



## Student-teacher relationships and ethnic outgroup attitudes among majority students



Jolien Geerlings\*, Jochem Thijs, Maykel Verkuyten

Ercomer, Utrecht University, The Netherlands

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### ABSTRACT

Children's ethnic outgroup attitudes are influenced by their teachers' beliefs and multicultural education. However, research has ignored the possible impact of interpersonal relationships with teachers on students' ethnic attitudes. Three studies, using comparable datasets gathered among native Dutch children (8–13 years) attending grades 4 to 6 in elementary schools in the Netherlands, assess the importance of student-teacher relationships. In Study 1 ( $N = 389$ ), student-teacher relationships were found to be associated with more positive outgroup attitudes, independent of factors commonly used to explain children's outgroup attitudes. Study 2 ( $N = 334$ ) replicated these findings and showed that the impact of student-teacher relationships was not a reflection of the perceived teacher norm on multiculturalism. The results of Study 3 ( $N = 308$ ) show that the association between close student-teacher relationships and children's ethnic attitudes is indirectly associated through internal motivations for intercultural openness, but not through external motivations or intergroup anxiety.

Research has established that children's ethnic outgroup attitudes develop and change over time (Feddes, Noack, & Rutland, 2009; Raabe & Beelmann, 2011), and depend on situational and social-contextual influences (Killen, Hitti, & Mulvey, 2015; McGuire, Rutland, & Nesdale, 2015). Some of this work has focused on the school context by examining ethnic attitudes in relation to classroom ethnic composition (see Thijs & Verkuyten, 2014; Tropp & Prenovost, 2008) and multicultural education programs (for reviews, see Aboud et al., 2012; Bigler, 1999; Stephan, Renfo, & Stephan, 2004), and there also is increasing attention for the role of individual teachers. Research has established, for example, that teachers can affect students' attitudes through the expression of their own views and beliefs on cultural diversity (Grütter & Meyer, 2014; Verkuyten & Thijs, 2013).

However, teachers may influence their students' attitudes not only through their expressed beliefs and teachings, but also through the interpersonal relationships they have with their students. A previous study found that ethnic minority students who shared a closer relationship with their ethnic majority teacher had more positive attitudes towards the ethnic majority group in general (Thijs & Verkuyten, 2012). This finding is consistent with intergroup contact theory (Pettigrew, 1998) which states that the experience of positive meaningful interactions with individual outgroup members increase one's positivity to the outgroup as a whole. Yet, even if students have the same ethnicity as their teachers, their relationships with them may be important for their ethnic attitudes. Same-ethnic relationships do not

involve intergroup contact but, as secondary attachment bonds (Ainsworth, 1973), they might provide children with a sense of security that makes them feel more comfortable with ethnic outgroups. We examined this possibility in three studies.

We used data collected among native Dutch primary school students (aged 8–13) and we investigated whether a closer bond with a native Dutch teacher is related to more positive ethnic outgroup attitudes. In the Netherlands, primary school students typically have one or two teachers for the whole year. We examined this bond from the perspective of the children and, to examine the unique association with out-group attitudes, we controlled for ethnic group identification, ethnic classroom composition, gender, age (Studies 1–3), perceived peer acceptance (Study 1), student-parent relationship (Study 2), and perceived teachers' multicultural norms (Studies 2 and 3). To test the robustness of the association, we also explored whether these control variables moderate the expected association between student-teacher relationship and ethnic attitudes. Finally, we investigated the degree to which this association is mediated by interethnic anxiety and the motivation for intercultural openness (Study 3).

### 1. Student-teacher relationship as secondary attachment

A growing body of research demonstrates the importance of the student-teacher relationship for children's academic engagement and

\* Corresponding author at: Utrecht University, Padualaan 14, 3584CH Utrecht, The Netherlands.  
 E-mail address: [j.geerlings@uu.nl](mailto:j.geerlings@uu.nl) (J. Geerlings).

achievement, and emotional and social development (Davis, 2003; Hamre & Pianta, 2006). Much of the positive effect of the student-teacher relationship can be explained in terms of a so-called secondary attachment (Ainsworth, 1989). Attachment Theory (Ainsworth, 1973; Bowlby, 1969), describes attachment as a deep and enduring affectionate bond between two persons. In young children, the most prominent attachment figure is usually the mother, but in later childhood, other adults such as teachers serve as attachment figures. However, the relationship between teacher and child is not as enduring or as exclusive as the relationship between parent and child. In most educational systems, children change teachers each year. Moreover students have to 'share' their teacher with their classmates, and some classrooms have more than one teacher (Hamilton & Howes, 1992). Teachers are therefore regarded as 'ad-hoc' or 'secondary' attachment figures, who typically tend to engage in affectionate bonds with their students (Verschuere & Koomen, 2012; Zajac & Kobak, 2006).

The sheer amount of time that teachers spend with their students, especially in elementary school, provides many opportunities for children to become attached to their teacher. This secondary attachment to teachers is more obvious among younger children, but it has been found to be important for preadolescents (9–13 years old) as well (Baker, 2006; Little & Kobak, 2003). This secondary attachment may be particularly important when secure parental attachment is lacking (Mitchell-Copeland, Denham, & Demulder, 1997). Nevertheless, even when parental bonds are secure, secondary attachment to teachers can generate additional positive effects. A strong relationship with the teacher has even been found to outweigh parental support in its influence on academic development (Gregory & Weinstein, 2004), illustrating the considerable formative potential of these student-teacher relationships.

The attachment that teachers provide in the context of the school makes children feel accepted and provides them with a 'secure base' to freely explore their social world (Bergin & Bergin, 2009). Teachers can function as a 'safe haven', a 'place' to return to in times of need and stress (see Verschuere & Koomen, 2012). Knowing there is a significant other who will be there to rely on, provides a sense of confidence and security (Weinfeld, Sroufe, Egeland, & Carlson, 2008). This can help children to be less concerned with their personal needs and emotional or physical well-being, and make them more willing to be involved in new and challenging social situations (Bowlby, 1988; Cassidy & Shaver, 2008). Meeting strangers is such a challenging situation, and according to attachment theory (Bowlby, 1982), children have a natural fear of the unknown which can threaten their sense of security. Theoretically, this fear can extend to people from other ethnic groups. Ethnic outgroup members are relatively unfamiliar and most people tend to find (possible) interactions with ethnic outgroup members challenging and discomfiting (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Turner, Hewstone, & Voci, 2007).

To date, there has been a lack of research on relational security and outgroup attitudes in children but research among adults has found that the experience of relational security can improve outgroup attitudes (Boag & Carnelley, 2012; Hofstra, van Oudenhoven, & Buunk, 2005; Mikulincer & Shaver, 2001). Two studies have focused on the underlying mechanisms of this effect. Mikulincer and Shaver (2001) showed that participants who were primed with the sense of a secure base were more positive about ethnic outgroups because the sense of security attenuated participants' appraisals of outgroup threat. More recently, Boag and Carnelley (2015) found that the priming of attachment security diminishes outgroup prejudice by temporarily enhancing empathic concern. Thus, and consistent with attachment theory, a sense of relational security can make ethnic outgroups less threatening, but it may also increase one's openness to and interest in these outgroups. In the school context, children's sense of relatedness to their teacher might have similar effects and thereby improve children's outgroup attitudes. In the present research, we tested this proposition, and in Study 3, we examined the roles of intergroup anxiety and the motivation for intercultural openness.

## 2. Intergroup anxiety

The relational security provided by attachment figures such as teachers is likely to decrease social anxiety in children which supports their natural tendency to explore their social environment (Cassidy & Shaver, 2008). Research has demonstrated that being securely attached to significant others is related to being less anxious in social encounters with various others (Bohlin, Hagekull, & Rydell, 2000; Brumariu & Kerns, 2008; Kestenbaum, Farber, & Sroufe, 1989), including adults (Hazan & Shaver, 1994; Lopez & Brennan, 2000; Mikulincer & Shaver, 2007). By contrast, social anxiety causes children to withdraw from interacting with unfamiliar others (Howes & Hamilton, 1993). More anxious children distance themselves from others, which is reflected in more negative attitudes towards these others (Binder et al., 2009). Furthermore, research has shown that anticipating interactions with ethnic outgroup members already can generate so-called intergroup anxiety (Plant & Devine, 2003; Stephan & Stephan, 1985). The extensive literature on intergroup contact has demonstrated that intergroup anxiety is an important reason for negative ethnic attitudes (Riek, Mania, & Gaertner, 2006; Turner et al., 2007; Voci & Hewstone, 2003). Social anxiety is likely to affect these attitudes because anxieties cause children to withdraw from interacting with unfamiliar others (Howes & Hamilton, 1993). This leads us to hypothesize that children who feel closer to their teacher will experience less social anxiety about possible interethnic interactions and therefore will have more positive ethnic outgroup attitudes.

## 3. Motivation for intercultural openness

A close attachment to their teacher might also affect students' outgroup attitudes by promoting an internal motivation to engage with cultural others. Social psychologists have studied people's motivations to react to ethnic and cultural differences in terms of the regulation of prejudice (Crandall, Eshleman, & O'Brien, 2002; Hughes, Alo, Krieger, & O'Leary, 2016; Legault, Green-Demers, Grant, & Chung, 2007), rather than in terms of the motivation to seek and develop positive interactions with cultural others (Siem, Stürmer, & Pittinsky, 2016). The research on the motivation to regulate prejudice has shown that it is important to make a distinction between an *internal* motivation that springs from personal interest and convictions (e.g., enjoy getting to know new people, belief that one should be nice to everyone), and an *external* motivation (e.g., wanting to be liked by others, fearing social sanction). Theoretically, the former should be stronger and more consistently related to people's expression of outgroup attitudes as it implies that individuals have internalized the social norm to be non-prejudiced (Crandall et al., 2002) and thus personally think it is important to be unbiased and open to other groups. Several studies have supported this claim (e.g., Legault et al., 2007; Plant & Devine, 1998; Thijs, Gharaei, & de Vroome, 2016). In the present research (Study 3), we borrow from this line of work by focusing on children's internal motivation to seek and develop positive interactions with ethnic outgroup peers. We have two reasons to expect that this motivation is affected by the degree of closeness in the student-teacher relationship. First, this motivation includes an intrinsic desire to engage with unfamiliar others, which matches the exploration tendency that is facilitated by a sense of relational security. Second, it involves the basic principle to be prosocial towards out-group members by respecting and accepting them. When people feel securely attached to others they are less focused on their own emotional states and more concerned with the well-being of others (Mikulincer & Shaver, 2007; Mikulincer, Shaver, Gillath, & Nitzberg, 2005). A closer student-teacher relationship is thus hypothesized to be related to a stronger internal motivation for intercultural openness, and we test whether this motivation played an intermediate role in the anticipated association between student-teacher relationship and children's ethnic attitudes. To investigate the unique importance of children's internal motivation we also include their external motivation to regulate prejudice. Children can have various

**Table 1**  
Descriptive statistics of measures in all three studies.

Student level	Range	Study 1	Study 2	Study 3
		<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Outgroup attitudes - general	1–7	4.52 (1.68)	4.37 (1.78)	
Outgroup attitudes - stereotypes	1–5	3.32 (0.85)		3.53 (0.77)
Female (ref. male)	0–1	0.48 (0.50)	0.53 (0.50)	0.56 (0.50)
Age	8–13	10.59 (1.03)	10.49 (0.97)	10.14 (0.84)
Ethnic identification	1–5	4.64 (0.58)	4.03 (0.76)	4.58 (0.52)
Close student-teacher relationship	1–5	4.21 (0.70)	3.69 (0.79)	3.80 (0.81)
Perceived peer acceptance	1–5	4.21 (0.77)	4.07 (0.72)	
Depressed affect	1–5		3.59 (0.96)	
Close student-parent relationship	1–5		4.56 (0.54)	
Teacher's multicultural norms	1–5		3.14 (0.93)	2.88 (0.96)
Internal motivation	1–5			4.10 (0.72)
External motivation	1–5			2.66 (0.90)
Intergroup anxiety	1–5			2.65 (1.44)
Classroom level				
Composition classroom Dutch	0–1	0.69 (0.25)	0.49 (0.29)	0.57 (0.26)
Composition classroom Turk./Moroc	0–1	0.06 (0.10)	0.24 (0.23)	0.16 (0.17)

Note. Two-sided test \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

simultaneous reasons for intercultural openness and this implies that their internal and external motivations do not have to be mutually exclusive and can even be positively correlated (e.g., [Thijs et al., 2016](#)). The sense of acceptance conveyed by a close relationship with their teacher will make students less concerned about social rejection or disapproval. Therefore, we do not anticipate a unique effect of relational closeness on children's external motivation to demonstrate cultural openness.

#### 4. Overview of the studies

We conducted three studies using comparable datasets (for descriptive statistics see [Table 1](#)), gathered among native Dutch children (aged 8–13) in the 4th to 6th grades of elementary schools across the Netherlands. In Dutch elementary schools, children typically have one or two teachers the whole year round, which increases the attachment potential of the student-teacher relationship. In all studies, we examined children's attitudes towards Turks and Moroccans. Both groups are the largest and most typical non-Western ethnic minority groups in Dutch society. They are predominantly Muslim, face much prejudice and discrimination, and are the least-liked groups in the Netherlands, also among young people ([Verkuyten & Thijs, 2010](#)). The attitudes towards both groups are strongly related for Dutch majority children ([Thijs & Verkuyten, 2012](#)).

In Study 1, we examined if the interpersonal relationship between student and teacher is positively associated with student's ethnic outgroup attitudes. In this analysis we controlled ethnic identification, as this factor is commonly used to explain outgroup attitudes of children (e.g., [Levy & Killen, 2010](#)). We also account for the ethnic composition of the classroom, which is often found to be of positive influence (e.g., [Verkuyten & Thijs, 2013](#)), because, consistent with contact theory ([Pettigrew, 1998](#)), the ability to interact with outgroup classmates is likely to have positive effects on outgroup attitudes. It is important to control for this variable, as student-teacher relationship quality could also explain between-teacher (or between-classroom) variation in those attitudes.

Additionally we took into account the students' perception of peer acceptance to ensure that the effect of the student-teacher relationship cannot be ascribed to children's peer group social standing ([Nesdale](#)

[et al., 2010](#)). In the second study, we investigated the same association controlling for the quality of parent-child relationship in order to be able to estimate the effect of attachment to the teacher independent of attachment to parents. We additionally took the perceived multicultural norms of the teacher into account to assess whether the effect of the student-teacher relationship is found regardless of students' perceived normative classroom climate. In the Netherlands, schools are legally obliged to advance interethnic understanding and to promote positive interethnic relations but there is variation in the extent to which teachers actively express multicultural norms in their classroom ([Onderwijsinspectie, 2006](#)). These norms condemn prejudice and discrimination and stress the importance of equality, and therefore they have the potential to improve children's ethnic attitudes ([Verkuyten & Thijs, 2013](#)). Thus, we anticipated that children's ethnic attitudes would be positively related to their perceptions of their teachers' multicultural norms and we controlled for these perceptions in our analyses. If we are correct in assuming that teachers influence the outgroup attitudes of their students through their attachment relationship, this influence should exist independently of any perceptions children have of their teachers' multicultural norm. Furthermore, the effect should be similar whether children view their teacher as expressing a weak versus a strong multicultural norm. In Study 2, we also included a measure for children's depressed affect to investigate whether the link between the student-teacher relationship and children's outgroup attitude was not due to internalizing problems which may hinder children in their social interactions. Finally, in the third study, we investigated whether the association between student-teacher relationship and ethnic attitude was statistically indirect through social anxiety and the internal motivation for intercultural openness. In all studies, we moreover test the robustness of the association between student-teacher relationship and ethnic attitudes by estimating interaction terms between student-teacher relationship with the control variables (age, gender, ethnic identification, peer acceptance and ethnic composition) to ensure that the importance of the student-teacher relationship for outgroup attitudes does not depend on these individual and contextual variables.

#### 5. Study 1

##### 5.1. Method

##### 5.1.1. Participants and procedure

This study was originally conducted among 572 students from 32 ethnically diverse 4th to 6th grade classrooms within 8 elementary schools across the Netherlands (for classroom ethnic composition, see [Table 1](#)). Because our focus is on co-ethnic student-teacher relationships and all students had a teacher with a native Dutch background, we selected those students who could be identified as Dutch. This categorization was based on students' ethnic self-definition and country of birth of both parents; students were therefore only categorized as Dutch if both parents were born in the Netherlands and students also self-identified as Dutch. Of these 402 students, those with missing values (between 0.3 and 2%; Little's MCAR test;  $p = 0.103$ ) on any of the variables were list-wise deleted, leaving 389 students for the analyses. Within this subsample, students were between 8 and 13 years old ( $M = 10.59$ ,  $SD = 1.03$ ), and 48% was female. After receiving informed parental consent, students anonymously and voluntarily completed a questionnaire in their classrooms.<sup>1</sup>

<sup>1</sup> If they had more than one teacher, the children in all studies were asked to complete the questions for the Dutch teacher who was present on the day of the data collection. However, for three classrooms in Study 2 and Study 3 the situation was different (see text). Information on the number of teachers per classroom was not available for Study 1, but respectively 47% and 43% of the students in, respectively, Study 2 and 3 had two teachers rather than one. For both studies, we checked whether the results depended on the number of teachers, but this was not the case. These additional analyses are available on request.

### 5.1.2. Measures

To assess the quality of the *student-teacher relationship*, students were asked to complete the Closeness subscale from Student Perception of Relationship with Teacher Scale (SPRTS; Koomen & Jellesma, 2015). Items of the SPRTS were derived from three sources: the Dutch version of the Student Teacher Relationship Scale (Koomen, Verschueren, van Schooten, Jak, & Pianta, 2012), the Network of Relationship Inventory (NRI; Buhrmester & Wyndol, 1987), and the Relatedness Scale (Wellborn & Connell, 1987). The SPRTS includes subscales for closeness, conflict and dependency, and the ‘closeness’ subscale (6 items; e.g., ‘I feel at ease with my teacher’, ‘If I have a problem, I can talk to my teacher about it’) taps into children’s feelings of relational security with their teacher (Koomen & Jellesma, 2015). Responses were measured on 5-point Likert scales, ranging from 1 (No, absolutely not!) to 5 (Yes, absolutely!). Confirmatory factor analysis revealed that one of the items did not fit the scale (loading 0.463), and was thus omitted. A single factor with the remaining 5 items was estimated and showed a good model fit ( $\chi^2(4) = 10.134$ ,  $p < 0.05$ , RMSEA = 0.063, CFI = 0.992, SRMR<sub>within</sub> = 0.022; loadings between 0.49 and 0.68). Cronbach’s alpha for this scale was 0.82.

Children’s *ethnic outgroup attitudes* were assessed with two types of measures. First, with two separate questions, the children were asked to indicate their general evaluations of, on the one hand, Turkish- and on the other Moroccan people using a Likert-type response format consisting of seven faces, ranging from very happy (1; big smile) to very sad (7; big frown) with a neutral mid-point (4; straight face). The introduction to these questions was, “The following questions are about how you feel about groups of people in the Netherlands. Pick the face that you choose.” The ‘seven faces’ response format (Yee & Brown, 1992) has been successfully used in previous research among early adolescents (e.g., Verkuyten & Thijs, 2001). The scores were recoded so that a higher score indicated a more positive attitude. The two evaluations of both outgroups were highly correlated ( $r = 0.81$ ) and therefore an average score was used.

In addition, participants evaluated Moroccan children on four stereotypic trait dimensions (see e.g., Brown & Bigler, 2002) that have been successfully used in previous research in the Netherlands (e.g., Verkuyten, 2002). Children were asked to indicate on 5-point scales (1 = totally disagree; 5 = totally agree) how much they agreed with each of the following statements; ‘I think most Moroccan children are: (a) friendly, (b) honest, (c) fun to play with, and (d) helpful’. Only positive traits were used as previous research has shown that children are more reluctant to evaluate outgroups on negative dimensions (Rutland et al., 2007). Confirmatory factor analysis showed a good model fit ( $\chi^2(2) = 1.218$ ,  $p > 0.05$ , RMSEA = 0.000, CFI = 1.000, SRMR<sub>within</sub> = 0.005; loadings between 0.76 and 0.87). These items formed a reliable scale with a Cronbach’s alpha of 0.88, and therefore an average score was used with a higher score indicating a more positive attitude. The stereotypic measure was positively associated with the global evaluations of Turks and Moroccans ( $r = 0.67$ ).

To assess *ethnic identification*, we used three items that have been used in previous studies in the Netherlands (e.g., Sierksma, Thijs, & Verkuyten, 2014; Verkuyten, 2002). The children, all of whom self-identified as Dutch, were asked to what extent they liked to be Dutch, were proud to be Dutch and found it important to be Dutch (5-point scale). Reliability analysis showed that the last item fitted poorly with the other two items and was thus omitted. The remaining two items were highly correlated ( $r = 0.69$ ) indicating acceptable reliability. *Perceived peer acceptance* was included as a control variable to be able to investigate whether the effect of the student-teacher relationship is independent of children’s general sense of relatedness. We measured this variable with four items adapted from a 10-item measure developed by Rutland et al. (2012). These items were selected to diminish the burden of data collection for the participating students, translated by researchers fluent in English and Dutch, and reformulated to pertain to the classroom rather than the school in general. The items

were ‘Are there many kids in class you can talk to?’, ‘Are there many kids in class you do fun things with?’, ‘Are there many kids in class you get along with?’, and ‘Do most kids in class like you?’ The response scale ranged from 1 (No, absolutely not!) to 5 (Yes, absolutely!). The four items loaded on one factor ( $\chi^2(1) = 13.683$ ,  $p > 0.001$ , RMSEA = 0.182, CFI = 0.984, SRMR = 0.022; loadings between 0.66 and 0.87), and yielded a Cronbach’s alpha of 0.87. Together, the four items were considerably and negatively related to peer victimization (teasing, name-calling, social exclusion) in another sample of Dutch preadolescents ( $r = -0.46$ ; Thijs & Fleischmann, 2015). Hence, the scale can be considered as an appropriate indicator of children’s perceived peer acceptance.

To assess the *ethnic composition of the classroom* we calculated the percentage of students in each classroom who were identified as Dutch students (according to the abovementioned criteria) and the proportion of students who reported that the ethnicity of themselves and their parents was either Turkish or Moroccan (see Table 1). Both variables were strongly and negatively related ( $r = -0.64$ ). As it was less skewed, we only included the first variable in the analyses. We further controlled for *age* (measured in years) and *gender* (0 = male, 1 = female).

### 5.2. Data analytic strategy

Because students were nested in their classrooms, their individual answers were not likely to be fully independent. This means that conventional statistical methods might lead to an underestimation of standard errors which could result in spurious significant results (Snijders & Bosker, 1999). To correct for this dependency in the data we analyzed our regression models with multilevel analyses using Mplus version 7 (Muthén & Muthén, 2012). We started our analysis by estimating an intercept-only model including both dependent variables. The intraclass correlations (ICC) were 0.082 ( $p < 0.05$ ) for the general outgroup attitudes and 0.136 ( $p < 0.05$ ) for the stereotypes, indicating that respectively 8.2 and 13.6% of the total variance in ethnic outgroup attitudes was at the classroom level.

We decided to enter all variables into our analysis as observed rather than latent constructs because using latent constructs resulted in non-identification, due to having more parameters than clusters in the model. All models were estimated using a maximum likelihood estimator and all continuous variables were centered on their mean to enhance the interpretability of the findings. Using a chi-square difference test, we investigated whether the student-teacher relationship is a significant predictor of ethnic outgroup attitudes by comparing the fit of a model with only control variables to a model in which the effect of student-teacher relations is included. Finally, for examining the robustness of the association between student-teacher relationship and ethnic attitudes we estimated interaction terms between student-teacher relationship with age, gender, ethnic identification, peer acceptance and ethnic composition.<sup>2</sup> When these interactions are not significant this would indicate that the importance of the student-teacher relationship for outgroup attitudes does not depend on these individual and contextual variables.

<sup>2</sup> For a randomly selected subsample of students in Study 2 ( $N = 108$ ) we had information about parental social economic status (SES) as reported by their teacher. Following Van Ewijk and Slegers (2010) we constructed a composite score for socioeconomic status by adding the scores on parental education (0 = elementary education, 1 = high school/lower vocational education, 2 = higher vocational education/university) and parental employment (0 = both unemployed, 1 = at least one working parent). This scale ranged from zero to three. SES was weakly correlated with closeness ( $r = 0.21$ ) and perceived peer acceptance ( $r = 0.22$ ) and was not correlated with outgroup attitudes. We also ran regression analyses including SES, which was not found to be associated with outgroup attitudes. Given the limited sample of 108 students and the non-significant results, our main analyses did not include SES as a control variable.

**Table 2**  
Study 1: multilevel effects of student-teacher relationships on outgroup attitudes.

	Model 1		Model 2	
	Out. att. faces	Out. att. stereotypes	Out. att. faces	Out. att. stereotypes
	B. (S.E.)	B. (S.E.)	B. (S.E.)	B. (S.E.)
<b>Student level</b>				
Female (ref. male)	0.066 (0.051)	0.113 (0.051)*	0.072 (0.050)	0.119 (0.050)*
Age	0.068 (0.061)	0.046 (0.067)	0.076 (0.060)	0.050 (0.066)
Perceived peer acceptance	0.113 (0.053)*	0.078 (0.054)	0.081 (0.054)	0.039 (0.054)
Ethnic identification	0.026 (0.054)	0.082 (0.054)	0.005 (0.053)	0.058 (0.054)
Close student-teacher rel.			0.160 (0.053)**	0.187 (0.054)***
<b>Classroom level</b>				
Composition classroom - Dutch	- 0.601 (0.228)**	- 0.467 (0.244)	- 0.560 (0.254)*	- 0.392 (0.263)
$\chi^2$ (df)	63.957 (9)		35.757 (6)	
CFI	0.810		0.897	
SRMR <sub>within</sub>	0.085		0.061	
SRMR <sub>between</sub>	0.035		0.005	
R <sup>2</sup> <sub>within</sub>	0.022 (0.015)	0.028 (0.016)	0.048 (0.023)*	0.059 (0.024)*
R <sup>2</sup> <sub>between</sub>	0.361 (0.274)	0.218 (0.228)	0.314 (0.285)	0.154 (0.207)

Note. Standardized effects are shown. Both models include correlations between close student-teacher relationships and perceived peer acceptance, and between the two dependent variables for outgroup attitudes. One-sided tests for close student-teacher relationships, others two-sided test.

\*  $p < 0.05$ .  
\*\*  $p < 0.01$ .  
\*\*\*  $p < 0.001$ .

### 5.3. Results

Means and standard deviations for the different measures can be found in Table 1. In the first model (Table 2, model 1); we added all covariates to the model. The results show that ethnic identification and age were not associated with outgroup attitudes. However, children who perceived themselves to be accepted by their peers ( $B = 0.113$ ) demonstrated more positive general outgroup attitudes, and girls reported more favorable stereotypes than boys did ( $B = 0.113$ ). Moreover, students in more ethnically diverse schools report more positive attitudes and stereotypes.

The evaluation of the student-teacher relationship was added in model 2 and this variable had a significant independent statistical effect (see Table 2). Children who perceived the relationship with their teacher to be closer, reported more positive ethnic attitudes both on the stereotype measure ( $B = 0.187$ ) and on the general attitudes measure ( $B = 0.160$ ). The student-teacher relationship explained an additional 2.6% of the variance in general outgroup attitudes compared to the model with only covariates, and an additional 3.1% of the variance in outgroup stereotypes. Model 2 fitted the data significantly better, indicated by the significant chi-square difference test,  $\Delta\chi^2(3) = 28.200$ ,  $p < 0.001$ .

Additionally, we analyzed possible interaction effects between the student-teacher relationship and any of the control variables, and none of these effects was significant. This indicates that the positive statistical effect of the student-teacher relationship was similar for older and younger children, boys and girls, for varying levels of peer acceptance and ethnic identification, and in classrooms with different percentages of ethnic minority students.

### 5.4. Discussion

The results of Study 1 show that when majority group children experience a closer relationship with their teacher they have more positive attitudes (general attitudes and stereotypes) towards ethnic outgroups. This association existed independently of a general sense of relatedness (i.e., the extent to which children feel accepted by their peers), ethnic identification and ethnic school composition. Further, the association was robust because it was similar for girls and boys, for the different age groups, for levels of peer acceptance, for levels of ethnic identification, and for the ethnic composition in the classroom.

### 6. Study 2

In the second study, we examined the association between the student-teacher relationship and children's ethnic outgroup attitudes by considering three additional factors. First, if we are correct in assuming that the student-teacher relationship matters for students' ethnic attitudes than this association should exist independently of the perception of a multicultural teacher norm. Research has demonstrated that school norms about diversity are associated with more positive student attitudes towards social outgroups (Grütter & Meyer, 2014; Solomon, Watson, Battistich, Schaps, & Delucchi, 1996; Verkuyten & Thijs, 2013). Therefore, we included children's norm perceptions in this study.

Second, one could argue that the effect of the student-teacher relationship on outgroup attitudes reflects children's general sense of relational security rather than their specific attachment to their teacher. Parents usually are the primary attachment figures and this attachment might generalize to other attachment figures, such as the teacher (Verschuere & Koomen, 2012). Thus it could be that parental attachment rather than teacher attachment that is an important factor. To assess whether the relationship with the teacher has a unique and independent effect on ethnic outgroup attitudes we added a measure of the quality of the parent-child relationship.

Third, we controlled in the analyses for children's depressed affect. It could be that the association between relational closeness and outgroup attitudes is due to their relations with third variables and therefore spurious. Depressed affect could be such a third variable, as children with internalizing problems have been found to share less close relationships with their teachers (Baker, 2006) and the principle of self-congruity suggests that negative self-feelings are associated with negative feelings towards others (Ehrlich, 1974).

#### 6.1. Method

##### 6.1.1. Participants and procedure

The second study was conducted among 888 children in 18 elementary schools across the Netherlands. The children all attended 4th to 6th grade classrooms ( $N = 36$ ) which were all taught by native Dutch teachers. Given our focus on co-ethnic student-teacher relationships, we again only selected native Dutch students. Students were included only if they self-identified as ethnic Dutch, and, additionally, indicated that both their parents were born in the Netherlands ( $N = 401$ ). Students with missing values (between 1 and 8%; Little's MCAR test;  $p = 0.271$ ) on any of the variables used in the analysis were list-wise deleted, leaving 334 students for the analyses. Within this subsample, students were between 9 and 13 years old ( $M = 10.49$ ,  $SD = 0.97$ ) and 53% was female. After getting informed parental consent (obtained for 96% of the students that were initially approached), the students anonymously and voluntarily responded to a questionnaire in their classrooms.

##### 6.1.2. Measures

The quality of the student-teacher relationship was again measured with the 6 items ( $\alpha = 0.85$ ) of the closeness subscale of the SPRTS (Koomen & Jellesma, 2015). These items loaded on a single factor that had

good model fit ( $\chi^2 (9) = 21.499, p < 0.05, RMSEA = 0.064, CFI = 0.983, SRMR_{within} = 0.027$ ; loadings between 0.61 and 0.88). Children's *outgroup attitudes* were measured with the 'seven faces' scale in relation to the Turkish and Moroccan outgroups ( $r = 0.77$ ). No stereotype measures were available for this study. The quality of the *student-parent relationship* was assessed by adjusting the SPRTS closeness subscale (Koomen & Jellesma, 2015) to the context of the parents. The scale consisted of 6 items (e.g., 'I feel at ease with my parents', 'If I have a problem, I can talk to my parents about it'), which together formed a reliable scale ( $\alpha = 0.85$ ). Confirmatory factor analysis showed that these items formed a single factor with a good model fit ( $\chi^2 (9) = 15.801, p > 0.05, RMSEA = 0.048, CFI = 0.991, SRMR_{within} = 0.023$ ; loadings between 0.61 and 0.80).

For measuring the *perceived multicultural teacher norm*, we used three items which have been successfully used in previous research in the Netherlands (Verkuyten & Thijs, 2013): 'Does your teacher ever say that all cultures should be respected?', 'Does your teacher ever say that it is wrong to discriminate?', and 'Does your teacher ever say that people from all cultures are equal?' The response scale ranged from 1 (absolutely never!) to 5 (very often!) and alpha was 0.75. Confirmatory factor analysis with these three items revealed a reasonable model fit ( $\chi^2 (1) = 6.551, p < 0.05, RMSEA = 0.129, CFI = 0.976, SRMR_{within} = 0.030$ ; loadings between 0.67 and 0.86). We also calculated the ICC of these norms using information of all students in the original data set (Dutch and non-Dutch), thus examining how much of the variation in individual perceptions was shared by students of the same teachers. Multilevel analyses revealed that a significant part of the variance in the norm perceptions (18.53%,  $p < 0.001$ ) could be explained by differences between teachers, indicating that there was relative agreement among students with the same teacher.

*Ethnic identification* was assessed with the same three items that were used in Study 1. Confirmatory factor analysis showed that the three items loaded on one component explaining 61.47% of the variance ( $\chi^2 (1) = 6.046, p < 0.05, RMSEA = 0.123, CFI = 0.976, SRMR_{within} = 0.030$ ;  $\alpha = 0.68$ ). *Perceived peer acceptance* was measured with the same four items as in Study 1 ( $\alpha = 0.85, CFA: \chi^2 (2) = 12.803, p < 0.01, RMSEA = 0.127, CFI = 0.982, SRMR_{within} = 0.027$ ; loadings between 0.59 and 0.84).

Children's *depressed affect* was measured with three items adapted from the Profile of Mood States (McNair, Lorr, & Droppleman, 1971): "Some children are sometimes sad. How about you?", "Some children are nervous. How about you?", and "Some children are often afraid. How about you?" The response scales ranged from 1 (No!) to 5 (Yes!), and the three items loaded on a single factor ( $\chi^2 (1) = 9.168, p < 0.01, RMSEA = 0.156, CFI = 0.973, SRMR_{within} = 0.041$ ; loadings between 0.76 and 0.82).

We obtained two measures for *classroom ethnic composition* by calculating the percentage of students identified as Dutch (according to the abovementioned criteria) and the percentage of students who self-identified as Turkish or Moroccan (see Table 1). As in Study 1, these percentages were negatively related ( $r = -0.81$ ) and we only included the percentage of Dutch students in our analysis.

### 6.2. Data analytic strategy

In Study 2, three of the classrooms were taught by two teachers and students were randomly assigned to fill in their questionnaires about one of the two teachers. To make sure students remembered to assess only the teacher assigned to them, the name of the teacher was written down above all questions pertaining to the teacher. Similar to Study 1 we conducted multilevel analyses using Mplus version 7. Again, all models were estimated using the ML estimator. The intraclass correlation, which was calculated after estimating an intercept-only model, revealed that 19.3% of the total variance in ethnic outgroup attitudes existed at the classroom level.

All variables were added to the model as observed rather than latent

constructs, because the latent models resulted in model non-identification (due to having more parameters than clusters in the model). In our first model, we tested the effect of student-teacher relationship on outgroup attitudes while controlling for the covariates. In a second model, we included the effect of student-parent relationship and in a third model we tested the effect of teachers' perceived multicultural norms. Further, we examined whether the association between student-teacher relationship and ethnic attitudes was robust across all control variables, the student-parent relationship, and the multicultural norm.

### 6.3. Results

The first model (see Table 3) shows that gender, age and depressed affect were not associated with outgroup attitudes. Stronger ethnic identification was associated with less positive outgroup attitudes and higher perception of peer acceptance was associated with more positive attitudes. Further, in ethnically more diverse schools, students had attitudes that are more positive. More importantly, and similar to Study 1, a closer student-teacher relationship was independently associated with a more favorable ethnic outgroup attitude ( $B = 0.139, p < 0.05$ ). This model showed a poor model fit ( $\chi^2 (8) = 29.424, p < 0.001, RMSEA = 0.082, CFI = 0.625, SRMR_{within} = 0.059, SRMR_{between} = 0.001$ ), but did explain a significant 9.6% of variance in outgroup attitudes at the student level.

In model 2, we added the effect of the student-parent relationship which was not significantly associated with outgroup attitudes. Also, the effect of the student-teacher relationship remained significant when adding this variable to the model, but the model did significantly improve compared to model 1 ( $\Delta\chi^2(4) = 9.508, p < 0.05$ ). Finally, model 3 shows that students who perceived their teacher to display more positive norms about multiculturalism demonstrated more

**Table 3**  
Study 2: multilevel effects of student-teacher relationships on outgroup attitudes(-faces).

	Model 1	Model 2	Model 3
	B. (S.E.)	B. (S.E.)	B. (S.E.)
<b>Student level</b>			
Female (ref. male)	0.038 (0.055)	0.038 (0.055)	0.039 (0.054)
Age	0.037 (0.066)	0.037 (0.066)	0.007 (0.065)
Perceived peer acceptance	0.184 (0.055)***	0.172 (0.057)**	0.161 (0.056)**
Ethnic identification	-0.168 (0.055)**	-0.176 (0.055)***	-0.158 (0.055)**
Depressed affect	0.022 (0.055)	0.024 (0.055)	0.022 (0.054)
Close student-teacher relationship	0.139 (0.057)*	0.125 (0.059)*	0.105 (0.059)*
Close student-parent relationship		0.063 (0.059)	0.058 (0.058)
Teacher's multicultural norms			0.170 (0.056)**
<b>Classroom level</b>			
Composition classroom - Dutch	-0.606 (0.198)**	-0.587 (0.205)**	-0.518 (0.232)*
$\chi^2$ (df)	29.424 (8)***	38.932 (12)***	47.304 (15)***
CFI	0.625	0.753	0.736
SRMR <sub>within</sub>	0.059	0.065	0.062
SRMR <sub>between</sub>	0.001	0.001	0.003
R <sup>2</sup> <sub>within</sub>	0.096 (0.035)**	0.102 (0.037)**	0.120 (0.037)***
R <sup>2</sup> <sub>between</sub>	0.368 (0.240)	0.345 (0.241)	0.268 (0.241)

Note. Standardized effects are shown. Models include correlations between close student-teacher relationships and perceived peer acceptance, between close student-teacher relationships and student-parent relationships, and between student-parent relationships and perceived peer acceptance. One-sided tests for close student-teacher relationships, close student-parent relationships and teacher's multicultural norms, others two-sided test.

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

\*\*\*  $p < 0.001$ .

positive outgroup attitudes ( $B = 0.170$ ). The fit of this model did significantly improved compared to model 2 ( $\Delta\chi^2(3) = 8.372, p < 0.05$ ). However, the positive effect of the student-teacher relationship on outgroup attitudes remained significant ( $B = 0.105, p < 0.05$ ).

Additional analyses for assessing the robustness of the findings showed that there were no significant interaction effects between the student-teacher relationship and all other variables included in the model, except for age. Although younger and older children reported similarly positive outgroup attitudes and close relationships (i.e., means are not significantly different (ANOVA); respectively  $F = 0.531, p = 0.71, F = 0.283, p = 0.89$ ), the negative interaction between the student-teacher relationship and age ( $b = -0.286, p < 0.05$ ), indicating, as illustrated in Fig. 1, that for younger children ( $-1 SD$ ) closeness with their teacher was somewhat more strongly associated with outgroup attitudes ( $b = 3.967, p < 0.05$ ) than for older students ( $b = 3.521, p < 0.05$ ). However, this interaction was small and explained  $< 1\%$  of the variance in both dependent variables.

#### 6.4. Discussion

Similar to Study 1, the results of Study 2 demonstrate that students' ethnic outgroup attitudes are associated with their relationship with their teacher. The closer students perceived this relationship to be, the more positive they were about the ethnic outgroups. This association was found independently of factors that are often used to explain ethnic outgroup attitudes among children, such as ethnic identification, perceived peer acceptance, and the ethnic composition of the classroom. Moreover, this association was found when controlling for the relationship with the parents, which indicates that the association cannot be attributed to a general sense of attachment. Furthermore, while norms about multiculturalism as expressed by the teacher were found to be important for children's ethnic attitudes (Verkuyten & Thijs, 2013), the interpersonal relation with the teacher was an additional factor. In addition, there was no interaction between the teacher norms and the quality of the student-teacher relationship. This illustrates that the student-teacher relationship is associated with students' ethnic outgroup attitudes regardless of the multicultural norms set by their teacher. Unlike we found in Study 1, there was an interaction between the student-teacher relationship and student age indicating that the effect of the relationship was slightly stronger for younger versus older students. This suggests that the attachment function of the student-teacher bond might be more relevant for younger children. However, the size of this interaction was small and the relationship effect held for students of all ages.

### 7. Study 3

We conducted a third study to investigate the association between the student-teacher relationship and ethnic attitudes in more detail. We set out to examine two possible mechanisms behind this association. We

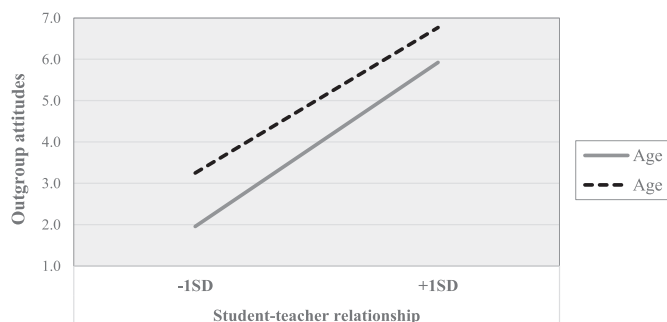


Fig. 1. Moderation effect of student-teacher relationships and students' age on outgroup attitudes.

predicted that the relational security provided by a close student-teacher relationship reduces children's intergroup anxiety and increases their internal (but not external) motivation for intercultural openness. Both processes, in turn, were expected to lead to more positive ethnic outgroup attitudes. To diminish the burden of data collection, and because Study 1 indicated that the effects were slightly stronger for the stereotype measure as compared to the seven-faces scales, children's ethnic attitudes were measured with out-group stereotypes only.

#### 7.1. Method

##### 7.1.1. Participants and procedure

This study was conducted among 800 students in 23 schools across the Netherlands. Of these students, 363 could be identified as native Dutch children (using the same procedure as in Studies 1 and 2) who attended 4th to 6th grade classrooms ( $N = 40$ ) taught by native Dutch teachers. All students with missing values (between 1 and 8%; Little's MCAR test;  $p = 0.258$ ) on any of the variables used in the analysis were list-wise deleted, leaving 308 students for the analyses. The students were between 8 and 12 years old ( $M = 10.15, SD = 0.84$ ) and 56% was female. After obtaining informed consent (obtained for 98% of the children that were initially approached), the students anonymously and voluntarily filled in a questionnaire in their classroom.

##### 7.1.2. Measures

The quality of the student-teacher relationship was assessed with the same six items as in Study 2:  $\chi^2(9) = 16.205, p = 0.06, RMSEA = 0.051, CFI = 0.986, SRMR_{within} = 0.030$ ; loadings between 0.56 and 0.71, with an alpha of 0.80. Ethnic outgroup attitudes were assessed by using the stereotypic trait evaluations used in Study 1 ("honest; fun to play with; helpful") but this time with regard to both Turkish and Moroccan minority peers (CFA, formed a single factor:  $\chi^2(3) = 5.976, p = 0.11, RMSEA = 0.057, CFI = 0.997, SRMR_{within} = 0.018$ ; loadings between 0.55 and 0.78;  $\alpha = 0.88$ ).

Intergroup anxiety was measured with six items that were developed for this study. They followed a brief introduction: 'Imagine that a new group of children from another country would join your classroom. You do not know these children. Your teacher asks you to work on a project with these children in the hallway.' Subsequently students were asked where they would (1) like doing this, (2) find this scary, (3) feel alone, (4) be nervous, (5) be a bit afraid, and (6) would like these children. Items were answered on a 5-point Likert scale (1 = No, definitely not!-5 = Yes, definitely!). Confirmatory factor analysis revealed that the two positively worded items did not fit the scale (with factor loadings of 0.27 and 0.26; other items  $> 0.56$ ). The remaining items (2-5) formed a reliable scale for intergroup anxiety ( $\chi^2(2) = 44.931, p < 0.001, RMSEA = 0.264, CFI = 0.957, SRMR_{within} = 0.069$ ; loadings between 0.79 and 0.90;  $\alpha = 0.93$ ).

Children's motivation for intercultural openness was assessed with a measure based on the work of Legault et al. (2007) and Plant and Devine (1998). Students were presented with six different reasons for being "nice to children from other countries or cultures". Three of these reasons were internal ("because I want to get to know them", "because I think everyone is equal", and "because I think it is important to be nice to others"), and three were external ("because I want others to like me", "because other people expect me to", and "because people might think I am mean"). Students answered on 5-point Likert scales (1 = No!-5 = Yes). Confirmatory factor analysis showed that the internal items loaded on one factor and the external reasons on another ( $\chi^2(8) = 25.948, p < 0.01, RMSEA = 0.085, CFI = 0.914, SRMR_{within} = 0.060$ ). Factor loadings for each of the factors were estimated between 0.54 and 0.86 (internal motivation,  $\alpha = 0.59$ ; externalizing motivation,  $\alpha = 0.61$ ).

We again considered the perceived multicultural teacher norm, measured with the same three items as in study two ( $\chi^2(1) = 0.323, p = 0.57, RMSEA = 0.000, CFI = 1.000, SRMR_{within} = 0.008$ ;  $\alpha = 0.69$ ). The ICC of this norm, using information of all students in the

original data set (Dutch and non-Dutch), was calculated and this revealed that a significant part of the variance in multiculturalist norm (13.7%,  $p < 0.001$ ) could be explained by differences between teachers. This indicates that students of the same teacher had relatively similar perceptions of the multicultural norms.

*Ethnic identification* was assessed with the three items used in the previous studies ( $\chi^2(1) = 0.719$ ,  $p = 0.40$ , RMSEA = 0.000, CFI = 1.000, SRMR<sub>within</sub> = 0.014;  $\alpha = 0.50$ ). The measures for *classroom ethnic composition* (see Table 1) were similar to those used in Study 1. Again, the percentage of Dutch students was negatively related to the percentage of Turkish or Moroccan students ( $r = -0.81$ ), and we only included the former in our analyses.

## 7.2. Data analytic strategy

In Study 3, twelve of the classrooms were taught by two teachers. Students were randomly assigned to fill in their questionnaires about one of the two teachers. To make sure students remembered to assess only the teacher assigned to them, the name of the teacher was written above all questions pertaining to the teacher. We again conducted multilevel analyses and all models were estimated using the ML estimator. We calculated the intraclass correlation of ethnic outgroup attitudes which was estimated with an intercept-only model at 0.008, indicating that 0.8% in outgroup attitudes was at the classroom level. Estimation of latent variables on outgroup attitudes resulted in non-identification due to estimating a higher number of parameters than clusters. Thus, all variables were added to the model as observed rather than latent constructs. In the first model, we added the direct effect of the student-teacher relationship along with the covariates. Subsequently, we added to the model the direct effects of internal and external motivation for intercultural openness and the direct effect of intergroup anxiety. In Model 3, we tested the expected indirect effects using the model indirect option in Mplus.<sup>3</sup>

## 7.3. Results

As expected and similar to the first two studies we again found (Table 4, model 1) that students who experienced a closer relationship with their teacher expressed more positive outgroup attitudes ( $B = 0.178$ ,  $p < 0.01$ ). Furthermore, additional analyses showed that this association was robust across age, gender, ethnic identification and ethnic composition because none of the interaction effects was significant.

In Model 2, the intermediate variables were added to the model. The results show that external motivation for intercultural openness was not independently related to outgroup attitudes. However, higher levels of intergroup anxiety ( $B = -0.126$ ,  $p < 0.05$ ) and a stronger internal motivation for intercultural openness ( $B = 0.488$ ,  $p < 0.001$ ) were associated with more positive ethnic attitudes. The effect of the student-teacher relationships became non-significant by adding these variables to the model.

In Model 3, we tested the full indirect model, in which we added the direct effect of the student-teacher relationship on intergroup anxiety and the internal motivation for intercultural openness. To retain parsimony, the external motivation was no longer included in this model. The analysis showed that a closer student-teacher relationship was not related to intergroup anxiety, but was positively related to intercultural

openness. Estimation using the Model Indirect option in Mplus, showed that the indirect effect through intercultural openness was positive and significant ( $B = 0.124$ ,  $p < 0.001$ ), while the indirect effect through intergroup anxiety was not ( $B = -0.009$ ). Because the direct effect of the student-teacher relationships was no longer significant, it appears that the indirect association via intercultural openness explains the association between the student-teacher relationship and students' outgroup attitudes.

## 7.4. Discussion

Study 3 again shows that the student-teacher relationship played a unique role in explaining students' outgroup attitudes, independently of ethnic identification, perceived multicultural teacher norms, age, and ethnic composition. Further, we found evidence that the internal motivation for intercultural openness explained the association between the student-teacher relationship and ethnic attitudes. Intergroup anxiety and the external motivation did not play an intermediate role. Thus, if students were closer to their teachers, they were more internally motivated to seek and develop positive interactions with outgroup peers and this was related to more positive ethnic outgroup attitudes.

## 8. General discussion

The influence of teachers on their students' ethnic outgroup attitudes has been examined in terms of teachers own cultural diversity beliefs (Grütter & Meyer, 2014; Verkuyten & Thijs, 2013) and multicultural education programs (Besley & Peters, 2012; Bigler, 1999), but the interpersonal relationship between student and teacher has been ignored. We focused on co-ethnic student-teacher relations and findings of three studies demonstrate that students who experienced a more close relationship with their teacher had more positive attitudes towards ethnic outgroups. This association was found for general outgroup feelings and for stereotypes and when controlling for factors that are commonly used to explain ethnic prejudice among children (e.g., ethnic composition of the classroom, ethnic identification). Further, the association was independent of the perceived multicultural norms expressed by the teacher and could not be attributed to students' perception of peer acceptance or the strength of the student-parent relationship. Moreover, the association was robust across gender, age, ethnic identification, classroom composition, relationship with parents and peer acceptance. Taken together these findings strongly suggest that the quality of the student-teacher relationship is relevant for children's ethnic outgroup attitudes. This means that ethnic attitudes in the classroom do not only depend on the classroom composition and on multicultural education but also on the interpersonal relationship between teacher and child. Furthermore, the findings indicate that the student-teacher relationship is not only relevant for children's academic engagement and development (Davis, 2003; Hamre & Pianta, 2006) but for their ethnic attitudes.

Study 3 demonstrates that the association between the student-teacher relationship and ethnic attitudes can be explained by the internal motivation for seeking and developing positive interactions with outgroup members (intercultural openness). Students who felt closer to their teacher were more internally motivated to be open to peers from other cultural backgrounds, and this motivation was, in turn, related to more positive attitudes towards ethnic outgroups. The external motivation for intercultural openness was not found to be related to outgroup attitudes. These findings correspond with previous work on the motivation to control prejudices that has found that internal but not external motivations are associated with more positive outgroup attitudes (Legault et al., 2007; Thijs et al., 2016). Our findings indicate that a good relationship with the teacher can stimulate children's internal motivation to seek and develop positive outgroup interactions. This suggests that teachers can influence motivations of students other than those related to academic engagement and achievement

<sup>3</sup> For a subset of children ( $N = 52$ ) teacher reports of internalizing problems were available, measured via the emotional problems subscale of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997, 2001) (Cronbach's  $\alpha = 0.77$ ). Additional analyses showed that these problems were not related to closeness, intergroup anxiety, and the motivations for intercultural openness. We also ran regression analyses including internalizing problem behavior, which was not found to be associated with outgroup attitudes and did not affect the effects of the other variables in the model. Hence, we did not include internalizing problem behavior as a control variable in our main analyses.



**Table 4**  
Study 3: multilevel effects of student-teacher relationships on outgroup attitudes (stereotypes) via mediation.

	Model 1	Model 2	Model 3		
	Outgroup attitudes	Outgroup attitudes	Outgroup attitudes	Internal openness	Intergroup anxiety
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
<b>Student level</b>					
Female (ref. male)	0.133 (0.060)*	0.068 (0.051)	0.074 (0.049)	0.123 (0.054)*	– 0.057 (0.054)
Age	0.037 (0.051)	0.027 (0.050)	0.033 (0.049)	0.008 (0.054)	0.000 (0.054)
Tch. multicult. norms	0.115 (0.059)*	0.044 (0.051)	0.043 (0.050)		
Ethnic identification	0.088 (0.080)	0.045 (0.051)	0.040 (0.050)		
Close st-tch relation.	0.178 (0.067)**	0.075 (0.052)	0.072 (0.051)	0.275 (0.052)***	0.073 (0.057)
Internal openness		0.488 (0.049)***	0.473 (0.048)***		
External openness		– 0.043 (0.051)			
Intergroup anxiety		– 0.126 (0.057)*	– 0.127 (0.056)*		
<b>Classroom level</b>					
Comp. class - Dutch	– 0.584 (0.716)	– 0.798 (0.789)	– 0.806 (0.716)		
$\chi^2$ (df)	0.045 (0)***	68.455 (15)***	18.701 (4)***		
CFI	1.000	0.674	0.897		
SRMR <sub>within</sub>	0.000	0.078	0.040		
SRMR <sub>between</sub>	0.033	0.061	0.061		
R <sup>2</sup> <sub>within</sub>	0.084 (0.035)*	0.271 (0.042)***	0.292 (0.044)***	0.093 (0.032)**	0.008 (0.010)
R <sup>2</sup> <sub>between</sub>	0.342 (0.837)	0.637 (1.259)	0.650 (1.351)		

Note. Standardized effects are shown. Models include correlations between internal and external motivations for openness and between both motivation variables and anxiety (model 2), and between internal openness and intergroup anxiety (models 2 and 3). One-sided tests for close student-teacher relationships and mediating variables, others two-sided test.

\*  $p < 0.05$ .  
 \*\*  $p < 0.01$ .  
 \*\*\*  $p < 0.001$ .

(Furrer & Skinner, 2003; Stroet, Opendakker, & Minnaert, 2013).

Unexpectedly, children's intergroup anxiety was related to outgroup attitudes, but not to student-teacher relations. This suggests that the security derived from a close relationship with one's teacher, as an 'ad-hoc' or 'secondary' attachment figure (Verschueren & Koomen, 2012; Zajac & Kobak, 2006), does not lead to lower concern about having to interact with unknown ethnic outgroup peers. This might indicate that reduced intergroup anxiety requires an attachment relationship that is more permanent and exclusive than with teachers. Perhaps the security that teachers offer is restricted to the school context and does not affect children's social anxiety more generally. However, it should be noted that the measure likely assessed both social and interethnic anxieties simultaneously. Future research should examine this further by assessing both intergroup anxiety and social anxiety more specifically.

In Study 2, the relationship between students and parents was not associated with children's ethnic outgroup attitudes. This is surprising because the relationship with parents is usually stronger than with teachers (Verschueren & Koomen, 2012), and therefore the parental relationship should make more of a difference. One possible explanation is that when asked in the context of their classroom, students interpret questions on ethnic outgroups in relation to peers in the classroom setting, even if this setting is not specified in the questions. In Study 1, the student-teacher relationships was found to be more strongly associated with outgroup stereotypes that referred to peers than with general outgroup attitudes. The reference to peers might have made the classroom setting more salient. When the students did indeed interpret the outgroup attitudes in relation to the classroom this could explain why the relationship with the teacher was more important than the parental relationship. This explanation implies that teachers are particularly important for the ethnic attitudes that children develop and express in the classroom but that parents might be more important for children's ethnic attitudes in other social settings. Future research should systematically examine this possibility.

**8.1. Limitations**

Several limitations should be acknowledged and discussed. First, our use of cross-sectional data prevents us from establishing causal

directions and entails the risk of third-variable explanations. Although we showed that children's depressed affect could not account for the link between the student-teacher relationship and children's ethnic attitudes, we cannot rule out the possibility of other, dispositional third variables. Moreover, although theoretically less likely, it is possible that students' ethnic attitudes also affect the relationship with their teacher. Longitudinal research could shed light on this issue, but it faces the problem that children tend to have another teacher every year. It might also be possible to use an experimental design to test the causal impact of the proposed underlying mechanisms of motivations for intercultural openness and intergroup anxiety. Further, other mechanisms could also be considered for understanding why the student-teacher relationship might affect children's ethnic attitudes, such as sense of security and classroom belonging.

Second, our research relied on student reports, which means that we cannot rule out the possibility of common method variance. Future research could try to replicate our findings by using different informants. This might be difficult, however, as our theoretical interest is in students' experience of the student-teacher relationship, and their own ethnic attitudes. Still, there is partial overlap between teachers' and students' relationship reports (Koomen & Jellesma, 2015), and future studies could consider the perspective of the teacher. This might be important for possible interventions to improve children's ethnic outgroup attitudes by improving the student-teacher relationship (Pianta, 1999). Intervention programs often try to help teachers to reflect on their interactions with individual students and this appears to be effective in improving these relationships (e.g., Spilt, Koomen, Thijs, & Van der Leij, 2012), and therefore might have a favorable effect on children's ethnic attitudes.

A third limitation to our study involves the assessment of students' outgroup attitudes by means of a single-item seven faces measures. Although these measures have been successfully used in many previous studies (e.g., Verkuyten & Thijs, 2001; Yee & Brown, 1992), they seem to be somewhat crude and open to varying interpretations depending on the social context in which the question is raised. Fortunately, the validity of these scales was supported by their strong correlations with the more subtle stereotype measures in Study 1. In fact, effect sizes for student-teacher relationships were generally somewhat stronger for the

latter, possibly because they explicitly referred to children, making the question better relatable to students' school context. Further research is needed to examine how these ethnic attitudes questions are interpreted among students.

Fourth, we have focused on the attitudes of majority group students (native Dutch) and their relationship with majority group teachers. We do not know whether the findings generalize to minority group students and their relationships with minority group teachers. In the Netherlands, most teachers are native Dutch, but in other countries, the question of generality could be examined. Furthermore, the student-teacher relationship can be cross-ethnic which means that future studies can also examine ethnic outgroup attitudes among majority group students with an ethnic minority teacher and minority group students with an ethnic majority teacher. These cross-ethnic relationships additionally involve processes of intergroup contact (Pettigrew, 1998) which might mean that the student-teacher relationship is more important for ethnic outgroup attitudes compared to when student and teacher are of the same ethnic background (Thijs & Verkuyten, 2012).

## 8.2. Conclusions

For the first time and with three studies we have demonstrated that the interpersonal relationship between students and teachers is relevant for children's ethnic outgroup attitudes. Schools are important settings for preparing children for the increasingly cultural diverse world they live in. In many countries, schools try to teach students about cultural differences and stimulate tolerant attitudes. Although our findings need to be replicated and substantiated by further research, our studies indicate that not only classroom composition and forms of multicultural education are important for this but that the relationships that teachers develop with their students also matter. Apparently, a close student-teacher relationship is not only relevant for children's academic engagement and their emotional and social adjustment, but also for the development of positive ethnic outgroup attitudes.

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