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Cross-ethnic friendship and prosocial behavior's potential significance to elementary children's academic competence

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ABSTRACT

The authors, with Swedish elementary school students ($N = 201$), 9–12 years old, examined the potential significance to self-perceived academic competence of students' cross-ethnic friendship ties and prosocial behavior to better understand education's minority achievement gap. A crossed-lagged panel model was tested to investigate potential relationships between these variables over time, while controlling for temporal associations. The results revealed that higher levels of prosocial behavior were related to more positive academic performance six months later. However, higher levels of cross-ethnic friendship did not. The findings further establish the predictive influence of prosocial behavior on academic competence, indicating that this over-time relation is applicable also in the North European context, with its increasingly diverse ethnicity.

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Because of the recent status of Europe as a rising destination for immigrants, migrants, and refugees, issues of integration and sociocultural adaptation have become a reality also in countries that were ethnically homogenous just a few decades ago. In the case of Sweden, the shift from a monoculture, consisting of mainly northern European Caucasians, into an increasingly multiethnic society, due to an increased number of asylum seekers, took its start in the 1980s. As a result, the proportion of residents born abroad increased from 7.5% in 1980 to 17% in 2015 (Statistics Sweden, 2017a). Consequently, Swedish elementary schools have become increasingly diverse in terms of ethnicity.

Children with immigrant or minority group backgrounds often face additional challenges related to academic achievement, a trend that has been noted globally (see Driessen & Merry, 2011; Dustmann, Frattini, & Lanzara, 2012; Jonsson & Rudolphi, 2011; Kao & Thompson, 2003). There are many possible elements likely at play, including psychological factors (Kao, 1999; Portes, 1999), language issues (Han, 2012; Thomas & Collier, 2002), teacher attitudes (Blanchard & Muller, 2015), and the school environment (Gietz & McIntosh, 2014).

In this study, we sought to clarify if the degree of elementary students' cross-ethnic social ties and prosocial behavior predicted children's ratings of their self-perceived academic competence at a later time. We further investigated if these potential relations differed for students with and without immigrant background. Our hypothesis was that, in very diverse Swedish schools, higher self-perceived academic competence may be related over time to students' prosocial behavior or cross-ethnic friendship ties due to the psychosocial benefits conferred by positive behavioral patterns and contact with and

positive attitudes to other groups. Further illumination of this question could help us better understand the social and academic challenges of diverse school environments.

That friendships play a role in children's developmental outcomes in a variety of domains—from the psychological to the academic—is widely accepted (see Buhrmester, 1990; Hartup, 1989, 1996; Parker & Asher, 1987; Wentzel & Caldwell, 1997). Though knowledge specific to cross-ethnic friendships is less established, it has in recent years come to be seen to confer particular benefits. For example, a meta-analysis of 113 research reports worldwide (Raabe & Beelmann, 2011) verified that cross-ethnic friendships promote positive attitudes to other groups. Separate empirical studies indicate other benefits. In the North American context, cross-ethnic friendships in multiethnic elementary schools have been concurrently associated with positive developmental outcomes (Kawabata & Crick, 2008) and with psychological well-being six months later (Kawabata & Crick, 2015). Research with slightly older children, conducted in multiethnic U.S. middle schools, points in the same direction, showing that, with cross-sectional data, cross-ethnic friendships were associated with a sense of social-emotional safety and belonging at school (Graham, Munniksmas, & Juvonen, 2014). Also studying children in multiethnic U.S. middle schools, Munniksmas and Juvonen (2012) found that the association between a greater number of cross-ethnic friendships and a stronger sense of safety was valid also longitudinally, although only for Latin American children, not Caucasians. A British study of South Asian 11-year-old school children showed that cross-ethnic friendships may protect them from discrimination's negative psychological effects (Bagci, Rutland, Kumashiro, Smith, & Blumberg, 2014).

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Empirical investigations of cross-ethnic friendship involving the academic domain are scarce. Using a two-wave, six-month longitudinal design, Kawabata and Crick (2015) examined associations with academic engagement among 9- to 10-year-olds in multiethnic schools, but found only a concurrent association with cross-ethnic friendship. Studies of friendships in more general terms have been conducted among high school students, indicating that academic involvement is promoted over time by both in-school friendships (Witkow & Fuligni, 2010) and academically oriented friendship groups (Crosnoe, Cavanagh, & Elder, 2003). This research is the background for our interest in investigating the longitudinal relationship of friendship with students from a variety of backgrounds with self-perceived academic competence in a diverse setting.

Building on Allport's (1954) contact hypothesis that contact with other groups reduces negative attitudes to them, we considered cross-ethnic friendships to be an acceptable, age-appropriate assessment in a diverse group of elementary students of multiethnic social integration. This was because the positive attitudes to intergroup contact that correspond with such friendships (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Pettigrew, 1998; Pettigrew & Tropp, 2005) are likewise linked to integration as an acculturation strategy (Berry, 1997; Zagefka & Brown, 2002). Indeed, positive attitudes to intergroup contact, integral to integration, seem to have the possibility of both predicting and resulting from the cross-group contact that friendship provides (Binder et al., 2009).

Links between the quality of children's social skills have likewise been found with children's academic competence (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000; DeRosier, 2004; Høglund & Leadbeater, 2004; Ladd, 1999). School-based programs focusing on social and emotional learning have been seen to improve academic school outcomes as well as school environments in relation to rule following and prosocial behavior (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Kilian & Kilian, 2011; Whitted & Dupper, 2005). It has been further suggested that the kinds of sociocognitive skills that promote prosocial behavior may also promote positive cross-ethnic interactions (Aboud & Levy, 2000). We were prompted by these studies to consider prosocial behavior as a possible longitudinal correlate to self-perceived academic competence.

Cross-sectional studies targeting the concept of prosocial behavior have established an association with academic achievement for both younger (e.g., Guo, Wang, & Zhang, 2005; Ma, 2003) and older (e.g., Li & Armstrong, 2009) children. Longitudinal evidence for the predictive effect of prosocial behavior on academic competence is more limited. Some of these studies did not study the unique contribution of prosocial behavior because they did not control for temporal covariance of each variable (e.g., Caprara et al., 2000; Malecki & Elliot, 2002), which otherwise tends to contribute to the predictive effects between different study variables. Other longitudinal studies of prosocial behavior and academic competence were conducted with North American primary school students in Grades 1–3 (Welsh, Parke, Widaman, & O'Neil, 2001) or high-achieving students in Chinese elementary schools (Chen, Rubin, & Li, 1997).

Our particular interest in cross-ethnic friendship and prosocial behavior was fostered by the current social climate of diverse schools in Sweden. A trend has been present in some schools, including those in the present study, of changes in demographics: increased students with immigrant backgrounds relates to students without immigrant background leaving the schools (Andersson, Östh, & Malmberg, 2010). At the same time, school performance is declining in some measures in Sweden (e.g., Organization for Economic Cooperation and Development, 2015). In the study schools, these issues plus concerns about the social environment of the students and anti-social behavioral trends were also identified by school leadership. Understanding the various elements that factor into these trends is necessary to intervene in them, and a desire to do so served as the primary footing of this study.

The possible longitudinal correlates, therefore, of cross-group friendship and prosocial behavior on self-perceived academic competence was investigated via the analytical approach of structural equation modeling, using a panel design, to be able to show the hypothesized relationships among these variables. This approach allowed us to control for both concurrent and temporal associations of study variables to ensure that potential results concern unique contributions of the independent variables. We further investigated if these processes manifested in similar ways among students from the majority and minority groups.

Method

Sample

The analytical sample included 201 Swedish elementary school students (105 boys, 96 girls). During the initial data collection, participants ranged in age from 8 to 14 years old ($M = 10.21$ years, $SD = 1.21$ years), with the majority being 9 to 12 years old (97%). There were 78 students in Grade 3, 44 in Grade 4, 46 in Grade 5, and 33 in Grade 6. In terms of family composition and characteristics, 76% lived with both parents and 36% of the participants were first- or second-generation immigrants to Sweden. The languages more often spoken by students besides Swedish were English (14%), Arabic (12%), and Somali (8%). However, in an indication of high levels of diversity among the students with immigrant background, participants spoke 24 languages besides Swedish and had background in 50 different countries outside of Scandinavia. In the analytical sample, 29% of children had both of their parents born abroad, as compared with 21% nationally for the current age range at the time of the data collection (Statistics Sweden, 2017b). The target sample for this study was all students in Grades 3–6 at these schools. As the target sample included 260 children, the 201 children in the analytical sample represent a response rate of 77%; the response rate was 55% among students with non-Scandinavian ethnic background.

The sample included pupils involved in a project targeting the social climate at two public elementary schools (kindergarten through Grade 6) in a town situated in southwest Sweden (population around 100,000). The schools were selected because of their multicultural school environment, their geographical proximity, and their similarities in terms of school

size and organizational structure. The overall project objective was to develop and test the effects of a school-based working model with children and parents to increase social integration. Two therapeutic social workers (of which one was also the project manager), employed by the municipality, worked at one of the schools (i.e., the project school) with group activities focusing on values directed at students and with network meetings with parents. The authors' role was to evaluate the project. At the time of the initial data collection, some of the characteristics reported by the municipality to describe the schools were as follows: the number of pupils was 309 and 347, the percentage of qualified teachers was 91% and 84%, and the percentage of pupils who reported feeling safe at school was 88% and 96% at the project school and the comparison school, respectively.

Procedure

Data were collected from students at two time points approximately six months apart (once in early December 2013 and again in late May 2014, at the end of both school terms of one school year). We call these time points Time 1 and Time 2, respectively. Project staff administered questionnaires in the Swedish language to students during regular school hours. School personnel were present to assist individual children who had difficulties understanding the Swedish language. The students and their parents were informed that participation was entirely voluntary and that they were free to discontinue participation at any time. Information about the study was made available in the major language groups of the parents. Participants were assured confidentiality. Completion of the questionnaires took approximately 20 min. A Regional Ethics Review Board approved the procedures and measures used in the study (reg. 592–13).

Measures

Self-perceived academic competence was assessed using five items created for the purpose of this study. This measure was inspired by Harter's (1985) Self-Perception Profile for Children and Ouviaen-Birgerstam's (1985) "I think I am" and adapted for use with Swedish children within the current age range. We choose not to use Harter's (1985) or Ouviaen-Birgerstam's (1985) scale, as the former was considered too complicated with its dual item-statements and the latter because it captured general giftedness, rather than focusing on academic competence specifically. Therefore, we constructed items with age-appropriate single statements specifically targeting academic competence using a conventional Likert-type response scale that harmonized with the design of the remaining measures in the questionnaire.

Participants rated on a 4-point Likert-type scale the following statements, with responses ranging from 1 (*disagree*) to 4 (*agree*): "I can do school assignment rather easily," "I am very good at schoolwork," "I usually know the answers to the questions at school," "I need a long time to do my schoolwork" (reversed), and "I am at least as smart as my classmates." The Cronbach's alpha values for this scale were .70 at Time 1 and .72 at Time 2, respectively, which is widely accepted as

adequate for five-item scales used in basic research (Vaske, Beaman, & Sponarski, 2017).

The students' self-perceived academic competence was validated against their results at one of the study schools from the Swedish National Tests in mathematics for students in Grades 3 and 6. Mathematics was chosen because the subtests' results had good reliability and because math performance has the best prognostic capability for later academic performance (Duncan et al., 2007). In Grade 3, student performance in the National Test is categorized as either achieved knowledge goals or not achieved knowledge goals. The National Test and the survey at Time 2 were administered at around the same time at the end of the school term. The reliability of the seven subtests in mathematics for Grade 3 was good (Cronbach's $\alpha = .79$). A correlation analysis (Pearson) showed that the relationship between student performance in the National Test and survey responses regarding self-perceived academic competence was only moderate ($r = .45$, $n = 43$, $p < .01$; two-tailed test), indicating that the survey questions in this area together constitute an instrument that measures their school achievement with limited validity.

Validation efforts were more successful with students in Grade 6; in this grade, students received a grade (A–F) in each subject in the National Test. An analysis of correlation (Pearson) showed that there was a relationship between self-perceived academic competence and performance on the National Test in mathematics ($r = .62$, $n = 14$, $p < .05$, two-tailed test). The relationship here was considerably stronger than in Grade 3 and thus shows that the survey questions regarding self-perceived academic competence can be used to measure academic performance among the sixth graders with acceptable validity.

Prosocial behavior was assessed using five items created for the purpose of this study, inspired by the scales of Harter's (1985) Self-Perception Profile for Children and Ouviaen-Birgerstam's (1985) "I think I am." As for academic achievement, we did not use any of these scales in their original versions, as the former was considered too complicated with its dual item-statements and the latter because its focus was too broad; in this case, targeting general relationship quality rather than children's actual behavior toward peers.

Participants rated on a 4-point Likert-type scale the following statements, with responses ranging from 1 (*disagree*) to 4 (*agree*): "I am often in trouble because of things I do at school" (reversed), "I often do things that I know I should not do" (reversed), "I am usually a good friend to everybody at school," "I often do mean things to other kids at school" (reversed), and "I almost always follow the rules at school." The Cronbach's alpha values for Time 1 and Time 2 were .73 and .79, respectively.

The students' self-reported prosocial behavior was validated at Time 2 by analyzing the relationship with the school incident reports from both schools during the second half of the study time. These reports were recorded when school personnel observed an incident considered to involve verbal abuse, physical abuse, or other antisocial behavior. The number of times a student in Grades 3–6 appeared as instigators in incident reports during the relevant time period correlated negatively with self-rated prosocial behavior ($r = -.40$, $n = 192$, $p < .001$,

two-tailed test). In other words, those students who appeared more often in incident reports also indicated in their survey responses that they had difficulty following rules and being a good friend, i.e. that they showed less prosocial behavior. However, the magnitude of the relationship indicates only limited validity. It should be noted, however, that the incident reports can only be regarded as a proxy for the concept of prosocial behavior as they address purported occasions of antisocial behavior rather than students' general attitudes in social interactions.

Cross-ethnic friendships was assessed using five items created for the purpose of this study. This measure was inspired by Sam and Berry's (1995) work on integration and adapted for use with Swedish children within the current age range. The items focused on time spent actively socializing with friends, a behavioral measure predictive of intergroup attitudes in cross-group friendships (Davies et al., 2011). Participants rated on a 4-point Likert-type scale the following statements, with responses ranging from 1 (*disagree*) to 4 (*agree*): "I often do things together with kids from both my own country and from other countries," "I am often together with friends from both my own country and from other countries at recess," "I have friends from both my own country and from other countries outside of school," "I often get together with friends from both my own country and from other countries," and "I think it is easy to be with kids from both my own country and from other countries." The internal consistency of this measure was good, with Cronbach's alpha values of .81 at Time 1 and .81 at Time 2. The word *countries* was chosen over the word *ethnicities* to simplify the language of the surveys for the target population, but the participants were informed that other ethnicities as well as other countries of origin were the focus of these questions.

We also performed two factor analyses (once at Time 1 and again at Time 2) with all 15 items from the three scales (principal axis factoring with varimax rotation and the eigenvalues set to 1.00). The results showed that the items divided into three distinct dimensions according to expectations with all factor loadings above .40 and no cross loadings, indicating that each measure was unidimensional.

Data analysis

We used Mplus version 7.11 (Muthén & Muthén, 2013) to conduct structural equation modeling with manifest variables. Each variable of self-perceived academic competence, prosocial behavior, and cross-ethnic friendship was included in the model for both Time 1 and Time 2. We used a design that controlled both for stability over time as well as for cross-sectional intercorrelations of all variables. The model included separate cross-lagged paths from prosocial behavior and cross-ethnic friendship at Time 1 to self-perceived academic competence at Time 2.

The model was estimated using the maximum likelihood estimation with robust standard errors (MLR), which handles data that are not normally distributed. To evaluate model fit, we used the comparative fit index (CFI) and the root mean square error of approximation (RSMEA), in addition to the chi-square value and the associated degrees of freedom. The CFI (Bentler, 1990; McDonald & Marsh, 1990) measures how

well the current model fits relative to a baseline model and can vary between 0 and 1. CFI values of .95 or greater are usually considered to be a good fit. The RMSEA (Browne & Cudeck, 1993; Steiger, Shapiro, & Browne, 1985) measures the amount of discrepancy between a specified model and the collected data. An RMSEA value of .05 or lower is usually considered a good fit. Gender effects and immigrant background effects were tested by multiple group comparisons for each path of interest using the Satorra-Bentler scaled chi-square difference test statistic (Td), which corrects for non-normality in the data (Satorra & Bentler, 2001). We calculated this following Muthén and Muthén's (2005) procedure.

We included participants who had complete data at the first time point of the data collection. The rate of nonresponse for individual measures at the second time point of the data collection ranged from 0% to 5%. For paired variables that were examined in the model, data coverage ranged from 95 to 100%. Little's missing completely at random (MCAR) test showed that missingness for the study variables did not differ from the requirements for data that are MCAR, $\chi^2(3, N = 201) = 4.12, p = .248$. To handle internal attrition, we used the method of full information maximum likelihood missing-data procedure provided by Mplus 7.1 as default. This procedure uses all available data from each participant and assumes that data are missing at random and is considered as one of the best procedures to handle missingness when data are MCAR (see Schafer & Graham, 2002; Schlomer, Bauman, & Card, 2010).

As the data collection was based on two schools that were likely to differ in terms of characteristics that have bearing on both social climate and school performance, we included additional paths in our model to control for nestedness between the schools. This was accomplished by adding a binary variable that separated between the two schools, which we used as a control variable for each of the study variables.

Results

Table 1 presents intercorrelations and standard deviations of the study variables. Paths between study variables in the results are presented as standardized estimates and evaluations of statistical significance were based on an alpha-level of 5%. Mean values for separate study variables did not change significantly across the two points of data collection, with all three p values $> .70$. Mean values of children's rating of their academic competence were 3.27 and

Table 1. Bivariate correlations and descriptive statistics for study variables ($N = 201$).

Variable	2	3	4	5	6	SD
1. Perceived academic competence (Time 1)	.62***	.26***	.26***	.25***	.15*	0.50
2. Perceived academic competence (Time 2)		.28***	.43***	.18**	.16*	0.47
3. Prosocial behavior (Time 1)			.64***	.02	.05	0.52
4. Prosocial behavior (Time 2)				.02	.10	0.50
5. Cross-ethnic friendship (Time 1)					.60***	0.65
6. Cross-ethnic friendship (Time 2)						0.65

* $p < .05$; ** $p < .01$; *** $p < .001$.

3.31 at Time 1 and Time 2, respectively. No gender differences in terms of academic competence were observed, either at Time 1, $t(199) = 0.70, p = .48$, or at Time 2, $t(189) = 0.58, p = .56$. Neither were differences observed between students with immigrant background (one or both parents born in another country, or the student him- or herself) and without immigrant background at Time 1, $t(199) = 0.43, p = .66$, or at Time 2, $t(199) = 0.97, p = .33$.

Overall model fit

To evaluate the overall model fit, we conducted a two-wave cross-lagged panel design with the hypothesized paths included, as presented in Figure 1. Except estimates aimed at controlling for temporal and cross-sectional variance and nestedness between the two schools, no additional paths or constraints were included in this model. The estimation of the hypothesized model yielded an excellent fit to the data, $\chi^2(4, N = 201) = 2.57, CFI = 1.00, RMSEA = .00$ [90% CI, .00 to .09].

Prosocial behavior and cross-ethnic friendship as determinants of perceived academic competence

Next, we examined the cross-lagged relationships from prosocial behavior and cross-ethnic friendship respectively at Time 1 to self-perceived academic competence at Time 2. Figure 1 presents the estimates for all paths examined.

It was hypothesized that higher levels of prosocial behavior would predict higher levels of self-perceived academic competence across time. This hypothesis was confirmed, indicating that children who complied with social and formal rules and expectations of the school were more likely to improve their self-perceived academic competence the following semester. Although this relationship was statistically significant, an explained variance of about 2% (as calculated by squaring the standardized estimate of the relationship; see Figure 1) leaves plenty of room for other factors explaining children's academic competence.

It was also hypothesized that increased cross-ethnic friendship ties would predict higher levels of self-perceived academic competence across time. However, a p value of .52 for this estimate indicates that this hypothesis was not confirmed. In other words, the results do not provide any support for believing that cross-ethnic friendship ties per se promote children's self-perceived academic competence.

Gender and immigrant background effects

A grouping variable was added to the original model to examine gender differences between girls ($n = 105$) and boys ($n = 96$). Tests for gender differences were performed by constraining each of the two cross-path relationships, one at a time. All comparisons across models were accomplished using the Satorra-Bentler scaled chi-square difference test statistic (Td), which corrects for non-normality in the data (Satorra & Bentler, 2001), and was calculated following the procedure described by Muthén and Muthén (2005). However, the results of this procedure did not reveal any gender differences across time for any of the cross-lagged relationships predicting self-perceived academic competence. Using the same method, differences between students with immigrant background (i.e., at least one parent born abroad; $n = 75$) and without immigrant background ($n = 126$) were examined and not found.

Discussion

The aim of this study was to investigate the longitudinal associations of cross-ethnic friendship and prosocial behavior on self-perceived academic competence of Swedish elementary school students. By using a statistical approach that allowed us to control for temporal associations of the study variables, the analyses revealed the unique impact of each independent variable. These associations have rarely been examined using such an approach in the North European context, one characterized by an increasing diversity in terms of ethnicity.

Unexpectedly, we found that only prosocial behavior had such a predictive effect on self-perceived academic competence six months later for elementary-age students. The results were true of both students with and without immigrant background, suggesting that similar mechanisms are at play even with the decreased association of positive behavioral patterns and academic attainment with students with immigrant background (e.g., Driessen & Merry, 2011; Phinney, 1990) and greater constellation of factors related to such students' experiences at school (e.g., Kao, 1999; Portes & MacLeod, 1996; Zhou, 1997). These findings contribute to previous research on children's academic competence by establishing prosocial behavior as a determinant not only in China and North America, but also in the North European cultural context. As compared with China, where students typically emphasize academic effort (Sebestyén, Ivaskevics, & Fülöp, 2017), and North America, for a long time characterized by diversity in terms of cultural values, including

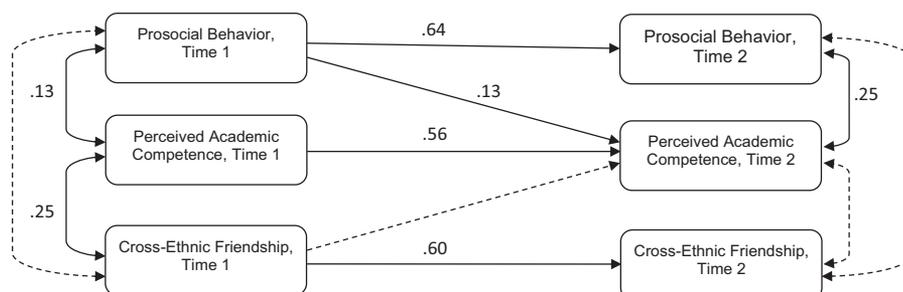


Figure 1. Structural model of relationships among perceived academic competence, prosocial behavior, and cross-ethnic friendship across Time 1 and Time 2 ($N = 201$). Dashed lines indicate that the relationship was not statistically significant at $p < .05$.

academic engagement and competitiveness (Sleeter, 2011), Sweden constitutes a distinctive setting. Nevertheless, this study shows that prosocial behavior also predicts academic competence in the North European context characterized by the cultural challenges that comes with an increasingly diverse society.

The study did not find that higher levels of cross-ethnic friendships relate to better self-perceived academic competence, contrary to our hypothesis that the possible benefits conferred by cross-ethnic friendships and increased social integration may extend to such improvement. Previous research has identified integration as an acculturation strategy as a positive factor for academic success, at least in students with immigrant background (e.g., Coatsworth, Maldonado-Molina, Pantin, & Szapocznik, 2005). We considered cross-ethnic friendship as a proxy for social integration, given that behavior (as well as cognition and emotions) is often used to read people's attitudes (Conrey & Smith, 2007; De Houwer, Gawronski, & Barnes-Holmes, 2013; Eagly & Chaiken, 1993). Here, the behavior was diversity in one's friends and the attitude diversity in friendship. Meta-analyses have found that "cross-group friendships appear to promote positive intergroup attitudes" (Davies et al., 2011, p. 345). However, our findings that cross-ethnic friendships did not seem to promote self-perceived academic competence indicate that cross-ethnic friendship and social integration may not have shared sociocognitive benefits and mechanisms. This was one of our starting points, and it was based on the relationship that has many times been seen between social integration and students' well-being (e.g., Cheung & Llu, 2000; Phinney, Horenczyk, Liebkind, & Vedder, 2001).

It can be argued that cross-ethnic friendship differs fundamentally from prosocial behavior and self-perceived academic competence in that its most basic determinants come from without. That is, children's possibilities to make cross-ethnic friendships are limited by the degree of prevalence of their own and other ethnic groups in their school or class. The incidence of cross-ethnic friendships may be determined by such factors more than the developmental and psychological issues at play that may predict a positive academic self-concept. Nevertheless, cross-ethnic friendships have been identified to have a host of prerequisites and effects reflecting beneficial factors to development (Kawabata & Crick, 2008; 2015), and its not being identified in this study to have a predictive relationship to self-perceived academic competence can have a variety of causes.

Practical advice originating from the results of this study should emphasize the role of personal characteristics that promote prosocial behavior. By implementing well-thought-out interventions intending to enhance children's prosocial behavior, educators may not only improve the psychosocial environment at their schools, but also help children perform better at school. So, how can prosocial behavior best be promoted? From their meta-analysis of 213 school-based intervention programs, Durlak et al. (2011) concluded that the enhancement of children's social and emotional learning does promote their prosocial behavior. They suggested three guiding aims that teachers should help children to achieve. First, develop self-awareness and self-management skills to achieve school and life success. Second, use social awareness and interpersonal skills to establish and maintain positive relationships. Third,

demonstrate decision-making skills and responsible behaviors in personal, school, and community contexts. For such programs to be effective, they further recommended (a) planning a connected and coordinated set of activities to be executed step by step, (b) using learning opportunities that allow for children's active participation, (c) devoting sufficient time focusing on children's learning of social and emotional skills, and (d) targeting specific social-emotional skills.

Limitations of the study

Although characterized by good reliability at both time points, the properties of the measure of cross-ethnic friendship had some limitations. By assessing friendship quantity rather than friendship quality, this measure does not capture the protective psychological functions that friendship quality may have for students with immigrant background (Bagci et al., 2014). Further, the items relating to cross-ethnic friendship require students to see themselves and their peers as members of only, or primarily, one ethnic group. However, it is not certain that students saw themselves or their peers in this way, or that students were conscious of their peers' ethnic backgrounds in such concrete terms.

The response rate for students with immigrant background was somewhat lower than for students without an immigrant background. This is not unusual (Stoop, Billiet, Koch, & Fitzgerald, 2010), but does imply a weakness in our ability to draw conclusions about moderating effects of nonimmigrant versus immigrant status. Other research has shown that students whose parents provide their consent to participate in research on sensitive questions often are those benefitting from better social conditions (Anderman et al., 1995), which can also relate to attitudes to cross-ethnic friendship, patterns of prosocial behavior, and self-perceived academic competence.

As another limitation, the study's two data collection points were only six months apart. A span of more than one year apart has been recommended in other studies involving academic success using similar statistical models with this age group (Marsh, Byrne, & Yeung, 1999). Although prosocial behavior proved to have a predictive effect on academic competence in only six months, cross-ethnic friendship did not. Had the time period between the two data collections been appropriately extended, it is not unlikely that the latter variable as well would have demonstrated a significant role in predicting academic competence. For the meantime, this is an issue for future research agenda.

Conclusions

This study's findings add to previous research by further establishing prosocial behavior as important for later academic competence, indicating that this relationship holds across multiple cultural contexts. Furthermore, the results did not imply different mechanisms for children with versus without immigrant background. However, the results of this study do not indicate that cross-ethnic social friendship ties per se in younger school-aged children in a diverse school predict self-perceived academic competence for children either with or without immigrant background. One possible difference between the two

behavioral concepts is that cross-ethnic friendship, to a larger extent than prosocial behavior, require interpersonal cooperation from the social surroundings. In light of the combination of this possibility and the findings of this study, one might want to emphasize that everybody would benefit from seeing integration as a reciprocal effort where individuals from each ethnic group invite individuals from other ethnic groups to interact.

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