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# Bullying and Victimization Among Young Elementary School Children: The Role of Child Ethnicity and Ethnic School Composition

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**Abstract** School-aged children with an ethnic minority background are relatively often involved in bullying and victimization, but the role of ethnic composition of schools in this context remains unclear. This study examined the relation between ethnic minority background, ethnic school composition, and bullying behaviour around primary school entry in the Netherlands. The study was based on a 2008/2009 school survey in Rotterdam, a Dutch city where about 50 % of children have a non-Dutch background. For 8523 children, teacher reports of bullying behaviour at age 5–6 years were available. Children with a non-Dutch background had higher odds of being a victim (adjusted OR 1.41, 95 % CI 1.11, 1.80), bully (OR 1.38, 95 % CI 1.20, 1.58) or bully-victim (OR 1.38, 95 % CI 1.19, 1.62) than children of Dutch national origin. Ethnic diversity in schools increased children's risk of bullying behaviour (e.g. $OR_{victim}$ per 0.1 increase in 0–1 diversity range = 1.06, 95 % CI 1.00, 1.13), with children of both Dutch and non-Dutch national origin relatively more often involved in bullying in ethnically diverse schools. The proportion of same-ethnic peers in school reduced the risk of bullying among children of Dutch national origin (e.g. $OR_{victim}$ per 10 % more same-ethnic children = 0.90, 95 % CI 0.83, 0.98), but not among non-Dutch children. In conclusion, ethnic minority background and ethnic diversity within schools are risk factors for bullying among 5–6 year olds. Plausibly, reductions in absolute numbers of bullying events may be obtained with tailor-made interventions in ethnically diverse schools. Such interventions should preferably be offered early in the school curriculum.

**Keywords** Bullying · Victimization · Ethnicity · Ethnic diversity · School · Child

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## Introduction

School bullying is an important problem affecting children's mental well-being and functioning (Bond et al. 2001; Griffin and Gross 2004; Kim et al. 2006; Schreier et al. 2009). Bullying can take several forms, like name-calling, gossiping, exclusion or hitting (Olweus 1993). It is a widespread phenomenon with roughly 25 % of children and adolescents being involved as bully, victim, or as both bully *and* victim (so-called bully-victims) (Craig et al. 2009; Glew et al. 2005; Perren and Alsaker 2006).

A number of theoretical frameworks have been proposed to understand and explain the phenomenon of bullying among children. While theories initially focused on

individual attributes that characterize bullies and their victims, recent theoretical frameworks emphasize the social context of bullying (Duffy 2004). The "social misfit" theory, as proposed by Wright and colleagues (Wright et al. 1986), can be used to combine both perspectives. This theory describes that individuals whose characteristics deviate from the norm group are prone to rejection. Translating this theory to the social context of children raises the suggestion that victimized children somehow deviate from their schoolmates, for instance regarding their appearance, physical strengths or other abilities (Olweus 1993). In accordance with this theory, children with an ethnic minority background may be at risk of victimization. Ethnicity refers to a sociocultural identity that is being shared by a group of people and is based on joint characteristics such as ancestry, culture, religion, language and physical appearance (National Kompas 2014). Thus, ethnic minority children—often with an immigrant background—may be victimized, because of having different cultural norms or a deviating physical appearance, or simply because they are not part of the "in"-group consisting of ethnic majority children.

From developmental research, it is known that infants can already discriminate between different racial groups and prefer to look at faces that belong to a familiar racial group (Bar-Haim et al. 2006; Kelly et al. 2005). Around 3–4 years of age, children become able to match people based on characteristics like hair texture or skin colour (Aboud 1988; Nesdale 2001). Next, awareness of cultural differences and a sense of in-group and out-group develop: around 6 years, children show in-group preferences (Baron and Banaji 2006; Cameron et al. 2001; Nesdale 2004) and apply stereotypes to the out-group (Pauker et al. 2010). Against the background of these developmental stages of cultural and racial awareness and the observation that bullying behaviour is a common phenomenon in the early school years, we postulate that ethnic differences in bullying and victimization might occur from the early school years onwards. This period is particularly important for examining predictors of bullying behaviour, given the observation that bully and victim roles are often established in early primary school and remain stable thereafter (Smith and Ananiadou 2003).

## Ethnic Background and Bullying Involvement

Although research on ethnic differences in bullying behaviour among *young* children is generally lacking, several US and European studies found evidence that such differences do exist in late primary and secondary school. Research showed that ethnic minority youth were more likely to be victims (Carlyle and Steinman 2007; Glew et al. 2005; Verkuyten and Thijs 2002)—but also to be bullies (Glew et al. 2005; Graham and Juvonen 2002; Juvonen et al. 2003; Nansel et al. 2001; Tippett et al. 2013; Tolsma et al. 2013; Vervoort et al. 2010) and bully-victims (Glew et al. 2005; Juvonen et al. 2003)—than their ethnic majority peers. However, other studies found no ethnic differences (Sweeting and West 2001; Thijs et al. 2014; Tippett et al. 2013; Wolke et al. 2001), or even reported *lower* rates of victimization among ethnic minority youth (Graham and Juvonen 2002; Hanish and Guerra 2000; Juvonen et al. 2003; Nansel et al. 2001; Spriggs et al. 2007).

An explanation for these inconsistent findings might lie in differences in the particular social context. Firstly, children generally visit schools within their neighbourhood. In most Western countries, neighbourhoods tend to be socioeconomically segregated to some degree which may lead to some neighbourhoods being poorer or having a more violent and hostile atmosphere than other neighbourhoods. As such characteristics may influence school bullying, it is important that studies on ethnic differences in bullying account for possible confounding factors. While some studies indeed controlled for factors like socioeconomic background of children (Glew et al. 2005; Spriggs et al. 2007; Tippett et al. 2013; Wolke et al. 2001), others did not or only marginally (Graham and Juvonen 2002; Hanish and Guerra 2000; Juvonen et al. 2003; Nansel et al. 2001; Sweeting and West 2001; Verkuyten and Thijs 2002; Vervoort et al. 2010).

Another possible explanation for inconsistent research findings is also context related. While potentially important, only few scholars investigated the role of school composition on social climate in class rooms. Some reported that bullying was more common in ethnically diverse schools (Durkin et al. 2012; Tolsma et al. 2013; Vervoort et al. 2010), while others found no effect of ethnic school composition (Hanish and Guerra 2000; Verkuyten and Thijs 2002). However, the social misfit theory (Wright et al. 1986) suggests that not a child's own ethnic background or the ethnic composition of schools per se, but rather the combination of these factors plays a key role in bullying involvement. Thus, it should be considered whether an ethnic minority child has classmates belonging to the same-ethnic group (fit) or if the child has a unique ethnic background (misfit). Indeed, it has been shown that a critical mass of same ethnics within schools or neighbourhoods creates a sense of comfort and belonging among minority groups (Ortiz and Santos 2009), thereby improving school functioning (Benner and Yan 2015) and well-being (Shaw et al. 2012). Exactly how many co-ethnics are needed to create a *safe haven* is not clear and possibly even differs between ethnic minority groups (Jackson et al. 2006). Bullying research on this same-ethnic group phenomenon is relatively scarce. Verkuyten and Thijs (2002)

showed in a study among 10- to 13-year-old children visiting Dutch primary schools that having classmates of the same-ethnic group reduced children's risk of racist victimization. However, it remains unknown whether ethnic composition of schools is related to bullying beyond racist victimization and whether it plays a role in early primary school.

Finally, inconsistent findings between studies on ethnic differences in bullying may also be explained by the heterogeneity of ethnic minority populations. Some studies collapsed children in larger groups representing a similar migration history or race (e.g. Hispanics or Asians) (Carlyle and Steinman 2007; Glew et al. 2005Graham and Juvonen 2002; Hanish and Guerra 2000; Juvonen et al. 2003; Nansel et al. 2001; Spriggs et al. 2007; Tolsma et al. 2013), but many studies dichotomized children into ethnic majority versus minority groups (Sweeting and West 2001; Vervoort et al. 2010; Wolke et al. 2001). Exceptionally few studies differentiated between children from different ethnic backgrounds (Verkuyten and Thijs 2002). Consequently, it is largely unknown whether ethnic differences in bullying behaviour are inherent to ethnic minority status in general, or if some specific ethnic minority groups are more vulnerable to bullying involvement than others.

As most Western cities have a persistently growing multicultural character and school classes are increasingly ethnically diverse, it is important to enhance understanding of bullying involvement among ethnic minority children. Therefore, we examined bullying behaviour (i.e. bullying, victimization and the combination of both) in a large sample of 5- and 6-year-old children attending primary school in Rotterdam, a large city in the Netherlands where about half of the school-aged children have a non-Dutch background. We hypothesized that minority children of diverse ethnic backgrounds are more often involved in bullying behaviour than their peers of Dutch national origin, independent of sociodemographic characteristics of the children's families. We also expected that more diversity in schools would predict a higher risk of bullying perpetration and victimization among children. Finally, in line with the social misfit hypothesis, we hypothesized that having peers of the same-ethnic group in school is associated with a reduced risk of bullying perpetration or victimization.

## Methods

### Design

Data from the school-based Rotterdam Youth Health Monitor of the Municipal Public Health Service were used. This health surveillance system is part of government-approved routine monitoring of health and well-being of *all* youth living in Rotterdam. The present study is based on questionnaire data obtained from parents and teachers. Parents were informed about the teacher questionnaire and could withdraw consent. Strictly observational assessments for health surveillance do not fall within the ambit of the Dutch Act on research involving human subjects and do not require the approval of an ethics review board. The research plan was approved by the Municipal Health Service's board. All data were anonymized before analysis.

### Study Population

For the present study, we used 2008/2009 survey data of children aged 5–6 years (n = 11,419). Primary school teachers of these children were asked to complete a questionnaire for each child in their class (response rate among teachers = 78 %). Teacher reports of bullying behaviour were available for 8871 children attending 253 different schools. Mean number of children per school was thirty-four (100 % range 10–116), who were divided over one to seven classes per school. For 96 % of the children, information about ethnic background was available. Of these, 51.6 % was Dutch, 7.7 % Surinamese, 4.4 % Antillean, 9.0 % Turkish, 10.0 % Moroccan, 2.5 % Cape Verdean, 4.5 % other Western, 5.2 % other non-Western and 5.1 % an unknown non-Dutch national origin. Children with ($n = 8523$) and without ($n = 348$) ethnicity data showed similar rates of overall involvement in bullying behaviour (36 vs 39 % involved, $p = 0.25$).

### Measures

#### *Ethnicity and Ethnic School Composition*

Ethnic background of children was based on their parents' national origin. Although ethnic background and nationality are not completely equivalent, nationality is commonly used in the Netherlands and other European countries as a proxy of ethnicity, as it can be assessed in a simple, objective way (Tippett et al. 2013; Verkuyten and Thijs 2002; Wolke et al. 2001). Country of birth of the children's parents was assessed by parental questionnaire. Children were classified as Dutch (51.6 %) if both parents were born in the Netherlands and as non-Dutch if one or both parents were born abroad (Statistics Netherlands 2004b.). Among non-Dutch children in this study, we identified children of Surinamese, Antillean, Turkish, Moroccan, Cape Verdean, other Western, other non-Western and unknown non-Dutch backgrounds. Most of the children with a non-Dutch background differ physically from children with a Dutch national origin, and this difference can generally be detected easily by school-aged children in the Netherlands (Aboud 1988; Bar-Haim et al.

2006; Kelly et al. 2005; Nesdale 2001). Children with an Antillean or Cape Verdean origin typically have a Creole background, with a dark skin and thick black hair, often with small curls. Children from Suriname either have a Creole or an Asian (originating from the Indian subcontinent, China or Indonesia) background. Children with a Turkish background have a mixed South-European and Middle-Eastern heritage, and children with a Moroccan origin have a Berber (the original inhabitants of North Africa) or Arab background (originating from the Middle East). Children of Turkish and Moroccan origin mostly belong to the Caucasian white race and generally have an olive-coloured skin and dark hair. Children of other Western origins are typically Caucasian Whites—just as children of Dutch origin—with a white skin and varying hair colours. The category other Western background consisted of all European countries, the USA, Canada and Australia, with children mainly being Caucasian Whites. Children of any other countries that did not fall into these categories were classified as other non-Western. This group is very mixed and cannot be described in terms of a typical physical appearance.

Ethnic diversity in schools was defined by a diversity index that captures both the number of ethnic groups within schools and the relative proportion of each group (Budescu and Budescu 2012). It was calculated using the formula:

$$D = 1 - \sum_{i=1}^{c} p_i^2$$

In the equation, D represents the ethnic diversity in schools. The proportion ($p$) of each ethnic group ($i$) was squared, summed across $c$ groups and subtracted from one. The diversity index ranges from 0 to 1 with higher values indicating a higher degree of diversity.

For each child, we determined the proportion of children in their school having the same-ethnic origin. This percentage ranged from 0 % for children having a unique ethnic background to 100 % for children sharing their ethnic background with all school mates (median = 41 %).

### *Bullying and Victimization*

Teachers rated the occurrence of four types of victimization and bullying behaviour for each child in their class (Jansen et al. 2012; Perren and Alsaker 2006). Four victimization items assessed (1) "whether a child was physically victimized by other children, for instance by being hit, kicked, pinched, or bitten" (further referred to as physical victimization); (2) "whether a child was verbally victimized, such as being teased, laughed at, or called names" (verbal victimization); (3) "whether a child was excluded by other children" (relational victimization); and (4) "whether belongings of a child were hidden or broken" (material victimization). Bullying was assessed with the perpetration form of these four items, e.g. "Whether a child physically bullied other children". Examples of physical and verbal victimization/bullying were added to the items, and we provided concrete descriptions of relational and material victimization/bullying. Each item was rated on a four-point rating scale ranging from "Never or less than once a month" to "More than twice a week". Children with a "Never or less than once a month" rating on all four bullying and four victimization items were classified as uninvolved children. Children were classified as victims if they experienced any of the four victimization types at least once a month. Likewise, children were classified as bullies if they perpetrated any of the forms of bullying at least once a month. Children meeting the criteria of both bullies *and* victims were categorized as bully-victims (Perren and Alsaker 2006).

To check the validity of teacher-reported bullying, we compared our data to peer reports of bullying involvement. Children's bullying involvement in the first grades of primary school, assessed using a peer nomination technique, was available in a subsample (n = 1002) of children participating in our study who also participate in the large population-based Generation R Study in Rotterdam, the Netherlands (Verlinden et al. 2014). In 75.1 % of the children, the teacher and child agreed on whether or not a child was a victim of bullying. There was also substantial overlap between teacher and child reports regarding whether a child bullies or not (73.8 %). These patterns were very similar for children of Dutch and non-Dutch national origin.

### *Possible Confounding Factors*

Several variables were taken into account as possible confounders in the ethnicity–bullying relation. These were assessed by parental questionnaire. Child variables were age, gender and presence of siblings (yes/no). Sociodemographic confounders included parental age, single parenthood and highest attained educational level of mothers and fathers (low, medium, high) (Statistics Netherlands 2004a).

## Statistical Analyses

The relation of ethnicity and ethnic school composition with bullying behaviour was examined using multinomial logistic regression analyses, adjusted for possible confounding variables. We calculated odds ratios (ORs) for each type of involvement in bullying (victim, bully, bully-victim) as compared to uninvolved children. The association of ethnic background and bullying involvement was

first examined. Then, the association between ethnic composition of schools and bullying involvement was examined by separate regression analyses with the school diversity index and the proportion of children of same-ethnic group as separate determinants (both continuous variables). Finally, we categorized the school ethnic diversity index in three groups, with an index of 0–0.33 being defined as homogeneous schools, 0.33–0.66 as moderate heterogeneous schools and an index of 0.66–1.00 as heterogeneous schools. We then calculated within each diversity category the risk difference between Dutch and non-Dutch children in bullying involvement, to examine whether ethnic differences differed by school diversity.

Data were analysed in a two-level structure of children clustered within schools. All variables were analysed at the individual level, except for the ethnic diversity index of schools, which was included as a group-level variable. Missing values of the confounders were accounted for by full information maximum likelihood procedures available in Mplus. This method estimates model parameters and standard errors based on the available information on the variables while adjusting for the uncertainty associated with missing data (Schafer and Graham 2002). Analyses were performed in Mplus.

## Results

The study population included 51.3 % boys and 48.7 % girls, of whom 68.4 % were younger than 6 years (31.6 % $\geq$ 6 years) and 72.8 % had one or more brothers or sisters living in the same household. In total, 4 % were victims of bullying, 17 % bullies, and 15 % bully-victims. Children of non-Dutch origin were relatively often involved in bullying (see percentages for children of Dutch and non-Dutch national origin depicted in Fig. 1): non-Dutch ethnic minority children had higher odds of being a victim (OR 1.41, 95 % CI 1.11, 1.80), bully (OR 1.38, 95 % CI 1.20, 1.58) or bully-victim (OR 1.38, 95 % CI 1.19, 1.62) than children of Dutch national origin, independent of possible sociodemographic confounding factors.

In Table 1, the risk of bullying involvement is presented for the separate ethnic minority groups. Risks of victimization were higher among children of Turkish, Moroccan and other non-Western origins as compared to children of Dutch national origin (e.g. for Turkish children, $OR_{victim} = 2.11$, 95 % CI 1.47, 3.04). Elevated risks of bullying and bully-victimization were seen in all non-Dutch subgroups, except for children originating from other Western or non-Western countries, who showed similar risks as children of Dutch national origin. These elevated risks attenuated only marginally after accounting for possible sociodemographic confounders. The covariates were

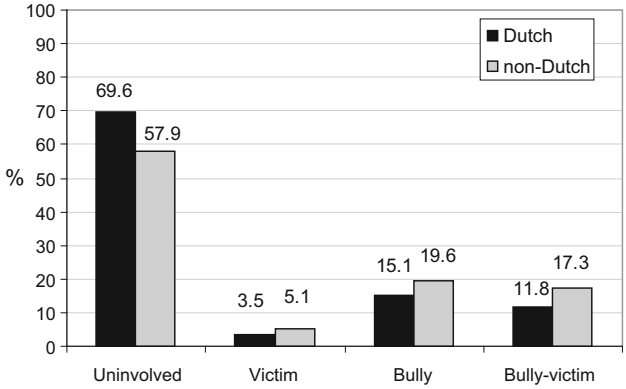


**Fig. 1** Prevalence of bullying and victimization by ethnic background (n = 8523)

hardly associated with bullying behaviour, except for paternal education: as compared to medium education, low education was associated with a higher risk of being a bully or bully-victim, while a high education was associated with lower risks.

Table 2 shows that ethnic diversity in schools was related to children's risk of bullying involvement. Diversity in schools was associated with a higher risk of children to be a victim, bully or bully-victim (e.g. $OR_{victim}$ per 0.1 increase in diversity = 1.06, 95 % CI 1.00, 1.13), controlling for possible sociodemographic confounding factors. Next, the individual-level variable "proportion of children of same-ethnic group" was examined within Dutch and non-Dutch children separately. Among children of Dutch national origin, a higher proportion of same-ethnic children in a school *reduced* a child's risk of being a victim, bully or bully-victim (e.g. $OR_{victim}$ per 10 % more same-ethnic children = 0.90, 95 % CI 0.83, 0.98). Among non-Dutch children, the proportion of children of the same-ethnic group was not related to bullying risk. However, these effects did not statistically differ between Dutch and non-Dutch children, given the overlap in confidence intervals and the absence of significant interactions between ethnic background and proportion of children of the same-ethnic group in the total sample (all $p$ values $> 0.05$).

In Fig. 2, the effect of child ethnicity on school bullying is presented for different levels of school diversity. The figure (upper part) illustrates that non-Dutch children are relatively more often involved in bulling than children of Dutch national origin, both in ethnically homogenous and in more heterogeneous schools. It also indicates that the prevalence of bullying involvement is higher in more diverse schools. The lower part of the figure shows the risk differences in bullying involvement between children of Dutch and non-Dutch national origin within each stratum of school diversity. Following the approach of Julious

**Table 1** Risk of bullying involvement for different ethnic groups

| Individual-level variables[b] | *n* | Odds ratio for victim/bully status (95 % CI)[a] | | |
|---|---|---|---|---|
| | | Victims ($n = 367$) | Bullies ($n = 1476$) | Bully-victims ($n = 1231$) |
| | | *Unadjusted model* | | |
| *Child ethnicity* | | | | |
| Dutch | 4395 | Reference | Reference | Reference |
| Surinamese | 653 | 1.45 (0.96; 2.21) | **1.66** (1.32; 2.08) | **1.55** (1.20; 2.00) |
| Antillean | 379 | 1.06 (0.58; 1.94) | **2.19** (1.68; 2.87) | **1.44** (1.04; 2.00) |
| Turkish | 769 | **2.11** (1.47; 3.04) | **1.57** (1.25; 1.96) | **1.66** (1.29; 2.14) |
| Moroccan | 851 | **1.49** (1.01; 2.21) | **1.70** (1.38; 2.10) | **1.49** (1.17; 1.91) |
| Cape Verdean | 213 | 1.66 (0.83; 3.32) | **1.86** (1.28; 2.68) | **2.10** (1.41; 3.12) |
| Other Western | 385 | 1.41 (0.85; 2.35) | 0.88 (0.64; 1.22) | 1.22 (0.88; 1.68) |
| Other non-Western | 442 | **1.71** (1.09; 2.67) | 1.04 (0.78; 1.39) | 1.33 (0.98; 1.79) |
| | | *Adjusted for sociodemographic confounders*[c] | | |
| *Child ethnicity* | | | | |
| Dutch | 4395 | Reference | Reference | Reference |
| Surinamese | 653 | 1.26 (0.82; 1.92) | **1.54** (1.22; 1.93) | **1.40** (1.09; 1.81) |
| Antillean | 379 | 0.84 (0.45; 1.55) | **1.98** (1.51; 2.61) | 1.20 (0.86; 1.68) |
| Turkish | 769 | **1.85** (1.28; 2.69) | **1.49** (1.19; 1.87) | **1.58** (1.22; 2.03) |
| Moroccan | 851 | 1.23 (0.82; 1.85) | **1.57** (1.26; 1.94) | **1.34** (1.04; 1.72) |
| Cape Verdean | 213 | 1.42 (0.71; 2.85) | **1.67** (1.15; 2.42) | **1.79** (1.20; 2.67) |
| Other Western | 385 | 1.63 (0.98; 2.73) | 0.90 (0.65; 1.25) | 1.37 (0.99; 1.90) |
| Other non-Western | 442 | **1.66** (1.05; 2.64) | 0.98 (0.73; 1.32) | 1.26 (0.93; 1.72) |
| Child gender (boy) | 4360 | 1.00 (1.00; 1.00) | 1.00 (1.00; 1.00) | 1.00 (1.00; 1.00) |
| Child age (>6 years) | 1976 | 1.00 (1.00; 1.00) | 1.00 (1.00; 1.00) | 1.00 (1.00; 1.00) |
| Siblings (yes) | 4502 | **0.99** (0.99; 1.00) | 1.00 (1.00; 1.00) | 1.00 (1.00; 1.00) |
| Single parenthood (yes) | 1199 | 1.00 (1.00; 1.00) | 1.00 (1.00; 1.00) | **1.00** (1.00; 1.00) |
| Maternal age | 6116 | 1.00 (1.00; 1.00) | 1.00 (1.00; 1.00) | 1.00 (1.00; 1.00) |
| *Maternal education* | | | | |
| High | 1791 | 0.93 (0.77; 1.13) | 1.01 (0.91; 1.11) | 0.95 (0.85; 1.06) |
| Medium | 1600 | Reference | Reference | Reference |
| Low | 1589 | 1.07 (0.89; 1.29) | 1.00 (0.90; 1.10) | 1.06 (0.95; 1.18) |
| Paternal age | 5786 | **1.00** (1.00; 1.00) | 1.00 (1.00; 1.00) | **1.00** (1.00; 1.00) |
| *Paternal education* | | | | |
| High | 1672 | 0.94 (0.77; 1.15) | **0.87** (0.78; 0.97) | **0.86** (0.76; 0.97) |
| Medium | 1934 | Reference | Reference | Reference |
| Low | 1718 | 1.06 (0.87; 1.29) | **1.15** (1.04; 1.28) | **1.17** (1.04; 1.32) |

Bold values are statistically significant ($p < 0.05$)

[a] Reference is the group of uninvolved children (n = 5449). Non-Dutch children with an unknown ethnic background (n = 436) are not included in this table

[b] All variables were included in the model as individual-level variables

[c] Missing values on confounders: child gender (n = 28), child age (n = 2272), presence of siblings (n = 2336), single parenthood (n = 2415), maternal age (n = 2407), maternal education (n = 3199), paternal age (n = 2737) and paternal education (n = 3543)

(2004), we examined whether these risk differences differed between the strata of school diversity. The 84 % confidence intervals between the heterogeneous (RD 0.046, 84 % CI 0.030, 0.062) and moderate heterogeneous schools (RD 0.110, 84 % CI 0.088, 0.132) did not overlap, suggesting that ethnic differences in bullying involvement were significantly larger in moderate heterogeneous schools than in heterogeneous schools. The risk difference in bullying involvement between children of Dutch and non-Dutch national origin in homogeneous schools, however, did not significantly differ from the risk differences in the other two strata.

**Table 2** Associations between ethnic composition of schools and risk of involvement in bullying

| School composition | Odds ratio for victim/bully status (95 % CI)[a,b] | | |
|---|---|---|---|
| | Victims ($n = 367$) | Bullies ($n = 1476$) | Bully-victims ($n = 1231$) |
| School-level variable | | | |
| Diversity index (per 0.1 point, range 0–1) | | | |
| In total sample ($n = 8523$) | **1.06** (1.00; 1.13) | **1.05** (1.02; 1.08) | **1.12** (1.06; 1.19) |
| Individual-level variable | | | |
| Proportion children of same-ethnic group (per 10 %)[c] | | | |
| In Dutch children only ($n = 4395$) | **0.90** (0.83; 0.98) | **0.93** (0.89; 0.98) | **0.87** (0.81; 0.93) |
| In non-Dutch children only ($n = 4128$) | 1.01 (0.91; 1.12) | 1.00 (0.94; 1.06) | 0.98 (0.91; 1.06) |

Bold values are statistically significant ($p < 0.05$)

[a] All analyses adjusted for child gender and age, having siblings, single parenthood, and parental age and education. These confounders were included as individual-level variables

[b] Reference is the group of uninvolved children ($n = 5449$ for total sample, $n = 3058$ for sample of Dutch children, $n = 2391$ for sample of non-Dutch children)

[c] In $n = 8523$, the interaction effects of ethnic background * proportion of children of same-ethnic group in predicting bullying involvement were: $p$ value = 0.11 for victims, 0.12 for bully-victims and 0.07 for bullies

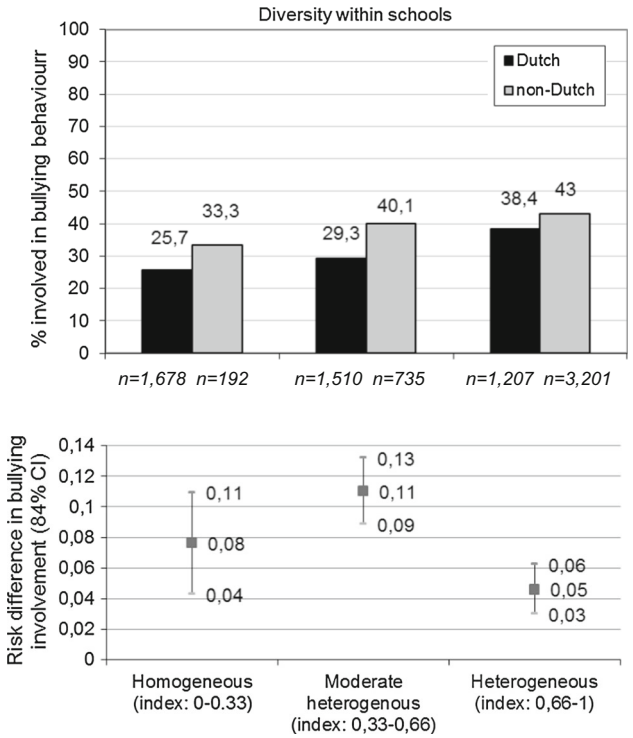


**Fig. 2** Prevalence of bullying and victimization by ethnic background ($n = 8523$)

## Discussion

This large school-based study showed that in early primary school, ethnic background and ethnic school composition are significant predictors of bullying involvement. Children of various non-Dutch minority backgrounds had higher risks than children of Dutch national origin to be involved in bullying, either as victim, bully or bully-victim. In contrast to our hypothesis, having schoolmates of the same-ethnic origin protected children of Dutch national origin, but not ethnic minority children against bullying involvement. Finally, bullying was more prevalent in ethnically diverse schools, with both Dutch and non-Dutch children more often involved in bullying in these schools. We found some indications that in the moderate heterogeneous schools, ethnic differences in bullying involvement were the largests. However, we did not observe a consistent pattern of ethnic differences across the different diversity levels, making it difficult to draw any conclusions on this finding.

The finding that early primary school children with an ethnic minority background are more often bullies than children of Dutch national origin is largely in line with previous US and European studies among older children (Glew et al. 2005; Graham and Juvonen 2002; Juvonen et al. 2003; Nansel et al. 2001; Tippett et al. 2013; Tolsma et al. 2013; Vervoort et al. 2010). However, the higher rates of victimization among non-Dutch children contrast with earlier research showing no ethnic differences (Sweeting and West 2001; Thijs et al. 2014; Tippett et al. 2013; Wolke et al. 2001) or reporting lower victimization rates among ethnic minority children (Graham and Juvonen 2002; Hanish and Guerra 2000; Juvonen et al. 2003; Nansel et al. 2001; Spriggs et al. 2007). These differences might reflect age differences, but could also be due to dissimilarities in ethnic backgrounds, as these studies were conducted in the USA where the composition of ethnic minority groups is rather different from European countries. Moreover, most research collapsed children of different ethnic minorities in rather heterogeneous categories (Verkuyten and Thijs 2002). Within in our sample comprising of large subgroups of children with Surinamese,

Antillean, Turkish, Moroccan and Cape Verdean backgrounds, we showed that each of these subgroups was more likely to be involved in bullying. This suggests that bullying is not just a problem of a particular group, but of ethnic minority status. However, the finding that only children of non-Dutch Western background had similar odds of bullying behaviour as their peers of Dutch national origin does not support the notion that bullying behaviour is inherent to ethnic minority status per se. Alternatively, if interpreted in light of the social misfit theory (Wright et al. 1986), this finding may also suggest that individuals of non-Dutch Western origins are more alike Dutch than non-Western individuals.

Besides individual ethnic background, ethnic diversity at schools was also associated with bullying behaviour. The finding that children in ethnically mixed schools had relatively high risks of involvement in different forms of bullying is perhaps not surprising given that non-Dutch children were more involved in bullying *and* by definition are found more frequently in ethnically mixed schools. Possibly, cultural differences in normative believes about social interactions and how to obtain a position within a social network account for this finding. With children of many different origins visiting ethnically diverse schools, such cultural differences are likely to exist and may cause frictions or misunderstanding, eventually resulting in bullying behaviour. Sociological studies also provide an explanation for the high prevalence of bullying in ethnically mixed schools, by showing that homogeneous groups perform better and have fewer conflicts than more heterogeneous groups (Thomas 1999). Furthermore, teachers in ethnically diverse schools may have relatively little time to promote children's development of social and coping skills, and to intervene in bullying problems, as they have other priorities associated with teaching disadvantaged children, such as reducing developmental delays.

Our findings also indicated that among non-Dutch children, having school mates of the same-ethnic origin does not provide the anticipated protective effect against bullying involvement. Furthermore, the extent of ethnic differences in bullying did not seem to depend on ethnic diversity within schools. These two findings are in contrast with our hypotheses and do not provide support for the social misfit theory (Wright et al. 1986), which suggests that ethnic minority children are less attainable targets of bullying when their specific minority group is relatively common. The lack of findings might be explained by the fact that the number of co-ethnics varied substantially in our sample. As indicated by Jackson et al. (2006), a substantial group of co-ethnics rather than just a few may be necessary to provide a safe haven. Possibly, for many minority children the necessary critical mass of co-ethnics was not present. Another explanation may lie in the fact that we examined diversity at a school level rather than at the class level, given that, in the Netherlands, the class composition in grades 1 and 2 changes substantially during a school year. Although diversity within schools is probably closely related to diversity in school classes, the proportion of same-ethnic peers may have differed slightly between school and class level, particularly for rather small ethnic groups. Future studies using social network analysis could examine the role of critical mass in ethnic differences in school bullying in more detail. Such analyses could also help determine who is bullying whom, and whether bullying occurs between or within different ethnic origins (or both).

Remarkably, for children of Dutch national origin, homogeneity within schools protected against bullying involvement. We assume that this finding is mainly due to school characteristics unrelated to ethnicity. Ethnically homogeneous schools in Rotterdam are mainly based in wealthier neighbourhoods with few ethnic minorities, while heterogeneous schools are typically found in poor neighbourhoods. Neighbourhood characteristics, like social (dis)advantage and (absence of) criminality, might influence children's behaviours at school. Although the analyses were adjusted for several sociodemographic factors at the individual level, residual confounding by social disadvantage and related factors at school level or neighbourhood level cannot be ruled out.

## Strengths and Limitations

The present study was strengthened by its large sample size, and the analyses of both child ethnicity and ethnic school composition. Moreover, the multilevel models accounted for children within schools being more alike than children from different schools (Pickett and Pearl 2001). Limitations of this study include the use of a single informant of bullying and victimization. Multiple informants could generate more accurate data on less overt bullying behaviours such as relational bullying (Shakoor et al. 2011). Moreover, teacher's bias against children's ethnic background (Sonuga-Barke et al. 1993) and teacher's own ethnic origin may have affected the teacher reports. We could not account for this, as we lacked information on ethnic background of teachers. However, the overlap between teacher and child reports of bullying and victimization in a subsample (Verlinden et al. 2014) was substantial, suggesting that the magnitude of bias, if any, is rather small. Furthermore, validity of a teacher report is provided by previous work showing that teachers' ratings of bullying and victimization are strong predictors of later psychiatric disorders (Ronning et al. 2009).

## Conclusions

The present study provides novel insights by showing that in the first grades of primary school, children of diverse ethnic backgrounds have a higher risk of bullying involvement than their peers of Dutch national origin. Ethnic diversity in schools also predicted more bullying behaviour. However, we found no support for the social misfit perspective on ethnicity and bullying (Wright et al. 1986), as the proportion of same-ethnic schoolmates was not associated with bullying among ethnic minority children, and the association of ethnic minority status with bullying did not consistently depend on ethnic diversity within schools.

Apparently, other mechanisms account for ethnic differences in bullying, and these should be examined in future research.

Previously, school-based anti-bullying interventions have had moderate successes in reducing the prevalence of bullying behaviour, with more success in primary than in secondary schools (Smith and Ananiadou 2003). Most bullying intervention programs do not specifically address problems associated with children's ethnic backgrounds or school context. Our findings suggest it may be worthwhile considering ethnicity-related issues in future prevention and intervention programs. Plausibly, large reductions in absolute numbers of bullying can be obtained with tailor-made interventions in ethnically diverse schools. Considering the observed ethnic differences in the first grades of primary school, such interventions should be offered early in the school curriculum. Timely intervention is probably the best approach to prevent that bullying becomes an entrenched way of how children interact with their peers.

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**Compliance with Ethical Standards**

**Conflict of Interest** The authors declare that they have no conflict of interest.



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