Research Statement

One of the primary motivations for my research is my professional experience with Florida’s early childhood care and education system. In spite of the research showing that early childhood presents a unique opportunity to mitigate the effects of poverty on child development, it was apparent that the policy choices surrounding subsidized child care, pre-kindergarten, early intervention, and home visitation were not grounded in scientific research. With this firsthand experience in policy implementation, I became determined to know how to evaluate and develop evidence-based policy to create systematic changes for young children.

Description
I would describe my research as interdisciplinary causal inference that focuses on young children and their families and prioritizes policy relevance. Child well being is relevant in many disciplines, so my work extends through economics, developmental psychology, political science, public health, education, neuroscience, and sociology. This broad interest also means that child policy is not yet a cohesive or comprehensive policy field, and the relevant literature is often siloed by academic discipline. This is challenging for research because you need to be familiar with a breadth of literature and be able to communicate your work to diverse scholars (and referees), practitioners, policymakers, and other stakeholders. Nevertheless, this intersection of ideas is what I find exciting. As a child policy scholar, my task is to synthesize and integrate these perspectives in a way that focuses on manipulable factors that are amenable to policy intervention, as well as to incorporate the field of child policy within the broader science to develop children.

Prior and current research
Training in policy has also taught me how your research question and best available data determine the methods you use. Therefore, I use a variety of research design and econometric methods for causal inference in my research. This is exemplified by my dissertation work. By grounding myself in public policy, I designed my dissertation so that each essay is an example of a different type of policy research: program evaluation, state policy analysis, and testing and advancing theory. In the first paper, I implement regression discontinuity design to test the effect of a school-based health insurance outreach intervention program on Medicaid and SCHIP enrollment, which I paired with key-informant interviews and focus groups to examine the strategies and mechanisms employed in program implementation. My second dissertation paper uses Instrumental Variables Estimation to handle the endogeneity of state policy choices and examine whether states’ management and governance of early childhood education policies affects cognitive and physical outcomes in early childhood. My third paper applies an economic theory of household production to early childhood development, where I use Value-Added and dynamic panel models to examine how parents ‘invest’ in their children, and whether these behaviors persist and affect child outcomes over time. In my other collaborative research work, I’ve used: propensity scores to overcome selection into arts education and breastfeeding exclusivity; Hierarchical Linear Modeling to address nesting of children within classrooms and schools with statewide administrative data to examine teacher effectiveness; multiple imputation methods to tackle missing data; and bounding methods.
to assess the potential for unobserved confounding. I’ve also developed comprehensive socioeconomic status measurement models with principal components analysis, and used this model to examine relationships between socioeconomic status and children’s brain structure and function.

Methods
My programming experience, primarily with Stata, includes programming techniques for cleaning, match-merging, manipulating data from diverse sources, and building comprehensive panel datasets, in addition to analysis. I have direct experience with raw administrative data that contain millions of data records that not only require efficient programming, but also require careful thought about the implications of coding decisions and deciphering the meaning of information when limited resources are available in terms of codebooks and expertise from the data providers. I have worked with large longitudinal complex survey data including the Panel Study of Income Dynamics (Child Development Survey) and the Early Childhood Longitudinal Study- Birth cohort (ECLS-B), and was selected to attend an ECLS-B data training seminar offered by the owners of the data (IES-NCES). Both the ECLS-B and the North Carolina educational and Medicaid data I have worked with contain highly sensitive information, so I am also experienced in working with data security personnel to comply with federal and state requirements for sensitive data. While my recent research uses primarily quantitative methods, I received training in qualitative research methods in my master’s program and conducted nearly 50 key-informant interviews in my master’s thesis research. I also incorporate a mixed-methods approach in one of my dissertation essays.

Future research
This diversity of methods and topics conveys the nature of my future research. States have become the foremost policymaking environment for children, yet there are very few studies that examine issues of state policy and young children. Now that I have built this unique dataset of state characteristics linked to a nationally representative sample of children (ECLS-B) for my dissertation, I can develop the empirical research in this area examining the effects of state policy choices including: program eligibility, quality initiatives, policy ‘bundles’, program implementation, and fidelity. The state policy field is also wide open for broader system-level questions like governance, management, and information and data systems.

There are additional interesting questions generated by the production function paper to explore as well; how do the mechanisms that ‘produce’ child development vary by parent characteristics and child’s sex, and how do these processes for children in the U.S. compare to samples of children in other countries? The paper I will present with my colleague at the upcoming APPAM meetings looks at the effects of delayed entry into kindergarten (a.k.a. ‘Redshirting’). I’m also continuing the neuroscience work with colleagues at Duke University to use the socioeconomic measurement model to examine how these factors affect specific brain regions and respective functions (e.g. prefrontal cortex and sustained attention).
The priority for my career is that my research penetrates policy and makes a difference in promoting and protecting children’s well being. The principal motivation for my work is to be objective, rigorous, communicated clearly, and disseminated frequently and broadly. In my research assistantship at the Carolina Institute for Public Policy under my advisor Gary Henry, I had the fantastic opportunity to see how our work was used to inform the UNC General Administration and the North Carolina Department of Public Instruction regarding policy and practice in K-12 education. I see myself becoming an applied researcher who is engaged in all aspects of child and family policy research; understanding the roles of both the family and the state in cultivating child development, developing policies and interventions, and assessing whether these policies and interventions affect child well-being. This may be through a policy institute or other systematic exchange with policymakers and researchers at the intersection of child development, policy, and causal inference to create a achieve strong, collaborative impact.