

Statement of Research, Teaching, and Service Goals
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Research

The primary goal of my research program is to investigate young children's social and emotional development. Specifically, my work focuses on the contributions of individual differences in temperament, in particular, children's emotion-related regulation (i.e., the processes that modulate, redirect, or increase emotion and emotion-related physiological responses) and emotional reactivity (i.e., the threshold and intensity of emotional experience) to their social and emotional outcomes. In addition, I consider parents' roles in explicating the links between children's temperament and later adjustment and social competence. Because of my interest in such developmental questions, my work relies intensively on longitudinal data, allowing me to explore changes in development and to predict outcomes from factors measured earlier. In addition, I utilize a multi-method approach to understanding young children's behavior, incorporating behavioral and physiological methods (i.e., heart rate, respiration, skin conductance), as well as using mothers', fathers' and caregivers' reports.

My work began during my doctoral program at Pennsylvania State University, where I focused on the role of infants' emotion regulation and emotional reactivity to children's later social development under the direction of Dr. Cynthia Stifter (Stifter, Spinrad, & Braungart-Rieker, 1999, *Child Development*; Stifter & Spinrad, 2002, *Infancy*). In addition, I examined the role of mothers' behaviors on infants' and toddlers' emotional reactivity (Spinrad & Stifter, 2002; *Marriage and Family Review*) and emotion regulation (Spinrad, Stifter, Donelan-McCall & Turner, 2004; *Social Development*). Although my early work provided evidence that both temperamental characteristics and maternal behaviors have an impact on infants' and toddlers' social functioning, an important step in understanding toddlers' social competence is investigating how parenting and infant characteristics together explain later social behavior. I recently examined the role of emotional reactivity, infant sex, and maternal behavior observed in infancy on toddlers' empathy-related responding. This paper is currently in press in *Infancy* (Spinrad & Stifter).

After my doctoral program, I completed a three-year postdoctoral position at Arizona State University under the direction of Dr. Nancy Eisenberg. In this position, I expanded my work by focusing on regulatory processes in older children. Specifically, a primary goal of this work was to differentiate between different types of emotion regulation. We have made the distinction between regulation that is under voluntary control (labeled effortful control) and that which is involuntary (Eisenberg & Spinrad, 2004, *Child Development*). In my role as a postdoctoral fellow, Dr. Eisenberg and I conducted a series of longitudinal studies examining the impact of effortful and involuntary control on children's social and emotional development (Eisenberg, Cumberland, Spinrad et al., 2001, *Child Development*; Eisenberg, Spinrad et al., 2004, *Child Development*; Eisenberg, Sadovsky, & Spinrad, 2005, *New Directions for Child and Adolescent Development*; Eisenberg, Sadovsky, Spinrad et al., 2005, *Developmental Psychology*; Eisenberg, N., Michalik, N., Spinrad et al., under review), and we have also explored the role of parenting in these relations (Spinrad et al., 1999, *Journal of Moral Education*; Smith et al., 2006, *Development and Psychopathology*; Valiente, Eisenberg, Spinrad et al., in press; *Emotion*; Eisenberg, Zhou, Spinrad et al., 2005, *Child Development*; Eisenberg, Hofer, Spinrad et al., under review, *Monographs of the Society for Research in Child Development*). Part of my responsibility as a postdoctoral fellow was to mentor graduate students. Thus, it is important to note that in many of these publications, graduate students served as first or second authors; thus, I am often the first or second *faculty* author on these publications.

Towards the end of my postdoctoral training, I took greater responsibility for directing the focus in our collaboration. In one study, I used naturalistic observations and parents' and teachers' reports to examine the relations of children's nonsocial and antisocial play to their social functioning, emotion and regulation (Spinrad et al., 2004; *Developmental Psychology*). In addition, I was the lead author on a paper using structural equation modeling to predict children's and popularity longitudinally from earlier effortful and involuntary control (Spinrad et al., in press, *Emotion*). My postdoctoral work offered me

valuable experience in new research methodology with older children and exposed me to complex statistical methods useful with longitudinal data. Furthermore, this experience allowed me use the distinction we developed in work with older children (i.e., between effortful and involuntary control) and apply this distinction to my work with infants and toddlers. These postdoctoral experiences gave me a strong foundation for establishing independent work.

Although my early work with Dr. Eisenberg demonstrated the relations between emotionality and regulation on children's development, the roots of these behaviors have not been fully explored. My long-term interests are to understand emotion-related regulation in infants and toddlers and its relation to socialization and family factors. Examining these issues in infants and very young children requires a specific expertise in this age group and is not parallel to studying this area in older children. Moreover, there is limited longitudinal work that examines regulation in infancy (particularly distinguishing between effortful and involuntary control) and the ways that these factors predict toddlers' social adjustment. Thus, the next step in my program of research was to address these relations in infancy. To do this, we obtained a grant from the NIMH to explore this topic (\$1,196,000 total costs for 5 years: RO1 MH 60838) and to expand on our earlier work with older children. Dr. Eisenberg is the Principal Investigator on this grant, and her involvement centers on extending the work with older children through two ongoing studies. Because of my experience and research interests with infants and toddlers, and because studying this age group is different from Nancy Eisenberg's prior work, I took the lead role in the planning, writing, and conducting the third part of the grant, which involves a longitudinal study that examines these processes in infants and toddlers (Dr. Eisenberg and I have portioned our time as nearly equal on this grant). As further evidence of my lead role in this part of our collaborative work, I received an ASU Faculty Grant-in-Aid in 2001 to begin to recruit participants for this study and to collect questionnaire data on the families in early and later infancy (i.e., 6 and 12 months of age). In addition, I was the primary investigator on a seed grant from the Arizona Biomedical Institute at Arizona State University (\$20,000) to study the toddlers at 18 months of age. The current NIMH grant allows us to collect follow-up data (annual laboratory visits and questionnaire data every 6 months) through the preschool years. In other words, this study involves laboratory visits at 18, 30, 42, and 54 months of age, as well as questionnaire follow-ups at 24, 36, and 48 months of age. The focus of the project will be to understand the development of effortful control over time and the bi-directional relations between parents' socialization practices and toddlers' regulation and to predict later social functioning and adjustment from earlier individual differences in the toddlers. These data are unique in that few studies have examined these processes in infancy and toddlerhood, particularly using multi-method data. In this work, I am taking the lead role in supervising data collection and analysis, and I am the primary author on the main research articles to come from this work.

It is important to note that the type of data involved in my research is very time consuming and labor intensive. One challenge in conducting research with infants and toddlers is that data must be collected within a small window of time for each toddler. For example, for the 18-month laboratory visit, toddlers must be within one month of their 18-month birthdays. Thus, we spend a great deal of effort in keeping in contact with families and maintaining a positive relationship with participating families; moreover, hospital recruitments had to be staggered to collect this type of data. Data collection for each laboratory toddler assessments of over 250 toddlers has taken 9 months (including training), and coding of the data (e.g., video coding) often has taken a year for each laboratory assessment period (with training). There are between 20 and 30 segments that require detailed coding for each toddler, resulting in approximately 30 hours of coding per child for each laboratory assessment. In addition, my work relies on the collection of cutting-edge physiological data (e.g., heart rate, vagal tone, cortisol/salivary alpha amylase). The physiological data must be cleaned and edited, which can take a year for each laboratory assessment. Thus, data collection, coding, entry, analyses, and manuscript writing generally take 2-3 years for each laboratory assessment. Moreover, we have collected questionnaire data by mail from both parents twice a year and have collected questionnaires from nonparental caregivers yearly. These tasks require a great deal of monitoring and follow-up with the families and caregivers. I also have been involved in the coding of videotaped data by training, monitoring and supervising the coding process.

Because of the complexity of doing research with infants and toddlers, we are just beginning to harvest the rich data our research will offer under my leadership. Thus far, I have explored whether our observed measures of effortful regulation at 18 and 30 months of age are linked with mothers' and caregivers' reports of regulation (Spinrad, Eisenberg & Gaertner, in press, *Infant Mental Health Journal*). In addition, because a major direction of my work is to understand the role of parenting/family factors in toddlers' social and emotional development, I have examined the role of socialization and toddlers' early effortful control on later social functioning at 18 and 30 months of age using structural equation modeling. Findings from this work indicate that toddlers' early effortful control mediates the relation between maternal supportive parenting and lower externalizing problems, separation distress (a subtype of internalizing problems), and higher social competence (Spinrad et al., revise-resubmit, *Developmental Psychology*). Given my expertise in socialization and family issues, my current work aims to understand the factors that predict both mothers' and fathers' parenting behaviors (Gaertner, Spinrad et al., accepted with minor revisions, *Journal of Marriage and Family*; Greving, Spinrad et al., under review; Smith, Spinrad et al., under review; Popp, Spinrad et al., under preparation). In each of these studies, I have allowed my graduate students or postdoctoral fellow to serve as the first author; thus, I am the first *faculty* author on these publications. In addition, more work from the toddler project has been (or will be) presented at the International Conference on Infant Studies (ICIS), Society for Research in Child Development (6 presentations in 2005); and the National Conference on Family Relations. Data from the initial assessments of this project also have been used (or are currently being used) for 5 master's projects and 4 dissertations for students in Psychology and Family and Human Development. I expect that several more papers will be written this year from the 2 completed dissertations from the toddler project.

Since coming to ASU, my developing program of research has been recognized by the scholarly community. In the last few years, I have published or had accepted for publication: 7 first author pieces in peer reviewed journals (in *Developmental Psychology*, *Social Development*, *Emotion*, *Infancy*, *Infant Mental Health Journal*, *Marriage and Family Review*, and *Journal of Moral Emotions*), 5 second author pieces (2 in *Child Development*, 1 in *Infancy*, 1 in *Journal of Marriage and Family*, and 1 in *Self and Identity*), and 2 second author chapters. Further, I co-authored (with Drs. Eisenberg and Fabes) a chapter covering Prosocial Behavior for the new edition of the *Handbook of Child Psychology*. This book is considered to be the definitive reference on core topics related to Child Psychology, and it is very unusual for junior faculty to be involved in this work (Eisenberg, Fabes & Spinrad, 2006).

Given my involvement in these projects, I have been asked to be a guest editor for a special issue devoted to moral development in the *Journal of Genetic Psychology*. Moreover, I have been asked to serve as an editorial consultant for the new SRCD journal, *Child Development Perspectives*, which will first be published in 2007.

I also recognize the importance of gaining external funding to foster quality research. In addition to the current NIH grant, I am a co-principal investigator on multi-site program project grant that involves studying the effects of an intervention on low-income children's social and emotional development (Funded at \$871,820 total direct costs: P01 HD048497-01A1). The focus of this grant is to understand the socioemotional processes involved in young children's school readiness and to examine the effectiveness of an intervention designed to improve children's social and emotional competence. Based on my work with the toddler project, I now have the experience to choose effective measures of effortful control in very young children, and data collection on this project will begin during the summer, 2006. Moreover, I have been involved in a small grant funded by the Fetzer Foundation to study compassion in adults and am an investigator on a NIDA grant with Dr. Laurie Chassin. Finally, I recently submitted a competing continuation grant to NIH to have the opportunity to follow-up my toddler sample into the transition to school. If funded, this grant would allow us to examine the contributions of effortful control to children's adjustment and social/academic competence, as well as to examine the contributions of parenting and heredity (using 6 genes) to children's regulation/adjustment.

Teaching.

I have contributed both to undergraduate and graduate teaching. I have prepared and instructed two undergraduate courses, Human Development (CDE 232), and Infant and Toddler Development (CDE

430). In teaching these courses, I used a variety of methods such as class discussions, in-class activities, guest panels and presentations to generate student interest and integrate material learned in class. My goal in teaching undergraduate courses is to encourage critical thinking, to apply learning to everyday issues, and to integrate research into students' knowledge of child development. My student evaluations have been very favorable (at the top of the department). At the graduate level, I developed and taught a new seminar course (CDE 533; Socialization in Early Development) that was a required course for doctoral students in the department and for students participating in the Early Intervention Training Grant (I was a training faculty member on this grant; Wilcox, Fabes & Lemorey, *Preparation of leaders in early intervention: Ph.D. training grant*).

In addition to my formal teaching, I have served in a teaching capacity with students in the context of my research projects. I work with an average of 25 undergraduate students per semester, providing them with opportunities to collect data with toddlers and their families, to have hands-on experience learning how to conduct standardized interviews and laboratory procedures, and to observe and code parents' and young children's behaviors in laboratory settings. The work is very time intensive and these tasks require a great deal of training. I am very involved with the undergraduate students in our project. Not only do I assist in their training and supervision, but I also conduct smaller group meetings to discuss getting into graduate school, writing personal statements and some of our current research findings. In addition, I hold larger group meetings with required readings to discuss the nature of our research and our specific research questions. We make efforts to be sure that the undergraduate students have a learning experience through research, and that we get to know the students throughout the semester. Throughout, my objective has been to expose students to the difficulties and rewards inherent in scientific research and to prepare students for advanced training in graduate programs.

My research projects also involve at least 8 graduate students per year from a variety of departments (Psychology, Education, Family and Human Development). I have been responsible for training these students to assist in data collection, coding, and obtaining reliability. Additionally, I have worked with graduate students in areas of advanced graduate training (i.e., project coordination, data management, data analysis, manuscript preparation, and conference presentations). I hold the philosophy that graduate students should be very involved in all aspects of the research process, and students are included on all publications from my work (often I allow students to take the first author role). Finally, I contribute to graduate students' education by serving on or chairing student committees. I have served (or am currently serving) on 10 thesis committees and 9 doctoral committees. I also have chaired 5 master's students to completion and am currently chairing the committees of 2 doctoral students.

Service

My service has included departmental, professional, and community activities. At the department level, I have served as a member of the department's undergraduate committee for the last 6 years. My responsibilities in this role include assisting in the development of an honors program, evaluating the undergraduate curriculum, and reviewing undergraduate scholarship applications. In addition, I have served on search committees for the last two years, in which we successfully hired two junior faculty members. I also served one year on the personnel committee. My role on this committee has been to review faculty files, participate in annual evaluations of all faculty, as well as serving on tenure/progress toward tenure reviews. I also served as the Affirmative Action representative for the department for the last 6 years.

Finally, in terms of my professional activities, I have been involved as an ad-hoc reviewer for several journals, including *Child Development*, *Developmental Psychology*, *Social Development*, *Merrill-Palmer Quarterly*, *Journal of Social and Personal Relationships*, *Psychological Inquiry*, *Parenting: Science and Practice*, *Infancy*, and *Journal of Family Psychology*. I also have reviewed conference proposals for the Society for Research in Child Development (the premier organization in my field). I maintain active membership in three professional organizations (i.e., attending conferences, and presenting my research). At the community level, I have been invited to speak about my research locally, nationally, and internationally.