## **Research Statement**

One of the most longstanding questions in the field of developmental psychology is whether early experiences with parents and other caregivers have a lasting influence on individuals' development. Despite the extensive amount of theoretical and empirical attention this question has received, many issues remain unsettled.

## **Current and Past Research**

One source debate in this field is whether early parent-child relationships contribute to competent adaptation across the entire life-course or whether the consequences of early caregiving experiences being less influential over time as individuals encounter other influences, such as relationships with peers and educational opportunities (Clarke & Clarke, 2000; Kagan, 1996). My colleagues and I used data from a longitudinal study that prospectively followed participants from birth to adulthood to demonstrate that individuals who experienced unsupportive care during the first three years of life are at an increased risk for mental health problems during adulthood and are more likely to provide lower quality parenting several decades later. In addition, we provided evidence that individuals who experienced unsupportive early caregiving are less likely to form committed romantic partnerships and have lower educational attainment during adulthood. Importantly, the consequences of early caregiving for these outcomes did not fade with time. Indeed, the effects of early caregiving for social and academic outcomes during childhood were as strong as the effects three decades later.

I have also investigated the mechanisms underlying the potentially long-term effects of early caregiving experiences. Guided by attachment theory (Bowlby, 1988), one potential mediator I have focused on is individuals' mental representations of close relationships. My search has provided evidence for several of the central principles of attachment theory, including the idea that attachment security has its origins in childhood caregiving experiences, that individual differences in attachment security are somewhat stable across development and across generations, and that attachment-related representations have implications for individuals' functioning within close relationships during adulthood. I have also addressed basic issues related to the measurement of attachment, including the question of whether dimensional measures of attachment characterize individual differences in attachment more accurately than the traditional attachment categories.

A second potential mechanism that I have investigated is the physiological systems that facilitate individuals' responses to threats and stressors. Consistent with idea that early caregiving experiences exert a long-term influence on development by becoming biologically embedded in key stress response systems (Shonkoff, Boyce, & McEwen, 2009), my research has demonstrated that individuals with histories of less supportive caregiving or insecure attachments early in life exhibit greater autonomic nervous system reactivity during interpersonally stressful situations later in life. In addition, I have worked with graduate students here at the University of Utah to test whether early experiences of adversity have lasting consequences for the functioning of the neuroendocrine systems among children adopted internationally and whether the formation of secure attachments can promote healthy neuroendocrine functioning among this unique group of children.

Another source of debate is whether these types of correlations reflect a causal effect of parents' behavior on children's outcomes or whether the associations are due to other, unmeasured

variables such as genetic factors shared between parents and children or families' socioeconomic environments (Kagan, 2010; McGue, 2010). My colleagues and I have used experimental data from randomized controlled trials of a parenting-focused intervention to test the idea that early caregiving has causal effects on children's behavior. We have shown that children of parents who received an intervention that improved supportive parenting exhibited more advanced language development, enhanced executive functioning abilities, and typical patterns of biological regulation than children whose parents received the control version of the intervention.

## Future research plans

I am extending my work on the mechanisms underlying the developmental consequences of early caregiving through a collaborative project with Elizabeth Conradt and Sheila Crowell. I am a Co-Investigator on this project, which has received funding from NIMH. The overall goal of the project is to examine the intergenerational transmission of emotional dysregulation among a sample of nearly 300 parent-child pairs. This collaboration will offer me opportunities to investigate how prenatal experiences and early postnatal caregiving experiences work together to shape infants' basic behavioral development, attachment representations, and physiological responses to stress. The first wave of data collection was completed during summer 2020, and I am working with members of our research team—including Developmental and Clinical Psychology graduate students and a post-doctoral researcher—to prepare conference submissions and manuscripts involving these data.

I have also begun to research the development of children who have been adopted. Research with adoptive families afford a unique opportunity to examine the potentially unique effects of early caregiving experiences that are disentangled from any potential inherited genetic factors or prenatal exposures (Rutter, Pickles, Murray, & Eaves, 2001). As a first step towards constructing this program of research, my research team and I have collected survey data from parents living in Utah who recently adopted an infant. This project has helped establish the feasibility of conducting adoption research in Utah and built a registry of Utah adoptive families that can be used for future research. Specifically, over 150 adoptive parents have participated in this project to date. Graduate students that I work with and I are preparing conference submissions and manuscripts involving these data. In addition, these survey data will serve as pilot data for a grant application to the National Institute of Child Health and Human Development for a project examining the role of the early caregiving environment for shaping the early biobehavioral development of adopted children.

In addition, I have partnered with a community mental health organization (The Children's Center) to implement a parenting-focused home visiting intervention here in Salt Lake City. This partnership will allow me to extend my earlier research examining the causal effects of the caregiving environment on children's early behavioral outcomes. We will be submitting a grant application to the National Institute of Mental Health in order to support the evaluation of this intervention when it is offered remotely to parents who are receiving services for substance use during pregnancy.