

CHILDREN'S POSITIVE SCHOOL BEHAVIORS AND SOCIAL PREFERENCE IN URBAN ELEMENTARY CLASSROOMS

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This study examined the associations between prosocial and academically oriented behaviors and social preference as a function of individual (i.e., gender), developmental (i.e., grade) and contextual factors (i.e., group descriptive norms). Data were gathered from a sample of 2nd, 3rd and 4th grade children (51% male, 97.5% African American) in 34 classrooms from high-poverty inner-city neighborhoods. Multilevel analyses indicated that individual, developmental, and contextual factors moderated the association between children's prosocial and academically oriented behaviors and social preference. Taken together, results from this study support theoretical models emphasizing the relational and contextual nature of children's social preference in the peer group. © 2014 Wiley Periodicals, Inc.

The importance of peer relationships for children's psychological well-being and academic functioning is well established (Buhs, Ladd, & Herald, 2006; Wentzel, 2003). Among the multiple aspects of peer relationships examined in the literature, sociometric status, defined as a child's level of acceptance and rejection in the peer group, has been identified as central to children's development (Gifford-Smith & Brownell, 2003). While most studies examining the correlates of sociometric status have focused on individual characteristics, such as attractiveness, personality, and social behaviors (e.g., Newcomb, Bukowski, & Pattee, 1993), it is increasingly acknowledged that a narrow focus on individual characteristics can only provide a partial understanding of children's social standing

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among peers. Burgeoning research conceptualizes sociometric status as the product of interactions between individuals and groups, as opposed to the invariant consequence of individual traits or behavioral styles (e.g., Becker & Luthar, 2007; Stormshak et al., 1999; Wright, Giammarino, & Parad, 1986).

Despite growing recognition of the relational and contextual nature of children's status among peers, a number of gaps remain in the literature. First, it is unusual to find studies that simultaneously examine how the association between children's behaviors and status varies as a function of contextual, individual, and developmental factors. Such cross-level research has been advocated in the field of community psychology (Shinn, 1990; Shinn & Rapkin, 2000) and is necessary to understand how person by environment interactions influence children's relationships. Second, most research on the role of context has built on a deficit perspective that emphasizes problem behaviors (e.g., aggression, hyperactivity, substance abuse) over positive behaviors (e.g., academic and prosocial) that are also critical to children's school success and well-being (Berger & Rodkin, 2011). Understanding the links between sociometric status and positive behaviors is necessary to inform efforts to enhance children's wellness (Cowen, 1994). Finally, the majority of existing research on sociometric status has employed techniques that fail to adjust for the nesting of individuals in contexts. Only recently have peer studies adjusted for the variance shared by individuals bounded by the same context (e.g., children in classrooms) thus disentangling the effects of individual and contextual factors on children's social experiences (Chung-Hall & Chen, 2010).

In light of these gaps, the current study uses multilevel modeling to expand previous findings on the association between positive school behaviors (prosocial and academic) and social preference, a dimension of sociometric status, by simultaneously examining the moderating role of classroom norms (a contextual factor), gender (an individual factor), and grade (a developmental factor). The goal is to contribute to the larger dialogue about how best to support children's social and academic adjustment in elementary school.

Peer Relationships in Middle Childhood

During the elementary school years, peers become increasingly important for children's development (Corsaro & Eder, 1990). Not only do children spend more time interacting with peers, but the nature and quality of those interactions can substantially impact children's academic, behavioral and emotional adjustment in the short and long term (e.g., Kindermann, 2007; Ladd, 1999; Ollendick, Weist, Borden, & Greene, 1992). A great deal of research within the peer literature has examined sociometric status, or the extent to which children are liked and accepted by their peers. Overall, those studies support the central role of sociometric status for children's adjustment. Peer acceptance can serve as a buffer against economic disadvantage (Criss, Pettit, Bates, Dodge, & Lapp, 2002) and play a protective role for children with behavior difficulties (Berdan, Keane, & Calkins, 2008). In contrast, peer rejection has been associated with externalizing and internalizing problems, such as aggression, depression, anxiety (Dodge et al., 2003; Hymel, Rubin, Rowden, & LeMare, 1990; Miller-Johnson et al., 2002), and early school dropout (Parker & Asher, 1987).

Research about children's sociometric status has largely focused on individual characteristics (Ladd, 1999). Generally, children who are accepted and liked by their peers show cooperative, supportive, problem solving, and empathic behaviors (e.g., Coie, Dodge, & Coppotelli, 1982; Newcomb et al., 1993), and children who are rejected display aggressive, disruptive, and hyperactive behaviors (e.g., Volling, MacKinnon-Lewis, Rabiner, &

Baradaran, 1993). However, the associations between children's characteristics and sociometric status are by no means uniform (Cillessen & Mayeux, 2004). The literature suggests that factors such as *group descriptive norms*, or the prevalence of a particular behavior at the group level, as well as children's demographic and developmental characteristics moderate these associations (see for example Graham & Juvonen, 2002; Graham, Taylor, & Hudley, 1998; Lee, 2009; Pakaslahti & Keltikangas-Järvinen, 1998; Sentse, Scholte, Salmivalli, & Voeten, 2007). Below, we summarize existing research about the role of descriptive norms, gender, and development in the relation between child behaviors and sociometric status.

The Moderating Influence of Group Norms

Contextual dynamics shape individuals' experiences of settings (Tseng & Seidman, 2007) and are increasingly recognized in the peer literature (Boivin, Dodge & Coie, 1995; Wentzel, Filisetti, & Looney, 2007; Becker & Luthar, 2007; Henry & Chan, 2010). Contexts provide a framework for assigning meaning and value to individual behavior, and may shape behavior by facilitating, reinforcing, discouraging, or punishing particular ways of acting (Kuppens, Grietens, Onghena, Michiels, & Subramanian, 2008). Because sociometric status is defined within groups, there is widespread consensus that in addition to child characteristics, the features and processes of groups contribute to children's status among peers.

At least two types of models serve as useful frameworks for the study of sociometric status in context. The first type includes two models: the *individual-group similarity-dissimilarity model* proposed by Wright et al. (1986) and the *social context model* proposed by Chang (2004). These models posit that behaviors have a "relative social value" that is dependent on context. Specifically, group descriptive norms moderate the *magnitude* and sometimes the *valence* of the association between individual behaviors and sociometric status (Wright et al., 1986; Chang, 2004). The second type includes the *social skills model* advanced by Stormshak and colleagues (1999). This model proposes that certain behaviors have an "absolute social value," inasmuch as they reflect social skills or deficits that inherently facilitate or hinder social interactions (Stormshak et al., 1999; Wright et al., 1986). Therefore, group descriptive norms moderate the *magnitude*, but never the *valence*, of their association with social preference (Boivin et al., 1995).

Because prosocial behaviors serve to build and maintain social relationships, they are expected to adhere to the social skills model rather than the individual-group similarity-dissimilarity and social context models. Prosocial behaviors are anticipated to have a constant positive *valence* across groups, although the *magnitude* of their association with social preference may vary as a function of group norms. Specifically, children exhibiting prosocial behaviors in classrooms where these behaviors are prevalent may be better liked than prosocial children in classrooms where these behaviors are less prevalent. Some support for this hypothesis has been found across varying populations: early elementary school, low-income, African American boys (Boivin et al., 1995), Chinese adolescents (Chang, 2004), and socioeconomically and ethnically diverse first-grade girls (Stormshak et al., 1999).

Regarding academic behaviors, researchers have examined the role of classroom processes—classroom composition (Barth, Dunlap, Dane, Lochman, & Wells, 2004) and academic norms (Kindermann, 2007; Ryan, 2001)—on academic motivation and achievement, as well as on the associations between sociometric status, academic reputation,

and academic motivation (Wentzel & Asher, 1995; Wentzel & Watkins, 2002). However, no known research has tested whether the association between academic behaviors and social preference varies as a function of academic norms. One exception is a study with Chinese children and adolescents, where mean levels of achievement in the peer group were found to enhance the association between individual academic achievement and peer acceptance (Chen, Chang, & He, 2003). Based on the scant available evidence and the fact that academic behaviors are not intrinsically related to relationship building, these behaviors are not expected to have an absolute social value across contexts. Instead, we anticipate that their association with social preference will vary in magnitude and valence across groups holding different norms, thus adhering to the general principles of the individual-group similarity-dissimilarity and social context models.

The Moderating Role of Gender

Among the factors that moderate the association between children's behaviors and social status, gender has been a recent focus of study (Underwood, 2004). The importance of gender for the study of peer relationships is warranted given the existence of gendered norms that influence the prevalence of behavior and how behaviors are evaluated by others (Adler, Kless, & Adler, 1992). Nonetheless, research about the role of gender in moderating the association between prosocial behaviors and social preference is inconclusive. Many early studies used male-only samples (e.g., Boivin et al., 1995; Wright et al., 1986); others have found disparate findings. In a longitudinal study of third- to sixth-graders, Zimmer-Gembeck, Geiger, and Crick (2005) found concurrent associations between prosocial behaviors and social preference to be stronger for girls than boys. However, a study with a similar population found a stronger contribution of prosocial behavior in predicting peer acceptance and rejection for boys than girls (Crick, 1996). Also, Stormshak et al. (1999) found classroom norms to qualify the association between prosocial behaviors and social preference for girls but not boys.

Research on the interaction between gender, academic behaviors, and social preference is also limited. However, results have been more consistent than for prosocial behavior. An ethnographic study by Adler and colleagues (1992) with a sample of mostly White, middle- and upper-middle class elementary school preadolescents revealed that boys, but not girls, derived social status from defiance to adult authority and lack of investment in academics. Taylor and Graham (2007) examined whether boys and girls in second, fourth, and seventh grades differed in the value they attached to academic achievement in a sample of low socioeconomic status African American (46%) and Latino (54%) children. Findings revealed that gender moderated grade differences in the valuation of achievement. Whereas girls in all grades, and second- and fourth-grade boys, preferred high-achieving over low-achieving peers, seventh-grade boys were more likely to nominate low-achieving peers as children they admired, respected, and wanted to be like. These two studies suggest that boys in upper grades may be more likely than girls and younger children to devalue academics. To summarize, there is a dearth of studies examining how gender moderates the association between children's behavior and sociometric status, and the limited available evidence provides conflicting results. More research is needed to understand the circumstances under which gender makes a difference for children's social standing in the eyes of their peers.

The Moderating Role of Development

Although change across middle childhood in the association between positive behaviors and social preference has received little attention, developmental theory and research on other behaviors suggest that this period merits exploration (e.g., Bierman, Smoot, & Aumiller, 1993). The role of peers, as well as children's own cognitive and regulatory skills, evolve during middle childhood (LaFontana & Cillessen, 2010; Campbell, 2011). As a result, the prevalence, salience, and valuation of certain behaviors also may change (Feldman & Dodge, 1987). Studies examining changes in the value attached to academic achievement during the transition to adolescence have found declines as children age (e.g., Taylor & Graham, 2007; Masten, Juvonen, & Spatzier, 2009; Bukowski, Sippola & Newcomb, 2000). However, research is needed that investigates potential shifts during middle childhood.

Current Study

The goal of the present study is to contribute to our understanding of the interplay between classroom contextual factors, individual factors, and children's sociometric status. More specifically, we assess how the association between children's social preference and prosocial and academically oriented behaviors varies as a function of classroom descriptive norms, gender, and grade. In addition, we take a strengths-based perspective that seeks to shed light on the factors that may reinforce positive school behaviors indicative of children's well being and that most educators would like to see propagated.

METHOD

Participants

Participants were 681 second- (30.1%), third- (37.4%), and fourth-grade (32.5%) children in 34 classrooms (10 second-grade, 15 third-grade, and nine fourth-grade classrooms) recruited from five Chicago public elementary schools in high-poverty neighborhoods. Schools had an average class size of 20 children (standard deviation [*SD*]: 6.91, Range: 10 – 34); 51% of children were boys and nearly all were African American (97.5%) and received free/reduced price lunch (96.4%).

Data were gathered at baseline of a longitudinal intervention trial assessing a mental health program for children with disruptive behavior problems (see Cappella, Frazier, Atkins, Schoenwald, & Glisson, 2008). The sampling frame included all regular education public elementary schools in a large urban district ($n = 325$). Schools were screened based on a set of demographic markers (e.g., 85% African American students, average state reading test scores below the 30th percentile). A subset of schools was selected based on the previous criteria ($n = 58$), and two schools were randomly selected within three high-poverty neighborhoods for a total of six schools (see Neal, Cappella, Wagner, & Atkins, 2011). One of the six schools did not participate in the sociometric data collection for the current study due to administrative transitions, for a final sample of five schools.

All second- to fourth-grade teachers ($n = 34$) agreed to participate in the study. Primary student participation required parental consent and student assent. Students without parental consent served as secondary participants, meaning that they did not complete surveys themselves; however, primary participants could nominate them. As a

result, our data reflect primary participants' perceptions of peer behaviors and relationships in the classroom. Across the 34 classrooms, the primary participation rate averaged 62.3%.

Measures

Student demographics. Teachers reported students' grade, gender, free-lunch status, and race/ethnicity.

Child school behaviors and social preference. Students' prosocial and academic behaviors and social preference were assessed with a Peer Nomination Survey. Children circled the names of classmates who fit particular descriptors, and were allowed to circle as many names as they wished, as well as to self-nominate or circle "no one." Self-nominations were not included in these analyses given that only primary participants had the chance to self-nominate. Descriptors were chosen from scales developed and tested in previous studies (Crick & Grotpeter, 1995). Items assessing students' academically oriented behaviors (e.g., "Who is smart and does good work in class?"), prosocial behaviors (e.g., "Who says or does nice things for other classmates?"), and social preference (e.g., "Which of the kids in your class do you like to hang out with the most/least?") were included.

Nominations for prosocial behaviors and for academic behaviors were separately summed for each nominated child and divided by the number of respondents per classroom (minus one if nominated child was a primary participant) to create a proportion of peer nominations for each child that ranged between 0–1 (same procedure used by Sentse et al., 2007; Thomas, Bierman, & the CPPRG, 2006). The three items in the prosocial behavior scale, and the two items in the academic orientation scale demonstrated adequate reliability (Cronbach's $\alpha = .80$ and $.76$, respectively). Even though a relatively strong zero-order correlation was found between academic and prosocial behaviors ($r = .78^{**}$), the two scales were not combined into a summary score because study aims include understanding processes that may be unique to academically oriented behaviors in the current sample. Standard errors and coefficients were examined to ensure there were no collinearity problems when the two scales were simultaneously tested.

For social preference, nominations for "like most" and "like least" were summed for each nominated child and divided by the number of respondents per classroom (minus one if the nominated child was a primary participant). This procedure produced total scores of positive and negative peer nominations for each child between 0–1. Following procedures by Coie et al. (1982), the number of nominations for being most liked minus the number of nominations for being least liked was used as the social preference score for each individual child. Commonly, children's scores are standardized at the classroom level to adjust for differences in classroom size. Standardization was not used in the current study to allow for the examination of classroom-level differences in the association between children's behavior and sociometric status (see Chang, 2004).

Classroom descriptive norms. The prevalence of positive behaviors in the classroom was computed by aggregating all classmates' scores on the peer nomination survey. Specifically, two arithmetic means were calculated for each classroom: one for academic behaviors and one for prosocial behaviors. This procedure has been used in related studies (Sentse et al., 2007; Berger & Rodkin, 2011).

Procedures

Children with parental consent and assent completed the Peer Nomination Survey during class as part of a larger set of assessments. One researcher read the questions aloud, with one to four research assistants available to assist children individually. All children, regardless of participation, were given a small prize at the end of survey completion. During survey administration, teachers completed additional measures that included the child demographic variables used in this study.

Analytic Approach

To account for the nested structure of the data (i.e., children nested within classrooms) and to simultaneously examine predictors at the individual and classroom level, analyses were conducted within a multilevel modeling framework (HLM 6.02; Raudenbush & Bryk, 2002). Continuous predictors at the classroom level were centered around their grand mean, and continuous individual level predictors were centered around their group mean (Enders & Tofghi, 2007). Gender and grade, the two categorical predictors, were not centered.

Preliminary analyses consisting of unconditional models were fitted for children's prosocial and academic behaviors to determine whether there was significant between-classroom variation in these predictors. Then, to address the study's substantive questions, three sets of models were tested. First, an unconditional baseline model with no predictors was run for social preference to determine the proportion of variance to be explained at the individual and classroom levels. Based on the estimates obtained from the unconditional model, intraclass correlations (ICCs) were computed. ICCs represent the proportion of variance attributed to mean differences between classrooms.

Second, conditional models were run in which gender (boys = 0; girls = 1) and individual child behaviors (academic and prosocial) were added as level 1 predictors to account for between-children variation in social preference within classrooms. Interaction terms between children's behavior and gender were added in a subsequent step to examine the potential moderating role of gender. Results will focus on the gender interaction terms as opposed to the main effect of gender, because the inclusion of this parameter—albeit necessary for modeling purposes—does not answer a substantive question.

Third, to determine whether there was significant variation between classrooms in the association between individual behaviors and social preference, models were fitted in which classroom-level slopes were allowed to vary for each of the individual behaviors (academic and prosocial). Significant random slopes would indicate that the association between individual behaviors and social preference varies as a function of classroom characteristics. In order to explain some of that variability and test whether contextual and developmental factors moderate the association between individual behaviors and social preference, cross-level interactions were examined between classroom descriptive norms and grade (level 2) and child individual behaviors (level 1). Significant cross-level interactions would indicate that the relationship between child behaviors and social preference varies as a function of classroom descriptive norms and/or grade. Preliminary analysis indicated collinearity between classroom descriptive norms for prosocial and academic behaviors. Because one of the study aims was to test the role of individual behaviors and their corresponding classroom descriptive norms, these two predictors were tested in separate models. A cross-level interaction between each individual behavior

and the percentage of female respondents per classroom was also included at this step, to control for potential imbalances in peer reports between female and male respondents.

Finally, to test for the adequacy of model fit, deviance statistics were examined using the χ^2 distribution. The null hypothesis is that the simpler model fits the data as well as the more complex model. Thus, nonsignificant χ^2 differences suggest keeping the most parsimonious model (Raudenbush & Bryk, 2002).

RESULTS

Zero-order correlations between social preference, prosocial, and academic behaviors were positive and significant regardless of gender and grade (see Table 1). All correlations were moderate to large, with the exception of the relatively small correlation between academic behavior and social preference for fourth-grade boys.

Preliminary unconditional models showed significant between-classroom variation in prosocial (total variance = 0.025, $\tau = 0.005$, ICC: 19.54, $p < .001$) and academic behaviors (total variance = 0.045, $\tau = 0.014$, ICC: 30.70, $p < .001$), corroborating that these classroom variables could be meaningful predictors of social preference. The unconditional model for social preference also revealed significant between-classroom variation in children's preference scores (total variance = 0.06, ICC: 0.06, $p < .001$). While most of the variance in children's social preference was due to children's characteristics, 6% of that variance can be explained by differences between classrooms. Whereas this proportion is small compared to individual-level variance, it is within the range considered worthy of investigation in educational research (e.g., Koth, Bradshaw, & Leaf, 2008; Stormshak

Table 1. Bivariate Zero-Order Correlations and Descriptive Statistics by Gender and Grade

| Level 1 – Child | | | | | | | | | |
|---------------------|-----------------------|-----------------|--------|-----------|--------|-------|-------|------|-------|
| Grade | Variable | S. Preference | | Prosocial | | Mean | SD | Mean | SD |
| | | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls |
| 2 | 1. Social Preference | – | – | – | – | –0.03 | 0.22 | 0.09 | 0.24 |
| | 2. Prosocial behavior | 0.38** | 0.55** | – | – | 0.13 | 0.11 | 0.22 | 0.17 |
| | 3. Academic behavior | 0.52** | 0.54** | 0.79** | 0.79** | 0.16 | 0.16 | 0.25 | 0.18 |
| 3 | 1. Social Preference | – | – | – | – | –0.02 | 0.28 | 0.03 | 0.29 |
| | 2. Prosocial behavior | 0.58** | 0.62** | – | – | 0.19 | 0.12 | 0.32 | 0.16 |
| | 3. Academic behavior | 0.43** | 0.48** | 0.71** | 0.77** | 0.31 | 0.21 | 0.39 | 0.22 |
| 4 | 1. Social Preference | – | – | – | – | –0.01 | 0.20 | 0.09 | 0.23 |
| | 2. Prosocial behavior | 0.42** | 0.58** | – | – | 0.12 | 0.08 | 0.28 | 0.17 |
| | 3. Academic behavior | 0.23* | 0.44** | 0.72** | 0.80** | 0.21 | 0.17 | 0.36 | 0.21 |
| Level 2 – Classroom | | | | | | | | | |
| Grade | Variable | Prosocial norms | | Mean | SD | | | | |
| 2 | 1. Prosocial norms | – | | 0.19 | 0.09 | | | | |
| | 2. Academic norms | 0.93** | | 0.22 | 0.09 | | | | |
| 3 | 1. Prosocial norms | – | | 0.26 | 0.08 | | | | |
| | 2. Academic norms | 0.83** | | 0.36 | 0.13 | | | | |
| 4 | 1. Prosocial norms | – | | 0.22 | 0.05 | | | | |
| | 2. Academic norms | 0.74* | | 0.32 | 0.11 | | | | |

Note. SD = standard deviation. 0 = boy; 1 = girl.

* $p < 0.05$. ** $p < 0.01$.

et al., 1999). Unstandardized regression coefficients, *t* values and standard errors for the full models are presented in Table 2. All regression coefficients represent the unique contribution of each variable adjusting for other variables in the model.

Prosocial Behaviors

Results from the first conditional model (see Table 2, model 1) show that prosocial behavior was positively associated with social preference ($\beta = .91, p < .05$). This suggests that prosocial children were more liked than their less prosocial peers, net of the association between prosocial behaviors, academic behaviors, and gender. This model alone explains 34.2% of the total variance in children's social preference scores. In the second model (see Table 2, model 2a), a significant negative interaction was found between gender and prosocial behaviors ($\beta = -.32, p < .05$); however, this interaction explained a negligible amount of the total variance in children's social preference scores (about 0.6%). The negative sign suggests that the positive association between prosocial behaviors and social preference is slightly weaker for girls than boys.

The model examining variation around the average classroom-level slope for prosocial behaviors indicated significant variation between classrooms in the association between prosocial behaviors and social preference (variance = 0.10, $p < .05$). Therefore, the inclusion of classroom-level predictors was granted. The cross-level interaction between classroom prosocial norms and child prosocial behavior was significantly associated with social preference ($\beta = 2.21, p < .05$; see Figure 1 and Table 2, model 3a). Thus, children perceived as prosocial were more preferred in classrooms where prosocial behaviors were more prevalent than in classrooms with lower levels of prosocial behavior. Classroom prosocial norms explained as much as 42% of the variation between classrooms in the association between individual prosocial behaviors and social preference. In contrast, the cross-level interaction between grade and prosocial behavior did not reach significance ($\beta = -.13, p = .16$), suggesting that the association between prosocial behavior and social preference was constant across grades.

Deviance statistics (see bottom of Table 2) indicate that the inclusion of individual-level predictors (i.e., gender and child behaviors), the interaction between gender and prosocial behavior, and the cross-level interaction between classroom prosocial norms and individual prosocial behaviors significantly improved model fit.

Academic Behaviors

The first conditional model indicated that academic behaviors were positively associated with social preference ($\beta = 0.22, p < .05$), even after adjusting for their association with gender and prosocial behaviors. As indicated before, this model explained 34.2% of the total variance in children's social preference. The second model revealed a significant and negative interaction between gender and academic behaviors ($\beta = -.24, p < .05$), indicating that academically oriented girls were slightly less preferred than academically oriented boys. Similar to the interaction between prosocial behaviors and gender, this interaction only explained 0.8% of the variance in children's preference scores.

The association between individual academic behaviors and social preference was found to significantly vary between classrooms (variance = 0.04, $p < .05$), indicating that the inclusion of classroom-level predictors was warranted. In model 3b (Table 2), a significant and positive cross-level interaction between classroom academic norms and individual academic behaviors was found ($\beta = 0.97, p < .05$). This interaction suggests

Table 2. Multilevel Results for the Prediction of Social Preference (N = 681)

| | M1. Individual level predictors | | | M2a. Prosocial interaction w/gender | | | M2b. Academic interaction w/gender | | | M3a. Cross-level interactions—prosocial norms | | | M3b. Cross-level interactions—academic norms | | |
|---|---------------------------------|---------------|---------------|-------------------------------------|---------------|---------------|------------------------------------|---------------|---------------|---|---------------|---------------|--|---------------|---------------|
| | b | SE | t | b | SE | t | b | SE | t | b | SE | t | b | SE | t |
| Intercept | 0.05** | 0.02 | 3.04 | 0.06** | 0.02 | 3.31 | 0.05** | 0.02 | 3.24 | 0.06** | 0.02 | 3.36 | 0.05** | 0.02 | 3.11 |
| Level 1 | | | | | | | | | | | | | | | |
| Gender | -0.05** | 0.02 | -2.96 | -0.06** | 0.02 | -3.50 | -0.06** | 0.02 | -3.39 | -0.06** | 0.02 | -3.59 | -0.05** | 0.02 | -3.09 |
| Prosocial behavior | 0.91** | 0.09 | 10.26 | 1.16** | 0.13 | 9.16 | 0.97** | 0.09 | 10.79 | 1.27** | 0.16 | 8.13 | 0.98** | 0.09 | 10.90 |
| Academic behavior | 0.22** | 0.07 | 3.35 | 0.20** | 0.07 | 3.02 | 0.34** | 0.08 | 4.47 | 0.24** | 0.07 | 3.66 | 0.52** | 0.10 | 5.11 |
| Gender* prosocial | | | | -0.32** | 0.12 | -2.78 | | | | | | | -0.37** | 0.12 | -3.15 |
| Gender* academic | | | | | | | -0.24** | 0.08 | -3.19 | | | | -0.24** | 0.08 | -3.06 |
| Cross-level interactions | | | | | | | | | | | | | | | |
| Grade* child prosocial behavior | | | | | | | | | | -0.13 ^{ns} | 0.09 | -1.45 | | | |
| Grade* child academic behavior | | | | | | | | | | | | | -0.19** | 0.07 | -2.85 |
| Classroom prosocial norms* child prosocial behavior | | | | | | | | | | 2.21* | 0.96 | 2.31 | | | |
| Classroom academic norms* child academic behavior | | | | | | | | | | | | | 0.97** | 0.39 | 2.48 |
| % Girls* child prosocial behavior | | | | | | | | | | 0.01 ^t | 0.01 | 1.94 | | | |
| % Girls* child academic behavior | | | | | | | | | | | | | 0.00 ^{ns} | 0.00 | 1.33 |
| Variance | | | | | | | | | | | | | | | |
| | Level 1 | Level 2 | Level 1 | Level 2 | Level 1 | Level 2 | Level 1 | Level 2 | Level 1 | Level 2 | Level 1 | Level 2 | Level 1 | Level 2 | Level 2 |
| Model Fit | 0.0354 | 0.0052** | 0.0349 | 0.0052** | 0.0348 | 0.0052** | 0.0330 | 0.0054** | 0.0336 | 0.0053** | 0.0336 | 0.0053** | 0.0336 | 0.0053** | 0.0053** |
| | Deviance (df) | χ^2 (df) | Deviance (df) | χ^2 (df) | Deviance (df) | χ^2 (df) | Deviance (df) | χ^2 (df) | Deviance (df) | χ^2 (df) | Deviance (df) | χ^2 (df) | Deviance (df) | χ^2 (df) | χ^2 (df) |
| | -291.7 (6) | 312.36 (3) | -299.4(7) | 7.68 (1)** | -301.8 (7) | 10.06 (1)** | -320.5(12) | 21.13(5)** | -317.2(12) | 15.46(5)** | | | | | |

Note. df = degrees of freedom; ns = non significant.
^tp < 0.10. *p < 0.05. **p < 0.01.

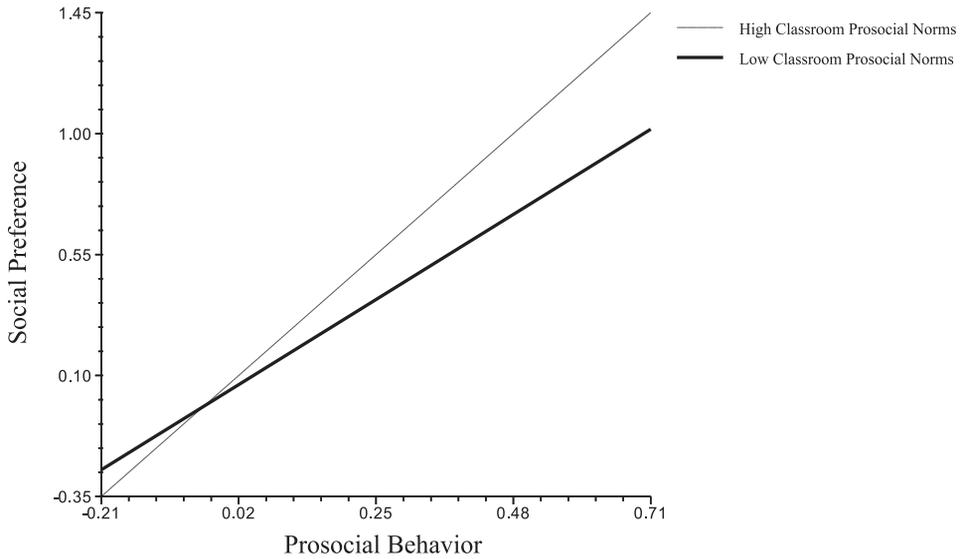


Figure 1. Social preference and prosocial behavior as moderated by classroom descriptive norms on prosocial behavior.
 Note. High classroom prosocial norms = 1 SD above the mean. Low classroom prosocial norms = 1 SD below the mean.

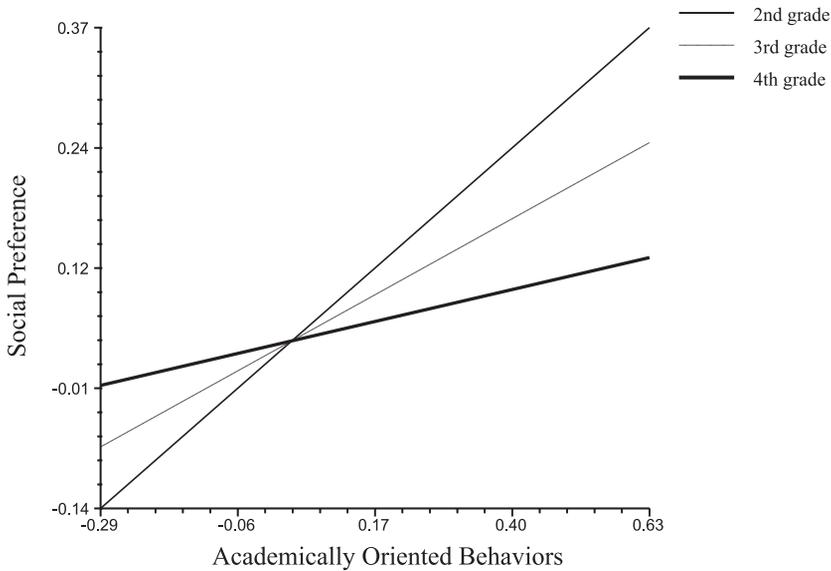


Figure 2. Social preference and academic behavior as moderated by grade level.

that academically oriented children were more preferred by their peers in classrooms with a high number of academically oriented children compared with classrooms with lower concentrations of academic behaviors. The cross-level interaction between grade and children’s academic behaviors was also significant ($\beta = -0.19, p < .05$; see Figure 2 and Table 2, model 3b), suggesting that the positive association between academic behaviors and social preference was attenuated in higher grades. The inclusion of classroom norms

and grade explained 52% of the between-classroom variation in the association between children's academic behaviors and social preference. Deviance statistics suggest that the final model was a better fit to the data than all the previous models (see Table 2).

DISCUSSION

Peer relationships, and sociometric status in particular, play a crucial role in children's functioning and well-being (Gifford-Smith & Brownell, 2003). Whereas most studies have focused on person-level attributes in the explanation of sociometric status (Newcomb et al., 1993), recent efforts emphasize the interactions between person-level attributes, contextual processes, and development (Sentse et al., 2007; Stormshak et al., 1999; Wright et al., 1986). Moreover, whereas the majority of research on sociometric status in context has taken a deficit approach, there is growing awareness of the need to better understand positive behaviors that allow children to thrive in school. This article builds on these efforts by examining how classroom descriptive norms, gender, and grade moderate the associations between prosocial and academic behaviors and social preference in a sample of second- through fourth-grade African American children.

Prosocial Behaviors

Consistent with previous work (e.g., Stormshak et al., 1999), children nominated as displaying higher levels of prosocial behavior were more preferred by their peers, even after adjusting for gender and academic behaviors. This is to be expected given that prosocial behaviors are presumed to facilitate and nurture social relationships (Eisenberg & Fabes, 1998). Importantly, the magnitude of the association between children's prosocial behaviors and social preference was found to vary as a function of gender and classroom norms, lending support to the need to conceptualize social preference as the result of interactions between individuals and environments. Regarding gender, the positive association between prosocial behaviors and social preference was stronger for boys than girls, but the size of this interaction was small. Past research on the moderating effects of gender on the association between prosocial behavior and social preference has been mixed (Crick, 1996; Zimmer-Gembeck et al., 2005), suggesting that differences between boys and girls may be highly context-dependent. Indeed, research and theory suggest that cultural values around gender expectations and attitudes may contribute to differences in the value assigned to prosocial behaviors of boys and girls across different populations (Kane, 2000). Thus, more research is needed to better understand how gender qualifies the association between prosocial behaviors and social preference across diverse populations.

Our study also provides evidence about the moderating role of classroom descriptive norms, indicating that the individual-group similarity-dissimilarity and social context models are useful for understanding the association between prosocial behaviors and sociometric status. As predicted, children perceived as saying and doing nice things for others, helping others make friends, and cheering up classmates were more liked in classrooms where those behaviors were normative (Chang, 2004; Wright et al., 1986). In classrooms where cheering up a classmate was rare, children displaying such behavior gained less in social preference than they would have in a classroom where those behaviors were common. Nonetheless, as predicted by the social skills model, prosocial behaviors were always positively associated with social preference, albeit differences in magnitude.

While being a prosocial “misfit” does not have the deleterious effects of being an aggressive or withdrawn social misfit (Wright et al., 1986), children whose behaviors match those of the group have an advantage over children whose behaviors are mismatched, particularly when the match reinforces the display of prosocial behaviors.

Finally, we found the association between prosocial behaviors and social preference to be constant from Grades 2 to 4. This result is in line with the social skills model (Stormshak et al., 1999), which proposes that some behaviors reflect underlying competencies that consistently lead to positive social interactions. While studies about developmental change in the positive correlates of social preference are limited, this finding is consistent with the study by Bierman et al. (1993), which did not find change for prosocial behaviors in a sample of first- to sixth-grade White boys. Our findings suggest that the prominent role of prosocial behaviors in building and maintaining positive relationships makes their value less susceptible to change during middle childhood than the value of other behaviors, such as physical aggression, which have been found to change during this developmental period.

Academic Behaviors

Extending the literature, this study examined the contribution of academic behaviors to social preference as a function of varying classroom norms, children’s gender, and grade. Simultaneously modeling academic and prosocial behaviors as separate constructs enabled us to detect the unique contribution of each type of behavior to children’s social preference. Our results show that even after controlling for prosocial behaviors and gender, academic behaviors contributed to children’s social preference. In particular, children perceived as smart and trying hard in school were more liked than less academically oriented peers. In our sample of predominantly African American children in high-poverty urban schools, this finding does not support previous work on an oppositional culture among ethnic minority students (e.g., Fordham & Ogbu, 1986). Instead, it is consistent with recent studies in which some ethnic minority students are encouraged by peers to do well in school (Hamm, Schmid, Farmer, & Locke, 2011). This result, however, may be a product of the unique characteristics of our sample. Children in this study come from racially and socioeconomically homogeneous schools; the emergence of oppositional cultures may be more relevant in heterogeneous settings.

Also, unlike prosocial behaviors, academic behaviors do not necessarily play a role in nourishing social relationships. Therefore, it is possible that children showed a preference for academically oriented peers because those students were preferred by teachers, and not because of their academic orientation. Hughes, Luo, Kwok, and Loyd (2008) followed a sample of White, Hispanic, and African American children from first to third grades, and found that the quality of teacher-child relationships significantly predicted children’s social preference the following year. This association was mediated by the second year teachers’ ratings of academic engagement—a construct that overlaps with the measure of academic orientation used in this article. Therefore, being liked by the teacher may be part of the mechanism by which academically oriented children gain social status in elementary school. Yet it is also possible that a third variable explains the link between academic behaviors and peer and teacher preference. For example, self-regulation has been found to predict social and academic competence (Blair & Razza, 2007). Studies that explore whether teacher-child relationships and children’s self-regulatory skills influence the association between children’s school behaviors and social preference can help unpack the mechanisms behind these relationships.

Unexpectedly, the association between academic behaviors and social preference was weaker for girls than boys, but this interaction explained a very small amount of variance in children's social preference. It is possible that—as suggested by the zero-order correlations—academic and prosocial behaviors co-occur more often in the case of girls; so once prosocial behavior is accounted for, academic behaviors do not contribute as much to girls' social preference as they do in the case of boys. In any case, the small contribution of this interaction indicates that gender by itself is not a major factor in understanding the association between academic behaviors and social preference in this population.

Consistent with previous research, our results showed a negative interaction between grade and academic behaviors, indicating a decline in the value of academics in upper grades. It has been proposed that behaviors associated with obedience and adherence to adult norms begin to lose social value as children negotiate their childhood identities (e.g., Bukowski et al., 2000). Also, as peers become more central in children's lives, the importance of being liked and praised by the teacher—presumably as a result of trying hard and doing well in school—may decrease. Previous studies have examined and found changes in the value of academic behaviors in older children (e.g., Bukowski et al., 2000; Taylor & Graham, 2007; Masten et al., 2009), so it is noteworthy that this effect was detected in middle childhood. Notably, although the strength of the association between academic behaviors and social preference decreased, it did not change direction. This suggests that while academically oriented children were less preferred by their peers in older compared with younger grades, academic behavior was still being sanctioned by the peer group during these years of elementary school.

As expected, the association between academic behaviors and social preference was moderated by classroom descriptive norms. Academically oriented children were more liked by their peers in classrooms where many children were perceived as being smart and trying to do well than in classrooms where fewer peers fit that profile. This finding is in line with the predictions of the social context and individual-group similarity-dissimilarity models, and extends the relevance of such models to academic behaviors. The fact that academically oriented children were not as reinforced through social preference in classrooms where those behaviors were less common provides additional rationale for promoting environments where more children are motivated to try hard and do well in school.

Limitations and Future Directions

A few limitations and future directions should be noted. The use of correlational and cross-sectional data limits our ability to draw causal conclusions about the direction of associations and their long-term consequences. It is possible that social preference is a predictor of behavior (e.g., Wentzel & Asher, 1995) or that the relation is bidirectional. Our choices were grounded in theory and research, but alternative paths merit further exploration. Also, whereas our sample's uniqueness permits assessment of the generalizability of existing models—generally developed in middle income White populations—replication with more heterogeneous samples is needed to improve the external validity of our findings. Moreover, we relied on peer nominations to measure constructs of interest. Although peers are well-positioned to report on classmates' behavior as well as whom they like and do not like (see Coie, Dodge, & Kupersmidt, 1990), future research should counteract potential biases arising from this method by employing multi-informant approaches. In

addition, this method may have led to the nomination of more same-gender peers due to patterns of gender-segregation observed in elementary school (Maccoby, 2002). Although this reflects the reality of gender-segregated groups in middle childhood, preference patterns across gender groups deserve further inquiry.

Results from this article underscore the need to examine social preference from a relational and contextual lens. In this sample of low-income African American students, it is noteworthy that peers sanctioned prosocial and academic behaviors across gender and grade. Yet prosocial or academically oriented children in classrooms with higher levels of these behaviors received greater social rewards than children in classrooms with lower levels of these behaviors. Understanding that classrooms with varying descriptive norms provide differential social reinforcement for children's positive school behaviors may inform interventions to increase prosocial and academic behaviors in urban low-income schools. The current study, in tandem with related work on classroom social processes, suggests classroom interventions should consider the overall classroom norms in efforts to promote positive child behaviors. Interventions that target individual children and disregard classroom contextual processes may fail to produce the expected changes. Instead, it may be beneficial to situate individual interventions for children who struggle in academic or social domains within the context of whole classroom programs that encourage all children to try hard, do well, and help others. Future studies should explore if programs such as this enhance the likelihood not only that individual children will gain positive school skills but also that those skills will be socially reinforced across the classroom.

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