

My past research experiences have been varied in their methodologies and areas of study. As my research interests have become more focused, I am increasingly aware that the breadth of my experiences helps me think flexibly about research questions, hypotheses, and study design. My first exposure to research, as an undergraduate, was at the Spelke Lab for Developmental Studies. There, I contributed to the design and administration of experimental tasks devised to understand young children's intuitive reasoning about numbers. I continue to draw on this experience in thinking about how to assess young children's thoughts and abilities through the use of careful experiments that are sensitive to their developmental capacities. As an undergraduate, I also worked on a study that used interviews to assess the cognitive experiences associated with disordered eating and suicidal ideation in a population of female Fijian adolescents. My experience transcribing and analyzing these interviews highlighted for me the advantages and disadvantages of using interviews as tools in quantitative research.

After graduating from college, I worked as a clinical research coordinator at Massachusetts General Hospital (MGH). There, one of my major projects was an observational study of perimenopausal women with major depressive disorder, in which we sought to answer whether shifts in mood symptoms were accompanied by shifts in estrogen levels. I worked on study design, recruitment, and data collection for this project. Though data collection is ongoing, preliminary data indicates that peaks in depressive symptomatology may be preceded by spikes in estradiol. While at MGH, I also contributed to writing and data analysis; for instance, I worked on a major federal grant with my supervisor, analyzing data from her previous studies to assist in developing our hypotheses, and writing parts of the literature review. I also conducted data analysis, reviewed literature, and wrote sections of a paper on the effect of progesterone therapy on depression symptoms.¹ These experiences taught me how to evaluate information from the scientific literature, and they also helped me to improve my science writing skills.

During my first year of graduate school I began to focus on factors in the parent, family, and community that impact early child development, particularly in the context of poverty. I have collaborated on several projects related to this question; these projects have contributed substantially to my knowledge of the literature, my statistical analysis skills, and my writing abilities. For instance, I recently submitted a manuscript in which my co-authors and I used structural equation modeling to link risk factors in toddlerhood to externalizing behaviors in kindergarten. Our results show that parent psychological distress in early toddlerhood predicts externalizing behavior problems in kindergarten, with parenting behavior in late toddlerhood mediating this relation. Our results further demonstrate that social support moderates the relation between psychological distress and parenting behavior, such that parents with high levels of social support appear to be protected in their parenting behavior from the effects of psychological distress. In addition to a manuscript, three poster abstracts based on this project are currently under review. For this project, I worked with my research mentor and with another graduate student in my program; though I took the lead on analysis and writing for the project, they each contributed ideas, writing, and editing, making this a highly collaborative project.

I am also working on a manuscript that addresses whether living in a disadvantaged neighborhood uniquely predicts toddlers' externalizing behavior problems, beyond the effect of family disadvantage. This project stems from the work of a former graduate student in my mentor's lab. My role has been to extend the previous analyses and test whether our findings are moderated by child sex. Because new, more appropriate statistical models were available—specifically, multi-group hierarchical linear modeling—I took the lead in reanalyzing the data and have re-written the results and methods sections of the manuscript as well as parts of the

introduction and discussion sections. Because this work involves complex statistical analyses and is situated in a topic area at the intersection of psychology and sociology, I have worked closely with a statistician/sociologist outside my university throughout the process of analyzing and writing up our findings. I expect that our final manuscript, which documents a unique contribution of neighborhood disadvantage to children's externalizing behaviors over and above parallel individual family-level characteristics, will be submitted for review by the end of 2012.

In addition to these collaborative projects, I am working on a largely independent master's thesis designed to develop a comprehensive typology of maternal parenting styles based on observed and self-rated parenting behaviors. I further aim to contextualize these styles within the broader constellation of maternal, child, and family characteristics in which they occur. The methodology used in this project—cluster analysis—is a person-oriented approach to data analysis, and as such offers the opportunity to address different questions than more traditional variable-oriented analyses. My work appears to show six unique clusters of parents, all of which are distinguishable from each other not only in their parenting behaviors, which was the basis of the analysis, but also in their demographic and psychological characteristics. I expect to finish this project by the end of 2012 and to submit a manuscript from it early in 2013.

In addition to these and other writing projects (including a review article,² an encyclopedia entry,³ and two posters^{4,5}), I have been working for the past year on data collection and project management for a study of low-income families who have experienced violence. In this role, I supervise undergraduate research assistants and coordinate data collection and management with the other graduate students on the project. I also perform cognitive assessments with three- to five-year-old children who participate in the study, an experience that has given me insight into the cognitive capacities of children in this age group and informed my thinking about the assessment techniques I will use in my own work. I plan to collaborate on manuscripts stemming from the data we collect, and I have recently begun to supervise independent analytic projects that offer presentation opportunities to undergraduates on our research team.

Overall, my past research experiences have given me practical research skills, knowledge of research methodology, and a great enthusiasm for science, and I look forward to continuing to develop my abilities as I attempt to answer research questions about which I care deeply. In addition, I look forward to drawing on my experience with collaboration as I pursue opportunities for interdisciplinary and international partnerships that will enrich my work.

Publications and Presentations

1. Rogines-Velo, M. P., **Heberle, A. E.**, & Joffe, H. (2011). Effect of medroxyprogesterone on depressive symptoms in depressed and nondepressed perimenopausal and postmenopausal women after discontinuation of transdermal estradiol therapy. *Menopause (New York, N.Y.)*. doi:10.1097/gme.0b013e3182333847
2. Gray, S.A.O, **Heberle, A.**, & Carter, A.S (2012). Social-Emotional School Readiness: How do We Ensure Children are Ready to Learn? *Zero to Three*, 33 (1), 4-9.
3. **Heberle, A.** (2012). Retrieval of Information. In F. R. Volkmar (Ed.), *Encyclopedia of Autism Spectrum Disorders*. Springer.
4. Soto, T., Kaplan-Levy, S., **Heberle, A. E.**, Carter, A. S., & Eisenhower, A. S. (2012, June). *Parental psychopathology as a risk factor for child internalizing and externalizing behaviors in a low-income sample*. Presented at the Society for Prevention Research (SPR) 2012 Annual Meeting, Washington, DC
5. **Heberle, A. E.**, Briggs-Gowan, M. J., & Carter, A. S. (2012, August). *Parent Language Quality and Amount Predict Adaptive Social Behavior in Early School Age Children*. Presented at the American Psychological Association (APA) Annual Meeting, Orlando, FL.

*Note: One publication and three presentations are currently under review.