The Significance of Cross-Racial/Ethnic Friendships: Associations with Peer Victimization, Social-Psychological Adjustment, and Classroom Diversity

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Abstract

The purpose of this study was to examine consequences of diverse friendships. Specifically, this study investigated the associations between diverse friendships and changes in indices of social adjustment (e.g., sociometric status, peer victimization, peer support), which are developmentally salient for school-aged children, and how classroom diversity moderates these associations. Further, this study investigated whether social preference mediates these social processes. The sample consisted of 444 children who were in the fourth grade from 39 diverse classrooms in 10 public elementary schools. Results demonstrated that cross-racial/ethnic friendships uniquely predicted relative *decreases* in peer rejection, relational victimization, externalizing adjustment problems, and internalizing adjustment problems and relative *increases* in peer acceptance and peer support, whereas same-racial/ethnic friendships were unrelated to relative changes in these indices of social adjustment. In addition, classroom diversity moderated the association between cross-racial/ethnic friendships and relative decreases in physical victimization or relative increases in peer support, such that children with these friendships were less likely to experience physical victimization and were more likely to receive peer support in highly diverse classrooms. Finally, social preference mediated the association between cross-racial/ethnic friendships and relational victimization. The complex mechanisms involving cross-racial/ethnic friendships, same-racial/ethnic friendships, social adjustment, and classroom diversity were discussed.

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CHAPTER 1

Introduction

Statement of Purpose

An extensive body of research has demonstrated the crucial role of friendships in peer relationships and social adjustment (Hartup & Stevens, 1997; Newcomb & Bagwell, 1996; Sullivan, 1953). Friendships are associated with a host of positive outcomes, including sociability and success with peers and are related to decreases in negative outcomes, such as peer rejection, isolation, and depressive symptoms (for a review see Hartup & Stevens, 1997). Other research has suggested that having close or high quality friendships leads to greater self-esteem and emotional well-being and, thus, more positive views of self (Hartup, 1991). These findings indicate that friendships can result in a wide variety of positive developmental outcomes.

Despite significant advances in our understanding of friendships and social adjustment, the majority of past studies in this arena have focused primarily on middle class, European American children and thus have neglected racial/ethnic variations that may exist in friendships within and across racial/ethnic minority children. These issues deserve attention given the rapidly increasing number of racial/ethnic minorities, especially immigrants from non-Western cultures (i.e., Latino/Hispanic, Asian), in the American population (Fuligni & Yoshikawa, 2003; García Coll & Garrido, 2000; McLoyd, 1998; Quintana et al., 2006). Nonetheless, relatively little is known about the relation between cross-racial/ethnic friendships [1] and indices of peer relations and social adjustment. It is important to address this disparity in the literature and to examine the nature (i.e., frequency, stability, and quality) and the consequences (i.e., social

adjustment) of friendships with a special focus on cross-racial/ethnic friendships by using a relatively large racially/ethnically diverse sample (i.e., African American, European American, Asian American, and Latino American).

Cross-Racial/Ethnic Friendships and Same-Racial/Ethnic Friendships

The social and developmental psychology literatures have demonstrated that friendships are formed on the basis of commonalities. For example, *the similarity-attraction hypothesis* suggests that individuals are more likely to make friends with others who are similar to themselves with respect to demographic (e.g., gender, races/ethnicities, SES), behavioral (e.g., aggression, sociability), and individual (e.g., self-esteem, self-concept, personality) factors rather than with dissimilar ones (Aboud & Mendelson, 1998). Among these factors, race/ethnicity seems to be a major criterion in friendship selection (McPherson, Smith-Loving, & Cook, 2001; Louch, 2000). Supporting this view, a substantial body of research has demonstrated that cross-racial/ethnic friendships are less common than same-racial/ethnic friendships regardless of age, gender, and races/ethnicities (Aboud, Mendelson, & Purdy, 2003; Asher, Oden, & Gottman, 1977; Graham & Cohen, 1997; Hallinan & Teixeira, 1987; Hamm, Brown, & Heck, 2005; Howes & Wu, 1990; McPherson et al., 2001; Kao & Joyner, 2004; Kupersmidt, DeRosier, & Patterson, 1995; Sagar, Schofield, & Snyder, 1983; Shrum, Creek, & Hunter, 1988). Moreover, these friendships have been shown to be less reciprocated and more unstable than same-racial/ethnic friendships (Aboud et al., 2003; Clark & Ayers, 1993; Hallinan & Williams, 1987; Schneider, Dixson, & Udvari, 2007). For example, Aboud et al. (2003) found that cross-racial/ethnic friendships formed between European American children and African American children were less likely

than same-racial/ethnic friendships to last over a six-month period. Similarly, Hallinan and Williams (1987) showed that most cross-racial/ethnic friendships in European American children and African American children did not continue over the course of an academic year, whereas many same-racial/ethnic friendships in these children were maintained over time.

Regarding the quality of cross-racial/ethnic friendships, recent studies have indicated that children who formed these friendships exhibited high levels of positive friendship qualities, including companionship, help, and emotional security in the same way as children who formed same-racial/ethnic friendships (Aboud et al., 2003). However, the same study and other studies found that children with cross-racial/ethnic friendships displayed less closeness and intimacy (i.e., sharing personal feelings and thoughts or activities) than children with same-racial/ethnic friendships (Aboud et al., 2003; Kao & Joyner, 2004; Schneider et al., 2007). It is possible that some children do not maintain cross-racial/ethnic friendships, conceivably because they are unable to deepen these friendships and strengthen the ties with friends from different racial/ethnic or cultural backgrounds. It may be that shared racial/ethnic or cultural experiences affect children's ability to interact with other peers, such that the greater amount of previous experiences may increase the likelihood of maintaining cross-racial/ethnic friendships. Together, similarity in terms of races/ethnicities (or shared racial/ethnic or cultural experiences) may be the important reason for children to choose or reject peers as a best friend, and it may affect the frequency, stability and quality of cross-racial/ethnic friendships.

Cross-Racial/Ethnic Friendships and Social Adjustment

Despite children's general tendency to form same-racial/ethnic friendships, cross-racial/ethnic friendships *do* form in heterogeneous classrooms. Accordingly, interest in the effects of these friendships has flourished in recent years, and some findings suggest that involvement in these friendships is indeed associated with positive outcomes, such as higher levels of acceptance and prosocial behavior among school-aged children (Hallinan & Teixeira, 1987; Hunter & Elias, 1999; Lease & Blake, 2005; Kawabata & Crick, 2008). For example, Hallinan and Teixeira (1987) found that the number of friendships choices made to peers (friendliness) and the number of friendship choices received (popularity) increased the likelihood of forming cross-racial/ethnic friendships. Further, Lease and Blake (2005) found that racial/ethnic majority children in schools with minority (cross-racial/ethnic) friends were viewed as accepted and prosocial, and as having leadership skills. However, other literatures have indicated that the frequency of racial/ethnic interactions is low and unstable (e.g., Orfield, 1996), implying that cross-racial/ethnic friendships may not be uniquely indicative of positive social adjustment.

These mixed findings point to several limitations in the literature. For one, several studies have solely examined the effects of cross-racial/ethnic friendships, without also considering the effects of *same*-racial/ethnic friendships, which may be confounded with the total number of reciprocated friendships. In addition, these studies have not fully considered the effects of contextual factors such as classroom diversity on these friendships. This is problematic because cross-racial/ethnic friendships are largely accounted for by the rates of availability of other races/ethnicities (Hallinan & Smith, 1985; Khmelkov & Hallinan, 1999). This issue necessitates researchers to take into

account the exact classroom diversity in the analyses. Plus, the majority of these studies have focused exclusively on African American and European American pairs. This calls for a more in-depth examination of cross-racial/ethnic friendships with a more racially/ethnically diverse sample. Further, many of these studies are cross-sectional in nature, which prevents us from determining the direction of the association between cross-racial/ethnic friendships and social adjustment. Finally, many of these findings are not grounded by a relevant theoretical framework. For example, although the similarity hypothesis proposes that relationships form on the basis of commonalities, including children's races/ethnicities, this may not adequately explain the formation and consequences of cross-racial/ethnic friendships.

Contact Theory and Cross-Racial/Ethnic Friendships

One theoretical perspective, Allport's intergroup contact theory, may explain how interactions across races/ethnicities are related to social adjustment. Allport (1954) proposed the *intergroup contact* theory, which posits that interacting with other racial/ethnic groups may help individuals reduce cognitive biases, including prejudice and discrimination, and increase positive views toward races/ethnicities under certain conditions, including interpersonal (intimate) contact, equal status, common goals, cooperative interdependence, and the presence of authorities (for a review, see Pettigrew & Tropp, 2000). Several investigators have suggested that cross-racial/ethnic friendships have great potential for meeting the conditions posited by contact theory. For example, Aboud and Levy (2000) have contended that cross-racial/ethnic friendships may be optimal dyads which provide certain levels of intimate exchange, cooperation, emotional security, and equality between friends from different

racial/ethnic backgrounds. Moreover, these friendships may offer the context in which children can achieve shared or superordinate goals by working together in a cooperative and harmonious manner. Consequently, these friendships may help to decrease cognitive biases and encourage the development of awareness of and/or sensitivity to other races/ethnicities (Aboud &b Levy, 2000).

Further, the literature has demonstrated that interracial/ethnic understanding and empathy is important to reduce prejudice and discrimination, thereby forming and maintaining cross-racial/ethnic friendships (Aboud & Levy, 2000). For example, children with high levels of social and cognitive skills (e.g., having high levels of sociability and leadership skills) may endorse diversity in friendships because they do not discriminate peers on the basis of any physical or psychological attributes. In favor of this argument, recent research in this domain revealed that concurrent cross-racial/ethnic friendships were *uniquely* associated with prosocial behavior, which was found even after controlling for same-racial/ethnic friendships and the level of peer acceptance that is highly confounded with the number of friendships (Kawabata & Crick, 2008). Specifically, it was found that children who formed cross-racial/ethnic friendships displayed higher levels of relational inclusion and leadership skills than children who did not. Interestingly, same-racial/ethnic friendships were unrelated to the indices of prosocial behavior above and beyond the contribution of cross-racial/ethnic friendships and peer acceptance. These findings suggest that cross-racial/ethnic friendships may be uniquely associated with social adjustment, which may not be fully explained by same-racial/ethnic friendships.

Over and above contact theory, *extended intergroup contact theory* argues that

intergroup contact leads to positive outcomes even in the absence of direct racial/ethnic interactions (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). One study has uncovered that, when individuals know one of their friends has interracial/ethnic friends, they are more likely to accept interracial contact, compared to others who do not know any friends who have interracial friends (Wright et al., 2005). This indicates that individuals can improve their racial/ethnic attitudes vicariously by observing a friend who has cross-racial/ethnic friendships or who comfortably interacts with peers from different racial/ethnic backgrounds. This is very promising since it implies that the positive outcomes of cross-racial/ethnic friendships or close racial/ethnic interactions extend beyond the immediate contact.

Based on these theoretical perspectives, it can be hypothesized that *cross*-racial/ethnic friendships may contribute in *unique* ways to changes in social adjustment. That is, friendships, and especially cross-racial/ethnic friendships, may be related to high levels of cultural and social competence, including the awareness of and sensitivity to racial/ethnic and cultural differences, thereby leading to successful interactions with diverse peers. For example, children with cross-racial/ethnic friendships may be more welcomed by peers because they do not discriminate individuals on the basis of physical and psychological attributes, including races/ethnicities. Consequently, these children may be more involved in positive, harmonious interactions with same-racial/ethnic *and* cross-racial/ethnic peers. Even children who do not have immediate cross-racial/ethnic friendships may view other peers with these friendships as positive through the observations of their interactions. Accordingly, relative to children with same-racial/ethnic friendships only, children with cross-racial/ethnic friendships may be

more appreciated by peers. Hence, these children may display positive social adjustment (i.e., being more accepted and supported and less rejected and victimized by other peers, more likely to be prosocial to and cooperative with other peers, and less likely to display social-psychological adjustment problems such as aggression and depressive symptoms).

The Moderating Role of Classroom Diversity

The availability of and proximity to racially/ethnically diverse individuals is a crucial factor that may influence the formation of cross-racial/ethnic friendships (Moody, 2001). Research suggests that individuals are more likely to form friendships with individuals with whom they have an opportunity to interact (Hallinan & Williams, 1989). A number of school and classroom organizational factors may contribute to the availability of racially/ethnically diverse students, thereby promoting or hindering the formation of cross-racial/ethnic friendships (Khmelkov & Hallinan, 1999). For example, schools or classrooms that are predominantly of one race limit the availability of diverse students, allowing for more same-racial/ethnic friendships. If so, these contextual factors may change the meaning of cross-racial/ethnic friendships (i.e., the direction and magnitude of the associations between these friendships and social adjustment).

Several models involving individuals-social context relations support the moderating role that classroom diversity plays on the effects of cross-racial/ethnic friendships. *The person-group similarity model* suggests that an individual in the particular group context is inclined to behave and act in a normative way (Boivin, Dodge, & Coie, 1995; Wright, Gimmarino, & Parad, 1986). Similarly, *the social*

context model proposes that an individual's behavior is reinforced by the most prevalent behavior in the particular social context (Chang, 2004; Deutsch & Gerard, 1955). These propositions suggest that a child is not in an empty milieu; rather the norm or the normative behavior of the particular context facilitates or hinders social behavior and adjustment. Likewise, forming cross-racial/ethnic friendships could be viewed as more normative in the classroom with greater diversity (which provides more opportunities to interact with other peers from different cultural backgrounds). Consequently, the effects of cross-racial/ethnic friendships may depend on the features of classroom context including cultural diversity.

The Mediating Role of Social Preference

Given that children with cross-racial/ethnic friendships may be more appreciated, and thus more accepted by other peers, it can be further hypothesized that social preference (i.e., the degree to which children are viewed as accepted by peers) plays a mediating role in the association between cross-racial/ethnic friendships and indices of social adjustment. However, the mediating role of social preference may depend on classroom diversity. For example, children with cross-racial/ethnic friendships may be viewed as more accepted by peers than children with same-racial/ethnic friendships only; perhaps, in highly diverse classrooms. Thus, these children with cross-racial/ethnic friendships may receive more social support from peers and experience less peer victimization and display fewer levels of negative adjustment in such diverse context. By contrast, the mediating effect of social preference may not be salient for children with cross-racial/ethnic friendships in less diverse classrooms, given that these children may not be viewed as accepted as other peers within relatively less diverse

contexts. Accordingly, we have examined whether the unique effects of cross-racial/ethnic friendships on indices of social adjustment and the moderating role of classroom diversity in these effects were reduced after controlling for the contribution of same-racial/ethnic friendships (i.e., covariate) and social preference (i.e., a mediator).

The Present Study

The current study examined the frequency, stability, and quality of cross-racial/ethnic friendships and the unique effects of these friendships, as compared to same-racial/ethnic friendships, on indices of positive social adjustment (i.e., peer acceptance, peer support, prosocial behavior) and negative social adjustment (i.e., peer rejection, peer victimization, externalizing adjustment problems, and internalizing adjustment problems). Of particular interest were longitudinal consequences of cross-racial/ethnic friendships (i.e., *changes* in friendship qualities and social adjustment), above and beyond the effects of same-racial/ethnic friendships. Further, this study investigated the mechanisms by which social preference and classroom diversity (i.e., the probability that any two children randomly chosen in the classroom are cross-racial/ethnic) were related to these effects. We selected these social constructs because we were particularly interested in examining how cross-racial/ethnic friendships are related to social and relational factors, which are developmentally salient for school-aged children (Crick, Ostrov, & Kawabata, 2007; Parker, Rubin, Price, & DeRosier, 1995; Rubin, Bukowski, & Parker, 1988). Based on our literature review, it was hypothesized that 1) cross-racial/ethnic friendships would be less stable and of lower-quality than same-racial/ethnic friendships; 2) cross-racial/ethnic friendships would be *uniquely* associated with an increase in positive social adjustment and a decrease in

negative social adjustment, over and above the contribution of same-racial/ethnic friendships; 3) classroom diversity would moderate these associations; and 4) social preference would mediate these social processes. Specifically, relative to peers, children who form cross-racial/ethnic friendships in highly diverse classrooms would be more likely to display positive social adjustment. Further, children with cross-racial/ethnic friendships would be more accepted by peers, and thus these children would be less likely to exhibit social-psychological adjustment problems. It is noted that we controlled for initial levels of social adjustment. This allowed us to examine how cross-racial/ethnic and same-racial/ethnic friendships were related to relative *changes* in these outcome variables. In addition, we were interested in examining fourth graders because the literature has suggested that racial/ethnic divides in friendships and prejudice/discrimination toward other races/ethnicities generally emerge during late childhood and/or preadolescence (Nesdale, 2008). Finally, mixed linear models were used to evaluate our hypotheses, which took into account the dependencies between classrooms and individuals. It appears that no study has explicitly considered differential effects of cross-racial/ethnic friendships and same-racial/ethnic friendships on indices of social adjustment, including peer victimization, or has systematically examined the role of social preference and classroom diversity in these effects.

CHAPTER 2

Method

Participants

Participants concsisted of 444 (53.0 % female) fourth graders (i.e., 161 African American, 108 European American, 100 Asian American, and 75 Latino American) from 39 classrooms in 10 public schools in a large, Midwestern city. Other races/ethnicities (Native American, Indian, Somali, Arabic, Ethiopian) were not included in this study due to small sample sizes. The child's specific race/ethnicity was identified by classroom teachers (predominantly European American). The socioeconomic status of the sample was estimated to be relatively lower class based on school demographic information (i.e., the percentage of children who are eligible for the free or reduced lunch ranged from 68% to 96%). Further, achievement levels of the sample were estimated to be average (i.e., approximately 80% of children each school were reported to have passed and/or be close to passing the national-wide, math and reading achievement tests). Information with regard to the diversity of classrooms/schools and school district/neighborhood is presented in Appendix A and B. Each participant had parental consent to participate; the average consent rate at the first assessment period was 73% of all students in participating classrooms.

Procedure

Participants' friendships, sociometric status, peer victimization, prosocial behavior, the receipt of prosocial behavior, and indices of social-psychological adjustment problems were assessed at two time points during the course of one school year (i.e., fall and spring). Approximately 95% of the sample from the fall assessment

(Time 1) continued through the spring (Time 2). All children with informed consent and who provided assent participated in a classroom-administered assessment period at both time points. In the peer nomination procedure, trained graduate students and research assistants in a classroom assisted children who were not familiar with the measure and explained the details of what the items meant, as needed. Questionnaires translated and back-translated into the native languages were provided to some of the Asian and Latino children who did not have adequate English proficiency. Children were provided with a small gift (e.g., pencil, toy) for their participation.

Teachers were given a small packet of questionnaires to complete for each child in their classroom, including the measures of peer victimization (CSEQ-T), prosocial behavior (CSBS-T), and indices of social-psychological adjustment problems (CBCL). They were encouraged to think about each child separately when completing the forms. Teachers were provided with a payment in the amount of $150 for their extensive time in completing study packets (teachers completed additional measurements that were not part of the present study).

Measures

Friendships. A peer nomination technique was used to identify mutual friendships (Grotpeter & Crick, 1996; Parker & Asher, 1993). Participants were asked to nominate up to six best friends from their classroom rosters. Reciprocal friendships were identified as pairs of children who chose each other as a best friend. Cross-racial/ethnic friendships and same-racial/ethnic friendships depended on racial/ethnic backgrounds for the rater and the nominee. For example, if a European American child nominated an Asian American peer as a best friend and he or she was nominated by the

same Asian American peer as a best friend, this was considered a cross-racial/ethnic friendship. If a European American child nominated a peer from the same racial group as a friend and he or she was also nominated by the same racial peer as a friend, this was considered a same-racial/ethnic friendship. Reciprocated friendships consisted of primarily same-sex friendships (97.8%).

Sociometric Status. Peer nominations assessed positive and negative sociometric status (Crick & Grotpeter, 1995). In the measure, participants were asked to nominate up to three liked and three disliked peers. The number of disliked nominations that children received from classmates was subtracted from the number of liked nominations and then standardized within each classroom. This procedure generated three peer status constructs: peer acceptance (liked nominations), peer rejection (disliked nominations), and social preference (i.e., sociometric popularity – liked nominations minus disliked nominations).

Peer victimization. Teacher reports of participants' relational and physical victimization were assessed using the Children's Social Experience Questionnaire – Teacher Report (CSEQ-T, Cullerton-Sen, & Crick, 2005). Teachers were asked to rate each child on a 5-point scale based on how true each statement was for each child. The response scale ranged from 1 (not at all true) to 5 (always true). Relational victimization consists of 3 items (e.g., "This child gets left out of the group"; "This child gets ignored by other children."). Physical victimization consists of 3 items (e.g., "This child gets pushed or shoved by peers"; "This child gets physically threatened by peers."). Teachers' responses to each item were summed to yield total relational victimization and physical victimization scores (score range 0 – 15 for each). Peer victimization

scores exhibited acceptable reliability across time points and four races/ethnicities (Cronbach's αs > .73 and αs > .93, for relational victimization and physical victimization, respectively). Teacher reports were used to avoid shared method variance (i.e., cross-racial/ethnic friendships and same-racial/ethnic friendships were obtained from peer nominations). Moreover, we viewed that teacher reports of children's experiences of peer victimization may be more accurate than peer nominations partly because racial/ethnic prejudice and discrimination which typically emerge during middle childhood (Nesdale, 2008) may make it difficult for peers to reasonably judge the levels of social adjustment for children who cross the racial/ethnic boundaries (i.e., interacting with peers from different racial/ethnic friends). Indeed, a recent study has demonstrated that middle school children exhibit same-ethnicity preferences in peer nominations such that they are more likely to nominate same-ethnic peers as liked most and are less likely to nominate as liked least (Bellmore, Nishina, Witkow, Graham, & Juvonen, 2007).

Prosocial Behavior. Children's levels of prosocial behavior were assessed using the Children's Social Behavior Questionnaire – Teacher Report (CSBQ-T; Crick, 1996), an instrument designed to assess children's social behaviors based on the perspective of their teachers. For each child, the teacher was asked to rate how true it was that the child displayed particular prosocial acts on a scale of 1 (Never True) to 5 (Almost Always True). Items reflected two domains of prosocial behavior; relational inclusion (3 items; e.g., "This child helps peers when s/he needs it"; "This child is friendly to most kids, even those h/she does not like very much.") and leadership (3 items; e.g., "This child takes a lead on the peer group"; "Other kids follow this child's lead in social

situations."). Teachers' responses to each item were summed to yield total prosocial behavior scores (score range 0 – 30). The scores of prosocial behavior exhibited acceptable reliability across time points and the four races/ethnicities (Cronbach's αs > .81). The validity (construct, concurrent, predictive, and external validity) and racial/ethnic measurement invariance of this construct have been confirmed in previous research (Kawabata & Crick, 2008).

Internalizing and Externalizing Problems. Teacher reports of participants' internalizing and externalizing symptoms were assessed using the Teacher Report form of the Child Behavior Checklist (TRF; Achenbach & Edelbrock, 1991). As part of the larger teacher report battery, teachers were presented with items describing symptoms of anxiety, depression, withdrawal, psychosomatic ailments, aggression, delinquency, and attentiveness. Teachers rated how true each item was of participants on a scale from '0' (not true) to '2' (very true or often true). Students' scores were summed across three subscales for internalizing problems (anxious/depressed, withdrawn, and somatic complaints) and three subscales for externalizing problems (aggression, delinquency, and attentiveness). The validity of the TRF has been confirmed across varied levels of social contexts (i.e., SES) and races/ethnicities. Externalizing and internalizing adjustment problem scores exhibited acceptable reliability across time points and the four races/ethnicities (Cronbach's αs > .88 and αs > .86, for externalizing adjustment problems and internalizing adjustment problems, respectively).

Friendship Qualities. Children's friendship qualities were assessed using the Friendship Quality Measure (FQM: Grotpeter & Crick, 1996). This measure assessed children's levels of friend victimization, intimacy, exclusivity, companionship, and

friendship satisfaction. Children's best friends were identified by friendship nominations prior to the assessment of friendship quality. Children were asked to recall everyday interactions with a best friend and then were presented with items describing eight subscales; friend relational victimization (4 items; e.g., "My friend tells my secrets to other kids when s/he is mad at me"), friend physical victimization (3 items; e.g., "My friend hits and kicks me when s/he is mad at me."), high levels of intimacy toward their best friend (3 items; e.g., "I can tell my friend about my problems"), high levels of intimacy toward subject (3 items; e.g., "My friend can tell me his/her secrets."), high levels of exclusivity toward their best friend (3 items; e.g., "I would rather hang out with my friend alone, and not other kids too."), high levels of exclusivity toward subject (3 items; e.g., "It bothers my friend if I hang out with other kids even when s/he is busy."), companionship (3 items; e.g., "My friend does fun things with me."), and friendship satisfaction (2 items; e.g., "How happy are you with this friendship"). Children were then asked to identify how true each item was for them within their friendships. The scale ranges from 1 (not at all true) to 5 (almost always true). The scale for friendship satisfaction ranges from 1 (very unhappy) to 5 (very happy).

To reduce the number of subscales and to create somewhat broader and more meaningful constructs, an exploratory factor analysis, using a principal axis factoring and varimax solution was conducted. This procedure extracted two constructs: one that included subject's intimacy, friend's intimacy, companionship, and friendship satisfaction, and the other that included friend relational victimization, friend physical victimization, subject's demand of exclusivity, and friend's demand of exclusivity. The initial eigenvalues of two factors were more than 2 and the total variance explained by

these factors was 64%. Each subscale was summed to yield positive friendships and negative friendships. Factor loadings for positive friendship qualities and negative friendship qualities were acceptable (> .54). These constructs demonstrated acceptable reliability across time points and the four races/ethnicities (Cronbach's αs > .78 and αs > .73, for positive friendships and negative friendships, respectively).

Receipt of prosocial behavior. Children's levels of peer support were assessed using the Children's Social Experiences Questionnaire (CSEQ: Crick & Grotpeter, 1996), an instrument designed to assess children's social experiences based on their perspectives. Each child was asked to rate how true it was that he/she received prosocial behavior from peers on a scale of 1 (Never) to 5 (All the time). Items reflected receipt of prosocial behavior (5 items; e.g., "How often does another peer do something that makes you feel happy?"; "How often does another peer try to cheer you up when you feel sad or upset?"; "How often do other kids let you know that they care about you?"). Children's responses to each item were summed to yield total scores of peer support (score range 5 – 25 for each). The construct demonstrated acceptable reliability across time points and races/ethnicities (Cronbach's αs > .63).

Classroom Diversity. As suggested in previous studies examining classroom diversity, races/ethnicities, and peer relationships (Bellmore, Witkow, Graham, & Juvonen, 2004), racial/ethnic diversity of each classroom was computed, using the following formula (Simpson, 1949).

$$D_c = 1 - \sum_{i=1}^{g} P_i^2$$

where D_c is the cultural diversity in the given classroom and P_i is the proportion of children in the classroom who belong to the racial/ethnic group of *i*. P_i is summed across *g* groups in the classroom. As indicated by Simpson's index of diversity, this formula provides the probability that any two children randomly chosen in the classroom are cross-racial/ethnic. Possible values range from 0 to 1.00 (1.00 signifies greatest diversity). Classroom diversity in the present study was moderate on average (*Min.* = .34, *Max.* = .73; *M* = .59, *SD* = .11).

CHAPTER 3

Results

Descriptive Analysis: Friendships

Frequency. To examine whether cross-racial/ethnic friendships were less common than same-racial/ethnic friendships, paired t-tests were conducted. Time 1 cross-racial/ethnic friendships and same-racial/ethnic friendships, and time 2 cross-racial/ethnic friendships and same-racial/ethnic friendships were directly compared. Results showed that time 1 cross-racial/ethnic friendships were as common as same-racial/ethnic friendships on average, t (444) = 1.69, *n.s.* and time 2 cross-racial/ethnic friendships were less common than same-racial/ethnic friendships, t (476) = -1.97, p = .05. Moreover, racial/ethnic differences in the frequency of these friendships were found. That is, cross-racial/ethnic friendships were less frequently formed for African American children at time 1, t (160) = -2.47, $p < .05$ and at time 2, t (160) = -2.47, $p <$ .05. A similar pattern was found for Latino children at time 1, t (74) = -2.36, $p < .05$ and at time 2, t (73) = -4.86, $p < .001$. By contrast, cross-racial/ethnic friendships were more common for European American children at time 1, t (107) = 3.97, $p < .001$, but this was not found at time 2, t (98) = 1.26, *n.s.* Asian American children formed the same number of cross-racial/ethnic friendships and same-racial/ethnic friendships at time 1, t (99) = .54, $p < .001$, but the trend was found for a larger number of same-racial/ethnic friendships at time 2, t (97) = -1.77, $p < .10$. These findings indicate that children tended to form more same-racial/ethnic friendships than cross-racial/ethnic friendships; however, this depended on the child's race/ethnicity and the time point of data collection (fall versus spring). The results are summarized in Table 1.

Stability. A within-subject ANCOVA was conducted to examine the stability of cross-racial/ethnic friendships and same-racial/ethnic friendships. Gender (0 = male, 1 = female) and Race/Ethnicity (0 = African American, 1 = European American, 3 = Asian American, and 4 = Latino American) served as between-subject variables. Because the assessment of friendships was nested within individuals, time 1 and time 2 cross-racial/ethnic friendships and same-racial/ethnic friendships served as within-subject variables. Class size and classroom diversity were used as covariates. Multivariate tests concerning between-subject variables showed a significant main effect of gender, F (2, 418) = 4.00, $p < .05$, $\eta_p^2 = .02$ and races/ethnicities, F (2, 838) = 6.00, $p < .001$, $\eta_p^2 = .04$. Univariate tests indicated that gender differences in cross-racial/ethnic friendships and same-racial/ethnic friendships (the average of the number of friendships summed by adding time 1 and time 2 friendships) were marginally significant, F (1, 419) = 3.42, $p < .10$, $\eta_p^2 = .008$; F (1, 419) = 2.84, $p < .10$, $\eta_p^2 = .007$, and that racial/ethnic differences in cross-racial/ethnic friendships and same-racial/ethnic friendships were significant, F (3, 419) = 7.23, $p < .001$, $\eta_p^2 = .05$; F (3, 419) = 5.12, $p < .01$, $\eta_p^2 = .04$. A follow-up deviation contrast test for these racial/ethnic differences indicated that compared to the group average, African American children were less likely to form cross-racial/ethnic friendships, $t = -2.40$, $p < .05$, and European American children and Asian American children were more likely to form these friendships, $t = 3.43$, $p < .01$; $t = 1.93$, $p = .05$; moreover, relative to the group average, European American children were less likely to form same-racial/ethnic friendships, $t = -2.88$, $p < .01$. Pairwise comparisons also showed racial/ethnic differences in the number of cross-racial/ethnic and same-racial/ethnic friendships. The results are summarized in Table 2.

Multivariate tests regarding within-subject variables showed a significant effect of the interaction between time and gender, F (2, 418) = 4.04, $p < .05$, $\eta_p^2 = .02$. Univariate tests showed the main effect of time × gender on cross-racial/ethnic friendships, F (1, 419) = 5.34, $p < .05$, $\eta_p^2 = .01$, and on same-racial/ethnic friendships, F (1, 419) = 3.75, $p = .05$, $\eta_p^2 = .01$. To clarify this interaction, follow-up pairwise t-tests were conducted separately by gender. The results indicated that the number of cross-racial/ethnic friendships decreased, t (226) = 4.74, $p < .001$, and the number of same-racial/ethnic friendships increased for boys, t (229) = -3.42, $p < .01$; however, there were no changes in these friendships for girls. These findings suggest that boys were more likely to lose cross-racial/ethnic friendships and to replenish the drop in friendships by adding new same-racial/ethnic friendships; by contrast, girls were more likely to maintain both cross-racial/ethnic and same-racial/ethnic friendships over a school year. No other significant effects were found. Means and standard deviations are summarized in Table 3.

Correlational Analysis

Correlational analyses were conducted to examine whether cross-racial/ethnic friendships and same-racial/ethnic friendships were correlated with time 2 criterion variables. The results showed that cross-racial/ethnic friendships and same-racial/ethnic friendships were significantly correlated with outcome variables. These findings highlighted the need for further in-depth analyses. The results are presented in Table 4. The means and standard deviations for the measures used in the analyses are presented in the same table.

Predictive Analysis: Multiple Regression Models

To examine how cross-racial/ethnic friendships and same-racial/ethnic friendships were differentially associated with relative changes in indices of sociometric status (i.e., peer acceptance and peer rejection) and friendship qualities, multiple regression models were conducted. This decision was made because the indices of sociometric status are standardized within classrooms prior to data analyses, the variations of these variables, which may be accounted for by classrooms, are assumed to be zero. Similarly, the unconditional mixed models predicting positive and negative friendship quality showed that only .9% (less than 1%) of the variance was estimated to be due to classrooms, which was regarded as negligible (the level 2 classroom random effect was not significant; $B = .57$, n.s.; $B = 1.22$, n.s., for positive friendship quality and negative friendship quality, respectively). Thus, mixed linear models, which assume that observations were substantially different across classrooms, were not relevant. Gender (0 = male, 1 = female), three dummy coded variables relating to races/ethnicities [African American (0 = other, 1 = African American), European American (0 = other, 1 = European American), and Asian American (0 = other, 1 = Asian American)], class size, classroom diversity, time 1 cross-racial/ethnic friendships, time 1 same-racial/ethnic friendships, and time 1 adjustment were all entered simultaneously. Time 1 friendships and adjustment variables were entered to control these initial levels, which allowed us to examine relative changes in outcome variables. All predictors, which were continuous in nature, were centered around the means prior to the analyses. Peer acceptance, peer rejection, positive friendship quality, and negative friendship quality served as criterion variables.

The results showed that cross-racial/ethnic friendships predicted relative increases in peer acceptance and positive friendship quality and relative decreases in peer rejection (B = .15, p < .001; B = .60, p = .06; B = -.11, p < .001, respectively) and same-racial/ethnic friendships were related to relative increases in peer acceptance (B = .17, p < .001), after controlling for the initial levels of these outcome variables. These findings indicated that cross-racial/ethnic friendships were *uniquely* associated with relative changes in peer rejection and positive friendship quality (although marginal) above and beyond the contribution of same-racial/ethnic friendships. The results are summarized in Table 5.

Predictive Analysis: Mixed Linear Models

To examine the stability and consequences of cross-racial/ethnic friendships and same-racial/ethnic friendships, mixed linear models were conducted with restricted maximum likelihood estimation of variance-covariance matrices. Time 2 cross-racial/ethnic friendships, same-racial/ethnic friendships, and social adjustment (i.e., relational victimization, physical victimization, the receipt of prosocial behavior, externalizing and internalizing adjustment problems, and prosocial behavior) served as criterion variables. Because observations are nested within classrooms, mixed linear models are most relevant to test proposed hypotheses (Raudenbush & Bryk, 2002; Snijders & Bosker, 1999). The mixed linear models take into account the dependencies between individuals and classrooms. Specifically, the error terms or residuals of each independent variable in the models are set to vary across classrooms, allowing for adjusting the variance that may be due to individuals and classrooms. This procedure

estimates more accurate effects of predictors than the traditional OLS regression approach.

Prior to conducting a full model, an unconditional model with a random effect of classrooms only was performed for each criterion variable (Model 1). This analysis tells us whether the levels of outcome variables vary across classrooms. Subsequently, main effects and the interactions between friendships and classroom diversity were tested (Model 2). Gender (0 = male, 1 = female), races/ethnicities [African American (0 = other, 1 = African American), European American (0 = other, 1 = European American), and Asian American (0 = other, 1 = Asian American)], class size, classroom diversity, time 1 cross-racial/ethnic friendships, time 1 same-racial/ethnic friendships, time 1 adjustment, and interaction terms involving friendships and classroom diversity were all entered simultaneously. Time 1 friendships and indices of social adjustment were entered to control for the initial levels. Classroom diversity × cross-racial/ethnic friendships and classroom diversity × same-racial/ethnic friendships were added to investigate whether classroom diversity moderated the stability of friendships and the associations between friendships and social adjustment. All continuous predictor variables were centered around the means prior to the analyses. Finally, the mediating role of social preference on the associations between cross-racial/ethnic friendships and criterion variables and on the effect of classroom diversity in these associations was tested (Model 3). The mediation was interpreted when the main effects of cross-racial/ethnic friendships and/or the interaction between these friendships and classroom diversity on criterion variables and the mediator were significant and the significant effects of these friendships and/or the moderating effects of classroom diversity were

removed or significantly reduced after the mediator was entered simultaneously, which in turn predicted outcome variables (Baron & Kenny, 1986).

Cross-Racial/Ethnic Friendships and Same-Racial/Ethnic Friendships

Results from Model 1 showed that the classroom-level random effect was significant ($B = .17$, $p < .01$; $B = .19$, $p < .05$, respectively). Intraclass correlations calculated based on individual-level and classroom-level estimates (.17/1.32 = .13; .19/1.52 = .13, respectively) indicated that approximately 13 % of the total variance was attributable to classroom differences in cross-racial/ethnic friendships and same-racial/ethnic friendships. Further, results from Model 2 demonstrated that time 1 cross-racial/ethnic friendships predicted time 2 cross-racial/ethnic friendships ($B = .49$, $p < .001$), taking into account the effect of classrooms (i.e., classroom diversity and non-independent observations). This suggests that these friendships are stable during an academic year. Moreover, gender and class size were significant predictors ($B = -.30$, $p < .01$; $B = -.08$, $p < .05$). These findings signify that girls and children who were in smaller classrooms were more likely to keep cross-racial/ethnic friendships. Further, time 1 same-racial/ethnic friendships predicted time 2 same-racial/ethnic friendships ($B = .65$, $p < .001$), suggesting that these friendships were stable over time. No other significant effects were found. The results are summarized in Table 6.

Relational Victimization, Physical Victimization, and Receipt of Prosocial Behavior

Results from Model 1 showed that the classroom-level random effect was significant ($B = 1.84$, $p < .01$; $B = 1.74$, $p < .01$, for relational victimization and physical victimization, respectively). Intraclass correlations calculated based on individual-level and classroom-level estimates (1.84/6.35 = .29; 1.74/6.08 = .29, respectively) indicated

that approximately 30% of the total variance was attributable to classroom differences. In addition, results in Model 2 showed that cross-racial/ethnic friendships predicted relative *decreases* in relational victimization and relative *increases* in the receipt of prosocial behavior (B = -.19, $p < .05$; B = .44, $p < .01$, respectively), taking into consideration the initial levels of these criterion variables, contextual factors such as classroom diversity, and same-racial/ethnic friendships. Interestingly, relative to other children, European American children experienced more relational victimization (B = -.65, $p < .05$).

Results from Model 2 demonstrated that the cross-racial/ethnic friendships × classroom diversity interactions were significant for physical victimization and the receipt of prosocial behavior (B = -1.12, $p < .10$; B = 3.12, $p < .05$). A separate mixed regression analysis indicated that the association between cross-racial/ethnic friendships and relative *decreases* in physical victimization was stronger for children who were in highly diverse classrooms (β = -.12. $p < .05$; β = -.05, *n.s.*, respectively). That is, children who formed cross-racial/ethnic friendships were less likely to experience physical victimization only in highly diverse classrooms (see Figure 1). Another follow-up separate regression analysis showed that the association between cross-racial/ethnic friendships and relative *increases* in the receipt of prosocial behavior was stronger for children who were in a greater diversity environment, compared to children who were in a lower diversity context (β = .71. $p < .001$; β = -.17, *n.s.*, respectively). That is, children who formed cross-racial/ethnic friendships were more likely to receive social support from other peers in more diverse classrooms (see Figure 2).

Finally, results in Model 3 predicting relational victimization revealed that social preference or sociometric popularity predicted relative decreases in relational victimization (B = -.32, p < .01), whereas the effect of cross-racial/ethnic friendships disappeared after social preference was considered (B = -.06, *n.s.*). These findings signify that social preference mediated the association between cross-racial/ethnic friendships and relative decreases in relational victimization. More specifically, cross-racial/ethnic friendships were related to the higher level of social preference, which was in turn predictive of decreased relational victimization. It is noted that correlational analyses showed that cross-racial/ethnic friendships were positively and significantly related to social preference (r = .38), which further supports the validity of the meditational model tested. The interactions of cross-racial/ethnic friendships × classroom diversity for physical victimization and the receipt of prosocial behavior remained significant, after taking into account the level of social preference. The results are summarized in Table 7.

Externalizing and Internalizing Adjustment Problems and Prosocial Behavior

Results from Model 1 showed that the classroom-level random effect was significant (B = 17.22, p < .05; B = 8.57, p < .01; B = .69, p < .001, for externalizing adjustment problems, internalizing adjustment problems, and prosocial behavior, respectively). Intraclass correlations calculated based on individual-level and classroom-level estimates (17.22/175.53 = .10; 8.57/34.01 = .25; .69/1.55 = .45, respectively) indicated that approximately 10%, 25%, and 45% of the total variance was attributable to classroom differences in externalizing adjustment problems, internalizing adjustment problems, and prosocial behavior, respectively. Results from Model 2

showed that cross-racial/ethnic friendships predicted relative *decreases* in externalizing adjustment problems and internalizing adjustment problems, and relative *increases* in prosocial behavior (B = -.71, p < .05; B = -.41, p < .05; B = .07, p = .05, respectively), controlling for the initial levels of these outcome variables, contextual factors such as classroom diversity, and same-racial/ethnic friendships. That is, children who formed cross-racial/ethnic friendships were less likely to display social-psychological adjustment problems and were more likely to be prosocial to other peers. Similarly, same-racial/ethnic friendships were positively related to relative *increases* in prosocial behavior, controlling for cross-racial/ethnic friendships and other covariates (B = .08, p = .05). Further, results from Model 3 showed that social preference predicted relative increases in prosocial behavior (B = .11, p < .10), whereas the effects of cross-racial/ethnic friendships and same-racial/ethnic friendships were removed after the contribution of social preference was considered (B = .04, *n.s.*; B = .04, *n.s.*, respectively). These findings suggested that social preference mediated the association between cross-racial/ethnic friendships or same-racial/ethnic friendships and prosocial behavior, such that these friendships are concurrently and positively related to social preference, which is in turn predictive of prosocial behavior. The results are presented in Table 8.

CHAPTER 4

Discussion

The purpose of this study was to examine the frequency, stability, and consequences of diverse friendships. Specifically, this study investigated the association between diverse friendships and relative *change* in social adjustment and the roles of classroom diversity and social preference on this association. Results demonstrated that cross-racial/ethnic friendships were as stable as same-racial/ethnic friendships during an academic year. Moreover, cross-racial/ethnic friendships were *uniquely* related to relative *decreases* in peer rejection, peer victimization, and psychosocial adjustment problems and relative *increases* in peer support over and above the contribution of classroom diversity and same-racial/ethnic friendships. In addition, classroom diversity moderated the association between cross-racial/ethnic friendships and relative decreases in physical victimization or relative increases in peer support, such that children with these friendships were less likely to experience physical victimization and were more likely to receive peer support in highly diverse classrooms. Further, social preference mediated the association between cross-racial/ethnic friendships and relative decreases in relational victimization, such that the significant effect of this association was removed after taking into account the level of social preference. Together, cross-racial/ethnic friendships and same-racial/ethnic friendships may be differentially associated with social adjustment, which may be explained by classroom diversity and sociometric status (i.e., popular vs. rejected or isolated).

The Frequency and Stability of Friendships

Consistent with the findings of previous studies (e.g., Aboud & Mendelson, 1998), the present study demonstrated that, on average, children formed more same-racial/ethnic friendships than cross-racial/ethnic friendships. However, this pattern varied across races/ethnicities. Whereas there were no differences in the number of cross-racial/ethnic friendships and same-racial/ethnic friendships for European American children and Asian American children, cross-racial/ethnic friendships were less common than same-racial/ethnic friendships for African American children and Latino American children. These findings imply that cross-racial/ethnic friendships between European Americans and Asian Americans may be more common than other pairs (e.g., European American and African American, African American and Latino American). In line with this view, research examining racial/ethnic differences in the rates of cross-racial/ethnic friendships in a nationally-representative adolescent sample has demonstrated that although Asian students are least likely to nominate other racial/ethnic peers as a best friend, Asian students and European American students are most likely to choose each counterpart as cross-racial/ethnic friends (Quillian & Campbell, 2003). This is perhaps because Asian immigrants tend to assimilate selectively; that is, relative to other peers, these children interact with European American peers to know more about mainstream culture, whereas they maintain strong ties with other Asian peers and families (Portes & Rumbault, 1996). Alternatively, African American children and Latino American children may spend more time with friends outside schools and family relatives, which may promote the formation of high-quality friendships in their neighborhoods and communities and may result in weaker ties formed at school (DuBois & Hirsch, 1990). Thus, friendships formed outside

schools may be more reciprocated and perhaps better-quality than friendships formed at school for these children.

The present study showed that cross-racial/ethnic friendships were as stable as same-racial/ethnic friendships over a six-month period. In addition, gender moderated the stability of cross-racial/ethnic friendships and same-racial/ethnic friendships; that is, cross-racial/ethnic friendships decreased and same-racial/ethnic friendships increased for boys, whereas there were no changes in these friendships for girls. A substantial body of research has demonstrated that girls place more emphasis on close relationships (i.e., affection, closeness, and intimacy) and are more sensitive to interpersonal and prosocial issues (Cross & Madsen, 1997; Maccoby, 1990; Rose & Rudolph, 2006) than boys. Given these views, girls may be more likely to form *high-quality* friendships, regardless of whether they are cross-racial/ethnic or same-racial/ethnic, which increases the stability of and prevents the dissolution of these friendships.

Cross-Racial/Ethnic Friendships, Peer Relations, and Peer Victimization

The present study demonstrated that cross-racial/ethnic friendships were uniquely associated with relative *decreases* in peer rejection and relational victimization and relative *increases* in peer support, above and beyond the contribution of same-racial/ethnic friendships, which were largely unrelated to these outcome variables after the contribution of cross-racial/ethnic friendships was considered. These findings suggested that forming cross-racial/ethnic friendships in moderately diverse classrooms is salient or normative and beneficial to children's social adjustment. One explanation is that children who welcome peers from different racial/ethnic groups in the play group may be viewed as accepted by peers, which protects them from being rejected and

victimized by peers and increases peer support. By contrast, children who focus primarily on same-racial/ethnic peers, despite the sufficient availability of other racial/ethnic peers, may be somewhat different from the norms or otherwise establish more independent and private peer groups.

Alternatively, it may be that cross-racial/ethnic friendships played a mediating role in the associations between same-racial/ethnic friendships and indices of social adjustment. This view is supported by the findings of the correlational analyses that showed that same-racial/ethnic friendships were weakly and negatively related to peer rejection, and positively associated with peer support (r = -.09, p < .05; r = .11, p < .05). One possibility is that children who form same-racial/ethnic friendships gain greater acceptance by including cross-racial/ethnic peers in the play group, which in turn results in fewer experiences of peer rejection and increased peer support. On the other hand, children who exclusively focus on same-racial/ethnic friendships have limited access to diverse peers, thereby becoming less popular in moderately diverse classrooms. These views suggest that children's social adjustment may be dependent on the condition of whether or not they form cross-racial/ethnic friendships in such contexts.

This explanation was supported by the finding of the present study that revealed that social preference or sociometric popularity mediated the association between cross-racial/ethnic friendships and relative decreases in relational victimization. That is, relative to children who formed fewer cross-racial/ethnic friendships, children who formed the greater number of these friendships were less likely to experience relational victimization; however, children with these friendships were also viewed as popular by peers concurrently, which in turn resulted in relative decreases in relational

victimization. This is in line with a recent study that found that majority children who formed cross-racial/ethnic friendships were viewed as more popular than majority children who did not have these friendships (Lease & Blake, 2005). Perhaps children who are able to cross racial/ethnic boundaries and form both cross-racial/ethnic and same-racial/ethnic friendships may gain popularity in moderately diverse classrooms, thereby avoiding or mitigating experiences of peer victimization and maximizing social support from peers.

In line with the hypothesis, classroom diversity moderated the association between cross-racial/ethnic friendships and relative decreases in physical victimization or increases in peer support. That is, children who formed cross-racial/ethnic friendships in highly diverse classrooms were less likely to experience physical victimization and more likely to receive peer support, compared to children with these friendships in lower diversity classrooms. Interestingly, cross-racial/ethnic friendships were inversely related to peer support in a less diverse classroom, although the effect was not significant, implying that children with cross-racial/ethnic friendships in this context may be less appreciated by peers. It is possible that children with cross-racial/ethnic friendships in diverse classrooms are accepted by cross-racial/ethnic *plus* same-racial/ethnic peers, thereby protecting themselves from being harassed by and thus feeling more validated by diverse classmates; in contrast, children with these friendships in lower diverse environments may be liked only by a few cross-racial/ethnic peers and perhaps they are neglected or even disliked by the majority of peers who are from their own racial/ethnic groups.

Cross-Racial/Ethnic Friendships and Social-Psychological Adjustment

Similar to the findings with respect to forms of peer victimization, the present study showed that cross-racial/ethnic friendships were uniquely associated with relative decreases in externalizing and internalizing adjustment problems, above and beyond the contribution of same-racial/ethnic friendships. These findings indicate that cross-racial/ethnic friendships may be more salient than same-racial/ethnic friendships in moderately diverse classrooms, thereby contributing to mitigating levels of social-psychological adjustment problems. Given that in general friendships are important indicators for children's social adjustment (Hartup & Stevens, 1997), friendships and *particularly* cross-racial/ethnic friendships are beneficial with adequate and equal opportunities to meet other-racial/ethnic peers.

One explanation for this finding is that cross-racial/ethnic friendships may play differential roles in social adjustment, including aggression and depressive symptoms due to the *unique* nature of these friendships. Given the abundance of evidence that children show a strong preference toward same-racial/ethnic peers (e.g., Nesdale, 2008), forming cross-racial/ethnic friendships against this norm is challenging, which requires high levels of cognitive, social, and interpersonal skills such as prosocial behavior, leadership skills, and empathy toward other races/ethnicities (Aboud & Levy, 2000; Kawabata & Crick, 2008). Thus, cross-racial/ethnic friendships may serve as a socializing context in which children can negate negative views, attitudes, and emotions (i.e., anxiety, fear) toward other racial/ethnic groups (Pettigrew & Tropp, 2006), and become more culturally competent in diverse classrooms. More specifically, these friendships may offer numerous opportunities to learn how to work well with individuals who may have different beliefs and values and to develop social skills,

including an ability to be more cooperative with and to avoid direct confrontations with diverse peers.

These views are in consistent with the finding of a recent experimental study that examined the effects of cross-group interactions on anxiety toward other races/ethnicities (assessed by cortisol reactivity) in European American and Latino college students. This study revealed that cross-group friendships reduced anxiety levels in cross-racial/ethnic contexts, especially for individuals who initially displayed high levels of racial/ethnic rejection sensitivity (Page-Gould, Mendoza-Denton, & Tropp, 2008). This result suggests that cross-racial/ethnic friendships are indeed beneficial to reducing negative emotions toward other races/ethnicities. Given the nature of the sample, the finding cannot be generalized to all children and adolescents without replication. However, this study sheds light on the negative relation between cross-racial/ethnic friendships and racial/ethnic prejudice and discrimination.

In summary, the findings of the present study have supported previous research indicating that friendships are beneficial to children's social adjustment in general (e.g., Berndt, 2002; Hartup & Stevens, 1997). Further, the findings of this study have provided important contributions to these previous studies by demonstrating that cross-racial/ethnic friendships are as positive as same-racial/ethnic friendships and that the effects of cross-racial/ethnic friendships are accounted for in part by the diversity of classrooms and level of social preference or popularity. Specifically, these findings have addressed the existence of cross-racial/ethnic friendships and the relative unique effects of these friendships in terms of developmental changes in social adjustment, which was found above and beyond the contribution of same-racial/ethnic friendships.

In sum, these findings suggest that cross-racial/ethnic friendships are developmentally crucial and thus need to be examined in more depth.

Future Implications

The present study offers guidance of future studies that examine cross-racial/ethnic friendships. Although this study revealed that cross-racial/ethnic friendships were relatively stable and they were associated with positive social adjustment (i.e., decreases in peer rejection, peer victimization, and social-psychological adjustment problems and increases in prosocial behavior and peer support), a short-term longitudinal study such as the present study makes it difficult to draw firm conclusions regarding long-term stability and consequences. In addition, the range of classroom diversity in the sample was moderate at best, which precludes one from describing a complete picture of the influence of classroom diversity on the associations between cross-racial/ethnic friendships and indices of social adjustment. Thus, an extended longitudinal study, including a larger range of classroom diversity (i.e., very homogenous and heterogeneous classrooms) is warranted to replicate these findings.

The probability of forming cross-racial/ethnic friendships drops considerably toward adolescence, perhaps due to the emergence of racial/ethnic prejudice and discrimination at this developmental period (Nesdale, 2008). Thus, it is very important to examine in a larger longitudinal study how cross-racial/ethnic friendships are associated with change in positive cognitive and social adjustment, including increased prosocial behavior and empathy as well as decreased racial/ethnic prejudice and discrimination. It is possible that children who form cross-racial/ethnic friendships,

which are associated with high levels of relational inclusion (i.e., an ability to welcome any peers in the play group) and leadership skills, provide a learning environment in which the understanding of and sensitivity to other races/ethnicities increase (Kawabata & Crick, 2008). These children may be able to maintain cross-racial/ethnic friendships and even multiply these friendships toward adolescence, thereby inhibiting the development of racial/ethnic prejudice and discrimination.

In addition to the longevity of cross-racial/ethnic friendships and the long-term consequences of these friendships, it is imperative to examine the antecedents or early developmental history of cross-racial/ethnic friendships. For example, parent-child relationships (e.g., closeness, intimacy) and parental beliefs, values, and practices for diversity may promote or hinder children's cross-racial/ethnic friendships. It is possible that parents who endorse racial/ethnic diversity may increase their children's understanding of and sensitivity to racial/ethnic diversity, thereby enhancing the formation of cross-racial/ethnic friendships. Children whose parents spend a lot of time with diverse individuals are exposed to diversity and thus may be ready to form diverse friendships at school. All in all, children's developmental history, including parental beliefs and values toward racial/ethnic experiences may shape a better understanding of races/ethnicities and thus increase diverse friendships.

It is also important to examine racial/ethnic differences and the effects of different pairs of cross-racial/ethnic friendships in the impact of interracial/ethnic contact. A previous study has demonstrated that the effect of cross-racial/ethnic friendships on reduced discrimination was weaker for members of minority status groups than members of majority groups (Tropp & Pettigrew, 2005). Additionally,

McGlothlin, Edmonds, and Kellen (2007) showed that children's positive views toward same-racial/ethnic peers were found only for European American children. These findings indicate that the meaning of cross-racial/ethnic friendships formed among minority children (versus friendships made between majority and minority children) may not be the same. Thus, the effects of cross-racial/ethnic friendships on social adjustment are varied, depending on the status of children (majority versus minority) involved and the type of pairs formed.

Regarding methodology, it would be informative to conduct social network analyses and dyadic analyses in future cross-racial/ethnic friendship research. Although the present study revealed that cross-racial/ethnic friendships were uniquely associated with peer rejection and peer support, social networking, including the centrality of same-racial/ethnic peers vis-à-vis cross-racial/ethnic peers in the peer group, and its relation to sociometric status and friendships remains unexamined. Further, dyadic analyses could examine whether children and best friends differ or are similar in terms of behavioral and psychological attributes and how they are influenced by friends' cognition, emotion, and motivation in the context of cross-racial/ethnic friendships. For example, it is possible that children develop racial/ethnic bias due to partners' negative views and attitudes toward races/ethnicities and vice-versa. A future study is warranted to examine bi-directionality in the association between children and friends in terms of racial/ethnic prejudice and discrimination.

The literature has further suggested that in addition to quantitative research qualitative research is important because it enriches developmental science by providing thorough and detailed information to researchers (Yoshikawa, Weisner, Kalil, & Way,

2008). For example, naturalistic observations and in-depth interviews can offer details concerning cross-racial/ethnic friendships in terms of how children with these friendships think, feel, and act and why they choose or reject cross-racial/ethnic peers as best friends. Given the nature of ethnography which allows researchers to directly observe and interview children with cross-racial/ethnic friendships, researchers can understand their real-life experiences that depict the detailed processes involving cross-racial/ethnic friendships and social adjustment (Way, 2006). This kind of information is crucial for the full understanding of the initiation, maintenance, and dissolution of cross-racial/ethnic friendships and the potential racial/ethnic differences in these processes.

Limitations

One of the limitations of this study is the issue of sample representativeness and generalizability of the findings. Whereas the sample was racially/ethnically diverse providing the opportunity to examine cross-racial/ethnic friendships and social adjustment over and beyond European American and African American relationships, the data may not be necessarily generalized to all fourth grade students in the U.S. Another limitation of this study is the lack of specific information on social contexts that may influence the formation of cross-racial/ethnic friendships, including the child's SES, neighborhood, residency, and school district. Accordingly, in future studies, it would be important to consider the child's dynamic social development involving cross-racial/ethnic friendships within and across diverse social contexts. Despite these limitations, the present study, drawing upon a relatively large and diverse sample, helps

bridge the gaps in the literature by demonstrating the importance of taking into account the diversity of friendships and classrooms when studying social adjustment at school.

Footnote

[1] The term “racial/ethnic” is used throughout this article. This decision was made because the sample in this study included various ethnic groups within one race. Thus, it was that the terms such as cross-racial/ethnic friendships and same-racial/ethnic friendships were representative of all possible pairs of friendships examined in the particular study.

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Table 1. The Frequency of Cross-Racial/Ethnic Friendships and Same-Racial/Ethnic Friendships at Time 1 and Time 2 by Races/Ethnicities

		Cross-Racial/Ethnic				Same-Racial/Ethnic				Sig.
		M	SD	Min	Max	M	SD	Min	Max	
AF	T1	0.91	1.19	0	6	1.25	1.25	0	5	$p < 0.05$
	T2	0.85	1.06	0	5	1.27	1.12	0	4	$p < 0.05$
EA	T1	1.72	1.44	0	5	0.94	1.06	0	5	$p < 0.001$
	T2	1.26	1.31	0	5	1.01	1.09	0	5	*n.s.*
AA	T1	1.43	1.27	0	6	1.33	1.17	0	4	$p < 0.001$
	T2	1.19	1.15	0	4	1.53	1.14	0	5	$p < 0.10$
LA	T1	1.00	1.16	0	4	1.56	1.30	0	5	$p < 0.05$
	T2	0.70	0.96	0	5	1.80	1.52	0	5	$p < 0.001$
ALL	T1	1.30	1.33	0	6	1.15	1.20	0	5	$p < 0.10$
	T2	1.07	1.20	0	5	1.25	1.22	0	5	$p = 0.05$

Note: M = Mean. SD = Standard Deviation. MIN = Minimum. MAX = Maximum. AF = African American. EA = European American. AA = Asian American. LA = Latino American. T1 = Time 1. T2 = Time 2. Sig. = Significance.

Table 2. Racial/Ethnic Differences in the Frequency of Cross-Racial/Ethnic Friendships and Same-Racial/Ethnic Friendships

	African American (AF)		European American (EA)		Asian American (AA)		Latino American (LA)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Cross-racial/ethnic friendships	0.93	.09	1.45	.11	1.31	.11	0.83	.12
Same-racial/ethnic friendships	1.18	.09	1.06	.11	1.49	.11	1.59	.13

	Statistical significance: Pairwise Comparisons (Bonferroni)
Cross-racial/ethnic friendships	AF<EA* AF<AA* EA>LA*AA>LA*
Same-racial/ethnic friendships	AF<LA* EA<AA* EA<LA*

†p<.10.*p < .05. **p < .01. ***p < .001. Note: Gender, class size, and classroom diversity were all taken into account in these models. Adjusted means and standard error of the averaged cross-racial/ethnic and same-racial/ethnic friendships across two time points are presented.

Table 3. Gender Differences in the Stability of Cross-Racial/Ethnic Friendships and Same-Racial/Ethnic Friendships

	Boys				Girls			
	Time 1		Time 2		Time 1		Time 2	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Cross-racial/ethnic friendships	1.33	1.30	0.97	1.13	1.27	1.38	1.16	1.3
Same-racial/ethnic friendships	0.99	1.09	1.20	1.24	1.31	1.28	1.31	1.2

†p<.10.*p < .05. **p < .01. ***p < .001. Note: Races/ethnicities, class size, and classroom diversity were all taken into account in these models. Adjusted means and standard error are presented.

Table 4. Zero-Order Correlations, Means, and Standard Deviations among Major Predictors and Criterion Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. CrossT1	1.00															
2. Same T1	-.22	1.00														
3. Diversity	.21	-.22	1.00													
4. SP T1	.38	.34	.02	1.00												
5. Cross T2	.59	-.15	.16	.25	1.00											
6. Same T2	-.20	.68	-.23	.32	-.24	1.00										
7. PAC T2	.33	.33	.00	.57	.28	.37	1.00									
8. PRJ T2	-.26	-.09	-.02	-.54	-.19	-.21	-.36	1.00								
9. PF T2	.13	.02	.04	.13	.15	.01	.19	-.06	1.00							
10. NF T2	-.05	-.05	.01	-.17	-.07	-.04	-.12	.15	-.24	1.00						
11. RV T2	-.12	-.08	.01	-.29	-.08	-.13	-.21	.38	.00	.12	1.00					
12. PV T2	-.11	-.05	-.01	-.25	-.07	-.16	-.21	.29	-.07	.07	.79	1.00				
13. PS T2	.15	.11	.02	.13	.12	.05	.18	-.09	.43	-.07	-.01	-.04	1.00			
14. EX T2	-.19	-.08	-.04	-.35	-.09	-.18	-.19	.40	.00	.04	.48	.50	.04	1.00		
15. IN T2	-.10	-.07	-.03	-.22	-.03	-.15	-.19	.22	-.03	.05	.44	.42	.01	.57	1.00	
16. PRO T2	.13	.09	.12	.19	.12	.12	.19	-.16	.05	-.05	-.14	-.12	.05	-.23	-.20	1.00
M	1.24	1.24	.59	.10	1.00	1.37	.11	-.07	31.9	20.6	5.16	4.71	17.4	8.29	5.16	3.43
SD	1.31	1.21	.11	.97	1.14	1.23	.97	.93	9.18	7.62	2.57	2.50	4.55	13.4	6.10	1.25

Note. Correlations with absolute values greater than .17 were significant at $p < .001$; those with absolute values greater than .12 were significant at $p < .01$; those with absolute values greater than .9 were significant at $p < .05$; those with absolute values greater than .8 were significant at $p < .10$. Cross T1 = cross-racial/ethnic friendships at time 1. Same T1 = same-racial/ethnic friendships at time 2. Diversity = classroom diversity. SP T1 = social preference at time 1. Cross T2 = cross-racial/ethnic friendships at time 2. Same T2 = same-racial/ethnic friendships at time 2. PAC T2 = peer acceptance at time 2. PRJ = peer rejection at time 2. PF T2 = positive friendship at time 2. MF T2 = negative friendship at time 2. RV T2 = relational victimization at time 2. PV T2 = physical victimization at time 2. PS T2 = peer support at time 2. EX T2 = externalizing adjustment problems at time 2. IN T2 = internalizing adjustment problems at time 2. PRO T2 = prosocial behavior at time 2.

Table 5. Multiple Linear Regression Models Predicting Sociometric Status and Friendship Qualities

	Peer acceptance	Peer rejection	Positive friendship	Negative friendship
Intercept	-0.78(0.46) †	0.29(0.45)	5.27(5.14) †	18.39(4.33)***
Gender	-0.02(0.07)	0.13(0.07) †	2.78(0.78)***	0.50(0.66)
African American	0.00(0.11)	0.23(0.13)*	2.28(1.14)*	-1.97(0.96)*
European American	-0.06(0.12)	0.26(0.13)*	2.31(1.27) †	-2.12(1.06)*
Asian American	-0.08(0.12)	-0.04(0.13)**	0.17(1.25)	0.70(1.06)
Class size	0.04(0.02) †	-0.02(0.02)	0.44(0.20)*	-0.27(0.17)
Diversity	0.01(0.34)	0.16(0.33)	0.17(3.69)	1.39(3.12)
Adjustment T1	0.47(0.05)***	0.51(0.04)***	0.41(0.05)***	0.48(0.05)***
Cross	0.15(0.03)***	-0.11(0.03)***	0.60(0.32) †	0.02(0.27)
Same	0.17(0.04)***	-0.01(0.03)	0.45(0.34)	-0.27(0.29)
Total R^2	0.43***	0.37***	0.25***	0.22***

†p<.10. *p < .05. **p < .01. ***p < .001. Note: Gender (Male = 0, Female = 1). African American (other = 0, African American = 1). European American (other = 0, European American = 1). Asian American (other = 0, Asian American = 1). Cross = Cross-racial/ethnic friendships time 1. Same = Same-racial/ethnic friendships time 1. Adjustment T1 = time 1 peer acceptance, time 1 peer rejection, time 1 positive friendships, and time 1 negative friendships, respectively. Interaction terms including friendships and diversity were not included in these final models because the effects were not statistically significant. Unstandardized coefficients and standard error are presented.

Table 6. Estimates of Fixed and Random Effects From the Mixed Linear Models Predicting Cross-Racial/Ethnic Friendships and Same-Racial/Ethnic Friendships

	Cross-Racial/Ethnic Friendships T2		Same-Racial/Ethnic Friendships T2	
	Model 1	Model 2	Model 1	Model 2
Fixed effects				
Intercept	1.00(0.09)***	3.40(0.85)***	1.34(0.10)***	0.51(0.75)
Gender		-0.30(0.09)**		0.10(0.09)
African American		-0.12(0.14)		0.19(0.14)
European American		-0.17(0.16)		0.17(0.15)
Asian American		-0.23(0.16)		-0.06(0.15)
Class size		-0.08(0.03)*		0.02(0.03)
Diversity		0.26(0.63)		-0.89(0.54)
Cross		0.49(0.04)***		-0.04(0.04)
Same		-0.05(0.04)		0.65(0.04)***
Cross X Diversity		-0.30(0.35)		-0.04(0.35)
Same X Diversity		0.03(0.36)		-0.34(0.35)
Random effects				
Level 1	1.15(0.08)***	0.76(0.05)***	1.33(0.09)***	0.77(0.05)***
Level 2	0.17(0.06)**	0.07(0.04)*	0.19(0.08)*	0.04(0.03)
Goodness of fit				
Deviance	1312.77	1144.16	1379.17	1142.24
AIC	1316.77	1148.16	1383.17	1146.24
BIC	1324.89	1156.23	1391.29	1154.32

†p<.10. *p < .05. **p < .01. ***p < .001. Note: Model 1 is the unconditional mixed model with intercept. Model 2 is the mixed model including fixed effects and random effects of intercept. Gender (Male = 0, Female = 1). African American (other = 0, African American = 1). European American (other = 0, European American = 1). Asian American (other = 0, Asian American = 1). A higher-level of each of these variables is a reference category. Cross = Cross-racial/ethnic friendships time 1. Same = Same-racial/ethnic friendships time 1.

Table 7. Estimates of Fixed and Random Effects From the Mixed Linear Models Predicting Peer Victimization and Peer Support

	Relational victimization		
	Model 1	Model 2	Model 3
Fixed effects			
Intercept	5.13(0.26)***	6.59(2.13)**	6.78(2.22)**
Gender		-0.18(0.17)	-0.19(0.17)
African American		-0.50(0.28) †	-0.47(0.28) †
European American		-0.65(0.30)*	-0.67(0.30)*
Asian American		0.11(0.32)	0.07(0.32)
Class size		-0.03(0.09)	-0.02(0.09)
Diversity		0.44(1.60)	0.41(1.68)
T1 Adjustment		0.57(0.04)***	0.53(0.04)***
T1 Cross		-0.19(0.07)*	-0.06(0.08)
T1 Same		-0.02(0.08)	0.10(0.09)
T1 Cross X Diversity		-0.42(0.70)	-0.74(0.70)
T1 Same X Diversity		0.16(0.70)	0.03(0.69)
Social preference			-0.34(0.11)**
Random effects			
Level 1	4.61(0.32)***	2.82(0.20)***	2.74(0.20)***
Level 2	1.84(0.55)**	0.68(0.24)**	0.78(0.27)**
Fit indexes			
Deviance	1948.69	1728.11	1721.48
AIC	1952.69	1732.11	1725.48
BIC	1960.82	1740.20	1733.56

†p<.10. *p < .05. **p < .01. ***p < .001. Note: Model 1 is the unconditional mixed model with intercept. Model 2 is the mixed model including fixed effects and random effects of intercept. Gender (Male = 0, Female = 1). African American (other = 0, African American = 1). European American (other = 0, European American = 1). Asian American (other = 0, Asian American = 1). A higher-level of each of these variables is a reference category. T1 Cross = Cross-racial/ethnic friendships time 1. T1 Same = Same-racial/ethnic friendships time 1. T1 Adjustment = time 1 relational victimization, physical victimization, and receipt of prosocial behavior, respectively.

Table 7 (Continued). Estimates of Fixed and Random Effects From the Mixed Linear Models Predicting Peer Victimization and Peer Support

	Physical victimization		
	Model 1	Model 2	Model 3
Fixed effects			
Intercept	4.67(0.26)***	6.16(2.09)**	6.03(2.14)**
Gender		-0.07(0.16)	-0.05(0.16)
African American		-0.21(0.26)	-0.18(0.26)
European American		-0.54(0.28) †	-0.56(0.28)*
Asian American		0.30(0.29)	0.27(0.29)
Class size		-0.05(0.08)	-0.04(0.09)
Diversity		-0.36(1.58)	-0.39(1.62)
T1 Adjustment		0.67(0.04)***	0.65(0.04)***
T1 Cross		-0.09(0.07)	-0.01(0.08)
T1 Same		0.06(0.07)	0.13(0.08)
T1 Cross X Diversity		-1.12(0.65) †	-1.30(0.65)*
T1 Same X Diversity		0.41(0.64)	0.34(0.64)
Social preference			-0.21(0.10)*
Random effects			
Level 1	4.34(0.31)***	2.37(0.17)***	2.34(0.17)***
Level 2	1.74(0.52)**	0.70(0.23)**	0.74(0.24)**
Fit indexes			
Deviance	1923.49	1658.94	1657.64
AIC	1927.49	1662.94	1661.64
BIC	1935.62	1671.03	1669.72

†p<.10. *p < .05. **p < .01. ***p < .001. Note: Model 1 is the unconditional mixed model with intercept. Model 2 is the mixed model including fixed effects and random effects of intercept. Gender (Male = 0, Female = 1). African American (other = 0, African American = 1). European American (other = 0, European American = 1). Asian American (other = 0, Asian American = 1). A higher-level of each of these variables is a reference category. T1 Cross = Cross-racial/ethnic friendships time 1. T1 Same = Same-racial/ethnic friendships time 1. T1 Adjustment = time 1 relational victimization, physical victimization, and receipt of prosocial behavior, respectively.

Table 7 (Continued). Estimates of Fixed and Random Effects From the Mixed Linear Models Predicting Peer Victimization and Peer Support

	Receipt of prosocial behavior		
	Model 1	Model 2	Model 3
Fixed effects			
Intercept	17.42(0.25)***	15.13(3.16)***	7.16(3.29)*
Gender		-0.82(0.40)*	-0.82(0.40)*
African American		-0.50(0.64)	-0.58(0.64)
European American		0.03(0.68)	0.01(0.69)
Asian American		0.23(0.69)	0.31(0.70)
Class size		0.11(0.12)	0.10(0.12)
Diversity		1.47(2.33)	1.49(2.32)
T1 Adjustment		0.46(0.04)***	0.46(0.04)***
T1 Cross		0.44(0.16)**	0.33(0.19)†
T1 Same		0.24(0.18)	0.13(0.21)
T1 Cross X Diversity		3.12(1.55)*	3.35(1.57)*
T1 Same X Diversity		-2.14(1.65)	-1.98(1.65)
Social preference			0.31(0.25)
Random effects			
Level 1	20.63(1.51)***	14.29(1.07)***	14.33(1.07)***
Level 2	0.28(0.49)	0.65(0.49)	0.63(0.49)
Fit indexes			
Deviance	2368.43	2218.68	2228.43
AIC	2372.43	2222.68	2212.43
BIC	2380.43	2230.62	2220.35

†p<.10. *p < .05. **p < .01. ***p < .001. Note: Model 1 is the unconditional mixed model with intercept. Model 2 is the mixed model including fixed effects and random effects of intercept. Gender (Male = 0, Female = 1). African American (other = 0, African American = 1). European American (other = 0, European American = 1). Asian American (other = 0, Asian American = 1). A higher-level of each of these variables is a reference category. T1 Cross = Cross-racial/ethnic friendships time 1. T1 Same = Same-racial/ethnic friendships time 1. T1 Adjustment = time 1 relational victimization, physical victimization, and receipt of prosocial behavior, respectively.

Table 8. Estimates of Fixed and Random Effects From the Mixed Linear Models Predicting Negative and Positive Social Adjustment

	Externalizing adjustment problems		
	Model 1	Model 2	Model 3
Fixed effects			
Intercept	8.00(0.96)***	14.45(7.27) †	14.29(7.31) †
Gender		0.01(0.66)	0.03(0.66)
African American		-2.28(1.14)*	-2.29(1.14)*
European American		0.55(1.18)	0.50(1.18)
Asian American		1.19(1.21)	1.11(1.22)
Class size		-0.26(0.29)	-0.25(0.29)
Diversity		7.67(5.42)	7.53(5.45)
T1 Adjustment		0.80(0.03)***	0.79(0.03)***
T1 Cross		-0.71(0.29)*	-0.54(0.33) †
T1 Same		-0.30(0.31)	-0.12(0.35)
Cross T1 X Diversity		-1.44(2.72)	-1.79(2.74)
Same T1 X Diversity		1.34(2.71)	1.18(2.72)
Social preference			-0.48(0.43)
Random effects			
Level 1	158.31(11.15)***	43.09(2.80)***	43.03(3.07)***
Level 2	17.22(7.27)*	6.88(2.60)**	7.00(2.63)**
Fit indexes			
Deviance	3447.64	2870.64	2869.24
AIC	3451.64	2874.64	2873.24
BIC	3459.78	2882.72	2881.32

†p<.10. *p < .05. **p < .01. ***p < .001. Note: Model 1 is the unconditional mixed model with intercept. Model 2 is the mixed model including fixed effects and random effects of intercept. Gender (Male = 0, Female = 1). African American (other = 0, African American = 1). European American (other = 0, European American = 1). Asian American (other = 0, Asian American = 1). A higher-level of each of these variables is a reference category. T1 Cross = Cross-racial/ethnic friendships time 1. T1 Same = Same-racial/ethnic friendships time 1. T1 Adjustment = time 1 externalizing adjustment problems, internalizing adjustment problems, and prosocial behavior, respectively.

Table 8 (Continued). Estimates of Fixed and Random Effects From the Mixed Linear Models Predicting Negative and Positive Social Adjustment

	Internalizing adjustment problems		
	Model 1	Model 2	Model 3
Fixed effects			
Intercept	4.96(0.57)***	11.44(5.63)*	11.29(5.63) †
Gender		-0.34(0.41)	-0.33(0.41)
African American		-1.88(0.68)**	-1.81(0.68)**
European American		-0.85(0.74)	-0.86(0.74)
Asian American		0.14(0.77)	-0.20 (0.77)
Class size		-0.18(0.23)	-0.17(0.23)
Diversity		4.03(4.26)	3.90(4.26)
T1 Adjustment		0.52(0.04)***	0.51(0.04)***
T1 Cross		-0.41(0.18)*	-0.28(0.20) †
T1 Same		-0.00(0.19)	-0.13(0.22)
Cross T1 X Diversity		0.28(1.71)	-0.00(1.72)
Same T1 X Diversity		-0.72(1.69)	-0.81(1.69)
Social preference			-0.35(0.26)
Random effects			
Level 1	25.44(1.79)***	16.25(1.16)***	16.22(1.16)***
Level 2	8.57(2.61)**	5.12(1.67)**	5.13(1.67)**
Fit indexes			
Deviance	2682.61	2474.94	2471.99
AIC	2686.61	2476.94	2475.99
BIC	2694.74	2485.03	2484.07

†p<.10. *p < .05. **p < .01. ***p < .001. Note: Model 1 is the unconditional mixed model with intercept. Model 2 is the mixed model including fixed effects and random effects of intercept. Gender (Male = 0, Female = 1). African American (other = 0, African American = 1). European American (other = 0, European American = 1). Asian American (other = 0, Asian American = 1). A higher-level of each of these variables is a reference category. T1 Cross = Cross-racial/ethnic friendships time 1. T1 Same = Same-racial/ethnic friendships time 1. T1 Adjustment = time 1 externalizing adjustment problems, internalizing adjustment problems, and prosocial behavior, respectively.

Table 8 (Continued). Estimates of Fixed and Random Effects From the Mixed Linear Models Predicting Negative and Positive Social Adjustment

	Prosocial behavior		
	Model 1	Model 2	Model 3
Fixed effects			
Intercept	3.44(0.15)***	1.51(1.50)	1.57(1.52)
Gender		0.03(0.09)	0.02(0.09)
African American		0.04(0.15)	0.01(0.15)
European American		-0.01(0.16)	-0.01(0.16)
Asian American		-0.02(0.17)	-0.01 (0.17)
Class size		0.08(0.06)	0.07(0.06)
Diversity		0.24(1.15)	0.30(1.17)
T1 Adjustment		0.47(0.05)***	0.45(0.05)***
T1 Cross		0.07(0.04)*	0.04(0.04)
T1 Same		0.08(0.04)*	0.04(0.05)
Cross T1 X Diversity		-0.01(0.37)	0.09(0.37)
Same T1 X Diversity		-0.39(0.36)	-0.35(0.36)
Social preference			0.10(0.06) †
Random effects			
Level 1	0.86(0.06)***	0.73(0.05)***	0.73(0.05)***
Level 2	0.69(0.19)***	0.41(0.12)**	0.42(0.13)**
Fit indexes			
Deviance	1243.93	1177.58	1178.19
AIC	1237.93	1181.58	1182.19
BIC	1256.06	1189.66	1190.27

†p<.10. *p < .05. **p < .01. ***p < .001. Note: Model 1 is the unconditional mixed model with intercept. Model 2 is the mixed model including fixed effects and random effects of intercept. Gender (Male = 0, Female = 1). African American (other = 0, African American = 1). European American (other = 0, European American = 1). Asian American (other = 0, Asian American = 1). A higher-level of each of these variables is a reference category. T1 Cross = Cross-racial/ethnic friendships time 1. T1 Same = Same-racial/ethnic friendships time 1. T1 Adjustment = time 1 externalizing adjustment problems, internalizing adjustment problems, and prosocial behavior, respectively.

Figure 1. The Association between Cross-Racial/Ethnic Friendships at Time 1 and Physical Victimization at Time 2 as a Function of Classroom Diversity: Children who did not form cross-racial/ethnic friendships (one standard deviation below the mean) in highly diverse classrooms (one standard deviation above the mean) experienced higher levels of physical victimization at time 2 than children who did not form these friendships (one standard deviation below the mean) in lower diverse classrooms (one standard deviation above the mean). Children who formed cross-racial/ethnic friendships did not differ in terms of physical victimization levels across classrooms.

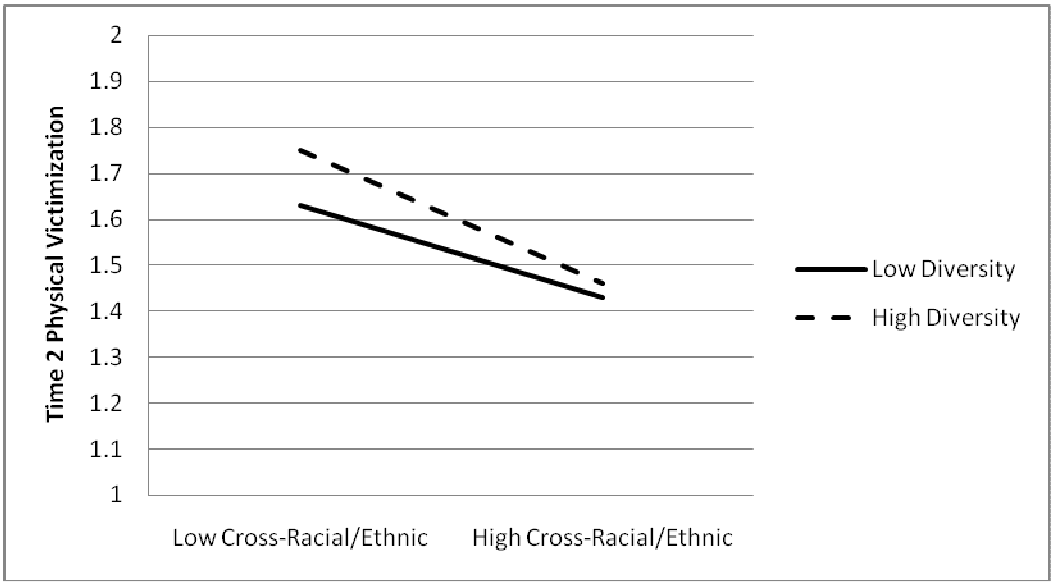

Figure 2. The Association between Cross-Racial/Ethnic Friendships and Receipt of Prosocial Behavior at Time 2 as a Function of Classroom Diversity: Children who formed cross-racial/ethnic friendships (one standard deviation below the mean) in highly diverse classrooms (one standard deviation above the mean) received higher levels of prosocial behavior at time 2 than children who formed these friendships in low diversity classrooms (one standard deviation below the mean). By contrast, children who formed cross-racial/ethnic friendships (one standard deviation above the mean) in low diversity classrooms (one standard deviation below the mean) received lower levels of prosocial behavior at time 2 than children who did not form these friendships (one standard deviation below the mean).