

AUTHORS' ACCEPTED MANUSCRIPT VERSION - DO NOT CITE WITHOUT PERMISSION

Bagci, S. C., Kumashiro, M., Rutland, A., Smith, P. K., & Blumberg, H. (2017). Cross-ethnic friendships, psychological well-being, and academic outcomes: Study of South Asian and White children in the UK. *European Journal of Developmental Psychology, 14*, 190-205. DOI: 10.1080/17405629.2016.1185008

Cross-ethnic friendships, psychological well-being, and academic outcomes: Study of South Asian and White children in the UK

Sabahat C. Bagci

Isik University

Madoka Kumahiro

Adam Rutland

Peter K. Smith

Herbert Blumberg

Goldsmiths, University of London

Request for reprints should be sent to: Dr. Sabahat C. Bagci. Department of Psychology, Isik University, Sile, Istanbul 34980, Turkey; email: cigdem.bagci@isikun.edu.tr

Abstract

We examined whether two interpersonal processes, self-disclosure and affirmation of ideal self, mediated the relationship between cross-ethnic friendships and psychological well-being and academic outcomes. **We conducted a cross-sectional survey** with 484 secondary school children (243 White European, 241 South Asian British; $M_{age} = 11.10$, 220 boys, 264 girls) recruited from 37 multiethnic classrooms. Results of multilevel structural equation modeling revealed mediational effects of self-disclosure between cross-ethnic friendships and psychological well-being for only South Asian children. Affirmation also mediated the association between cross-ethnic friendships and both psychological well-being and academic outcomes for South Asian children. For White European children, affirmation mediated the association between cross-ethnic friendships and psychological well-being. Further analyses demonstrated that self-disclosure resulting from cross-ethnic friendship quality facilitated affirmation, which in turn promoted both sets of outcomes. Findings demonstrate that cross-ethnic friendships in multiethnic settings contribute to well-being through the generation of positive interpersonal processes.

Keywords: cross-ethnic, friendships, self-disclosure, affirmation, well-being

**Cross-ethnic friendships, psychological well-being, and academic outcomes: Study of
South Asian and White children in the UK**

Despite significant progress in the understanding of cross-ethnic friendships in relation to the formation of outgroup attitudes (e.g., Feddes, Noack, & Rutland, 2009), research investigating associations between cross-ethnic friendships and positive psychological development in multiethnic educational settings has been limited to few psychosocial and academic outcomes (e.g., Bagci, Rutland, Kumashiro, Smith, & Blumberg, 2014; Graham, Munniksmas, & Juvonen, 2014; Newgent, Lee, & Daniel, 2007). Although these studies have provided evidence for the benefits of cross-ethnic friendships for children, no studies, to our knowledge, examined mechanisms that link cross-ethnic friendships to positive psychological and academic outcomes. In this study, we aimed to investigate simultaneously two interpersonal processes - self-disclosure with cross-ethnic friends and cross-ethnic friend affirmation - as mediators between cross-ethnic friendship quality and psychological well-being and academic outcomes.

Previous research has shown that self-disclosure among friends is related to well-being, trust, and acceptance (Furman & Robbins, 1985), as well as increased involvement in school (Berndt & Keefe, 1995) and **academic achievement and adjustment (Berndt, 1999; Jourard, 1961)**. Reciprocated self-disclosure has been also found to be an important concept in cross-ethnic friendships (Turner, Hewstone, & Voci, 2007), being one of the most significant indicators of cross-ethnic friendships promoting positive intergroup relationships (Davies, Tropp, Aron, Pettigrew, & Wright, 2011). We suggested that self-disclosure would be an important mediating mechanism between cross-ethnic friendships and well-being for two reasons. First, a mutual sharing of information among different ethnic group members is likely to promote social-cognitive skills such as perspective-taking and empathy and thereby facilitate children's social interactions in multi-ethnic settings (Turner et al., 2007). In fact,

cross-ethnic friendships improve perspective taking (Eisenberg et al., 2009), resilience (Bagci, Rutland, Kumsahiro, Smith, & Blumberg, 2014), and social skills (Lease & Blake, 2005) and therefore equip children with necessary skills to moderate prejudicial attitudes (Fitzroy & Rutland, 2010). Second, this kind of information exchange across ethnic boundaries also provides children with a varied range of reference points to evaluate themselves (Antonio, 2004), and functions like '*social capital*', providing children with opportunities to access important information about being successful in an ethnically diverse society (Crosnoe, Cavanagh, & Elder, 2003).

We further argued that the relationship between cross-ethnic friendships and well-being would be mediated by cross-ethnic friend affirmation of the ideal self, defined as the degree to which cross-ethnic friends help bring out one's ideal self. **Affirmation of ideal self is likely to be facilitated by reciprocal self-disclosure and function as a mediator between cross-ethnic friendship quality on psychological well-being and academic outcomes.** The ideal self is the desired vision of an individual's future possible selves and motivates individuals to change, improve, and achieve (Higgins, 1987). Such possible selves relate to well-being and academic and motivational outcomes, and function as 'road maps' by increasing optimism and self-regulating behavior (e.g., Oyserman & James, 2011). Close others often have a key role in the formation of ideal self. Specifically, the Michelangelo Phenomenon suggests that close relationship partners can help move individuals closer to their ideal self via affirmation of the ideal self and therefore promote personal and relational well-being (Drigotas, Rusbult, Wieselquist, & Whitton, 1999; Rusbult, Finkel, & Kumashiro, 2009). Especially friendships serve as processes that justify such self-concepts (Derlega & Chaikin, 1975); people are receptive to how their friends see them, and friendships contribute to self-sufficiency by increasing self-awareness, consequently presenting a more ideal self (Cocking & Kennett, 1998).

Affirmation of the ideal self, especially when it originates from cross-ethnic friends, may contribute to positive outcomes by providing a source of support and encouragement from a variety of groups in a multiethnic setting which may offer a number of challenges such as ethnic discrimination (Bellmore, Nishina, You, & Ma, 2012) and negative stereotypes (Wolfe & Spencer, 1996). Research has shown that when expectations from other group members are negative, these can lead to stereotype threat and have negative influences on well-being (Steele & Aronson, 1995). As opposed to stereotype threat, cross-ethnic friend affirmation implies positive expectations from a variety of ethnic groups in a multiethnic environment, and indicate that the friend is understood, approved, and cared about (Rusbult, Reis, & Kumashiro, 2009), which may in turn promote the development of psychological well-being and academic outcomes.

In this paper, we focused on two ethnic groups within the UK for whom interpersonal processes involved in cross-ethnic friendships may be critical. We examined South Asian British children; apart from prevalent racist bullying (Eslea & Mukhtar, 2000) and integration difficulties (Maxwell, 2009), parental restrictions may also have detrimental effects on self-confidence among this ethnic group (Ghuman, 1999). Likewise, South Asians have been often found to experience negative stereotypes in the academic arena (e.g., Modood & Shiner, 1994). We also investigated our hypotheses among White European children; although this ethnic group now constitute numerical minorities in some ethnically diverse educational environments in the UK (Cohen, 2012), power imbalances between minority and majority status children often continue to exist in ethnically heterogeneous settings irrespective of absolute numbers of group numbers (Vervoort, Scholte, & Overbeek, 2010). We were specifically interested in secondary school children, as this period is critical for the development of friendships (Dunn, 2004) and self-concepts (Eccles, Wigfield, Flanagan, Miller, Reuman, & Yee, 1989). During this period, early adolescents are vulnerable to

discriminatory experiences (Steele, 1997) and start to spend a considerable amount of time away from home, approaching their peers as a source of belongingness, self-worth, and advice (Fuligni & Eccles, 1993).

In summary, we aimed to investigate how cross-ethnic friendships relate to psychological and academic outcomes by testing cross-ethnic self-disclosure and affirmation of ideal self as mediators. We hypothesized that the associations between cross-ethnic friendship quality and psychological well-being and academic outcomes would be mediated by self-disclosure (*Hypothesis I*) and affirmation of ideal self (*Hypothesis II*). We conducted mediational analyses separately for each group, since we suspected group differences may exist based on previous research which has shown that, compared to ethnic minority group members, ethnic majority group members are less likely to perceive cross-ethnic friendships as important (Pica-Smith, 2011). Although cross-ethnic friendships have been related to positive outcomes among both ethnic minority (Graham et al., 2014) and majority status children (Lease & Blake, 2005), previous research examining relationships between cross-ethnic friendships and psychosocial outcomes has either concentrated on ethnic minorities (Graham et al., 2014) or ethnic majorities (Mendoza-Denton & Page-Gould, 2008), and has not yet studied interpersonal processes that may mediate these relationships.

We also sought to test the relationship between self-disclosure and affirmation. We predicted that self-disclosure would mediate the relationship between cross-ethnic friendship quality and affirmation (*Hypothesis III*). Due to the temporal sequence of two processes, we suggested that self-disclosure would develop prior to affirmation of ideal self (Weber & Carter, 1998), since for cross-ethnic friends to believe that the target can achieve the most important dreams in life (affirmation), they should initially talk about these dreams (self-disclosure). Therefore, we hypothesized that self-disclosure would be a mediator between quality and affirmation. The suggested model is illustrated in Figure 1.

(Figure 1 about here)

Method

Participants

The sample ($N = 484$) included 243 White European and 241 South Asian British children ($M_{\text{age}} = 11.10$, $SD = .30$; 220 boys, 264 girls) attending multi-ethnic secondary schools in London, UK¹. The White group was composed of 173 White British and 70 European students; whereas the South Asian British group was composed of 64 Indian, 121 Pakistani, 37 Bangladeshi and 19 other South Asian children. A total of 16 children (2.5% of White Europeans and 3.2% of South Asians) who reported no cross-ethnic friends were excluded from the study.

Procedure

Data were collected from eight multiethnic secondary schools (35 classrooms). Students and teachers were informed specifically about the ethical aspects of the research, while parents were given opt-out forms. The questionnaires were completed within 40 minutes. The participating schools were all comprehensive state secondary schools and were located in lower-middle socio-economic status suburban areas of London.

Materials

Cross-ethnic friendship quality. Participants were asked to think about their three best cross-ethnic friends and rate each friend on frequency of interaction (“How much do you interact with this friend?”) ranging from 1 (*not very frequently*) to 5 (*very frequently*); and closeness (“how close do you feel to this friend?”) ranging from 1 (*not very close*) to 5

¹Most classrooms contained a diverse range of other ethnic groups, including Black, Other Asian, Middle Eastern, and mixed ethnic groups. However, since the current study focused on two main ethnic groups and the sample sizes for other groups were small, we did not include data from other ethnic group children.

(*extremely close*). A composite variable of “friendship quality” was then indicated by the mean interaction and closeness for three best cross-ethnic friends².

Self-disclosure with cross-ethnic friends. Two five-item scales designed for the purpose of the study assessed self-disclosure to cross-ethnic friends and cross-ethnic friend self-disclosure (see Appendix; e.g., “How often do you talk to one of your cross-ethnic friends about your dreams and fears for future?”). Items were adapted from previous studies that assessed self-disclosure in cross-ethnic friendships (Turner et al., 2007). The response scale ranged from 1 (*none of the time*) to 5 (*all of the time*). The reliability of scales was satisfactory (Cronbach’s alpha = .77 and .83, respectively).

Cross-ethnic friend affirmation. A six-item scale designed for the purpose of this study was used to measure how much students’ cross-ethnic friends help elicit the students’ ideal self (see Appendix; e.g., “My cross-ethnic friends bring out the best in me”). Items were similar to previous affirmation measures (Drigotas et al., 1999). The responses were reported on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach’s alpha coefficient showed satisfactory reliability (.72).

Psychological well-being. Psychological well-being was indicated by two concepts. Since we were interested in functional and positive well-being, we used a 14-item well-being measure (Warwick-Edinburgh Mental Well-Being Scale, Tennant et al., 2007) which assesses positive mental well-being (e.g., “I’ve been feeling relaxed”) and a four-item resilience scale (MADIC, 1991-1998, Bartko & Eccles, 2003, e.g., “How often do you think you are good at learning from their mistakes”). The responses were reported on a five-point Likert scale

² In cases where children reported closeness and interaction for less than three friends (37% for White Europeans and 40% for South Asians), means were computed based on the closeness and interaction of one or two cross-ethnic friends.

ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The scales had moderate to good reliability (Cronbach's alpha = .89 for mental well-being and .64 for resilience).

Academic outcomes. Academic outcomes were represented by two indicators. Academic-self-concept was assessed by self-reported academic abilities on three subjects (Maths, English, and Science; Gogol et al., 2014). Responses were based on a five-point Likert scale ranging from 1 (*poor*) to 5 (*excellent*). The mean academic self-concept was computed by averaging responses across three subjects. Academic level was measured by self-report National Curriculum levels³ for three subjects (Maths, English, and Science). These numerical scores were then averaged across three subjects.

Data strategy

Multilevel Structural Equation Modelling (Curran, 2003) was used to present a systematic observation of the relationships between main variables. This method was advantageous for the current data, allowing the test of multiple mediators and outcomes in the model simultaneously. The fact that students were nested within classrooms necessitated a preliminary investigation of a multilevel procedure (Raudenbush & Bryk, 2002). Since variance explained at the classroom level was large for academic outcomes (ICC between .05-.24), classroom structure was accounted in data analysis.

Latent variables were used to represent all variables. Psychological well-being was indicated by mental well-being and resilience. Academic outcomes were indicated by academic self-concepts and academic level. Self-disclosure was indicated by self-disclosure

³ The National Curriculum in the English and Welsh educational system is based on National Curriculum Levels (NCL). These levels indicate children's academic level attained at the time of measurement. NCL range from 1 to 8, with level 8 being the most advanced level. Each level is further split into sublevels, with 'a' as the best, 'b' as the middle and 'c' as the bottom of that level. For Year 7 students, these levels ranged from 2c to 7a, which were converted to numerical scores from 1 (2c) to 18 (7a), with higher scores indicating higher levels attained.

to and from cross-ethnic friends. Affirmation was represented by two observed variables combined with the partial disaggregation method by collapsing the total number of items to two or three indicators (Bagozzi & Heatherton, 1994). This is advantageous for modelling a complex higher-order model and reducing the level of random error (Von der Heide & Scott, 2007). Finally, cross-ethnic friendship quality was represented by two observed variables: frequency of interaction and closeness with cross-ethnic friends.

The following goodness of fit indices were used: the chi-square test, the root-mean-square error of approximation (RMSEA), standardized root-mean-square residual (SRMR), and the comparative fit index (CFI). A good fit is achieved by a non significant chi-square test, a CFI value greater than 0.95, an RMSEA of less than .06, and an SRMR of less than .08 (Hu & Bentler, 1999).

Using Mplus Version 7 (Muthén & Muthén, 1998-2016), initially the fit of measurement model across groups was tested. Structural models included the mediation of cross-ethnic friend affirmation and self-disclosure in the relationship between cross-ethnic friendship quality, and psychological well-being and academic outcomes. The maximum likelihood estimation was used in competitive structural models. Baron and Kenny's (1986) basic mediational approach was applied by using the chi-square difference test to compare the fit of models (e.g., Wagner, Christ, Pettigrew, Stellmacher, & Wolf, 2006). First, models including no a priori paths between mediators were compared to models with a priori paths between mediators. Next, partial mediation models were compared to full mediation models to demonstrate whether the associations between cross-ethnic friendship quality and outcome variables were still intact after the addition of the mediators. Indirect effects were computed to test the significance of the suggested mediational pathways.

Results

Preliminary analyses

Means and standard deviations of main study variables and bivariate correlations are listed in Table 1.

(Table 1 about here)

Multilevel structural equation models

Measurement model. A confirmatory factor analysis (CFA) was performed to test the fit of our measurement model. The measurement model was acceptable for both groups, $\chi^2(25) = 70.98, p < .05, CFI = .94, RMSEA = .08, SRMR = .06$ for White Europeans and $\chi^2(25) = 38.57, p < .05, CFI = .98, RMSEA = .05, SRMR = .04$ for South Asians. All observed variables significantly loaded on latent variables.

Mediation models. Initially, partially mediated models including direct paths from cross-ethnic friendship quality to dependent measures were estimated. For this initial model, no a priori path among the mediators was included. The models yielded good fit for both White Europeans, $\chi^2(71) = 102.81, p < .05, CFI = .95, RMSEA = .04, SRMR = .07$ and South Asians, $\chi^2(71) = 74.18, p > .05, CFI = .99, RMSEA = .01, SRMR = .07$. This partially mediated model (baseline model) revealed that for both groups, quality predicted self-disclosure and affirmation and affirmation predicted psychological well-being and academic outcomes. Self-disclosure was only related to South Asian children's psychological well-being. Quality was not significantly associated with any outcomes. Table 2 presents model fits and path coefficients for all associations.

(Table 2 about here)

Next, baseline models were compared to models where a path from self-disclosure to affirmation was added. These models yielded significantly better fit compared to models with no path between self-disclosure and affirmation, demonstrated by significant chi-square difference tests, $\Delta\chi^2(1) = 16.63$ for White Europeans and $\Delta\chi^2(1) = 11.53$ for South Asians,

both $p < .05$. The path from self-disclosure to affirmation was significant for White European ($B = .25, SE = .06, p < .001$), and South Asian children ($B = .18, SE = .05, p < .01$). We also checked whether the model improved by changing the path direction among the mediators and the path direction between cross-ethnic friendship quality and the mediators; although paths including the opposite directions were generally significant, no significant improvement was observed in alternative models.

To ascertain whether there existed a full mediation, these models were compared to fully mediated models where direct paths from cross-ethnic friendship quality to outcome variables were excluded. Chi-square difference tests were non-significant, $\Delta\chi^2(2) = 5.80$ for White Europeans and $\Delta\chi^2(2) = 1.19$ for South Asians, all $p > .05$. Therefore, the fully mediated models were not significantly worse than the partially mediated models. Hence, the simpler model with no direct paths from quality to outcome variables was retained.

Additionally, whether self-disclosure fully or partially mediated the effects of quality on affirmation was tested by excluding the direct path from quality to affirmation. The results of chi-square difference tests were significant, $\Delta\chi^2(1) = 10.76$ for White Europeans and $\Delta\chi^2(1) = 28.10$ for South Asians, both $p < .05$. This demonstrated the retention of the partially mediated model.

Figures 2 and 3 illustrate final models for each ethnic group. Results confirmed that for White Europeans, affirmation was significantly associated with psychological well-being ($B = .47, SE = .14, p < .01$) and marginally significantly associated with academic outcomes ($B = .53, SE = .29, p = .06$). Self-disclosure did not relate to any outcome variables for this group. For South Asian children, affirmation was significantly associated with both psychological well-being and academic outcomes ($B = 1.60, SE = .47, p < .01$ and $B = .55, SE = .14, p < .05$, respectively). Self-disclosure was significantly related only to psychological well-being ($B = .14, SE = .06, p < .05$).

(Figures 2 and 3 about here)

Indirect effects were computed with delta method (Sobel test with added covariance). Affirmation fully mediated the associations between quality and both dependent measures for South Asian children, while it mediated the associations between quality and psychological well-being for White European children. Self-disclosure significantly mediated the associations between quality and psychological well-being for South Asian children. For both groups, quality-affirmation link was mediated by self-disclosure and self-disclosure-outcomes link was mediated by affirmation. Table 3 presents indirect effects.

(Table 3 about here)

Discussion

This study examined how cross-ethnic friendship quality relate to psychological well-being and academic outcomes amongst ethnic minority and majority status children in a multiethnic setting by investigating two interpersonal mechanisms, self-disclosure and affirmation, as mediators. Our initial hypothesis (Hypothesis I) stated that the associations between cross-ethnic friendship quality and psychological well-being and academic outcomes would be mediated by self-disclosure. We found partial evidence for this; self-disclosure mediated the relationship between quality and psychological well-being only among South Asian children. Hence, specifically for these ethnic-minority status children, self-disclosure with cross-ethnic friends may be beneficial in promoting psychological outcomes in a multiethnic context. One reason for the lack of significant associations for White children might be because self-disclosure with cross-ethnic friends may be less relevant for their adjustment in a setting where the majority group still yield power and set societal norms (Wagner et al., 2006). Self-disclosure may be therefore a particularly important process for South Asians who often experience a discrepancy between values emphasized in school and family settings (Ghuman, 1999). Future research should examine in more depth which

particular mechanisms may lead White children to perceive such cross-ethnic relationships as less important compared to other ethnic groups. **For example, awareness of historical and current power imbalances between minority and majority groups may influence how White children evaluate their cross-ethnic friendships.**

We also predicted that cross-ethnic friend affirmation would be a mediator between quality and psychological well-being and academic outcomes (Hypothesis II). Our findings showed evidence for the effective role of affirmation. Affirmation fully mediated the associations between quality and psychological and academic outcomes among South Asian children. For White European children, affirmation mediated the relationship between quality and psychological well-being. Extending research on partner affirmation in close relationships (Rusbult, Reis, et al., 2009), we found evidence demonstrating that the extent to which cross-ethnic friends helped in the pursuit of the ideal self was related to well-being among both minority and majority group children.

For South Asian children, affirmation was strongly related to both outcomes. Hence, affirmation of ideal self may be an effective resource that functions as a protective mechanism supporting resilience in a challenging multiethnic environment where perceived ethnic discrimination and negative stereotypes might have detrimental effects for ethnic minority children, especially for South Asians who often report high levels of ethnic harassment in schools (e.g., Bagci et al., 2014; Eslea & Mukhtar, 2000). The influence of close cross-ethnic friendships via affirmation may be of special advantage that boosts resilience effectively for this ethnic group. For White Europeans also, affirmation related to both outcomes. This shows that cross-ethnic friendships do not only improve outgroup attitudes and social skills as previously suggested (Lease & Blake, 2005), but they also relate to the pursuit of ideal self among both ethnic minority and majority status children. Although affirmation was associated with both outcomes among White children, it did not significantly

mediate the association between quality and academic outcomes. Ethnic majority status children may benefit less from cross-ethnic friend affirmation in terms of academic outcomes, since they are less likely to be negatively stereotyped in the academic arena (Steele, 1997) and therefore may not need to be affirmed by their cross-ethnic friends in relation to academic outcomes.

We also found evidence for the mediating role of self-disclosure between cross-ethnic friendship quality and affirmation for both groups (Hypothesis III). This finding fits our initial theoretical assumption about the temporal sequence between the mediators. Self-disclosure is one of the basic interpersonal processes in friendships and is accompanied with reciprocal trust, loyalty, and commitment (Bauminger, Finzi-Dottan, Chason, & Har-Even, 2008). It is possible that self-disclosure in cross-ethnic friendships leads to affirmation from cross-ethnic friends through the development of these reciprocal processes. As individuals start to gain knowledge about each other's inner world and establish mutual trust and understanding, then they can affirm ideal selves which consequently foster positive development in children.

A few limitations of the study should be considered. First, we were unable to show whether the observed associations were unique to cross-ethnic friendships since we could not make a direct comparison with same-ethnic friendships. Nevertheless, previous research suggests that cross-ethnic friendships may be more important in relation to positive developmental outcomes, since these types of friendships are more likely to provide psychosocial benefits compared to same-ethnic ones in multiethnic settings (Graham et al., 2014). Future research should look at cross-ethnic and same-ethnic friendships jointed to compare their effects. There is a need to address the questions about the generalizability of the findings to other settings. This study was conducted in a highly ethnically diverse city context, where children have daily interactions with cross-ethnic peers (Ford, 2008). In such

multiethnic educational settings, cross-ethnic friendships may be a more important aspect of children's academic lives, compared to more homogeneous settings.

Second, we were unable to state any conclusion about the causal relationships between variables due to the cross-sectional nature of the study. It is conceivable that well-being may increase cross-ethnic friendship quality and cross-ethnic interpersonal processes such that well-adjusted children may have better social skills leading to more proficient intergroup peer relationships (Lease & Blake, 2005). Cross-ethnic friend self-disclosure and affirmation may also generate higher quality cross-ethnic friendships which may be in turn associated with higher psychological and academic outcomes. Although we found that the suggested directional models were the best fitting ones, longitudinal studies should be conducted to fully understand the causal mechanisms between these variables. Another methodological issue was the relatively lower reliability of the resilience scale which may be due to the difficulty of items for children. Future research may use more appropriate measures for this construct.

Third, other mechanisms may play a role in the association between cross-ethnic friendships and psychological well-being and academic outcomes. For example, cross-ethnic friendships are related to social competence and skills (Kawabata & Crick, 2008; Lease & Blake, 2005) and decrease intergroup anxiety (Turner et al., 2007). Moreover, previous research has shown that cross-ethnic friendships may buffer the negative effects of perceived ethnic discrimination on psychological well-being (Bagci et al., 2014). Therefore, cross-ethnic friendships may also foster positive development through decreasing perceived discrimination and intergroup anxiety and increasing social competence. Similarly, future research may incorporate the role of perspective-taking and theory of mind in the association between cross-ethnic friendships and well-being, since such social-cognitive abilities may

moderate negative outgroup attitudes (e.g., Fitzroy & Rutland, 2010) and therefore promote well-being.

In summary, this study makes an important contribution to cross-ethnic friendship literature by highlighting for the first time the role of interpersonal processes in cross-ethnic friendships in relation to children's psychological well-being and academic outcomes in multiethnic educational settings. Compared to the majority of studies which demonstrated that cross-ethnic friendships are unstable and low in friendship quality (Graham & Cohen, 1997), these findings show that in current multiethnic contexts, cross-ethnic friendships are strong enough to generate important interpersonal processes that contribute to positive outcomes in childhood. We found evidence for two critical interpersonal mechanisms, self-disclosure and affirmation, suggesting that interpersonal processes in cross-ethnic friendships may serve as important resources that contribute to the psychological and academic functioning of both ethnic majority and minority status children in multiethnic school settings.

References

- Antonio, A. L. (2004). The influence of friendship groups on intellectual self-confidence and educational aspirations in college. *The Journal of Higher Education, 75*, 446-471.
- Bagci, S. C., Rutland, A., Kumashiro, M., Smith, P. K., & Blumberg, H. (2014). Are minority status children's cross-ethnic friendships beneficial in a multiethnic context?. *British Journal of Developmental Psychology, 32*, 107-115.
- Bagozzi, R. P., & Heatherton, T. F. (1994). A general approach to representing multifaceted personality constructs: Application to state self-esteem. *Structural Equation Modeling, 1*, 35-67.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1183.
- Bartko, T. W., & Eccles, J. S. (2003). Adolescent participation in structured and unstructured activities: A person-oriented analysis. *Journal of Youth and Adolescence, 32*, 233-241.
- Bauminger, N., Finzi-Dottan, R., Chason, S., & Har-Even, D. (2008). Intimacy in adolescent friendship: The roles of attachment, coherence, and self-disclosure. *Journal of Social and Personal Relationships, 25*, 409-428.
- Bellmore, A. D., Nishina, A., You, J., & Ma, T. (2012). School context protective factors against peer ethnic discrimination across the high school years. *American Journal of Community Psychology, 49*, 98-111.
- Berndt, T.J. (1999). Friends influence on students' adjustment to school. *Educational Psychologist, 34*, 15-28.
- Berndt, T. J., & Keefe, K. (1995). Friends' influence on adolescents' adjustment to school. *Child development, 66*, 1312-1329.

- Cocking D. & J. Kennett (1998). Friendship and the self. *Ethics, 108*, 502-527.
- Cohen, N. (2012, 11 December). White ethnic Britons in minority in London. *Financial Times*. Available from: <http://www.ft.com/cms/s/0/4bd95562-4379-11e2-a48c-00144feabdc0.html#axzz2JIw57mFO>.
- Crosnoe, R., Cavanagh, S., & Elder, G. (2003). Adolescent friendships as academic resources: The intersection of friendship, race, and school disadvantage. *Sociological Perspectives, 46*, 331–352.
- Curran, P. J. (2003). Have multilevel models been structural equation models all along? *Multivariate Behavioral Research, 38*, 529-569.
- Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-Group Friendships and Intergroup Attitudes: A Meta-Analytic Review. *Personality and Social Psychology Review, 15*, 332-351.
- Derlega, V. J., & Chaikin, A. L. (1975). *Sharing intimacy: What we reveal to others and why?* New Jersey: Prentice-Hall, Inc., Englewood Cliffs.
- Drigotas, S. M., Rusbult, C. E., Wieselquist, J., & Whitton, S. W. (1999). Close partner as sculptor of the ideal self: behavioral affirmation and the Michelangelo phenomenon. *Journal of Personality and Social Psychology, 77*, 293-323.
- Dunn, J. (2004). *Children's friendships: the beginnings of intimacy*. Malden, MA: Blackwell.
- Eccles, J. S., Wigfield, A., Flanagan, C. A., Miller, C., Reuman, D. A., & Yee, D. (1989). Self-concepts, domain values, and self-esteem: Relations and changes at early adolescence. *Journal of Personality, 57*, 283-310.
- Eisenberg, N., Sallquist, J., French, D. C., Purwono, U., Suryanti, T. A., & Pidada, S. (2009). The relations of majority-minority group status and having an other-religion friend to Indonesian youths' socio-emotional functioning. *Developmental Psychology, 45*, 248–259.

- Eslea, M., & Mukhtar, K. (2000). Bullying and racism among Asian school children in Britain. *Educational Research, 42*, 207-217.
- Feddes, A. R., Noack, P., & Rutland, A. (2009). Direct and extended friendship effects on minority and majority children's interethnic attitudes: A longitudinal study. *Child Development, 80*, 377-390.
- FitzRoy, S., & Rutland, A. (2010). Learning to control ethnic intergroup bias in childhood. *European Journal of Social Psychology, 40*, 679-693.
- Ford, R. (2008). Is racial prejudice declining in Britain? *British Journal of Sociology, 59*, 609-636.
- Fuligni, A. J., & Eccles, J. S. (1993). Perceived parent-child relationships and early adolescents' orientation toward peers. *Developmental Psychology, 29*, 622-632.
- Furman, W., & Robbins, P. (1985). What's the point? Issues in the selection of treatment objectives. In B. H. Schneider, K. H. Rubin, and J. E. Ledingham (Eds.), *Children's Peer Relations: Issues in Assessment and Intervention*. New York Springer-Verlag.
- Ghuman, P. A. S. (1999). *Asian Adolescents in the West*. Leicester: BPS Books.
- Gogol, M., Brunner, T., Goetz, R., Martin, S., Ugen, U., Keller, et al. (2014). "My Questionnaire is Too Long!" The assessments of motivational-affective constructs with three-item and single-item measures. *Contemporary Educational Psychology, 39*, 188-205.
- Graham, J. A., & Cohen, R. (1997). Race and sex factors in children's sociometric ratings and friendship choices. *Social Development, 6*, 355-372.
- Graham, S, Munniksma, A., & Juvonen, J. (2014). Psychosocial benefits of cross-ethnic friendships in urban middle schools. *Child Development, 85*, 469-483.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review, 94*, 319-340.

- Hu, L., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.
- Jourard, S. M. (1961). Self-disclosure scores and grades in nursing college. *Journal of Applied Psychology, 45*, 244-247.
- Kawabata, Y., & Crick, N. R. (2008). The role of cross-racial/ethnic friendships in social adjustment. *Developmental Psychology, 44*, 1177-1183.
- Lease, A. M., & Blake, J. J. (2005). A comparison of majority-race children with and without a minority-race friend. *Social Development, 14*, 20-41.
- Maxwell, R. (2009). Caribbean and South Asian identification with British society: The importance of perceived discrimination. *Ethnic and Racial Studies, 32*, 1449-1469.
- Mendoza-Denton, R., & Page-Gould, E. (2008). Can cross-group friendships influence minority students' well-being at historically white universities? *Psychological Science, 19*, 933-939.
- Modood, T., & Shiner, M. (1994). *Ethnic minorities and higher education: Why are there differential rates of entry?* London: Policy Studies Institute.
- Muthén, L. K., & Muthén, B. O. (1998-2016). *Mplus User's Guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.
- Newgent, R., Lee, S., & Daniel, A. (2007). Interracial best friendships: Relationships with 10th graders' academic achievement level. *Professional School Counseling, 11*, 98-104.
- Oyserman, D., & James, L. (2011). Possible identities. In S. Schwartz, K. Luyckx, & V. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 117-148). New York, NY: Springer-Verlag.
- Pica-Smith, C. (2011). Children's perceptions of interethnic and interracial friendships in a

- multiethnic school context. *Journal of Research in Childhood Education*, 25, 119-132.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods (2nd ed.)*. Thousand Oaks, CA: Sage.
- Rusbult, C.E., Finkel, E.J., & Kumashiro, M. (2009). The Michelangelo Phenomenon. *Current directions in Psychological Science*, 18, 305-309.
- Rusbult, C. E., Reis, H. T., & Kumashiro, M. (2009). *On the regulation of ongoing relationships: Partner affirmation, perceived responsiveness, and mutual cyclical growth*. Unpublished manuscript, Vrije Universiteit Amsterdam, Amsterdam, The Netherlands.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613-629.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69, 797-811.
- Tennant, J., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., ...& Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-Being Scale; Development and UK validation. *Health Quality of Life Outcomes*, 5, 63.
- Turner, R. N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology*, 93, 369-388.
- Vervoort, M. H., Scholte, R. H., & Overbeek, G. (2010). Bullying and victimization among adolescents: The role of ethnicity and ethnic composition of school class. *Journal of Youth and Adolescence*, 39, 1-11.
- Von der Heide, T., & Scott, D. R. (2007). Partial aggregation for complex structural equation

modeling (SEM) and small sample sizes: an illustration using a multi-stakeholder model of cooperative interorganisational relationships (IORs) in product innovation.

Paper presented at the 21st ANZAM 2007 Conference, Sydney, 4-7 December.

Wagner, U., Christ, O., Pettigrew, T. F., Stellmacher, J., & Wolf, C. (2006). Prejudice and minority proportion: Contact instead of threat effects. *Social Psychology Quarterly*, 69, 380-390.

Weber, L. R., & Carter, A. (1998). On constructing trust: Temporality, self-disclosure, and perspective-taking. *International Journal of Sociology and Social Policy*, 18, 7-26.

Wolfe, C. T., & Spencer, S. J. (1996). Stereotypes and prejudice: Their overt and subtle influence in the classroom. *American Behavioral Scientist*, 40, 176-185.

Appendix

Self-disclosure and affirmation scale items (grouped according to their representation in the SEM model)

Self-disclosure (1). Self-disclosure to cross-ethnic friends (How often do you talk to one of your cross-ethnic friends about how you are feeling; how well you are doing at school; your dreams and fears for the future; what you want to be when you grow up; an important secret you have)

Self-disclosure (2). Cross-ethnic friend self-disclosure (How often do one of your cross-ethnic friends talk to you about how he/she is feeling; how well he/she is doing at school; his/her dreams and fears for the future; what he/she wants to be when he/she grows up; an important secret he/she has).

Cross-ethnic friend affirmation (1). My cross-ethnic friends understand what kind of a person I am; believe that I can achieve the most important dreams in life; my cross-ethnic friends bring out the best in me.

Cross-ethnic friend affirmation (2). My cross-ethnic friends make me feel like a better person; encourage me to talk about all kinds of future for me, sometimes make me feel my dreams are stupid (R).