress.

### *Sample:*

- 160 low-income families enrolled in 3 EHS programs in New York City
- 80 moderate to higher income children and families

*Proposed Measures: Material, Psychosocial and Neighborhood Measures* (15 indicators from parental survey, observer report and 2010 U.S. Census data)

- Income-to-need calculations
- Economic need and economic sufficiency: Economic Strain Questionnaire
- Employment status
- Maternal and paternal level of educational attainment
- Economic safety
- Use of public assistance
- Adult exit and entrance from the household
- Maternal psychological distress: Center for Epidemiologic Studies Depression Scale (CES-D Scale)
- Parenting Stress Index – Short Form

- Family exposure to substandard housing quality
- Neighborhood violence crime victimization
- Proportion of female headed households with children
- Rate of adult unemployment

*Parent-Child Interaction:*

- Mothers' sensitivity, detachment, intrusiveness, positive regard, negative regard, stimulation and animation in interaction with the child (using the Three-bag observation assessment)

*Child Measures:*

- Allostatic Load (saliva samples, electrocardiogram (ECG) data)
- Child Reactivity and Regulation to fear evoking mask and frustration eliciting toy removal tasks
- Self-regulation: effortful control
  - Infant Behavior Record
  - Preschool Self-Regulation Assessment
  - Infant Behavior Questionnaire
  - Children's Behavior Questionnaire

## **University of Colorado Denver**

*Project Title:* An Evaluation of Parent Child Interaction Therapy and the Emotional Availability Intervention: Mitigating Toxic Stress among American Indian Children in Early Head Start

*Principal Investigator:* Michelle Sarche

*Co-Principal Investigator:* Misty Boyd

*Project Funding Years:* 2011 – 2016

*Project Abstract:* The University of Colorado-Denver in partnership with a tribal Early Head Start (EHS) program will adapt, implement and evaluate Parent-Child Interaction Therapy Intervention (PCIT) and the Emotional Availability Caregiver Intervention (EAI) to better understand the relationship between major environmental stressors and the development of American Indian children. Specifically, the project will: (1) examine the nature, extent and developmental course of environmental stressors among American Indian children between the ages of 10 and 48 months and explore hair cortisol as a marker of toxic stress; (2) culturally adapt and integrate PCIT and the EAI models with American Indian children and families; and (3) test the effectiveness of the adapted PCIT with and without early EAI for decreasing the chronic stress response among children and their caregivers, increasing caregiver sensitivity, and decreasing behavior problems among children experiencing environmental stressors. The study will yield information about environmental stressors for American Indian children, their impact on development, and establish an evidence base for parenting interventions that may buffer children from the impact of stressors.

*Sample:* 216 children in 27 classrooms at 8 sites at a tribal Early Head Start program

*Proposed Measures: Child Measures*

- Brief Infant Toddler Social Emotional Assessment (BITSEA)
- Child Behavior Checklist (CBCL)
- Child Stress and Trauma Index
- Hair Cortisol

*Parent/Caregiver Measures*

- Center for Epidemiological Studies Depression Scale (CES-D)
- Family Demographic Survey
- Hair Cortisol
- Parenting Stress Index (PSI)
- Parent/Caregiver Stress and Trauma Index (PSTI)
- Parent/Caregiver Substance Abuse Survey (PSAS)

*Relationship Measure*

- Emotional Availability Assessment Scales
- Three-Bag Observational Assessment

## **University of Delaware**

*Project Title:* Adapting the Attachment and Biobehavioral Catch-Up Parenting Intervention for Delivery by Early Head Start Home Visitors

*Principal Investigator:* Jason Hustedt

*Co-Principal Investigators:* Rena Hallam Myae Han Jennifer Vu

*Project Funding Years:* 2011 – 2016

*Project Abstract:* The purpose of this project is to adapt the parenting intervention Attachment and Biobehavioral Catch-Up (ABC) for use in the home visiting components of Early Head Start (EHS) home- and center-based models. This project will be conducted in collaboration with a multi-site EHS program serving both urban and suburban populations, comprised of African-American, Latino, and Caucasian families, and providing both center- and home-based programs in the state of Delaware. The project will examine the impacts of the ABC intervention for parents and children, specifically by: (1) determining the role toxic stress plays in the lives of children and families served by a large EHS program, (2) assessing how the ABC intervention can be adapted for use in the context of these existing EHS programs, and (3) evaluating the effectiveness of the ABC intervention in buffering EHS children from toxic stress. Results are expected to identify impacts of the ABC intervention for parents and children and determine what adaptations are needed to the ABC intervention for widespread delivery of the ABC model in EHS programs.

*Sample:* Approximately 300 EHS children and families

*Proposed Measures: Risk Factors for Toxic Stress*

- Parent demographic survey
- Stress reactivity (e.g., cortisol measurements)
- Brief Symptom Inventory (BSI)
- CAGE-Adapted to Include Drugs (CAGE-AID)
- Parenting Stress Index: Short Form (PSI/SF)

*Child Measures*

- Battelle Development Inventory, Second Edition (BDI-2)
- Brief Infant-Toddler Social and Emotional Assessment (BITSEA)
- Early Childhood Behavior Questionnaire - Very Short Form (ECBQ-VSF)
- Infant Behavior Questionnaire - Revised - Very Short Form (IBQ-R-VSF)

*Family Measures*

- Three-Bag Observational Assessment

## **University of Denver**

*Project Title:* A Microsocial Video-Coaching Intervention for Toxically Stressed EHS Families

*Principal Investigator:* Sarah Watamura

*Co-Investigators:* Phillip Fisher Amanda Moreno

*Project Funding Years:* 2011 – 2016

*Project Abstract:* This study seeks to understand how toxic stress leads to psychological and physical health problems and identify ways to buffer children enrolled in Early Head Start (EHS) from such stressors. Specifically, the project has the following objectives: (1) identify families at risk for dysregulated stress physiology as a function of toxic stress exposure, (2) implement the preventative intervention Filming Interactions to Nurture Development (FIND) to improve child's well being, (3) assess the effectiveness of the intervention's implementation, and (4) assess the effectiveness of the FIND and the FIND plus Parent Focused Support (PFS) interventions. Families will be randomly assigned to one of three conditions: (1) EHS standard supports; (2) EHS standard supports plus FIND, a microsocial video-feedback intervention; or (3) EHS standard supports plus FIND with a parent-focused mental health support module (FIND+PFS). The project includes careful attention to factors influencing implementation success and aims to create a fully scalable intervention. Results are expected to determine whether interventions targeted at parenting in general, and caregiver sensitivity in particular, among toxically stressed EHS families improve child development outcomes.

*Sample:* 360 EHS families

*Proposed Measures:*

*Goal 1 Measures of Toxic Stress*

- Demographic Risk Screening Measure

- Family Finances Questionnaire
- Adverse Childhood Experiences Study' Family Health History Questionnaire
  - Psychosocial Risk Screening Measure
  - Adverse Childhood Experiences Study' Family Health History Questionnaire
- Collection of Child Diurnal Cortisol

*Goal 2 Measures: Implementation Effectiveness Surveys, interviews and focus groups to evaluate constructs such as:*

- Dosage, content, and fidelity of services as delivered
- Parents' and therapists' perceptions of satisfaction and barriers

*Goal 3 Measures: Caregivers*

- Brief Symptom Inventory
- Parent Daily Report
- Parenting Behavior During Dyadic Interactions Presenting Challenges to the Child
- Parent diurnal and stress reactive cortisol
- Three-bag observational assessment

*Goal 3 Measures: Child*

- Infant Toddler Social Emotional Assessment
- Child Behavior During Dyadic Interactions Presenting Challenges to the Child
- Child diurnal and stress reactive cortisol

## **University of Maryland School of Social Work**

*Project Title:* Buffering Children from Toxic Stress through Attachment-Based Intervention: An Early Head Start-University Partnership

*Principal Investigator:* Lisa Berlin

*Co-Principal Investigator:* Brenda Jones Harden

*Project Funding Years:* 2011 – 2016

*Project Abstract:* This project will be conducted in collaboration with four Early Head Start (EHS) programs that serve African American and Latino families. Project partners will implement a supplemental evidence-based parenting program, Dozier's *Attachment and Biobehavioral Catch-up* (ABC), and evaluate its effects on parenting, child stress regulation, and the EHS programs. There are three key goals: (1) define criteria for identifying EHS families at risk for experiencing toxic stress and validate these criteria empirically, (2) evaluate through a randomized trial the efficacy and "value added" of supplementing EHS services with the ABC program, and (3) evaluate the implementation and sustainability of the ABC program within the EHS context, and the linkages between implementation characteristics and program impacts. The study's findings will advance the knowledge of how EHS can increase support for early parenting and thus buffer infants and toddlers from toxic stress.

*Sample:*

- 270 EHS families with 6- to 18- month old children from 4 EHS programs in Washington, DC and suburban Maryland: (180 families identified as high-risk for toxic stress, 90 randomly assigned to the intervention group [EHS + ABC]; 90 randomly assigned to the control group [EHS + “book of the week club”]; 90 families identified as lower-risk for toxic stress)

*Measures: Parenting Behavior Measures*

- Infant and Toddler version of the Home Observation for Measure of the Environment (IT HOME)
- Maternal Behavior Q-Sort
- The Three Bag observational assessment
- Parent-Child Conflict Tactics Scale
- Parent Stress Index – short form

*Infant Measures*

- Bayley Infant Neurodevelopment Screener (BINS)
- Brief Infant Toddler Social Emotional Assessment (BITSEA)
- Observed affective expression and management (based on Lab-TAB assessments)

*Implementation Measures*

- Dose of EHS and ABC visits
- Fidelity ratings according to ABC *In-the-Moment* coding scheme
- Working Alliance Inventory (WAI)
- Focus groups: perceptions of EHS and ABC service delivery, program effectiveness, and relationships among staff and between staff and families
- Open-ended interviews: family engagement, EHS program partner acceptance, and conditions necessary for implementing ABC in the EHS context
- Record reviews: intervention fidelity, intervention format and content, participant engagement, staff-participant relationships, and how the intervention is adapted within the EHS program
- Systematic observations: duration, level of engagement, and content of the interactions between the interventionist and mother

## Washington University

*Project Title:* Buffering Toxic Stress: Novel Application of Intensive Group-based Parent Training

*Principal Investigator:* John Constantino

*Project Funding Years:* 2011 – 2016

*Project Abstract:* The study will determine if a parenting intervention, an adaptation of the Incredible Years Toddler program, can buffer high-risk children in Early Head Start (EHS) from toxic stress and its consequences by fostering supportive and responsive care giving. Specifically the study will determine: (1) the efficacy of the proposed intervention; (2) how a range of variables relate to the occurrence of toxic levels of stress within the EHS population; and (3) whether the intervention buffers children from toxic stress and/or its consequences. Families will be randomly assigned to either a “treatment as usual” control group or an intervention group whereby bi-weekly socialization visits are replaced with an intensive adaptation of The Incredible Years Toddler Program for 6 months. Results are expected to generate implementation data and possible validation of the Incredible Years Toddler program with respect to reducing toxic stress, and to improve the field’s understanding of how toxic stress occurs and how it may be reduced. In addition, if the intervention is effective in reducing toxic stress, the study will offer EHS programs a supplemental means of supporting emotional and cognitive development among at-risk children.

*Sample:* 165 EHS toddlers, including 110 experimental subjects and 55 control subjects

*Proposed Measures (Partial Listing): Risk and Caregiving Measures*

- Three-Bag Observational Assessment
- Family Interview for Genetic Studies (FIGS)
- Conflict Tactics Scales, Parent-Child Version (CTS-PC)
- Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)
- Beck Depression Inventory — II (BDI-II)
- Parenting Stress Index — Long Version (PSI-Long)

*Child Measures*

- Ages and Stages Questionnaire (ASQ)
- Toddler Behavior Assessment Questionnaire (TBAQ-R)
- Inhibitory Control Battery
- Infant Toddler Socio-Emotional Assessment (ITSEA)
- Child Behavior Checklist (CBCL)
- Cortisol Measures
- Archiving of Biomaterials for Genotypic / Epigenetic Assays