

**Early Career Scholar Application
School Psychology Research Collaboration Conference (SPRCC)**

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Children's Academic and Social-Emotional Development in Urban School-Community Contexts

The overarching goal of my research is to understand what disrupts and promotes the positive adaptation of children growing up in challenging environments. My research is based in ecological-developmental theory: the study of the dynamic contexts in which children live and the role of those contexts – in interaction with the individual child and developmental processes – in promoting or preventing positive adaptation (Bronfenbrenner & Morris, 1998). I have identified academic and social-emotional functioning among low-income children as priority areas of interest, with a focus on the social processes of schooling. I have been involved in research to understand the predictors of academic resilience among adolescents across ecological domains, as well as theory-based intervention studies that target particular settings and skills to promote children's social competence and academic learning. In addition, I am studying the activation and support of indigenous community resources (i.e., school and mental health professionals) and proximal change agents (i.e., parents, teachers, and peers) toward the goal of more sustainable health-promoting activities in urban school-community contexts.

My early research focused, in turn, on children's academic learning and social competence in school contexts. I examined risk and resilience processes in a longitudinal national sample of public school students from the perspective of proximal rather than distal risk and toward the critical outcome of reading proficiency upon high school graduation (Cappella & Weinstein, 2001). I studied social conflicts and influence among girls in structured and unstructured school settings; in particular, I designed, implemented, and evaluated a theory-based program to reduce girls' social aggression and increase prosocial leadership (Cappella & Weinstein, 2006). More recently, my research has bridged academic and social-emotional learning among children from low-income and ethnic minority backgrounds. In particular, my colleagues at the University of Illinois at Chicago and I have developed a model for advancing evidence-based practices to protect children from the negative impact of poverty. This model includes a set of principles to guide intervention content and method guided by ecological,

organizational, and public health perspectives, along with a culturally and contextually responsive framework for conducting formative and summative research (Cappella et al., in press).

Currently, I am working to bridge intervention and methodological approaches in the study and support of positive and productive educational and social interactions in urban elementary schools. In an ongoing longitudinal experimental intervention study in Chicago, my colleagues and I are studying the impact of refocusing mental health services around the academic learning of children with disruptive behavior problems (Atkins et al., 2008). Curriculum content is designed around the predictors of learning in the classroom (effective instruction, classroom management, family outreach) and home (home-based learning activities, home-school communication). Intervention delivery relies on indigenous community resources – mental health providers, parent advocates, and leader teachers – to enhance the skills, abilities, and resources of teachers and families in high poverty neighborhoods.

In related work, I have launched a formative research study to adapt an evidence-based teacher consultation program (*MyTeachingPartner*, Pianta et al., 2008) for use with urban elementary schools and delivery by school counselors or social workers. At the end of the year, we will conduct an effectiveness trial to learn whether incorporation of the teacher consultation program into existing mental health and school structures promotes positive teacher-student interactions and student outcomes among students with behavioral and academic problems (NIMH, 1P20MH078458-01A2; PI: M. Atkins).

Finally, in my most recent work, we are using innovative and multidisciplinary methods – peer sociometric, social network, and classroom observational data in multi-level models – to understand the predictive association between teacher instructional practices and peer relationships in low income elementary schools (Cappella, Neal, & Atkins, 2008). Following completion of analyses, I aim to utilize social network methods to identify and study teachers and peers in an intervention approach that aligns resources to support not only the structured settings within the school (i.e., the classroom), but also the unstructured settings (i.e., the playground) toward increased academic and social-emotional learning opportunities for all.

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Abstract

Studies of peer relationships in schools demonstrate their increasing importance through middle childhood on children's behavior and achievement. Most studies, however, focus on the social interactions among *individual* children or *pairs* of children rather than social networks across classroom or school environments as a whole. In addition, research on the influence of peer relationships has largely remained separate from studies examining the influence of school- and classroom-level factors on children's academic and social-emotional development. Assessment of the peer social networks prior to, during, and after intervention implementation allows insight into the delivery and effect of programs that mobilize children as leaders in structured and unstructured school settings toward the promotion of learning and social development across the school network. In this collaborative multi-site research program, I aim to advance our knowledge of the influence of school and classroom processes on children's social networks and behaviors toward increased understanding of intervention targets that interact to promote children's learning and development. In Year 1, I plan to use a longitudinal, multiple reporter design to evaluate the interacting influence of elementary school organizational climate, playground processes, and classroom interactions on children's social networks and behaviors. In Year 2, I plan to use participatory action research to develop and implement a pilot program in a subset of low-income urban elementary schools aimed at promoting positive peer leadership in classroom and lunchroom/playground settings and increasing student academic and social development opportunities. The goal for Year 3 (and beyond) is to conduct a multiple baseline quasi-experimental study or place-randomized trial of the effectiveness of the classroom and playground peer leader intervention across urban school contexts.

Developmental Contexts in Urban Elementary Schools: A Focus on Peer Social Networks

Theory and research indicate that multiple and interacting ecological contexts influence children's development (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 1998). Perhaps the least well understood of these ecologies is the *peer* environment. Studies of peer relationships in schools demonstrate their increasing importance through middle childhood on children's behavior and achievement (e.g., ; Cairns et al., 1995; Coie & Dodge, 1983; Parker & Asher, 1993). Most studies, however, focus on the social interactions among *individual* children or *pairs* of children rather than social networks across classroom or school environments as a whole. In addition, research on the influence of peer relationships has largely remained separate from studies examining the influence of school- and classroom-level factors on children's academic and social-emotional development. Assessment of the peer social networks in the context of intervention implementation allows insight into the delivery and effect of interventions that incorporate children as leaders in structured and unstructured school settings toward the promotion of academic learning and social development.

In this collaborative multi-site research program, I aim to advance our knowledge of the influence of school and classroom processes on children's social networks and behaviors toward increased understanding of intervention targets across school settings that interact to promote children's learning and development. In Year 1, I plan to use a longitudinal (fall to spring), multiple reporter design in seven ethnically diverse, urban elementary schools to evaluate the interacting influence of playground and classroom interactions on children's social networks and behaviors. In the context of the NIMH-funded LINKS Center (NIMH, 1P20MH078458-01A2; PI: M. Atkins) a widely used measure of organizational climate is currently being adapted for and studied with teachers and children (Children's Services Organizational Climate Survey; Glisson & Hemmelgarn, 1998). This adapted measure will be administered to teachers and students as an index of school and classroom climate. Observers will use the Classroom Assessment Scoring System (CLASS; Pianta,

LaParo, & Hamre, 2007) to code quality of teacher-driven classroom interactions, as well as a standardized playground observation system to code playground structure and context (Leff, Costigan, & Power, 2004). Children will complete social cognitive mapping procedures (Cairns et al., 1995) as an assessment of peer social networks, and an adapted peer sociometric nomination measure as an assessment of student social behaviors (Crick & Grotpeter, 1995). In addition, a random subsample of children from each classroom will be observed in the classroom for engaged and disruptive behaviors (Behavioral Observations of Students in Schools, Shapiro, 1996; 2004) and on the playground for prosocial, aggressive, and withdrawn behaviors (Leff & Lakin, 2005).

I will model the combined influence of playground and classroom contexts on children's learning and social behaviors with a focus on the unique contribution of peer social networks. Depending upon grant support, analyses will be run at the individual student, classroom, and playground (rather than school) levels, as it can be argued that playground context shifts as different grades and aides rotate through the yard. In this case, the total N would include: (a) 7 low-income, urban elementary schools (approx. 21 playground contexts); (b) 84 K-5th grade classrooms, and (b) 840 K-5th grade students (subsample = 336).

In Year 2, I will use a participatory action research design (see Nastasi et al., 2000) to develop and implement a pilot program aimed at promoting positive peer leadership in classroom and lunchroom/playground settings and improving student academic and social development opportunities. I will propose to work collaboratively with 2-3 of the schools that participated in Year 1 data collection, and importantly, vary in climate, structure, and student demographics. A process evaluation will be conducted of an intervention that: (a) incorporates peer-assisted learning strategies into classrooms, (b) builds positive peer support into lunch and recess times, and (c) bridges structured and unstructured settings with training and support for appropriate school personnel. Beyond Year 1 data analyses, mixed method formative data will inform intervention content,

structure, and delivery. Social network data will guide the choice of peer leaders and intervention targets, school resource mapping will identify indigenous resources to support peer leadership activities, and focus groups with students, teachers, and aides will inform adaptation to content and training models. Intervention feasibility and initial effectiveness will be assessed through targeted classroom and playground observations, brief student and teacher surveys, and social network data from school staff and students. The long term goal for Year 3 (and beyond) is to conduct a place-randomized trial or multiple baseline quasi-experimental study of intervention effectiveness across school contexts. The funding needed to carry out the proposed program of research in Years 1-2 is approximately \$65,000, including: (1) a graduate research assistant (full-time for 2 years at \$15/hour), (2) research incentives for schools (\$150/school in Year 1 and 2), teachers and staff (\$20/teacher at each time point across Year 1 and 2), and students (\$1/student at each time point), (3) materials/supplies and travel (\$2,000 for 2 years).

The challenges of multi-site collaborative research in urban under-funded schools are many, including research logistics and communication, school system differences (i.e., curriculum, structure, resources), and diversity in student ethnic, linguistic, and cultural backgrounds. However, the benefits outweigh the challenges. Variability is necessary to examine predictors of differences in constructs that may not vary sufficiently within a single school district or geographic location. Interventions that are adaptable to and effective with a variety of settings and populations are relevant and usable for more schools, and thus have the potential to impact the development of more children. Finally, cross-site collaboration promotes openness to new ideas and ways of studying those ideas, enabling researchers, educators, families, and children to learn from those who are not a part of their regular social network. And that is a worthwhile goal.

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