

## Social Competence, Social Support, and Academic Achievement in Minority, Low-Income, Urban Elementary School Children

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Despite living in disadvantaged urban communities experiencing social and economic hardships, many children emerge with positive outcomes. Social-emotional competence and social support were hypothesized to have strong influences on academic trajectories during the critical period of academic skill acquisition. Participants were 282 third-grade students from six elementary schools in a Northwestern urban community. Beyond the importance of prior levels of academic competence, considerable variance in end-of-year academic outcomes was predicted by initial levels of academic social-emotional competence and improvements in social-emotional competence and perceived teacher support over the course of the year. Noteworthy is that findings were strongest for African-American students, but methodological caveats regarding research with underachieving minority youth were discussed. The findings suggest that school psychologists and others designing interventions to improve achievement of disadvantaged students should address social-emotional competencies and classroom climate, especially teacher support of students.

*Keywords:* social-emotional competence; prevention; resilience; academic underachievement; urban minority youth

Educators are becoming increasingly aware of the potential relationships that exist between educational achievement, social-emotional competence, and social support in elementary school children (e.g., Elliott, Malecki, & Demaray., 2001; Welsh, Parke, Widaman, & O'Neil, 2001; Zins, Weissberg, Wang, & Walberg,

2004). Research has shown that early social interactions and the quality of these interactions provide the basis for future developmental milestones (Vygotsky, Reiber, & Carton, 1987). As children mature and enter the school system, teachers become increasingly important in facilitating or hindering the adjustment-to-school

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process (Baker, 1999; Esposito, 1999; Munsch & Wampler, 1993; Schaps & Solomon, 2003). Teachers provide encouragement for attempting and persevering in challenging school activities. By the time a child enters grade four, his or her academic trajectory has been established (e.g., Eccles, Roeser, Wigfeld, & Freedman-Doan, 1999; Freedman-Doan, Wigfeld, Eccles, Blumenfeld, Arbretton, & Harold, 2000; Welsh et al., 2001). If one accepts that education is a socially situated process, any attempt to explain this phenomenon should consider elements at the individual as well as the environment levels (see Albee, 1982; Baker, 1999; Elias, 1987). Recent research has begun to shed light on the role of emotion recognition and regulation and related social-emotional skills in effective social interaction (Saarni, 2007). These skills thus can be important targets for interventions designed not only to promote positive interactions but also support one of their major distal effects, academic achievement (Elias & Arnold, 2006). While there is strong theoretical reason to have confidence in these suppositions, empirical support across diverse populations is still emerging. Specifically, relatively little is known about the implications of these relationships for elementary school children living in low-income urban communities (Baker, 1999; Esposito, 1999; Roeser, Eccles, & Sameroff, 2000). This study examined how the social and emotional competencies of minority, low-income, urban school children in the third grade are related to their end-of-year school outcomes.

From an ecological perspective, children's school outcomes are affected most strongly by the neighborhoods in which they live, their family life, the schools they attend, and the resources that are available to them personally and through the school (Bronfenbrenner, 1979; Dalton, Elias, & Wandersman, 2007). The harsh realities of living in the inner city present challenges for many children born and raised there (Attar, Guerra, & Tolan, 1994; Gonzales, Cauce, Friedman, & Mason, 1996; Spencer, 2005; Tolan, Guerra, & Montaini-Klov Dahl, 1997; Wilson, 1996). Consequently, discussions about the education process or evaluations of programs that address educational needs must consider these realities when studying children from high-poverty urban settings (Clark, 1991; Estell, Cairns, Farms, & Cairns, 2002; Luthar, 1995; Ogbu, 1991; Reynolds, 1998, 1999).

Children who attend school in these settings are plagued by unimaginative curricula, overcrowded classrooms, inadequate school facilities, and too few teachers who have confidence in them and who generally expect them to learn (Kozol, 2005; Wilson, 1996). According to Attar et al. (1994), these children grow up experiencing *neighborhood disadvantage*, as evidenced by poverty, unemployment and underemployment, limited resources, substandard housing, and high crime rates. These environmental risk factors have a high probability of subsequently resulting in stressor-filled psychological environments and the development of problem behaviors in children (Gonzales et al., 1996; Halpern, 1990; Tolan et al., 1997; Weinstein, 2002). In the context of establishing social relationships, additional risk factors include dysfunctional families, peer modeling of antisocial behavior, and constricted social networks (Haggerty, Sherrod, Garmezy & Rutter, 1994; Masten, 1994; Reynolds, 1998; Wilson, 1996).

In general, children who attend school in low-income areas consistently show the lowest academic achievement and the poorest development of social skills (Haggerty et al., 1994; Hoff & Mitchell, 2006; NCES, 2002; Pogrow, 2006; Reynolds, 1999). An examination of nationwide reading scores in 2002 revealed that fourth graders in central city schools performed lower than their peers who attended urban fringe/ large town and rural/ small town schools. In the same year, students who were eligible for free/ reduced-price lunch programs performed lower than students who were ineligible for such programs, with only 14% of the former group performing at the proficient reading level, compared to 41% of the latter. These results, when examined by ethnic group, also revealed that white and Asian/ Pacific Islander students outperformed their black, Hispanic, and American Indian peers. Additionally, female students scored consistently higher than their male peers, increasing a gap that has been widening since 1998 (NCES, 2002). These problems are further compounded by the reality that schools in low income urban districts also have the lowest ratings of school climate, which have been shown to be concomitant with problems in student achievement and socialization (Bernstein, 1992; Esposito, 1999; Haynes, Emmons, & Ben-Avie., 1997; Schaps & Solomon, 2003). Recent data suggest no meaningful changes in these

patterns have resulted from further implementation of NCLB reforms (Rothstein & Jacobsen, 2006).

Despite the exposure to risk, for some individuals the outcomes are not as devastating as those experienced by others (e.g., Attar et al., 1994; Baker, 1999; Haynes et al., 1997; Haynes, Troutman, & Nwachuku, 1998; Kobus & Reyes, 2000; Levitt & Levitt, 1994; Maton et al., 1996; Reyes, Gillock, Kobus & Sanchez, 2000). Wright and Masten (2005) define such occurrences as examples of resilience. They go on to point out that recent thinking in the field, what they refer to as a "second wave" of research (p. 25), takes the ecological, developmental, and transactional approach used in this study. Resilience is seen as the outcome of an ongoing set of processes involving the individual, family, and community relational networks. Among these processes, those most relevant for research and practice and most likely to account for differential effects are referred to as protective processes. Protective processes are "strengths or resources associated with positive individual outcomes" that operate in ongoing ways to help people function well in society (Dalton, et al., 2007, p. 245). In schools, protective processes can be discussed in terms of the school climate, that is "the quality and consistency of interpersonal interactions within the school community that influence children's cognitive, social-emotional, and psychological development" (Haynes et al., 1997, p. 322).

Thus, within the larger framework of resilience theory and research (Goldstein & Brooks, 2005), the present study focuses on two protective processes: (1) the social-emotional skills that a student possesses to foster successful adaptation despite the prevailing conditions (e.g., Wang & Gordon, 1994), collectively referred to as *social-emotional competence*; and (2) the individual's perception that resources are available for help in the environment, should one need them, that is, *perceived social support* (e.g., Baker, 1999).

### *Social-emotional Competence*

Social-emotional competence "can be viewed in terms of life skills for adaptation to diverse ecologies and settings" (Haggerty et al., 1994,

p. 275). According to the Collaborative for Academic, Social, and Emotional Learning (CASEL), social-emotionally competent students exhibit key emotional (e.g., understanding and managing emotions), cognitive (e.g., problem solving and goal-setting) and behavioral (e.g., understanding and displaying socially appropriate behavior) skills across different domains of home, school, and the wider community (Elias et al., 1997). In the school domain, students at the third grade level should possess skills that facilitate social interaction with their peers. They should be able to listen and respond effectively to their classmates; they should develop sensitivity to issues related to being included or excluded from social groups; and they should have the capability of regularly acting in ways that are "assertive, self-calming, and cooperative" (Elias et al., 1997, p. 135).

For minority, low-income students placed at-risk, these social-emotional skills are particularly important to achieving school success (Baker, 1999; Banks et al., 2001; Luthar, 1995; Reyes et al., 2000). The mechanisms by which these skills foster resiliency are linked to interpersonal processes in classrooms. Children's ability to regulate their emotions when frustrated, puzzled, or dejected, or beset with pervasive feelings of hopelessness or anger clearly will affect the energy they can devote to learning, even when presented with rigorous and empirically supported academic curricula. Thus, possessing social-emotional skills with fluency will allow students to better focus on academic tasks despite bringing into school the many interpersonal difficulties they may be experiencing outside (as well as inside) the building.

*Social-emotional Competence and School Outcomes.* There is both conceptual and empirical support for positing a relationship between social-emotional competence and school-related outcomes (e.g., Dalton et al., 2007; Haggerty et al., 1994; Wentzel, 1991; Zins et al., 2004). For example, social-emotional competence skills have been shown to be influential in the developmental trajectory of children's lives in a study of elementary school children in Italy (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000). Once children have grasped these skills, they are more prepared to manage their emotional responses and to control aggression. A repertoire of social-emotional skills also

serves a moral function by guiding responsible decision-making processes, and applying sanctions for harmful conduct (Caprara et al., 2000). In addition, social-emotional competence works to promote better intellectual functioning and significantly enhances positive outcomes for even the most disadvantaged groups (Masten, 1994).

In general, positive relationships have been found to exist between levels of academic success, acceptance by peers, ratings by teachers of responsible classroom behaviors, and educational outcomes (Caprara et al., 2000; Green, Forehand, Beck, & Vosk, 1980; Luthar, 1995; Wentzel, 1991). Elias and Clabby (1992) followed elementary school children over a 2-year period that included their transition into middle school. Their results showed that students who participated in a program designed to enhance social-emotional competencies showed improvements on teacher ratings of behavior, sociometric indices, and self-reports about their social adjustment and their ability to cope with everyday life situations.

Gresham and Elliott's (1990) research supports the claim that higher or lower levels of social-emotional competence are correspondingly associated with high or poor achievement. Welsh et al. (2001) showed that academic competence prospectively and positively influenced social-emotional competence from first grade to second grade, and from second grade to third grade. Results also indicated that social-emotional competence was reciprocally related to academic achievement from second grade to third grade. These results suggest that once students become integrated into the school system, the school-related competencies become preeminent in predicting later social-emotional competence. Wentzel (1991) concluded from her own research that "socially responsible behavior appears to mediate relations between achievement and both interpersonal and self-regulatory aspects of social competence" (p. 1076).

Intervention studies at the elementary level have found positive effects on academic performance, even at 6-year follow-up (Elias, Gara, Schuyler, Branden-Muller, & Sayette, 1991; Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999). In the most comprehensive study to date, Weissberg (2005) reported on a meta-analysis of 379 studies of universal preventive/compe-

tence-promotion interventions for youth in elementary, middle, and high schools and found that they had a significant impact on social-emotional-cognitive skills, positive self-efficacy, school bonding, and adherence to social norms; effect sizes ranged from .21 to .41. These programs also reduced negative behavior, school violence, detention/suspension, and peer rejection (effect sizes .21-.28) and increased positive behavior at school, academic achievement test scores, and grades (effect sizes .28-.47). While all studies did not look at all variables and the effect sizes are modest at best, the clear pattern of results support existing theoretical views of the mechanisms by which social-emotional competence might influence academic performance. That is, performing well on tests requires social-emotional skills such as self-control, cooperative interaction, and appropriate assertiveness and problem solving on the day of the event but also in the period of preparation/ studying for test-taking and when engaged in the larger set of tasks associated with academic learning and homework. Even if a child possesses the requisite skills, motivation to use them will be related to perceptions of social support for school-related activities on the part of peers and teachers, as well as parents.

### *Classroom-Related Perceived Social Support*

Weissberg's study joins others suggesting the importance of social support as a protective process. Perceived social support has been argued to be an important ingredient for healthy development in childhood (e.g., Cauce, Reid, Landesman, & Gonzales, 1990; Elliott et al., 2001; Munsch & Wampler, 1993; Rosenfeld, Richman, & Bowen, 2000). Attachment theory argues that social connectedness is required in order for children to internalize social standards and to develop respect for social institutions (Baker, 1999; Deci & Ryan, 1985). In this study, we focus on perceived social support from teachers and peers. To provide ecological focus, we review relevant studies that focus on urban minority children, including some on older youth samples from which inferences about construct relationships might be drawn.

*Perceived Teacher Support and School Outcomes.* Dubow and Tisak (1989) focused on third through fifth grade urban and suburban

students and found that student ratings of perceived social support from teachers were positively correlated with teacher-rated competencies and grade point average, and negatively correlated with teacher- and parent-rated problems. In addition, they found a significant main effect for teacher support, indicating that students with higher levels of perceived support from their teachers had lower levels of teacher-rated problem behaviors.

Studying children in a Northeast urban center who had participated in a Head Start program for their preschool year, Esposito (1999) found that the teacher/student relationship for urban, minority (sample: 80% African American, 18% Hispanic, 2% Caucasian), low-income children in kindergarten, first grade, and second grade, was significant in predicting positive school outcomes (i.e., school performance). In first and second grades, the teacher/student relationship contributed uniquely to school adjustment, even after controlling for family resources, maternal education, and kindergarten school adjustment.

A study of 61 third, fourth, and fifth graders from a public elementary school in a large metropolitan, southeast school district (Baker, 1999) provided corroborating information. All the students and teachers in the school were African American and 98% of the student population participated in the free or reduced-price lunch program. Low-income African American students most at-risk for school failure experienced alienation from school, as well as poor academic achievement. Students who were more satisfied with school tended to have more caring teacher-student relationships (thus, they perceived more teacher support), when compared to others who were not satisfied with school. Students who experienced less satisfaction with school were three times less likely to receive help when they asked for it, compared to students who were satisfied with school. Additionally, these students had lower levels of competence and adjustment to school when compared to their more satisfied counterparts. In fact, the less satisfied students received twice as many behavioral reprimands than the satisfied students.

The studies presented show the importance of the teacher-student relationship in determining school outcomes. However, teachers are not the only source of supportive influence in schools.

The next section discusses the role played by peers.

*Perceived Peer Support and School Outcomes.* Inconsistent findings have characterized the research linking peer support and student outcomes. The notion that peer support may have deleterious effects on school related outcomes can be traced back to one of the earliest studies of social support and adjustment among urban, low income, minority youth. Cauce, Felner, and Primavera (1982) found that high school students with high levels of perceived peer support had lower levels of academic performance as measured by grade point average and school absences. However, using a combination of social network variables and measures of perceived peer support, these researchers also found that among low-income, predominantly African American, urban middle school students, reciprocated best friends, perceived peer support, and school achievement orientation were all significant predictors of school competence measures. Even after controlling for individuals' cognitive skills, social network variables significantly contributed to students' GPA.

In a study of low income, urban, African American seventh and eighth grade students, Gonzales et al. (1996) found that higher levels of peer support were associated with higher ratings of perceived academic competence. But Demaray and Malecki (2002) did not find a similar relationship in their study of urban, Hispanic middle school students, although peer support was a significant, positive predictor of behavioral adjustment and had a positive impact on students' self esteem. A study of predominantly minority ninth graders in a Connecticut inner-city public school revealed that "adolescents' early academic success, and early peer perceptions of their leadership qualities, were each found to be linked with improvements in the children's classroom behaviors as rated by teachers" (Luthar, 1995, p. 424). The results also showed that over the course of the school year, students who were initially rated by their peers as friendly showed the greatest declines in academic achievement, as well as "peer-rated qualities of leadership and dependability" (p. 425). In addition, those who were initially rated as responsible leaders were later rated among the lowest for being gregarious and sociable. It appears that among adolescents in the context of

Luthar's study, peer reputations and school success and socially competent behavior directly oppose each other. This is a position supported in other research with at-risk populations (e.g., Cauce et al., 1982; Gonzales et al., 1996; Maton et al., 1996; Ogbu, 1991).

In a study of 92 first graders (53 boys, 39 girls, 99% African American) from two elementary schools in an inner-city area of a major Southeastern city, aggressive children low on social-emotional competence tended to associate with other aggressive children who complement their problem behavior. This finding implies that students who are perceived as social-emotionally incompetent may still have the ability to establish strong peer support in the classroom, though they may not have teacher support. Further, clusters of academically successful boys and girls were almost as high or even higher in aggression than groups of students considered average in competence, behaviorally at risk, or academically lagging. Boys and girls who were aggressive and academically successful were also able to establish peer relations and attain positive school outcomes, findings that generally stand in contradiction to results from nonminority populations (Estell et al., 2002).

The variation in results suggests that whatever relationships might exist between perceived peer support and academic success must be viewed in terms of both development and environmental context. The dynamic of individual classrooms and schools make the likelihood of a strong effect of perceived peer support unlikely. However, especially at the early elementary level, when it is less likely that there will be strong organized peer pressure against school academic norms, perceived peer support can be expected to serve as a positive protective feature of urban classroom settings (Levitt & Levitt, 1994; Luthar, 1995; Roeser et al., 2000). Additionally, the research literature supports viewing social-emotional competence and support as interrelated: "Personal characteristics such as social competence can lead an individual to develop and access effective social support across relationships" (Dubow & Ullman, 1989, p. 62). It is therefore reasonable to expect that support in the classroom and students' social-emotional competence would impact positively on school outcomes for young, minority, low-income, urban children.

### *The Present Research*

Based on the literature reviewed, it was hypothesized that direct relationships exist between school outcomes and social-emotional competence, perceived teacher support, and perceived peer support among urban minority third graders. Further, as students become more social-emotionally competent, their ability to seek (or create) supportive relationships also should increase. This can be explored by examining ways in which changes in competence affect changes in the perception of classroom-related perceived support, and thereby influence school performance. Figure 1 contains a detailed depiction of the specific pathways that are hypothesized, each noted by a number.

## Method

### *Participants and Setting*

Data for this study were collected as part of the assessment of a larger longitudinal action-research project based on an integration of the evidence-based Social Decision Making/Social Problem Solving curriculum (Elias & Bruene-Butler, 2005) with "Talking with TJ," (Hallmark Corporation, 1994), a video-based series focused on teamwork skills. The resulting curriculum (Rutgers Social & Emotional Laboratory, 1998) was tailored toward preventing violence and promoting social-emotional competence among urban elementary school children.

Data for 282 third grade students (46% boys, 54% girls) from six elementary schools in a Northeastern urban community were analyzed in this study. Of these, 172 were Black/African American, 27 were Hispanic/Latino, 1 Native American, 2 Caucasian, and 3 Other. Seventy-seven students were ethnically unidentified. Our experience in the district and reports of demographic studies in this and related communities suggest that it is most likely that these students were of mixed ethnicity whose status was not recorded due to lack of clarity on the part of parents/guardians or conflicting information contained in school records. Note that while the community demographic includes about 20% Caucasian population, the study sample is representative of the full school population.

Socioeconomic information about the sample revealed that approximately 60% received free

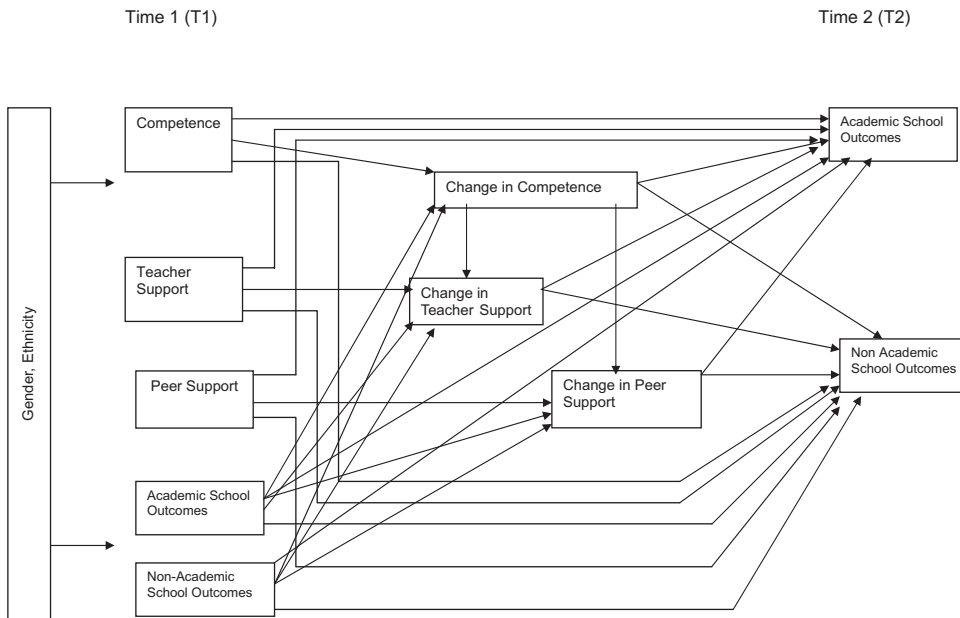


Figure 1. Hypothesized Model of Social Competence, Perceived Social Support, and School Outcomes

or subsidized lunch, although more who were eligible did not apply. In the community, the crime index was twice the national average, and indices of environmental health were in the lower 20% nationally. Over half of all families were single, headed by females. More generally, unemployment rates in the surrounding community were 9.2%.

### Measures

**Social Support.** The Survey of Children's Social Support (SOCSS), developed by Dubow and Ullman (1989), is one of the few multidimensional measures of perceived social support that has been used with urban elementary school children from third grade to fifth grade. The original version contains 31 items corresponding to perceived family, peer and teacher support factors. Dubow and Ullman (1989) reported Cronbach's alpha for subscales ranging from .78-.83 and test-retest reliability (3 to 4 weeks) ranging from .66-.73. Evidence for validity includes moderate to high correlations with the corresponding subscales of Harter's (1985) social support scale for children, significant correlations between the peer support sub-

scale and peer nominations of social preference, and moderate correlations with self-esteem.

Due to constraints in the time allowed for in-school assessment, the current study used the shortened form of the SOCSS, which was developed using the 3 items with the highest factor loadings for Teacher and Peer Support factors and contains high correlations with the full-items subscale scores (Dubow, Edwards, & Ippolito, 1997). Checking the internal consistency for the current sample suggested that the reliability of the teacher and peer support scales could be improved by deleting an item from each subscale. After making these statistically recommended changes, the internal consistency estimates of reliability were .75 and .67 teacher and peer support subscales, respectively.

Items on the modified teacher support subscale include: (a) "Do your teachers make you feel important?" and (b) "Do you think your teachers care about you?". The modified peer support subscale items, which more accurately reflect perceived protection from peer threat, are: (a) "Do you get picked on and teased by your friends?" and (b) "Do you feel left out by your friends?". Negatively scored items were recoded to reflect a positive support dimension.

All subscales used Likert-type responses ranging from *never* (1) to *always* (5), with a midpoint of *sometimes* (3). The final perceived social support scores were calculated by adding the items for each subscale and obtaining the mean score.

*Social-emotional Competence.* The Social Skills Rating Scale is an instrument with well researched reliability and validity (SSRS; Gresham & Elliot, 1990) and it was used to measure 3 components of competence: cooperation, assertion, and self-control. Competence scores were calculated by summing the responses on each subscale and obtaining the mean score across subscales. In total, 28 items were used to obtain the competence score. If participants had more than 3 items missing, they were excluded from the analyses. Cronbach's alpha was .85.

*School Outcomes.* School outcomes were measured using report card grades for reading and mathematics at the end of the first and the fourth marking periods, that is, the beginning and the end of the school year. Mean scores for reading and mathematics were averaged to obtain an overall indicator of academic performance. The scale used was the equivalent of 4.0 = A, 3.0 = B, 2.0 = C, 1.0 = D, and 0 = F. Students with any academic scores missing were excluded from the analyses. Attendance across corresponding periods was also used as a nonacademic indicator of positive school outcome. Higher scores on this variable indicate a greater number of absences.

*Demographic Information.* Demographic information was collected about students' gender, ethnicity, and grade level. Gender and ethnicity data are presented in Table 2.

### Procedure

As stated above, the data for this study were collected as part of a longitudinal project aimed at preventing youth violence. At the beginning of the school year, trained undergraduate research assistants were sent into the schools to administer preassessments. As part of a larger assessment packet, Grade 3 elementary school students were given instruments to measure their levels of perceived support. Research assistants read each item aloud to the students as they completed the survey, and paused to allow time for appropriate responses.

Teachers were also asked to complete the SSRS for each student in their class. A demographic information sheet was attached to each social-emotional competence measure, and teachers recorded data about the child's age and gender. Teachers were paid at the prevailing hourly rate to compensate them for their time.

In May of the following year (9 months later), research assistants returned to the schools and administered the same instruments as had been given previously. In June, at the end of the elementary school year, students' academic and nonacademic information was obtained from their report cards. Teachers were not aware that the latter information would be collected.

## Results

### Summary Statistics and Data Reduction

The means and standard deviations for the study variables are presented in Table 1.

Table 2 provides comparisons of means by gender and ethnic group status respectively, along with Cohen's *d* as a measure of effect size. Results indicate significant gender differences for T1 academic performance, T1 social-emotional competence, and T1 peer support. Girls generally scored higher on academic outcomes, social-emotional competence, and peer support. Boys reported numerically higher levels of perceived teacher support than girls, but there was no statistical significance found ( $p = .16$ ).

Significant group differences were found by ethnic group status (African American or non-African American; the 77 ethnically unidentified students were excluded from these ethnicity analyses, although subsequent analyses including them as non-African Americans yielded similar results). African Americans were found to have significantly lower levels of social-emotional competence and fewer absences than their non-African American counterparts. While no *d* level exceeded Cohen's criterion for a medium effect size, the pattern of findings nonetheless suggested that gender and ethnic group status be included in subsequent analyses (Valentine & Cooper, 2003).



Table 1  
*Descriptive Statistics for Main Study Variables*

	<i>N</i>	Mean	<i>SD</i>	Minimum	Maximum
Time 1 variables:					
Competence	222	1.37	.42	.28	2.00
Academic	272	2.55	.97	.00	4.00
Non-academic	278	3.48	4.00	.00	38.00
Teacher support	255	2.50	1.34	1.00	5.00
Peer support	255	1.75	1.14	1.00	5.00
Time 2 variables:					
Competence	227	1.35	.46	.38	2.00
Academic	282	2.50	1.07	.00	4.25
Non-academic	282	3.86	3.75	.00	21.00
Teacher support	227	1.87	1.33	1.00	5.00
Peer support	227	2.37	1.42	1.00	5.00
Change variables:					
Competence	198	-.02	.32	-1.17	.90
Teacher support	207	.08	1.34	-4.00	4.00
Peer support	207	-.20	1.34	-4.00	4.00

### Structural Equation Modeling

“Structural equation modeling (SEM) is a comprehensive statistical approach to testing hypotheses about relations among observed and latent variables” (Hoyle, 1995, p. 1). Due to its ability to simultaneously evaluate the pathways specified in the experimental model presented in Figure 1, and to impute missing data (a common feature of large community-based assessments), SEM procedures were used to test for hypothesized relationships. In the present study, latent factors were social competence, academic performance, students’ perceptions of social support, and the influences of socializa-

tion context, in the form of cultural and gender-related influences. The Mplus program (Muthén & Muthén, 2005) was used to test the latent conceptual model (in this case, also the measurement model) from the program-generated covariance matrix. It should be noted that the imputation procedure uses the SEM algorithm and assumes that data are missing at random (Dempster, Laird, & Rubin, 1977; Schafer & Graham, 2002). Further, the use of change scores in SEM with their baseline scores is acceptable, provided that there is no multicollinearity and that the change score represents a conceptually distinct variable from the status of the individual being assessed at Time 1 or 2; the

Table 2  
*Comparisons of Means of Predictive Variables by Gender and Ethnicity*

Variable (Range)	Males Mean ( <i>SD</i> )	Females Mean ( <i>SD</i> )	Effect Size	African American ( <i>n</i> = 172)	Non-African American ( <i>n</i> = 33)	Effect Size
Competence (pre) (0.28–2)	1.24 (.44)	1.44 (.40)	.48**	1.32 (.43)	1.50 (.40)	.43*
Academic (pre) (0 – 4)	2.40 (.99)	2.70 (.96)	.31*	2.52 (.96)	2.50 (1.13)	.02
Non-academic (pre) (0–38)	3.27 (3.37)	3.44 (4.72)	.11	3.10 (2.92)	5.39 (8.05)	.44**
Peer Support (pre) (1–5)	2.24 (1.26)	2.69 (1.35)	.35**	2.52 (1.32)	2.17 (1.33)	.26
Teacher Support (pre) (1–5)	1.91 (1.24)	1.69 (1.08)	.19	1.79 (1.11)	1.44 (.86)	.36

\*  $p < .05$   
 \*\*  $p < .01$

present circumstances meet both of these assumptions (Hoyle, 1995).

*Correlations*

As an initial step, the program-generated correlation matrix was analyzed. Pearson’s correlation coefficients are presented in Table 3. Hypothesized relationships were generally supported by the intercorrelation results. Social-emotional competence at T1 was significantly related to T1 academic performance ( $r = .589, p < .01$ ) and T2 academic performance ( $r = .550, p < .01$ ), T1 nonacademic school outcome ( $r = -.171, p < .05$ ), gender ( $r = -.234, p < .01$ ), and ethnic group status ( $r = -.158, p < .05$ ). Social-emotional competence was not significantly related to non academic school outcome at the end of the school year.

In terms of classroom-related perceived support, T1 perceived peer-related support was

found to be significantly associated with gender ( $r = -.169, p < .05$ ), end of the year (T2) academic performance ( $r = -.130, p < .05$ ), and T1 perceived teacher support ( $r = .143, p < .05$ ). The results also indicated significant associations between perceived teacher support and T1 (beginning of the school year) social-emotional competence ( $r = -.187, p < .01$ ).

*Structural Equation Models*

*Three models were tested.* The first model tested was the hypothesized model presented in Figure 1 above. The results of the initial SEM procedure are presented in Table 4. The initial model solution includes the results of nonsignificant as well as significant hypothesized pathways. As hypothesized, competence, change in competence, and change in teacher support, are important in predicting academic outcomes, despite contributions made by earlier

Table 3  
*Intercorrelation of Main Study Variables*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender (M = 1; F = 0)	—											
2. Ethnicity (AA = 1; NonAA = 0)	-.116*	—										
3. Academic (pre)	-.142**	-.021	—									
4. Academic (post)	-.135*	-.056	.758**	—								
5. Non-academic (pre)	-.023	-.126*	-.184**	-.175**	—							
6. Non-academic (post)	.045	.093	-.113*	-.124*	.419**	—						
7. Competence (pre)	-.234**	-.126*	.608**	.564**	-.200**	-.170**	—					
8. Teacher support (pre)	.086	.119*	-.008	-.100*	-.059	.122*	-.156**	—				
9. Peer support (pre)	-.171**	-.001	-.005	-.132*	-.114*	.104*	.025	.074	—			
10. Change in competence	-.001	.042	-.005	.137*	.039	.081	-.272**	.064	.030	—		
11. Change in teacher support	-.119*	.054	.117*	.157**	.047	-.015	.224**	-.486**	.007	-.224**	—	
12. Change in peer support	.034	-.069	-.141**	-.064	-.033	.000	.053	.003	-.433**	-.068	-.122*	—

\*  $p < .05$

\*\*  $p < .01$

$N = 282$

Notes. AA = African American, NonAA = Others  
Non-academic = number of absences

Table 4  
Initial Structural Equation Model Results<sup>[11]</sup>

	b	SE	t	$\beta$	R <sup>2</sup>
Change in competence on					.117
Gender (M = 1; F = 0)	-.045	.047	-.969	-.072	
Ethnicity (AA = 1; NonAA = 0)	-.021	.063	-.330	-.025	
Competence (pre)	-.330	.067	-4.940*	-.445	
Teacher support (pre)	-.002	.019	-.096	-.007	
Peer support (pre)	-.002	.016	-.112	-.008	
Academic (pre)	.082	.027	3.036*	.254	
Non-academic (pre)	.000	.005	-.062	-.004	
Change in teacher support on					.302
Change in competence	-.815	.287	-2.843*	-.191	
Gender (M = 1; F = 0)	-.086	.179	-.477	-.032	
Ethnicity (AA = 1; NonAA = 0)	.450	.256	1.759	.124	
Competence (pre)	.118	.289	.409	.037	
Teacher support (pre)	-.568	.073	-7.784*	-.480	
Peer support (pre)	.067	.061	1.095	.067	
Academic (pre)	.094	.108	.872	.068	
Non-academic (pre)	.015	.021	.724	.045	
Change in peer support on					.246
Change in competence	-.044	.297	-.149	-.010	
Gender (M = 1; F = 0)	-.147	.185	-.795	-.055	
Ethnicity (AA = 1; NonAA = 0)	-.098	.266	-.371	-.027	
Competence (pre)	.526	.299	1.760	.167	
Teacher support (pre)	.111	.075	1.477	.095	
Peer support (pre)	-.451	.063	-7.174*	-.453	
Academic (pre)	-.380	.111	-3.417*	-.278	
Non-academic (pre)	-.006	.022	-.265	-.017	
Academic (post) on					.647
Change in competence	.784	.153	5.120*	.231	
Change in teacher support	.092	.040	2.299*	.116	
Change in peer support	.000	.039	.000	.000	
Gender (M = 1; F = 0)	-.011	.091	-.116	-.005	
Ethnicity (AA = 1; NonAA = 0)	-.142	.131	-1.091	-.049	
Competence (pre)	.575	.147	3.908*	.228	
Teacher support (pre)	.042	.044	.940	.044	
Peer support (pre)	.058	.036	-1.594	-.073	
Academic (pre)	.654	.056	11.655*	.598	
Non-academic (pre)	-.010	.011	-.969	-.038	
Non-academic (post) on					.241
Change in competence	.744	.796	.935	.062	
Change in teacher support	.195	.204	.959	.070	
Change in peer support	.212	.197	1.078	.076	
Gender (M = 1; F = 0)	.570	.459	1.240	.076	
Ethnicity (AA = 1; NonAA = 0)	1.505	.662	2.274*	.148	
Competence (pre)	-.148	.755	-.197	-.017	
Teacher support (pre)	.507	.224	2.263*	.154	
Peer support (pre)	.215	.183	1.174	.077	
Academic (pre)	.027	.286	.096	.007	
Non-academic (pre)	.425	.053	8.019*	.453	

N = 282

Notes. AA = African American, NonAA = Others

Non-academic = number of absences

Results presented in this table can be interpreted like those obtained in regression analyses. For each outcome measure, R<sup>2</sup> refers to the percent of variance accounted for by the set of independent variables listed below it; The path coefficient is denoted by (b), the standard error of the estimate (S.E.), the test of significance ( $t$  2.00,  $p < .05$ , denoted by asterisk), and the standardized path coefficient ( $\beta$ ) shows the relative predictive power of the variables.

academic performance. Time 2 nonacademic outcomes, that is, absences, are predicted by perceived teacher support, previous absences, and ethnic group status. The parameter estimates (b) are presented for each significant pathway. Overall, the model explains almost 65% of the total variance in academic performance and 24% of the total variance in the number of absences. Once the structural equation modeling program evaluates specified pathways, results are given that suggest ways of improving the model to best describe the data. Modifications are usually related to “freeing parameters that formerly were fixed or fixing parameters that were formerly free” (Hoyle, 1995, pp. 8). Based on the modification indices, the model was trimmed to better fit the data by eliminating nonsignificant pathways. Figure 2 presents the final model. (All students are included; for this analysis, the 77 ethnically unidentified students were classified as non-African American; findings did not change when they were excluded; also, there was no difference in the pattern of construct relationships by gender.)

Goodness-of-fit indices denote the overall acceptability of the model to the data (Hoyle, 1995). These included a chi-square/degrees-of-freedom ratio ( $\chi^2/df$ ) of .751, a comparative fit index (CFI) of 1.000, and a TLI (Tucker-Lewis) of 1.017. The root mean square error of approximation (RMSEA) was 0.000 (good model fit is indicated by a RMSEA that is less than .04), and the lower and upper limits of the 90% confidence interval were .000 and .033, respectively,  $p = .994$ . The  $\chi^2(23, N = 282)$  for the final model was 17.269 ( $p = .796$ ). The significant model parameters are presented in Figure 2. Like the initial model, the trimmed model explains almost 64% of the variance in academic performance, and almost 23% of the variance in absences, but in a more parsimonious manner.

Interpretation of the model was guided by considerations outlined by Garson (2007). In general, the best fitting model (see Figure 2) was slightly different from the proposed model. These results suggest that not all the hypothesized pathways are necessary, and that the explanation of academic and nonacademic outcomes through social-emotional competence and perceived classroom-related support sources is less complex than suggested by the

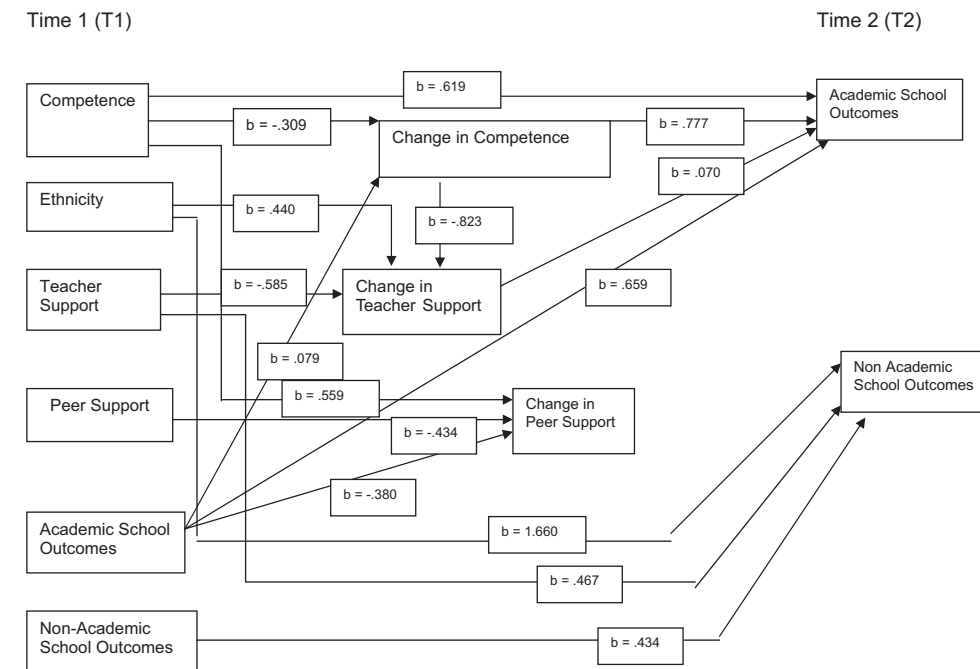


Figure 2. Trimmed Model of Social Support and Social Competence on School Outcomes

original model. At the same time, the residual variance unexplained by the model suggests that additional factors not included here may assist in further explaining school-related outcomes.

One significant pathway required further investigation. In the trimmed model (see Figure 2), ethnic group status was found to be important in determining the level of change in perceived teacher support, and also important in the students' absence from school. Therefore, to ascertain the accuracy of the model as it relates to African American students, another SEM procedure was conducted. Summary statistics for the African American students are presented in Table 5.

The goodness-of-fit indices yielded a chi-square/degrees-of-freedom ratio ( $\chi^2/df$ ) of .866, a comparative fit index (CFI) of 1.000, and a

TLI (Tucker-Lewis) of 1.016. The root mean square error of approximation (RMSEA) was 0.000, and the lower and upper limits of the 90% confidence interval were .000 and .056, respectively,  $p = .922$ . The  $\chi^2(20, N = 172)$  for the final model was 17.319 ( $p = .632$ ). The final results of the SEM procedure for the African American subsample are presented in Figure 3. Not surprisingly, the model is similar to the model for the entire sample because African Americans are the dominant ethnic group represented in the sample. Collectively, previous social-emotional competence, change in competence, and previous academic performance account for 64% of the variance in academic performance. Only previous absences are significant, determining almost 21% of the variance in the number of absences at the end of the school year.

Table 5  
Descriptive Statistics: Correlations, Means, SDs of Main Study Variables for African American Subsample

	1	2	3	4	5	6	7	8	9	10	11
1. Gender (M = 1; F = 0)	—										
2. Academic (pre)	-.144**	—									
3. Academic (post)	-.157**	.781**	—								
4. Non- academic (pre)	.018	-.179**	-.137*	—							
5. Non- academic (post)	.025	-.016	-.034	.455**	—						
6. Competence (pre)	-.312**	.579**	.549**	-.179**	-.101*	—					
7. Teacher support (pre)	.122*	-.146**	-.020	-.105*	.028	-.146**	—				
8. Peer support (pre)	-.181**	-.051	-.111*	.099	.120*	-.051	.159**	—			
9. Change in competence	.026	.025	.116*	.051	.088	-.258**	.070	-.046	—		
10. Change in teacher support	-.202**	.140*	.155**	.022	.036	.291**	-.465**	-.028	-.260**	—	
11. Change in peer support	-.046	-.136*	-.100*	-.103*	-.122*	.055	-.056	-.390**	-.054	-.056	—
Means	.449	2.523	2.441	3.099	3.686	1.327	1.792	2.518	-.027	.033	-.150
SD	.498	.956	1.072	2.909	3.392	.427	1.109	1.318	.311	1.339	1.261

\*  $p < .05$

\*\*  $p < .01$

N = 172

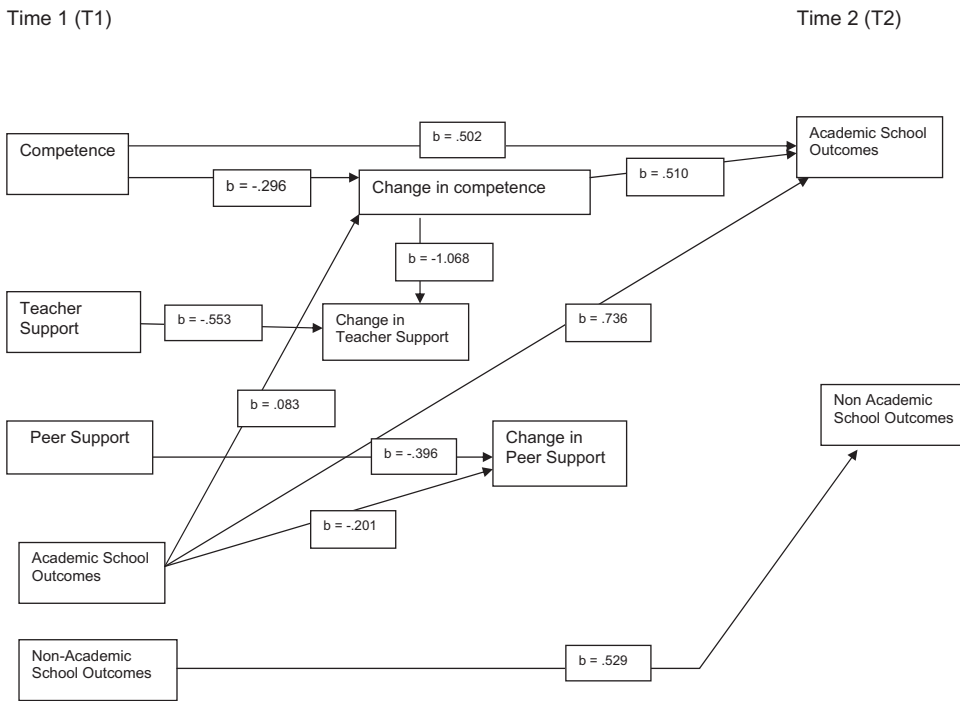


Figure 3. Trimmed Model of Social Support and Social Competence on School Outcomes for African American Subsample

### Discussion

The primary goal of this study was to examine the relationships that exist among social-emotional competence, perceived support at school (particularly in the classroom), and school outcomes for minority children who live in low-income, urban communities. This was operationalized by exploring the validity of the mediational model represented in Figure 1. The discussion reviews the relationships among the study variables, examines their stability throughout the school year, and analyzes gender and ethnic group differences.

#### *Empirical Relationships Among the Study Variables*

The hypothesized relationship between previous social-emotional competence and school outcomes was mostly supported. In agreement with the current literature, previous social-emotional competence affects academic performance of children in at-risk, high neighborhood

disadvantage communities (e.g., Baker, 1999; Caprara et al., 2000; Zins et al., 2004). Beyond the importance of prior levels of academic competence, considerable variance in end-of-year academic outcomes is predicted by initial levels of social-emotional competence and improvements in social-emotional competence and perceived teacher support over the course of the year. In the context of the current findings, the relationship of academic pretest scores to academic posttests shows that prior educational history is highly predictive but not deterministically so. Such a finding has particularly important implications in third grade, which is toward the end of the critical period of acquisition of literacy skills. Many educators view this as a nodal developmental transition point after which risk for low academic achievement increases considerably if children are still far behind in reading or do not move into fourth grade with strong, significant momentum. From the point of view of resilience theory, the findings suggest that social-emotional skills and support

combine to serve as protective processes, but not in ways that are uniform across cultural and ethnic groups or sources of support.

The relationship between previous social-emotional competence and nonacademic indices, that is, the number of absences, was not supported. This lack of a relationship is perhaps a function of the nonacademic indicator chosen, or a function of the developmental implications for these third graders. It is possible that another nonacademic indicator, for example, tardiness, with an implicit requirement for more basic social-emotional skills, would have been a more appropriate indicator. However, third graders in this population may or may not have much control regarding their attendance and their lateness in arriving at school. As suggested by Gonzales et al. (1996), problems at home (including a lack of money and frequent mobility), or in the surrounding community could be more influential than social-emotional competence in determining a student's attendance at school.

Perceived increases in teacher support were found to be modestly associated with academic performance as measured at the end of the school year. Perceived teacher support in the first month of the school year did not generally influence students' end of the year academic performance but was influential in the third graders' later degree of absence from school. One reason for this disparity could be that for academic advancement, students need more time to adjust to or to develop a stable relationship with the new teacher; hence relationship quality is difficult to assess at the initial stages of such a relationship. However, it appears that not as much time is needed for the perceived quality of the teacher-student relationship to impact on the number of absences that a student will have at the end of the school year. Perhaps, as is suggested by Reyes et al. (2000), students' perception of support at the start of their school year is influential on school outcomes as the year unfolds. If students enter third grade with an already low level of perceived teacher support, and perceive the same (or less) support than they had in second grade, it is possible that the immediate evaluation of support quickly impacts on current and later school attendance.

It was surprising to discover that initial perceptions of peer threat—which is the more accurate characterization of the peer support variable as actually assessed in this study—were not

important in students' end of year overall school performance. This finding is in opposition to the findings of previous research, although these generally involved older children. Timing may be an important factor; at the beginning of the school year, the picture of school safety may not be as coherent or consistent as it emerges later in the school year. Further, peer support in high-risk, predominantly minority, and urban populations may begin to be less consistently aligned with meeting adult goals for school achievement (Ogbu, 1991). Younger students may feel that their peers are not capable of providing assistance in school success. It also may be the case that they have no reason to believe that their peers can affect their learning status, nor affect their attendance at school. This reasoning may correspond with Feiring and Lewis' (1991) findings that support networks in the earlier stages of development may be beneficial in developing social-emotional skills, but not as essential in school performance.

#### *Stability of Relationships: Social-emotional Competence and Perceived Social Support*

SEM analyses showed that prior social-emotional competence and change in competence were found to significantly affect later academic performance. It should be noted that the level of change in competence was affected by previous academic performance and previous competence scores. This suggests that the ability of third graders to adapt in this setting is affected by their previous experiences of school success, as well as their past experiences in adapting to changes in the social and ecological climate of the school. It supports Reyes et al.'s (2000) position that transitional support is influential in determining later school performance for at-risk students.

Although social-emotional competence scores were relatively stable overall from the beginning to the end of the school year, the relatively large range of negative and positive change ( $-1.17$  and  $.90$ , respectively) indicates that some students experienced a significant reduction in their capacity to adapt to their social environment, while others increased in their ability to handle changing social requirements. Clearly, there are important mediating factors that can either help steer urban youth toward

positive outcomes or foster movement along negative trajectories.

Students' mean perception of a supportive teacher-student relationship declined from 2.50 ( $SD = 1.34$ ) to 1.87 ( $SD = 1.33$ ). This suggests that at the beginning of the school year, students generally perceived the teacher as more supportive than at the end of the school year. However, in agreement with Baker (1999), less competent students perceive more support from their teachers when compared to their more competent counterparts. This suggests that teachers do what they have been trained to do, that is, they identify their weakest students and provide extra attention in order to strengthen them. At the high school level, it seems that students are aware of this scenario and are not upset by it (Reyes et al., 2000). However, with younger children, these results suggest that despite the benefits to the weaker students in the class, there are costs associated with the other students perceiving less support available from their most valuable resource in the classroom, that is, their teacher. Interestingly, students' initial perception of teacher support did not impact on end-of-year academic performance, but change in the perception of teacher support did.

### *Group Differences in Social-emotional Competence and Perceived Social Support, and Their Effects on School Outcomes*

In general, the gender differences in this study (see Table 2) did not seem important in determining overall school performance when other factors were considered (see Table 3). The disappearance of differences based on gender in overall school outcomes should not be interpreted to mean that gender is an unimportant factor when considering students in this age group in similar at-risk environments. Rather, the results suggest that when other demographic variables are introduced in an environment where they are significant, the gender effect is negligible and secondary. In addition, these children may still be relatively early in the process of being socialized into gender-based patterns of school behavior.

On the other hand, ethnic group differences were found to be important when considering the number of absences and previous levels of competence (see Tables 2 and 3). This differ-

ence was also important in the change in the perception of teacher support (see Table 3), as seen in Figure 2. In the urban context of the present study, non-African American students are the minority. These students tended to exhibit higher levels of competence than their African American counterparts, yet also had a higher rate of absenteeism. These results are consistent with the view that when one is part of a minority group in an environment where ethnic/cultural tensions exist, it is not unusual to experience higher levels of environmental stress and also perceive lower levels of support (e.g., Barker, 1999; Kobus & Reyes, 2000; Maton et al., 1996; Munsch & Wampler, 1993). Under such circumstances, higher absentee rates would not be surprising. With regard to higher competence ratings, Kozol (2005) has pointed out that African Americans have been stereotyped as being very energetic, gregarious, and vociferous (i.e., distinctly expressive). These characteristics may be seen as appealing in many contexts but may not be viewed favorably in an academically pressured educational context. If the non-African American students as a group were distinctly less active and less expressive (and, by extension, less disruptive of the classroom routines), then it follows that their behaviors will more likely match those required for social-emotionally competent children in elementary school (i.e., the skills measured as being competent by the SSRS). Such possibilities call upon researchers and educators to be more cognizant of the ecological behavioral norms in school settings and the impact these may have on both children's behavior and on adults' ratings of their behavior.

### *Limitations and Future Research*

The present findings illuminate a number of complexities in the relationship between competence and perceived support among young children in an urban minority population. However, caution should be exercised in interpreting results from single studies. A few limitations may affect the analysis and interpretation of the data presented in this study. The first limitation is that any changes that occurred during the school year cannot be solely attributed to developmental outcomes. The students that were studied were part of a larger longitudinal project designed to teach social and emotional skills to



children. Not only were they exposed to a curriculum designed to teach respect for diversity, teamwork, and emotion-identification, but they were also exposed to various school-based programs designed to enhance their social-emotional and academic competencies. Nevertheless, this was a constant across all groups of children. More to the point, social-emotional and character-related interventions have now become a common component of school curricula and are required as part of the instructional standards in a number of states, including Illinois, Iowa, Massachusetts, New York, Ohio, Rhode Island, and the state in which this study took place, New Jersey (Cohen, 2006; Kress, Norris, Schoenholz, Elias, & Seigle, 2004).

As with other research with predominantly minority, at-risk students, there were methodological concerns (Cauce, Hannan, & Sargeant, 1992; Reyes et al., 2000). The first methodological limitation relates to the operationalization of perceived peer and teacher support. The modified measure was created based on selecting items with the highest factor loading from the original Dubow and Ullman (1989) study. After making reliability scale adjustments, the final analyses were based on scales having two items each. This may compromise the replicability of the present findings, although the internal consistency of the scales actually improved from Time 1 to Time 2. Further, the peer support items focused only on a narrow aspect of the construct, peer threat; thus, findings from the present study may be inconsistent with those of studies using the full SOCCS scale and more generally may not match those using broader peer support scales.

The second methodological problem has to do with teachers being the only source of judgments of students' competence, and that the measure was based on a 3-point scale. The literature supports that teachers are generally reliable sources of data; however, it would be best to have a comparable source of competence data. This issue combined with the fact that the measure was based on a 3-point scale may have affected the magnitude of change in competence scores. Teachers may miss small changes, or if they saw them, did not find appropriate gradations available for indicating the change. A small improvement is still an improvement; however, it is not an unequivocal positive response. Nonetheless, the SSRS (Gresham &

Elliot, 1990) is widely used and has strong empirical support in the literature.

The third and last methodological limitation concerns an inherent problem with structural equation modeling (SEM) procedures. These procedures use an iterative process to determine significant pathways based on the variables that are included in the model. However, should other variables be included/excluded, or the direction of prospective relationships be hypothesized and tested in a different way, the results of significant pathways may also change. For example, in this study it was found that competence is important in determining later academic achievements. However, it is also possible that the teachers' prior knowledge of the children's academic performance may influence their ratings for competence, and their prior knowledge of children's competence might influence their view of children's academic potential. The best solution for disentangling this potential method variance would be to have multiple sources of data for both sets of variables. A longer measurement time frame would also be desirable. Regardless, even longitudinal studies are, in a sense, snap shots of more extensive ecological and developmental processes and contexts within which they are embedded and which need to be captured with appropriate complexity.

### *Future Research and Action*

In addition to the methodological issues mentioned above, future research should address other competencies and support-related dimensions that are important in assisting third graders in achieving school success. The results have shown that the model is partially validated and that social-emotional competence and perceived support play important roles in school success, but there are still undiscovered factors that affect a student's performance at school, especially for African American children (see Figure 3). Among the variables suggested by recent research and intervention studies are emotion recognition, decision-making skills, feelings of being engaged in school, and, importantly, parent/guardian support (Elias & Arnold, 2006).

In taking an ecological perspective, future research should pay greater attention to the influence of cultural factors on students' social and learning behaviors and academic achieve-

ment. The growing presence of immigrant populations in many communities suggests assessments of acculturation and the values being communicated to children around school behavior and achievement by parents/guardians and also extended family members should be standard in research on culturally diverse children. These are data that would be best collected directly from family members. This research design element will bring needed nuance to investigations of the relationship between family support, social-emotional competence, classroom-related support, and overall school performance. The possibility that compensatory relationships may exist among sources of support and mediate their role on academic success (e.g., that strong parental support might reduce the impact of low peer or teacher support or that weak family support for academics may be a primary mediator of academic achievement in young children despite teacher and peer support) is especially salient for prevention research and action in urban minority contexts.

Time and timing are important factors in understanding the development of supportive relationships in classrooms. After a few months of being together with classmates and the teacher, students will typically be more able to reliably respond to the measures of perceived support. An additional assessment period could be included about halfway through the school year. This assessment would capture changes that may have occurred during the few months spent together, but because of any number of life events, may have disappeared by the end of the school year. The time frame between assessments for younger children may have to be shortened in order to understand nuances in the progression of their development across areas (Gonzales et al., 1996).

Lastly, future research should consider additional indicators of school performance. While certain measures are invested with large social value, such as report card grades and standardized test scores in reading and mathematics, we would benefit from knowing how school performance varies as a function of indicators selected. For example, a child who is not born in the United States and has memories of another country may be better in world history, social studies, or geography than in reading and mathematics, especially if a language barrier exists. In another scenario,

a child with below-average age-appropriate cognitive skills may not perform well at language-based subjects, but may excel at art, or may earn good citizenship or merit awards on a regular basis. Understanding how a wider range of school-based accomplishments affect educators, parents, and the child's own judgments about school engagement and support and personal capabilities, and the role of social-emotional competence in predicting these outcomes, may lead to the strengthening or deeper contextualizing of current findings.

Action implications suggest that interventions designed to improve the academic achievement of urban youth, particularly during the elementary school years so crucial for reading acquisition, should explicitly address both students' social-emotional competencies and the relationships between teachers and students in the classroom. For school psychologists in particular, the emerging research on the link of school performance and social-emotional factors provide an important way to foster integration of school psychology concerns with the broader mission of schools. Current approaches emphasizing rigid, prescriptive academic drills and practice oriented toward the format and content of standardized tests have not meaningfully changed the academic trajectories of most underachieving youth and are not likely to do so in the future (Kozol, 2005). Indeed, even if test scores improve, there is reason to believe that genuine learning and the skills needed for success in life are being compromised (Elias, 2001). Similarly, those planning and implementing skill-oriented preventive interventions in schools can begin to have more confidence in emphasizing the potentially important role that teacher support plays in mediating students' valuing and use of the skills they learn. There are corresponding implications for the selection, training, and ongoing supervision of teachers and other educators, particularly with the ways in which teachers distribute their attention and support across students of different needs and abilities in their classrooms. Of course, these implications cannot be drawn from this study alone, but rather from the growing related literature on the connection of academics to social-emotional learning (Elias & Arnold, 2006; Zins et al., 2004).

## Conclusion

The results of this study provide insight into a relatively infrequently studied population and how the social and emotional development of students in third grade in an inner-city elementary school district affects school outcomes. Findings supported the proposed model that social-emotional competence and classroom-related perceived social support are important in determining school success in this population. Developing social-emotional competence in school is important because it gives children who do not necessarily have these skills from home an opportunity to develop them in school (Baker, 1999), and to achieve greater academic success. Perceived teacher support is important for academic success and school attendance. This is true for all groups, but especially true for those students who attend school in highly disadvantaged communities, perhaps because of the fact that African Americans comprise the significant majority in these districts (Attar et al., 1994). Unlike the results of studies with older age groups in this context, perceived peer support was not found to be influential in overall school performance.

These results have implications for programs that would seek to alter the current educational context for these students, such as classroom-based interventions, introduction of new curricula, or the introduction of additional assessments. Policies and action designed to affect learning environments for students placed at-risk must consider the role and function of the teachers, their social and emotional capacity to negotiate the social and academic tasks, as well as the quality of their interaction with peers in the classroom. Interventions designed to create environments conducive to learning and performance for third graders in low-income urban districts appear more likely to succeed if they systematically incorporate ways to develop children's social-emotional competence and teachers' supportiveness.

## References

- Albee, G. W. (1982). Preventing psychopathology and promoting human potential. *American Psychologist, 37*, 1043–1050.
- Attar, B. K., Guerra, N. G., & Tolan, P. H. (1994). Neighborhood disadvantage, stressful life events, and adjustment in urban elementary-school children. *Journal of Clinical Child Psychology, 23*, 391–400.
- Baker, J. A. (1999). Teacher-Student interaction in urban at-risk classrooms: Differential behavior, relationship quality, and student satisfaction with school. *The Elementary School Journal, 100*, 57–70.
- Banks, J. A., Cookson, P., Gay, G., Hawley, W. D., Jordan Irvine, J., Nieto, S., et al. (2001). Diversity within unity: Essential principles for teaching and learning in a multicultural society. *Phi Delta Kappan, 83*, 196–203.
- Bernstein, L. (1992). Where is reform taking place? An analysis of policy changes and school climate. *Educational Evaluation and Policy Analysis, 14*, 297–302.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Caprara, G. V., Barbaranelli, C., Pastorelli, C., Bandura, A., & Zimbardo, P. (2000). Psychosocial foundations of children's academic achievement. *Psychological Science, 11*, 302–306.
- Cauce, A. M., Felner, R. D., & Primavera, J. (1982). Social support in high-risk adolescents: Structural components and adaptive impact. *American Journal of Community Psychology, 10*, 417–428.
- Cauce, A. M., Hannan, K., & Sargeant, M. (1992). Life stress, social support, and locus of control during early adolescence: Interactive effects. *American Journal of Community Psychology, 20*, 787–798.
- Cauce, A. M., Reid, M., Landesman, S., & Gonzales, N. (1990). Social support in young children: Measurement, structure, and behavioral impact. In B. R. Sarason, I. G. Sarason & G. R. Pierce (Eds.), *Social support: An interactional view* (pp. 64–94). New York: Wiley.
- Clark, M. L. (1991). Social identity, peer relations, and academic competence of African American adolescents. *Education and Urban Society, 24*, 41–52.
- Cohen, J. (2006). Social, emotional, ethical, and academic education: Creating a climate for learning, participation in democracy, and well-being. *Harvard Education Review, 76*, 201–237.
- Dalton, J. H., Elias, M. J., & Wandersman, A. (2007). *Community psychology: Linking individuals and communities* (2nd ed.). Belmont, CA: Wadsworth.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Demaray, M. K., & Malecki, C. K. (2002). The relationship between perceived social support and maladjustment for students at risk. *Psychology in the Schools, 39*, 305–316.

- Dempster, A. P., Laird, N. M., & Rubin, D. B. (1977). Maximum likelihood estimation From incomplete data via the EM algorithm (with discussion). *Journal of the Royal Statistical Society, Series B*, 39, 1–38.
- Dubow, E. F., Edwards, S., & Ippolito, M. F. (1997). Life stressors, neighborhood disadvantage, and resources: A focus on inner-city children's adjustment. *Journal of Clinical Child Psychology*, 26, 130–144.
- Dubow, E. F., & Tisak, J. (1989). The relation between stressful life events and adjustment in elementary school children: The role of social support and social problem solving skills. *Child Development*, 60, 1412–1423.
- Dubow, E. F., & Ullman, D. G. (1989). Assessing social support in elementary school children: The Survey of Children's Social Support. *Journal of Clinical Child Psychology*, 18, 52–64.
- Eccles, J. S., Roeser, R., Wigfeld, A., & Freedman-Doan, C. (1999). Academic and motivational pathways through middle childhood. In L. Balter & C. S. Tamis-LeMonda. (Eds.), *Child psychology: A handbook of contemporary issues* (pp. 287–317). Philadelphia: Psychology Press.
- Elias, M. J. (1987). Establishing enduring prevention programs: Advancing the legacy of Swampscott. *American Journal of Community Psychology*, 15, 539–553.
- Elias, M. J. (2001). Prepare children for the tests of life, not a life of tests. *Education Week*, 21, 40.
- Elias, M. J., & Arnold, H. A. (Eds.) (2006). *The educator's guide to emotional intelligence and academic achievement: Social-emotional learning in the classroom*. Thousand Oaks, CA: Corwin Press.
- Elias, M. J., & Bruene-Butler, L. (2005). *Social decision making/Social problem solving: A curriculum for academic, social, and emotional Learning, grades 2–3 and 4–5*. Champaign, IL: Research Press.
- Elias, M. J., & Clabby, J. (1992). *Building social problem-solving skills: Guidelines from a school-based program*. San Francisco: Jossey-Bass.
- Elias, M. J., Gara, M., Schuyler, T., Brandon-Muller, L. R., & Sayette, M. A. (1991). The promotion of social competence: Longitudinal study of a preventative school-based program. *American Journal of Orthopsychiatry*, 61, 409–417.
- Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., et al. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Elliott, S. N., Malecki, C. K., & Demaray, M. K. (2001). New directions in social skills assessment and intervention for elementary and middle school students. *Exceptionality*, 9, 19–32.
- Esposito, C. (1999). Learning in urban blight: School climate and its effect on the school performance of urban, minority, low-income children. *School Psychology Review*, 28, 365–377.
- Estell, D. B., Cairns, R. B., Farmer, T. W., & Cairns, B. D. (2002). Aggression in inner-city elementary classrooms: Individual and peer-group configurations. *Merrill-Palmer Quarterly*, 48, 52–76.
- Feiring, C., & Lewis, M. (1991). The development of social networks from early to middle childhood: Gender differences and the relation to school competence. *Sex Roles*, 25, 237–253.
- Freedman-Doan, C., Wigfeld, A., Eccles, J. S., Blumenfeld, P., Arbreton, A., & Harold, R. D. (2000). What am I best at? Grade and gender differences in children's beliefs about ability improvement. *Journal of Applied Developmental Psychology*, 21, 379–402.
- Garson, G. D. (2007). Structural equation modeling. Retrieved April 12, 2007, from <http://www2.chass.ncsu.edu/garson/pa765/structur.htm>.
- Goldstein, S., & Brooks, R. B. (Eds.) (2005). *Handbook of resilience in children*. New York: Kluwer.
- Gonzales, N. A., Cauce, A. M., Friedman, R. J., & Mason, C. A. (1996). Family, peer, and neighborhood influences on academic achievement among African-American adolescents: One-year prospective effects. *American Journal of Community Psychology*, 24, 365–387.
- Green, K. D., Forehand, R., Beck, S., & Vosk, B. (1980). An assessment of the relationship among measures of children's social competence and children's academic achievement. *Child Development*, 51, 1149–1156.
- Gresham, F. M., & Elliott, S. N. (1990). *Social Skills Rating System manual*. Circle Pines, MN: American Guidance Service.
- Haggerty, R. J., Sherrod, L. R., Garmezy, N., & Rutter, M. (1994). *Stress, risk, and resilience in children and adolescents: Processes, mechanisms, and interventions*. New York: Cambridge University Press.
- Hallmark Corporation (1994). *Talking with T.J.* Kansas City, MO: Hallmark Foundation.
- Halpern, R. (1990). Poverty and early childhood parenting: Toward a framework for intervention. *American Journal of Orthopsychiatry*, 60, 6–17.
- Harter, S. (1985). *Manual for the self-perception profile for children*. Denver, CO: University of Denver Press.
- Hawkins, J. D., Catalano, R. F., Kosterman, R., Abbott, R., & Hill, K. G. (1999). Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatric and Adolescent Medicine*, 153, 226–234.
- Haynes, N. M., Emmons, C., & Ben-Avie, M. (1997). School climate as a factor in student adjustment

- and achievement. *Journal of Educational and Psychological Consultation*, 8, 321–329.
- Haynes, N. M., Troutman, M. R., & Nwachuku, U. (1998). School factors in substance abuse prevention among young male African Americans. *Journal of Educational and Psychological Consultation*, 9, 143–154.
- Hoff, D., & Mitchell, S. (2006). Pay-to-play: Fair or foul? *Phi Delta Kappan*, 88, 223–229.
- Hoyle, R. H. (Ed.). (1995). *Structural equation modeling: Concepts, issues, and applications*. Thousand Oaks, CA: SAGE Publications.
- Kobus, K., & Reyes, O. (2000). A descriptive study of urban Mexican American adolescents' perceived stress and coping. *Hispanic Journal of Behavioral Sciences*, 22(2), 163–178.
- Kozol, J. (2005). Apartheid in America? *Phi Delta Kappan*, 87, 264–275.
- Kress, J. S., Norris, J. A., Schoenholz, D. A., Elias, M. J., & Seigle, P. (2004). Bringing together educational standards and social and emotional learning: Making the case for educators. *American Journal of Education*, 111, 68–89.
- Levitt, M. J., & Levitt, J. L. (1994). Social support and achievement in childhood and early adolescence: A multicultural study. *Journal of Applied Developmental Psychology*, 15, 207–222.
- Luthar, S. S. (1995). Social competence in the school setting: Prospective cross-domain associations among inner-city teens. *Child Development*, 66, 416–429.
- Masten, A. S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M. C. Wang & E. W. Gordon (Eds.), *Educational Resilience in Inner-City America: Challenges and Prospects* (pp. 3–26). Hillsdale, NJ: Erlbaum.
- Maton, K. I., Teti, D. M., Corns, K. M., Vieira-Baker, C. C., Lavine, J. R., Gouze, K. R., et al. (1996). Cultural specificity of support sources, correlates and contexts: Three studies of African-American and Caucasian youth. *American Journal of Community Psychology*, 24, 551–587.
- Munsch, J., & Wampler, R. S. (1993). Ethnic differences in early adolescents' coping with school stress. *American Journal of Orthopsychiatry*, 63, 633–646.
- Muthen, L., & Muthen, B. (2005). *Mplus: Statistical analysis with latent variables: User's guide*. Los Angeles: Muthen & Muthen.
- NCES. (2002). *The nation's report card*. Washington, DC: U.S. Government Printing Office.
- Ogbu, J. U. (1991). Low school performance as an adaptation: The case of Blacks in Stockton, CA. In M. A. Gibson & J. U. Ogbu (Eds.), *Minority status and schooling: A comparative study of immigrant and involuntary minorities* (pp. 249–285). New York: Garland.
- Pogrow, S. (2006). Restructuring high-poverty elementary schools for success: A description of the Hi-Perform school design. *Phi Delta Kappan*, 88, 223–229.
- Reyes, O., Gillock, K. L., Kobus, K., & Sanchez, B. (2000). A longitudinal examination of the transition into senior high school for adolescents from urban, low-income status, and predominantly minority backgrounds. *American Journal of Community Psychology*, 28, 519–544.
- Reynolds, A. J. (1998). Resilience among Black urban youth: Prevalence, intervention effects, and mechanisms of influence. *American Journal of Orthopsychiatry*, 68, 84–100.
- Reynolds, A. J. (1999). Educational success in high-risk settings: Contributions of the Chicago Longitudinal Study. *Journal of School Psychology*, 37, 345–354.
- Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *Elementary School Journal*, 100, 443–471.
- Rosenfeld, L. B., Richman, J. M., & Bowen, G. L. (2000). Social support networks and school outcomes: The centrality of the teacher. *Child and Adolescent Social Work Journal*, 17(3), 205–226.
- Rothstein, R., & Jacobsen, R. (2006). What is basic? *Principal Leadership*, 7, 14–19.
- Rutgers Social-Emotional Learning Laboratory (1998). *Talking with TJ: A Social Decision Making/Social Problem Solving Curriculum for Urban Elementary Youth*. Piscataway, NJ: Author, Rutgers University, Psychology Department.
- Saarni, C. (2007). The development of emotional competence: Pathways for helping children become emotionally intelligent. In R. BarOn, J. Maree, and M. J. Elias (Eds.), *Educating people to be emotionally intelligent* (pp. 15–36). Westport, CT: Praeger.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7, 147–177.
- Schaps, E., & Solomon, D. (2003). The role of the school's social environment in preventing student drug use. *Journal of Primary Prevention*, 23(3), 299–328.
- Spencer, M. B. (2005). Crafting identities and assessing opportunities post-Brown. *American Psychologist*, 60, 821–830.
- Tolan, P. H., Guerra, N. G., & Montaini-Kloydahl, L. R. (1997). Staying out of harm's way: Coping and the development of inner-city children. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention* (pp. 453–479). New York: Plenum Press.
- Valentine, J. C., & Cooper, H. (2003). *Effect size substantive interpretation guidelines: Issues in the*

- interpretation of effect sizes*. Washington, DC: What Works Clearinghouse.
- Vygotsky, L. S., Rieber, R., & Carton, A. S. (Eds.) (1987). *The collected works of L. S. Vygotsky, Vol. 1: Problems of general psychology*. New York: Plenum Press.
- Wang, M. C., & Gordon, E. W. (Eds.) (1994). *Educational Resilience in Inner-City America: Challenges and Prospects*. Hilldale, NJ: Erlbaum.
- Wang, M. C., Haertel, G. D., & Walberg, H. J. (1997). Fostering resilience: What do we know, "*Principal*, 77, 18–20.
- Weinstein, R. (2002). Overcoming inequality in schooling: A call to action for community psychology. *American Journal of Community Psychology*, 30, 21–42.
- Weissberg, R. P. (2005). Social and emotional learning for school and life success. Distinguished contribution award address at the annual meeting of the American Psychological Association, Washington, DC. Retrieval from <http://www.casell.org/downloads/apa08.20.05.ppt>
- Welsh, M., Parke, R. D., Widaman, K., & O'Neil, R. (2001). Linkages between children's social and academic competence: A longitudinal analysis. *Journal of School Psychology*, 39, 463–482.
- Wentzel, K. R. (1991). Relations between social competence and academic Achievement in early adolescence. *Child Development*, 62, 1066–1078.
- Wilson, W. J. (1996). *When work disappears: The world of the new urban poor*. New York: Knopf.
- Wright, M., & Masten, A. S. (2005). Resilience processes and development. In S. Goldstein & R. Brooks, (Eds.), *Handbook of resilience in children* (pp. 17–38). New York: Kluwer.
- Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.

### Call for Nominations: *Psychology of Violence*

The Publications and Communications (P&C) Board of the American Psychological Association has opened nominations for the editorship of *Psychology of Violence*, for the years 2011–2016. The editor search committee is chaired by William Howell, PhD.

*Psychology of Violence*, to begin publishing in 2011, is a multidisciplinary research journal devoted to violence and extreme aggression, including identifying the causes and consequences of violence from a psychological framework, finding ways to prevent or reduce violence, and developing practical interventions and treatments.

As a multidisciplinary forum, *Psychology of Violence* recognizes that all forms of violence and aggression are interconnected and require cross-cutting work that incorporates research from psychology, public health, neuroscience, sociology, medicine, and other related behavioral and social sciences. Research areas of interest include murder, sexual violence, youth violence, inpatient aggression against staff, suicide, child maltreatment, bullying, intimate partner violence, international violence, and prevention efforts.

Editorial candidates should be members of APA and should be available to start receiving manuscripts in early 2010 to prepare for issues published in 2011. Please note that the P&C Board encourages participation by members of underrepresented groups in the publication process and would particularly welcome such nominees. Self-nominations are also encouraged.

Candidates should be nominated by accessing APA's EditorQuest site on the Web. Using your Web browser, go to <http://editorquest.apa.org>. On the Home menu on the left, find "Guests." Next, click on the link "Submit a Nomination," enter your nominee's information, and click "Submit."

Prepared statements of one page or less in support of a nominee can also be submitted by e-mail to Emnet Tesfaye, P&C Board Search Liaison, at [Emnet@apa.org](mailto:Emnet@apa.org).

Deadline for accepting nominations is January 31, 2009, when reviews will begin.