

Abstract

Quality early childhood experiences are paramount for young children birth to five years old. Responsive and nurturing early childhood experiences lay the foundation for a healthy and successful life. Conversely, violent and unpredictable experiences in early childhood can lead to deficits, disease, and disability across the lifespan. Child abuse and neglect is arguably one of the most deleterious adverse childhood experiences and creates a cascade of negative outcomes including insecure attachment with caregivers, difficulty forming peer relationships, lack of academic preparedness and performance, unhealthy romantic relationships, mental health disorders, chronic physical disorders, and early death.

The effects of child abuse and neglect on individual child health are well-documented. For example, abuse and neglect are associated with stress-related, but not necessarily transmittable, diseases and disabilities such as diabetes, obesity, and cardiovascular disease in adolescence and adulthood. What is not known is if and how abuse and neglect increases susceptibility to transmittable diseases in childhood and, potentially, negatively affects the health of a population.

The proposed study is an innovative approach to understanding the health and development associated with early childhood abuse and neglect. We propose a prospective, cohort and control design to examine *if* and *how* children who have experienced abuse and neglect differ from children who have not experienced abuse and neglect in their a) overall physical health and development and, specifically, their b) antibodies' response to the influenza (flu) vaccine (i.e., the degree of "success" of the vaccine in protecting against the flu). Approximately 50 children (25 with confirmed diagnosis of abuse or neglect; 25 without diagnosis) who have not yet received the season influenza vaccine will be recruited through the UF Health i2b2 system. Children and their primary caregivers will visit the Clinical Research Center three times over the course of 16 weeks. During the first visit, baseline influenza antibody levels will be measured along with chronic stress levels, telomere length, and caregiver-child relationship quality. Children will then be given the standard influenza vaccine. Antibody levels will again be measured at 2 follow-up visits to assess the level of "uptake" of the vaccine for children who experienced abuse or neglect compared to those who did not.

To conduct this study, we will bring together a team of experts in early childhood studies, pediatrics, child abuse and neglect, and infectious disease. The principal investigator and study home are with the Anita Zucker Center for Excellence in Early Childhood Studies (the Center). Although housed within the UF College of Education, the Center is interdisciplinary and dedicated to advancing knowledge on many aspects of young children birth to age 5, their families, and the contexts that support their health, development, and learning. The Center has a particular emphasis on addressing the needs of the most vulnerable children and their families, including those who are abused and neglected. Thus, the Center is an environment uniquely positioned to lead the proposed study and foster collaborations across campus.