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'Cross-ethnic friendship self-efficacy': A new predictor of cross-ethnic friendships among

children

Abstract

Across two studies ($N_{Study\ 1} = 101$; $N_{Study\ 2} = 262$) conducted among children in the UK, we incorporate Bandura's (1986) self-efficacy theory to intergroup contact literature and introduce the new construct of cross-ethnic friendship self-efficacy (CEFSE), the belief that one can successfully form and maintain high quality cross-ethnic friendships. Study 1 examined whether sources of CEFSE beliefs (prior contact, indirect contact, social norms, and intergroup anxiety) predicted higher quality cross-ethnic friendships through CEFSE. Study 2 replicated Study 1 and extended it by including perceived parental cross-ethnic friendship quality as a further predictor. In both studies, sources of self-efficacy beliefs (except social norms) were related to CEFSE, which predicted higher quality cross-ethnic friendships. Study 2 demonstrated that parental cross-ethnic friendships had direct and indirect associations with children's cross-ethnic friendships through sources of CEFSE and CEFSE beliefs. Findings are discussed in the light of self-efficacy and intergroup contact theories.

Keywords: Cross-ethnic friendships; Self-efficacy; Intergroup contact; Parents; Children

'Cross-ethnic friendship self-efficacy': A new predictor of cross-ethnic friendships among children

In a world that is becoming increasingly diverse, it is critical to understand how people establish successful interpersonal relationships that cross group boundaries. For children, it may be challenging to navigate these complex relationships especially in educational settings where ethnic and cultural diversity is now an important aspect of many children's schooling experiences. Although such ethnically diverse school settings provide children with opportunities to form a diverse social network (Bagci, Kumashiro, Smith, Blumberg, & Rutland, 2014; Sturgis, Brunton-Smith, Kuha, & Jackson, 2014), intergroup contact is often avoided (Paolini, Harwood, Hewstone, & Neumann, 2018) and for many, cross-group friendships are difficult to initiate and maintain (Kao & Joyner, 2004; Pica-Smith, 2011; Shelton, Trail, West, & Bergsieker, 2010). Despite their relative rarity, however, high quality cross-group friendships provide unique benefits for children, not only in relation to improved attitudes towards different group members (Aboud, Mendelson, & Purdy, 2003; Feddes, Noack, & Rutland, 2009; Turner, Hewstone, & Voci, 2007; Wölfer, Schmid, Hewstone, & Zalk, 2016), but also regarding positive developmental outcomes such as improved social skills (Lease & Blake, 2005), increased psychological resilience and sense of safety (Bagci, Rutland, Kumashiro, Smith, & Blumberg, 2014; Munniksma & Juvonen, 2012), as well as increased academic well-being (Bagci, Kumashiro, Rutland, Smith, & Blumberg, 2017), and greater openness to experience (Vezzali, Turner, Capozza, & Triffiletti, 2018). Moreover, research shows that cross-group friendships in childhood have long-term consequences such as the formation of more positive outgroup attitudes in adolescence (Wölfer et al., 2016) and a more diverse social network in adulthood (Emerson, Kimbro, & Yancey, 2002). Therefore, more research is needed to understand how

children engage in cross-ethnic friendships and identify the conditions that encourage cross-ethnic friendship initiation and maintenance.

In this paper we extend existing research on the formation of cross-ethnic friendships by introducing the concept of 'cross-ethnic friendship self-efficacy' (CEFSE), the belief that one can successfully form and maintain a high-quality cross-ethnic friendship, through two studies conducted among secondary school children in the UK. Drawing on Bandura's model of self-efficacy (1986) and previous theoretical models in the intergroup contact literature (Confidence in Contact Model, Turner & Cameron, 2016), we examined CEFSE in relation to four dimensions of self-efficacy beliefs suggested by Bandura (1986) and tested the associations between CEFSE and cross-ethnic friendship quality (Studies 1 and 2). Next, conceptualizing CEFSE and its sources as mediating variables, we investigated whether perceived parental cross-ethnic friendship quality predicted cross-ethnic friendship quality among both majority and minority ethnic status children (Study 2).

CEFSE Model and Cross-ethnic Friendships

We argue that in order to better understand the formation of cross-group interactions among children, we first need to investigate whether children have sufficient motivational background to engage in such interactions that are often assumed to be challenging and anxiety-provoking (e.g., Shelton et al., 2010). Recent theoretical work in cross-group friendship literature highlighted the role of confidence in contact, suggesting that children need to be 'contact ready' and 'self-efficacious' in order to engage in intergroup contact behavior (Confidence in Contact Model, Cameron & Turner, 2017; Turner & Cameron, 2016). According to Bandura's self-efficacy theory (1977, 1986), one of the most important determinants of behavioral self-regulation that leads individuals to engage in certain behaviors and activities is their level of self-

efficacy which is defined as an individual's belief or confidence in his/her ability to carry out a particular behavior in order to achieve a specific outcome (Ajzen, 2002; Bandura, 1986, 1997; Zimmerman, Bandura, & Martinez-Pons, 1992). Hence, we introduce the concept of CEFSE – cross-ethnic friendship self-efficacy – which indicates the extent to which children believe they can successfully build and maintain cross-ethnic friendships and test whether CEFSE successfully predicts cross-ethnic friendship quality among children. To date, only a few studies have examined self-efficacy in the context of intergroup contact (Mak & Tran, 2001; Mazziotta, Mummendey, & Wright, 2011; Stathi, Crisp, & Hogg, 2011; Titzmann, Brenick, & Silbereisen, 2015) and either defined 'contact self-efficacy' as an outcome variable defined as the willingness to engage in future contact or concentrated on contact-specific (but not *friendship* specific) self-efficacy beliefs. According to Bandura (2012), self-efficacy beliefs diverge significantly from actions and intentions and represent a person's self-appraisal about his/her subsequent performance rather than his/her willingness (intention) to perform it. Moreover, it is essential that self-efficacy beliefs are 'domain-specific'; that they assess one's beliefs in the performance of a particular behavior. The construct of CEFSE thereby involves children's perceived self-efficacy *beliefs* in engaging in the specific *cross-group friendship behavior*. Previous research in self-efficacy literature has consistently shown self-efficacy beliefs to be an important predictor of effort, motivation, and enthusiasm towards engaging in the relevant behavior and to provide persistence and perseverance individuals exert when they are faced with difficulties (e.g., Pajares, 2003; Zimmerman et al., 1992). Therefore, CEFSE is likely to predict children's actual cross-ethnic friendships by providing necessary motivation to form successful cross-ethnic friendships and persistence to maintain such behavior in the face of challenges.

We further aimed to test the sources of CEFSE, drawing on the original self-efficacy sources suggested by Bandura (1986). Accordingly, the positive belief that one can successfully form and maintain a cross-ethnic interaction partner should be related to four factors including 1) enactive experiences, i.e., whether children successfully engaged in cross-ethnic friendship behavior in the past; 2) vicarious experiences, i.e., whether children observe peers and parents who have cross-ethnic friends; 3) social persuasion, i.e., whether children are encouraged by others to form cross-ethnic friends; and 4) physiological states, i.e., whether children feel comfortable or anxious in forming cross-ethnic friendships. Past research has demonstrated that in line with each of these sources, cross-group friendships are predicted by previous contact experiences in earlier stages of life (e.g., Emerson et al., 2002; Tropp, O'Brien, & Migacheva, 2014), by extended and vicarious contact (e.g., Schofield, Hausmann, Ye, & Woods, 2010), by social norms (e.g., Tropp et al., 2014), and by intergroup anxiety (e.g., Page-Gould, Mendoza-Denton, & Tropp, 2008). These predictors have been previously tested as individual facilitators or inhibitors of cross-group friendships with no previous attempt to incorporate all these factors under a single model. While a recent theoretical approach, the Confidence in Contact Model (Turner & Cameron, 2016), generated an integrated framework identifying the numerous factors associated with cross-group friendship formation, this has not been empirically tested. The current research extends on this work, by incorporating these factors using Bandura's self-efficacy theory (1977, 1986). Our suggested conceptual model is presented in Figure 1.

--------------------------------------Insert Figure 1---------------------------------

The Role of Parents on Children's Intergroup Behaviors

We further propose that children's cross-ethnic friendships would be predicted by parental cross-ethnic friendships via sources of CEFSE and thereby CEFSE beliefs. Parents

constitute major agents of socialization in childhood, with children learning and conforming to their parents' attitudes and values through observation and imitation, as well as direct instruction (e.g. Katz, 2003). Children usually internalize these parental attitudes and receive disapproval if they do not comply with these norms (e.g., Smith, Maas, & Tubergen, 2015). Given the central role of parents in the socialization process, strong evidence has been compiled regarding the influential role of parental attitudes on the formation of children's attitudes towards various concepts including intergroup attitudes (e.g., Branch & Newcombe, 1986; Duriez & Soenens, 2009; Edmonds & Killen, 2009; Meeusen, 2014; Meeusen & Dhont, 2015; Miklikowska, 2015), and prejudice (Castelli, Zogmaister, & Tomelleri, 2009; Sinclair, Dunn, & Lowery, 2005).

While the majority of this research literature has examined the role of parents' attitudes on children's intergroup attitudes and behaviors, few studies have investigated associations in terms of actual cross-group friendship behavior. Meeusen (2014) proposed that parental cross-group friendships are an important source of motivation for children to form cross-group friendships, since they provide children with opportunities for extended contact which is to observe a close ingroup member to have a successful cross-group friendship (Wright, Aron, McLaughlin-Volpe, & Ropp, 1999). Parents' cross-group friendships also meet the criteria of Allport's contact conditions (1954), as parents constitute authority figures for children. Similarly, Smith and colleagues (2015) found that parents' cross-group friendships were related to children's cross-group friendships and this association was partly mediated by children's positive outgroup attitudes. In a recent study, Bagci and Gungor (2019) investigated associations between perceived positive and negative parental contact and children's positive and negative contact and found these associations to be mediated by intergroup anxiety and perspective-taking, as well as by intergroup attitudes and behavioral intentions. Overall, this research literature indicates that

the formation of cross-group friendships among children is likely to be predicted by parental cross-ethnic friendship behavior.

Extending these findings, we suggest that the associations between perceived parental cross-ethnic friendship quality and children's cross-ethnic friendship quality would be partly mediated by sources of CEFSE and thereby CEFSE beliefs. Bandura (1997) stated that if the social environment where children are raised provides children with vicarious learning experiences and supportive communication of a specific behavior, children would be more likely to display higher levels of self-efficacy beliefs, which would in turn increase the likelihood of the occurrence of the actual behavior (e.g., Fan & Williams, 2010). Indeed, self-efficacy research and social cognitive learning theories have previously shown that children's self-efficacy beliefs are often drawn from both individual and social cues in the environment (Bandura, 1986). Parents and families, forming the direct social environment of children especially during early adolescence, usually play a critical role in the formation of children's self-efficacy beliefs in various domains (Bagci, 2018; Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Therefore, we propose that perceived parental cross-ethnic friendship quality would be related to the functioning of various sources of CEFSE and consequently to greater CEFSE and higher quality cross-ethnic friendships among children. More specifically, we hypothesized that parental cross-ethnic friendship quality provide *early* experiences of direct contact at the home environment and thereby would be associated with the formation of both early direct and indirect contact experiences in children's school setting, would relate to more positive social norms about cross-ethnic relationships as well as lower levels of intergroup anxiety. These various sources of CEFSE are in turn likely to predict more positive CEFSE beliefs and, consequently, higher quality cross-ethnic friendships among children.

Study 1

Study 1 explored whether four sources of CEFSE (prior contact, indirect contact, social norms, and intergroup anxiety) predicted self-efficacy beliefs, and whether such efficacy beliefs were related to current cross-ethnic friendship quality. We focused on Year 7 and Year 8 secondary school students in an ethnically heterogeneous school environment, where status differences are less salient, and thereby children have the opportunities to build cross-ethnic friendships. The focal age group is also critical for the development of self-efficacy beliefs in general; during early adolescence, many children start to reformulate their efficacy beliefs according to newly emerging motivational goals, which therefore makes the cultivation of self-efficacy beliefs among children and youth especially important during this transitional period (Bagci, 2018; Bandura et al., 2001; Eccles & Midgley, 1989). We also focused on cross-ethnic friendship quality and closeness as an indicator of cross-ethnic friendships, since previous research has demonstrated quality of friendships to represent a stronger assessment of cross-group friendships (e.g., Bagci, Rutland, et al., 2014; Davies, Tropp, Aron, Pettigrew, & Wright, 2011).

Method

Participants and Procedure

A total of 101 students in Year 7 or Year 8 (56 females, 41 males, 4 chose not to reveal; M_{age} =12.29 years, SD_{age} = .57) participated in the study individually in a classroom setting and self-reported their ethnic background based on the instruction presented to children at the beginning of the survey (See Supplementary Materials). Participants were from different ethnic backgrounds including White British (24%), Black British (45%), Asian British (11%), and Mixed Heritage (20%) which broadly reflected the ethnic make-up of the whole school. The

school which is located in London was randomly chosen and approached by the researchers at

the beginning of the term. Children with parental and school permission for participation in the

study completed the survey. At the start of the session, the researcher explained the study aims

and instructions for completion of the survey to the class and participants were debriefed

following completion of the survey.

Measures

Unless reported otherwise, participants answered the items by indicating to what extent

they agreed (*1 = strongly disagree, 5 = strongly agree*) with each statement.

Cross-ethnic friendship self-efficacy scale. Since previous research has focused on self-

efficacy in cross-ethnic/race contact rather than friendships, a new CEFSE scale was designed

for the aim of this research. Using Bandura's self-efficacy measurement guide and previous

research that used various self-efficacy measures, such as social self-efficacy scale (Matsushima

& Shiomi, 2002), social self-efficacy scale for students (Fan & Mak, 1998), contact self-efficacy

measure (Stathi et al., 2011) and gender-based relationship efficacy scale (Zosuls, Field, Martin,

Andrews, & England, 2014), a nine-item CEFSE scale was constructed. Items related to how

confident children felt in building high quality cross-ethnic friendships. The scale was composed

of items that measure characteristics of friendship quality such as spending time, self-disclosure,

trust, and shared interests (e.g. "I am confident I would be able to get close to a new friend from

another ethnic group" and "I believe I could find many things in common with new friends from

another ethnic group"), since previous research has specifically indicated that time-spent and

self-disclosure were critical indicators of cross-group friendships (Davies et al., 2011). An initial

Confirmatory Factor-Analysis revealed an acceptable fit level of this structure after excluding

one item ("I don't think I would be able to make new friends with people from ethnic groups

other than my own, R), $\chi^2(18) = 35.94$, $p = .010$, $\chi^2/df = 2.00$, CFI $= .95$, RMSEA $= .09$, SRMR $= .05$, demonstrating all item loadings to be over $.40^1$. All indicators significantly loaded on the CEFSE measure and the scale formed a reliable scale ($\alpha = .87$). See Tables S1-S3 in Supplementary Materials for the list of items and item statistics.

  Sources of self-efficacy scale. Another scale was constructed to measure sources of CEFSE. Items were adapted from Lent, Lopez, and Bieschke's sources of science self-efficacy scale (1991) and sources of social self-efficacy expectation scale (Anderson & Betz, 2001). Participants rated their agreement with 11 statements. Two items were removed as they reduced the reliability of the subscale (See Supplementary Materials). The scale included four individual subscales, each measuring a specific self-efficacy source: (1) Prior contact representing enactive experiences (e.g., "Thinking back to primary school, I was good at making close friends from ethnic groups other than my own", $r = .46$, $p < .001$); (2) indirect contact representing vicarious experiences (e.g. "Lots of my friends have close friends who belong to ethnic groups other than their own"; 2 items, $r = .46$, $p < .001$); (3) social norms representing social persuasion (e.g. "Our teachers in Primary School would encourage us to be friends with people from other ethnic groups"; 2 items, $r = .33$, $p = .001$); and (4) intergroup anxiety representing negative physiological states to cross-ethnic contact (e.g. "If I was starting to from a friendship with someone who belonged to an ethnic group other than my own I would feel comfortable"; 3 items, $\alpha = .76$). A Confirmatory Factor-Analysis revealed a good fit level of this structure, $\chi^2(21) = 27.99$, $p = .14$, $\chi^2/df = 1.33$, CFI $= .97$, RMSEA $= .06$, SRMR $= .05$, with all items

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[1]The initial CFA showed a poorer fit of the model structure, thereby, based on the modification index and residuals, error terms of the following items (which are theoretically related) were correlated: CEFSE1-CEFSE2, CEFSE2-CEFSE3.

significantly loading on corresponding latent factors (See Tables S4-S6 in Supplementary

Materials for the list of items and item statistics).

Cross-ethnic friendship quality. Cross-ethnic friendships were measured by a quality

measure assessing participants' self-reported closeness to their cross-ethnic friends (*1 = not very*

close, 5 = extremely close) which was previously used to assess cross-ethnic friendship quality

(Bagci, Rutland et al., 2014).

Results

Descriptive statistics are given in Table 1.

----------------------------------Insert Table 1--------------------------

Data were analyzed with Mplus Software Version 7 (Muthén & Muthén, 1998-2017).

The following goodness of fit indices were used: the chi-square test, the rootmean-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 .95, an RMSEA of less than .06, and an SRMR of less than .08 (Hu & Bentler,

1999). Indirect effects were computed with Model Indirect Command on Mplus and

bootstrapping technique (using 1000 samples and 95% Confidence Intervals).

The final model with sources of CEFSE as manifest independent variables, CEFSE as the

mediator (indicated by three parcels using partial disaggregation method, Bagozzi &

Heatherthon, 1994), and cross-ethnic friendship quality as the outcome variable demonstrated an

excellent fit, $\chi^2(10) = 6.01$, $p = .81$, χ^2/df = .61, CFI = 1.00, RMSEA = .00, SRMR = .02.[2]

Among sources of CEFSE, both prior contact and indirect contact were positively associated

with CEFSE ($\beta = .20$, $p = .03$ and $\beta = .32$, $p < .001$). Intergroup anxiety, on the other hand,

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[2] An initial test of the structural model with sources of CEFSE variables represented as latent variables demonstrated
a poorer fit, $\chi^2(152) = 216.42$, $p < .001$, CFI = .91, RMSEA = .07, SRMR = .06.

predicted lower levels of CEFSE (β = -.35, p < .001), whereas social norms did not have a

significant association with CEFSE (β = .14, p = .13). In turn, CEFSE was positively and

strongly associated with cross-ethnic friendship quality (β = .41, p < .01). Among the sources of

CEFSE beliefs, intergroup anxiety (but not other sources) was also directly and negatively

associated with cross-ethnic friendship quality.

A closer look at the indirect effects indicated that prior contact was marginally

significantly related to current cross-ethnic friendship quality through CEFSE (IE = .09, SE =

.05, p = .08, 95% CI [.003, .23]). Both indirect contact and intergroup anxiety were indirectly

related to cross-ethnic friendhsip quality via CEFSE, albeit in opposite directions (IE = .13, SE =

.06, p = .02, 95% CI [.02, .25], and IE = -.17, SE = .07, p = .02, 95% CI [-.36, -.03],

respectively). Figure 2 illustrates the mediation model.

----------------------------------Insert Figure 2--------------------------------

Study 2

In summary, Study 1 showed that all sources of CEFSE, except social norms which

represented social persuasion from teachers and parents, predicted the positive belief that one can

successfully form and maintain cross-ethnic friendships, which was in turn, related to higher

quality cross-ethnic friendships. Therefore, as predicted, CEFSE was strongly associated with the

level of closeness with actual cross-ethnic friends, highlighting the need to instill positive beliefs

about the formation of successful cross-group contact in order to improve cross-ethnic

relationships. This can be particularly achieved by decreasing intergroup anxiety which was a

strong predictor of both CEFSE and cross-ethnic friendship quality, standing as one of the most

critical variables that have been previously suggested to inhibit volitional contact (Paolini et al.,

2018; Turner & Cameron, 2016). Indirect contact was also an important predictor of CEFSE,

confirming the importance of extended contact for better intergroup relationships, especially in school settings (e.g., Cameron & Rutland, 2006; Vezzali, Stathi, Giovannini, Capozza, & Visintin, 2015). In Study 2, we aimed to extend the findings of Study 1 in two main ways; a) introduce parental cross-ethnic friendships as a further variable in the associations between CEFSE sources, CEFSE beliefs, and child cross-ethnic friendships, b) use a larger and more representative sample to generalize our findings.

Method

Participants and Procedure

A total of 262 Year 7 and Year 8 children (M_{age} = 12.45, SD = .50, 103 Males, 153 Females, 6 unknown) including 141 White British, 22 White other, 16 White-other mixed, 66 Asian, 16 Black, and 1 Other ethnicity were recruited from three different schools located in London and Kent in the UK. Emails were sent to local schools with a summary of the study's aims, and a copy of the questionnaire and head-teacher letter attached. The opt-out forms were delivered to parents who were given a fortnight to respond. Data were collected in classrooms and students were given informed consents stating ethical procedures involved in the study. The completion of the questionnaire took between 15-30 minutes and children were debriefed at the end of the study.

Measures

CEFSE. The same 11-item CEFSE scale assessing children's perceived ability to form and maintain successful cross-ethnic friendships was used in Study 2. An initial reliability analyses demonstrated that three items decreased initial reliability (items 2, 4, and 6); after their removal the final reliability was satisfactory (See Supplementary Materials, Cronbach's Alpha = .79). An initial CFA with the remaining variables demonstrated a good fit to the data with these

items, $\chi^2(7) = 9.39$, $p = .23$, $\chi^2/df = 1.34$, CFI = .99, RMSEA = .04, SRMR = .02, with all items

loading significantly on the CEFSE factor (all factor loadings > .40)[3].

Sources of CEFSE. The same sources of CEFSE scale was used in Study 2.[4] Prior contact

representing enactive experiences included the same two items as in Study 1 ("Thinking back to

primary school, I was good at making close friends from ethnic groups other than my own" and

"I am still very close with the friends I made in primary school who belong to ethnic groups

other than my own", $r = .28$, $p < .001$). For indirect contact representing vicarious experiences,

we used one item related to extended contact with friendships ("Lots of my friends have close

friends who belong to ethnic groups other than their own"), and for social norms representing

social persuasion we used one item related to parental social persuasion ("My parents would

support me if I wanted to make new friends from other ethnic groups"). For intergroup anxiety

representing negative physiological states, we used the same three items as in Study 1. One item

was discarded because it reduced the subscale's reliability ("If I was starting to form a friendship

with someone who belonged to an ethnic group other than my own I would feel comfortable", r

with two items = .63, $p < .001$). Supplementary Materials include the list of items in Study 2.

Children's cross-ethnic friendship quality. Quality of cross-ethnic friendships among

children was measured by two items ("How close are you with friends from the other ethnic

group?" and "How much time do you spend with these friends?", Bagci et al., 2017). The quality

dimension with two items formed a reliable scale ($r = .63$, $p < .001$).

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[3] Two residual correlations between CEFSE5-CEFSE1 and CEFSE7-CEFSE9 (which are theoretically related) were added to increase the fit of the model.

[4] Some items were removed from the scale to fit the assumptions of Study 2. We excluded one item from the extended contact scale because we already had parental cross-ethnic friendships as the main independent variable ('My parents have a lot of friends from other ethnic groups') and one item from the social persuasion scale ('Our teachers in Primary School would encourage us to be friends with people from other ethnic groups') as parental contact is less likely to influence teachers' social norms.

Perceived parental cross-ethnic friendship quality. Following the same procedure as for children's friendships, participants were asked to rate the quality of their parents' cross-ethnic friendships with two items (how close they perceived their parents to be with friends from the other ethnic group, measured from 1 = *not at all* to 5 = *very much*, and how often they perceived their parents to spend time with those friends measured from 1 = *never* to 5 = *all the time*, $r =$ .56, $p < .001$).

Results

Descriptive statistics are presented in Table 2.

----------------------------Insert Table 2----------------------

The structural model included parental cross-ethnic friendship quality as the main independent variable, sources of CEFSE and CEFSE (represented by two parcels each containing three items, Bagozzi & Heatherton, 1994) as serial mediators, and child cross-ethnic friendship quality as the main dependent variable. We also controlled for gender (1=male, 2=female) and ethnic group status (1=minority group status, 2=majority group status)[5]. The model demonstrated excellent fit, $\chi^2(26) = 38.65$, $p = .05$, $\chi^2/df = 1.49$, CFI = .98, RMSEA = .04, SRMR = .03. As expected, perceived parental cross-ethnic friendship quality predicted a higher level of prior contact ($\beta = .33$, $p < .001$), a higher level of indirect contact ($\beta = .31$, $p < .001$), and more positive social norms ($\beta = .35$, $p < .001$), but did not relate to intergroup anxiety ($\beta = .04$, $p = .61$). In turn, except social norms ($\beta = .10$, $p = .14$), all sources of CEFSE were related to CEFSE beliefs; both prior and indirect contact provided more positive CEFSE beliefs ($\beta = .28$, $p < .001$,

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[5] We included this control variable by grouping White British participants as the 'ethnic majority status' group and the rest of the sample as the 'ethnic minority status' group. The ethnic minority status group included great heterogeneity including White European, Asian, Black, and Mixed ethnic group children whose intergroup relationship experiences are unique. Moreover, while two of the schools included White British students as the numerical majority group, the third school included the Asian group as the numerically dominant group. Therefore, although we grouped all different minority groups together as a control variable, we refrained from pursuing further multiple group analyses across group status.

and $\beta = 16$, $p = .01$), whereas intergroup anxiety was negatively related to the belief that one can successfully form and maintain a cross-ethnic friendship ($\beta = -.34$, $p < .001$). In turn, CEFSE predicted higher quality cross-ethnic friendships in children ($\beta = .29$, $p = .001$). Parental cross-ethnic friendship quality was also directly associated with children's cross-ethnic friendship quality ($\beta = .57$, $p < .001$).

A further look at the indirect effects showed that parental cross-ethnic friendship quality was associated with higher levels of prior contact and indirect contact among children, which then related to CEFSE and from CEFSE to children's own cross-ethnic friendship quality (IE = .03, $SE = .01$, $p = .03$, 95% CI [.001, .06] for prior contact and IE = .02, $SE = .01$, $p = .07$, 95% CI [-.001, .04] for indirect contact). Except social norms, all three sources of CEFSE also seemed to indirectly relate to cross-ethnic friendship quality in children through CEFSE beliefs (IE = .09, $SE = .04$, $p = .01$, 95% CI [.004, .17] for prior contact; IE = .05, $SE = .03$, $p = .05$, 95% CI [-.002, .12] for indirect contact; IE = .08, $SE = .03$, $p = .005$, 95% CI [-.16, -.003] for intergroup anxiety). We also found parental cross-ethnic friendship quality to be indirectly associated with CEFSE beliefs through prior contact (IE = .09, $SE = .03$, $p = .001$, 95% CI [.03, .11]) and indirect contact (IE = .05, $SE = .02$, $p = .02$, 95% CI [.005, .07]). See Tables 3 and 4, as well as Figure 3 for all indirect and direct associations between variables.

-------------------------------Insert Table 3----------------------------

-------------------------------Insert Table 4----------------------------

-------------------------------Insert Figure 3----------------------------

General Discussion

Contemporary research in intergroup contact literature demonstrates that positive contact is common, but often avoided due to various structural, situational, and personality factors that

inhibit intentions and willingness to engage in volitional contact (Paolini et al., 2018). We argued that one potential construct behind contact formation is CEFSE, the sense of confidence in one's capacity to form and maintain a successful cross-ethnic friendship. Incorporating theoretical research from Bandura's self-efficacy theory (Bandura, 1986) and previous studies in intergroup contact theory, we suggested that prior contact (enactive experiences), indirect contact (vicarious experiences), social norms (social persuasion), and intergroup anxiety (physiological states) would predict children's CEFSE beliefs, which would in turn predict their actual cross-ethnic friendship quality (Studies 1 and 2). Using a diverse sample of children, we further examined the role of parental cross-ethnic friendship quality in equipping children with CEFSE sources and beliefs that would be related to children's cross-ethnic friendships (Study 2).

Both studies showed that CEFSE was a consistent predictor of children's current cross-ethnic friendship quality. While previous research has commonly focused on contact self-efficacy as an outcome variable of current contact experiences, and defined contact self-efficacy as the willingness to engage in future contact (Mazziotta et al., 2011; Stathi et al., 2011), we examined self-efficacy in the context of Bandura's self-efficacy theory and Confidence in Contact Model (Turner & Cameron, 2016), and thereby described self-efficacy as someone's beliefs and confidence in their capacity to perform a specific task. Hence, unlike in previous studies which focused on interest in or willingness to contact novel outgroup members (e.g., Stathi et al., 2011; Tropp et al., 2014), the study of CEFSE highlights the motivational basis of cross-ethnic friendships and intergroup contact and reveals a critical predictor of actual cross-ethnic friendships.

Moreover, in both studies CEFSE has been found to be predicted by prior and indirect contact experiences, as well as lower intergroup anxiety. Hence, children with successful prior

contact in primary school and indirect contact experiences, as well as the ones who display lower intergroup anxiety levels held more positive beliefs about their capacity to form high quality cross-ethnic friendships and were more likely to report higher quality cross-ethnic friendships. While previous research has often examined predictors of actual cross-group friendships individually, the sources of CEFSE beliefs demonstrate an integrative framework involving all different aspects of self-efficacy beliefs. In line with previous research in contact literature (Page-Gould et al., 2008), we found intergroup anxiety to be particularly strongly related to CEFSE beliefs and thereby to cross-ethnic friendship quality in both studies, suggesting that intergroup anxiety may be an important barrier behind contact formation (e.g., Paolini et al., 2018; Turner & Cameron, 2016).

On the other hand, in both studies social norms (represented by both teachers' and parents' social persuasion in Study 1 and by parents' social persuasion in Study 2) did not significantly predict (although significantly correlated with) greater CEFSE beliefs. Previous research in self-efficacy literature suggested that social persuasion may be limited in its ability to provide sustainable self-efficacy beliefs (Usher & Pajares, 2008), indicating social norms in the form of social persuasion to be a relatively weaker predictor of CEFSE compared to more direct and behavioral sources of CEFSE. In Study 2, we also found that social norms, the overt persuasion of parents to build cross-ethnic friendships, were related to lower quality cross-ethnic friendships among children. This may be a sign of a reactional pattern against social persuasion of parents particularly during this transitional developmental period where early adolescents start to turn away from parents to their peers for advice and support (e.g., Fuligni & Eccless, 1993)

Study 2 additionally explored the associations between children's perceptions of their parents' cross-ethnic friendship quality and their own cross-ethnic friendships through CEFSE

beliefs. We found that perceived parental cross-ethnic friendship quality was directly and indirectly associated with children's cross-ethnic friendship quality through sources of CEFSE and CEFSE beliefs. While previous research has shown parental contact experiences to predict child contact experiences through various intergroup processes such as positive outgroup attitudes and perspective-taking (Bagci & Gungor, 2019; Smith et al., 2015), there is limited knowledge about which other mechanisms, mainly motivational ones, mediate the associations between parental contact on child contact. We found that perceived parental cross-ethnic friendship quality was particularly related to CEFSE through contact experiences for children, including both enactive and vicarious experiences. Past research suggested that one way whereby parents can socialize their children in terms of intergroup experiences is not only about giving them direct messages, but also by providing them structural opportunities to experience intergroup contact such as choosing multicultural schools and ethnically diverse social settings for children (e.g., Smith et al., 2015). Hence, as the authority figure, parents who have high quality cross-ethnic friends are more likely to support enactive and vicarious experiences, which in turn relate to the belief that one can successfully engage in cross-ethnic friendship behavior. Interestingly, we found parental cross-ethnic friendship quality to be unrelated to intergroup anxiety. Bagci and Gungor (2019) have previously demonstrated that positive parental contact experiences were related to children's positive contact through decreased intergroup anxiety. Nevertheless, that study included only majority Turkish participants who were recruited from an ethnically homogeneous intergroup setting and in super-diverse ethnic diversity settings such as in the current study, parental contact may be a relatively less critical aspect of intergroup anxiety which is potentially shaped more by school experiences rather than family experiences.

A number of limitations should be noted. While in Study 2 we included a larger sample size compared to Study 1, the minority group was very heterogeneous and we still did not have sufficient numbers of participants from main minority groups to make meaningful comparisons across groups. Furthermore, while two of the schools included the White majority group as the numerically dominant group, the third school was mainly composed of Asians. This poses important complexities about which ethnic group to refer to as the majority or minority group and thereby limiting our conclusions about particular ethnic group differences. Future studies comparing the effectiveness of the CEFSE sources, beliefs, and cross-ethnic friendships should be investigated across various ethnic status groups. Although we do not expect White British and minority status ethnic group members to benefit from CEFSE beliefs differentially, various sources of CEFSE beliefs may be more critical for some ethnic groups than others. For example, intergroup anxiety may be a more fundamental predictor of CEFSE for White British participants, whereas social persuasion may be more critical among Asian British participants who are generally raised in more traditional families. Parental contact experiences may also differentially relate to children's contact across different ethnic groups; direct teaching about race among a White sample would be rare, so observing parents in cross-ethnic friendship would provide an opportunity to transmit positive messages to children regarding diversity and race relations, as well as cross-ethnic friendships, possibly making observable parental cross-ethnic friendships more critical in the formation of majority status children's cross-ethnic friendships.

Methodologically, longitudinal studies should be conducted to present a clearer understanding of the relationship between the variables. While CEFSE has been conceptualized to promote cross-ethnic friendship quality, cross-ethnic friendships are also likely to encourage positive beliefs about forming a novel cross-group interaction. For example, previous research

found cross-group friendships to be associated with the active avoidance of the outgroup through expectations of rejection (Barlow, Louis, & Hewstone, 2009). Therefore, it is also plausible that current friendship closeness leads to greater confidence and self-efficacy in future interactions and people may generalize from their current friendships about whether or not they could form a successful intergroup interaction. This bidirectional relationship is elaborated on in Turner and Cameron (2016) Confidence in Contact Model, which predicts a feedback loop where cross-ethnic friendships feeds back to enhance confidence in contact. Moreover, as Degner and Dalege (2013) note, we cannot rule out bidirectional socialization which suggests that children influence their parents' attitudes, just as parents influence their children. For instance, Windzio (2015) examined children's and parents' social networks in the context of immigrant children's birthday parties. The author explored how attendance at these parties affected both child and parental social networks. While parents' own friendship networks influenced the parties that their children were invited to, parties which provided additional opportunities for parents to interact with outgroup members had a larger impact on diversifying parents' own social networks.

One further limitation of the current research is the reliance on children's reports of their parents' friendships. In their meta-analysis, Degner and Dalege (2013) found that parent's and children's attitudes were interrelated regardless of source of information on the parent's attitudes, but the strength of the association between parent and child attitudes was stronger when children's reports of parents' attitudes were measured, as opposed to measuring parents' attitudes directly. The authors noted that this may be driven by children simply not knowing their parents' attitudes, or assuming their parents hold the same attitudes as themselves. The current research relies on children's reports of their parents' friendships, and so the association between their own and their parents' friendships may be inflated. However, we think that children's

observations of their parents' friendships are likely to be accurate representations of parental cross-ethnic friendships, since the measures in the current study are based on relationships that could be observed at behavioral level, rather than internal attitudes. Future research should nonetheless use more elaborate intergroup contact measures that are reported by both children and parents.

Finally, our measures of CEFSE and sources of CEFSE which in general produced an acceptable fit of data, but relatively low reliability scores, should be improved in further studies by using a larger number of items, in particular for the sources of CEFSE measure which included one or two items for each source. In summary, applying Bandura's self-efficacy theory to intergroup contact research, the current study examined the construct of CEFSE beliefs among children. Study 1 showed that all sources of CEFSE, except social norms, predicted more positive beliefs about forming high quality cross-ethnic friendships which in turn related to greater quality cross-ethnic friendships. Study 2 confirmed and extended Study 1 by further incorporating parental cross-ethnic friendship quality as a predictor of sources of CEFSE and thereby CEFSE beliefs, and indicated perceived parental cross-ethnic friendship quality to be directly and indirectly related to children's cross-ethnic friendship quality. Future studies should examine in more details various mechanisms that explain the formation of high quality cross-ethnic friendships in childhood.

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Table 1. Descriptive Statistics in Study 1

	Mean (SD)	2	3	4	5	6
1.Prior contact	3.83 (.96)	.46***	.35***	-.39***	.50***	.40***
2.Indirect contact	3.76 (1.03)	-	.36***	-.32***	.54***	.30**
3.Social norms	3.99 (.81)		-	-.51***	.46***	.26*
4.Intergroup anxiety	2.07 (.86)			-	-.55***	-.53***
5.CEFSE	3.82 (.75)					.54***
6.CE friendship quality	3.87 (1.00)					-

Notes. CE = Cross-ethnic. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 2. Descriptive Statistics in Study 2

	Mean (SD)	2	3	4	5	6	7
1.Parent CEF quality	2.94 (1.05)	.44***	.30***	.29***	.27***	.06	.27***
2.Child CEF quality	3.55 (1.05)	-	.25***	.10	.23***	.02	.39***
3.Prior contact	3.72 (.91)		-	.21**	.19**	-.03	.32***
4.Indirect contact	4.26 (.89)			-	.11†	-.19**	.28***
5.Social norms	3.81 (.94)				-	.08	.23***
6.Intergroup anxiety	2.69 (1.20)					-	-.30***
7.CEFSE	3.72 (.64)						-

Notes. CEF = Cross-ethnic friendship(s). †p = .06, *p < .05, **p < .01, ***p < .001.

Table 3. Direct Associations between Main Study Variables in Study 2

Direct Effects	β	*SE*	*p*	95% CI Lower bound	95% CI Upper bound
Parent CEF -> Prior contact	.33	.07	< .001	.18	.49
Parent CEF -> Indirect contact	.31	.07	< .001	.17	.50
Parent CEF -> Social norms	.35	.07	< .001	.20	.53
Parent CEF -> Intergroup anxiety	.04	.07	.61	-.16	.26
Parent CEF -> CEFSE	.22	.08	.009	.02	.29
Parent CEF -> Child CEF	.57	.09	< .001	.36	.97
Prior contact -> CEFSE	.28	.06	< .001	.10	.28
Indirect contact -> CEFSE	.16	.06	.01	.02	.19
Social norms -> CEFSE	.10	.07	.14	-.04	.17
Intergroup anxiety -> CEFSE	-.34	.06	< .001	-.25	-.10
Prior contact -> Child CEF	.03	.07	.66	-.15	.21
Indirect contact -> Child CEF	.02	.07	.73	-.13	.17
Social norms -> Child CEF	-.19	.07	.009	-.38	-.04
Intergroup anxiety -> Child CEF	.04	.07	.64	-.10	.15
CEFSE -> Child CEF	.29	.09	.001	.02	.80

Notes. CEF = Cross-ethnic friendships. Standardized direct effect estimates are provided.

Table 4. Indirect Associations between Main Study Variables in Study 2

Indirect Effects	IE	*SE*	*p*	95% CI Lower bound	95% CI Upper bound
Parent CEF -> Prior contact -> CEFSE	.09	.03	.001	.03	.11
Parent CEF -> Indirect contact -> CEFSE	.05	.02	.02	.005	.07
Parent CEF -> Social norms -> CEFSE	.04	.02	.14	-.02	.06
Parent CEF -> Intergroup anxiety -> CEFSE	-.01	.02	.61	-.05	.03
Parent CEF -> CEFSE -> Child CEF	.06	.03	.02	-.009	.14
Prior contact -> CEFSE -> Child CEF	.08	.03	.01	.004	.17
Indirect contact -> CEFSE -> Child CEF	.05	.02	.05	-.002	.12
Social norms -> CEFSE -> Child CEF	.03	.02	.19	-.01	.10
Intergroup anxiety -> CEFSE -> Child CEF	-.10	.03	.005	-.16	-.003
Parent CEF -> Prior contact -> CEFSE -> Child CEF	.03	.01	.02	.001	.06
Parent CEF -> Indirect contact -> CEFSE -> Child CEF	.01	.01	.07	-.001	.04
Parent CEF -> Social norms -> CEFSE -> Child CEF	.01	.01	.20	-.005	.04
Parent CEF -> Intergroup anxiety -> CEFSE -> Child CEF	-.003	.01	.62	-.02	.01

Notes. CEF = Cross-ethnic friendships. Standardized indirect effect estimates are provided.
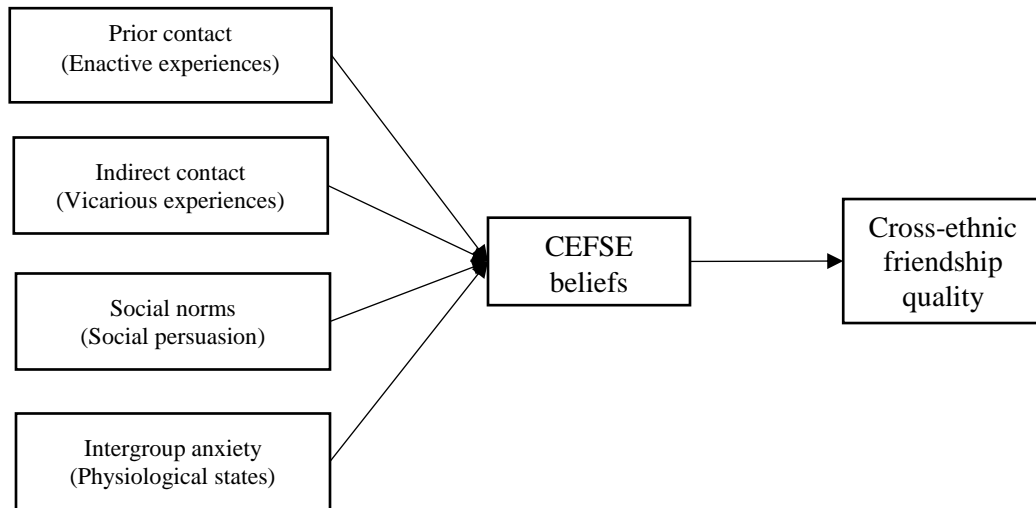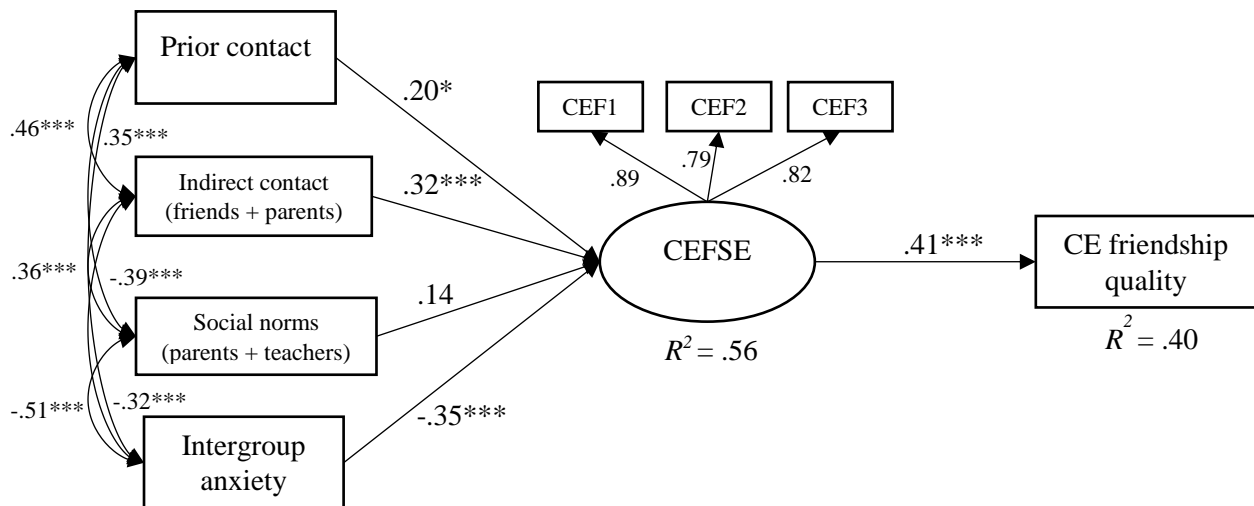
Figure 1. Conceptual Model of CEFSE

Figure 2. Structural Model Linking Sources of CEFSE to Cross-ethnic Friendship Quality through CEFSE

Notes. CEFSE = Cross-ethnic friendship self-efficacy, CE = Cross-ethnic. *p < .05, ***p < .001. Final model fit: $\chi^2(10) = 6.01$, $p = .81$, $\chi^2/df = .61$, CFI = 1.00, RMSEA = .00, SRMR = .02. Direct associations between sources of CEFSE and friendship quality are not shown for simplicity. Cross-ethnic friendship quality was not directly predicted by previous contact ($\beta = .12$, $p = .21$), indirect contact ($\beta = -.06$, $p = .56$) or social norms ($\beta = -.14$, $p = .16$), but was significantly predicted by intergroup anxiety ($\beta = -.32$, $p = .002$).

Figure 3. Structural Model Linking Parental Cross-ethnic Friendship Quality to Children's Cross-ethnic Friendship Quality through sources of CEFSE and CEFSE Beliefs
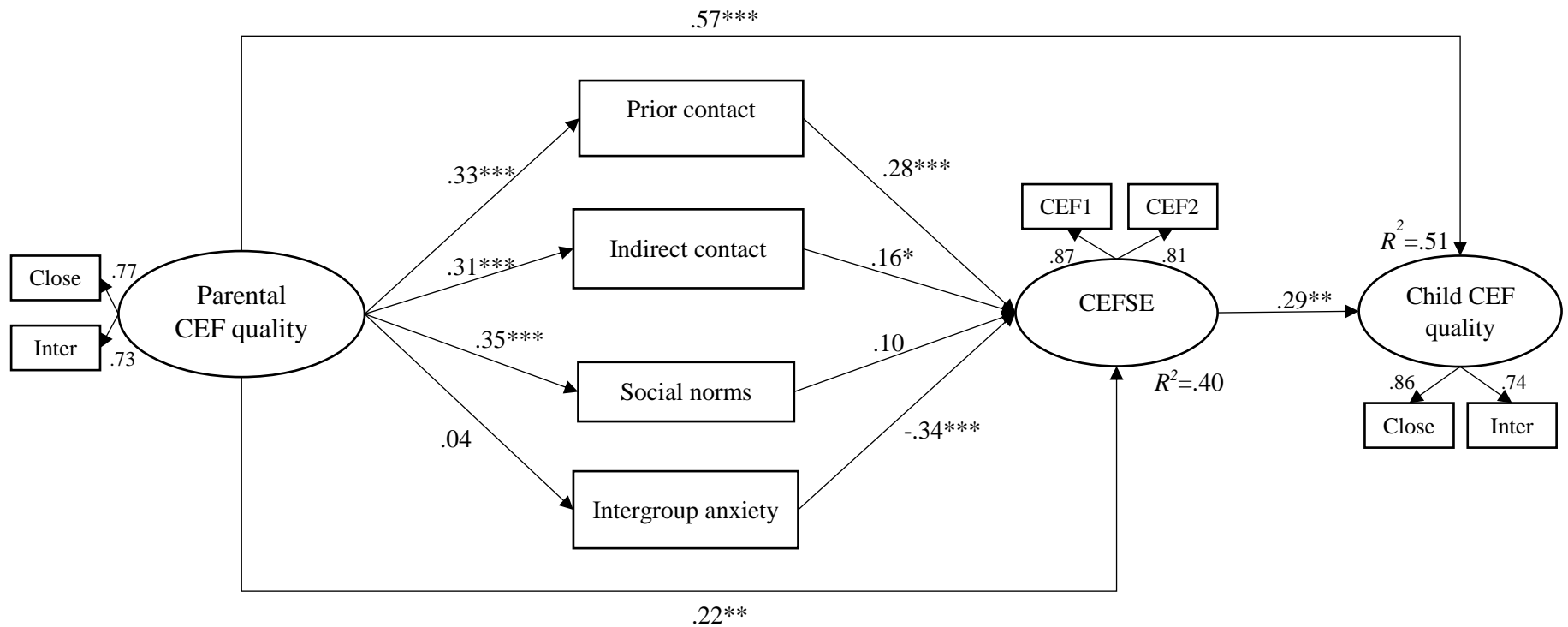
Notes. CEF = Cross-ethnic friendship. Final model fit: $\chi^2(26) = 38.65$, $p = .05$, $\chi^2/df = 1.49$, CFI = .98, RMSEA = .04, SRMR = .03. Direct effects between sources of CEFSE and Child cross-ethnc friendships, as well as effects of control variables are not displayed for simplicity. Standardized coefficients are presented. Among control variables, gender was associated with child cross-ethnic friendships ($\beta = .17$, $p = .01$) and group status was associated with intergroup anxiety ($\beta = -.36$, $p < .001$). R^2 values for sources of CEFSE: .11 for previous contact, .10 for indirect contact, .19 for social persuasion, .15 for intergroup anxiety. *$p < .05$, **$p < .01$, ***$p < .001$.