

The association between in-class cultural diversity with empathy and bullying in adolescence: A multilevel mediation analysis

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Little is known about the associations between cultural class composition, teacher support for diversity (TSD), cognitive and affective empathy, and bullying and victimisation. Research shows that empathy is negatively associated with bullying and victimisation; and support for diversity and classroom cultural diversity are positively linked to social skills. The present study examines whether cultural diversity and perceived TSD are protective factors against bullying and victimisation, either directly or mediated by empathy. Participants were 897 students from Grades 7 to 10 ($M_{age} = 13.45$, $SD_{age} = 1.07$, 51.3% girls, 46.7% boys) in 36 classes. Multilevel mediation analyses were conducted. Age and gender were controlled for. More perceived TSD and affective empathy were associated with less bullying. Moreover, the effect of perceived TSD on bullying was partly indirect through affective empathy. Victimisation was not predicted by the study variables. The class level showed no effects. Bullying and victimisation are complex phenomena, which seem to be linked more to individual than to class characteristics. The result that higher perceived TSD was linked to empathy and bullying provides a promising starting point for measures of competence enhancement and bullying prevention.

Keywords: Cultural diversity; Teacher support for contact and pluralism; Bullying; Empathy; Adolescence.

With past and recent increases in migration to Germany, culturally diverse compositions of school classes and teacher support for diversity (TSD) might be promising protective factors against bullying perpetration and bullying victimisation in school, possibly through enhancing key competences such as cognitive and affective empathy, which are known to protect against bullying and victimisation.

According to the 2015 Ageing report of the European Commission, migration to Europe has been constantly increasing since around 2000 and will continue doing so for the next 20 years (European Commission, 2015). In 2015, approximately 17.1 million people with a migrant background resided in Germany, with every

third child or adolescent between 5 and 15 years old having a migrant background (Statistisches Bundesamt, 2017). This increasingly provides students with opportunities for and instances of inter-ethnic contact. According to Allport's contact hypothesis (1954) increased contact between different groups can reduce prejudice and inter-group rejection. This in turn implies that forms of peer rejection like bullying behaviour and bullying experiences should decrease. Furthermore, since interpersonal contact exposes people to other's cognitions, perceptions, attitudes and emotions, higher intergroup contact might foster social-emotional competences such as empathy, which has been shown to be a protective factor against bullying.

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Bullying and victimisation in school

Students are embedded in the social context of the classroom, where they spend a significant amount of their time and, in the case of Germany, in relatively stable units until 10th grade. Here they are exposed to different beliefs, norms and attitudes and the peers, and partly the teachers in the function of role models, determine the normative beliefs about acceptable and non-acceptable behaviour. However, students cannot choose the members of this social group by personal preference. Instead, the members are allocated to a classroom by the institution's administration. This increases the risk of bullying and victimisation.

Bullying is understood as a subtype of aggression, which repeatedly and intentionally targets persons of lesser power than the perpetrator(s) and can manifest itself in physical (i.e. hitting, destroying personal items), verbal (insulting, threatening) or relational (excluding, destroying friendships) forms. The PISA 2015 sub-study on students' well-being found that 15.7% of students in Germany are bullied at least a few times a month (Organisation for Economic Cooperation and Development [OECD], 2017). Bullying and victimisation are associated with depression, anxiety, self-esteem, health problems, school absenteeism, and low school achievement, among others (Kowalski & Limber, 2013). Research has also shown that the dividing lines between a subgroup of aggressive victims and bullies are permeable over time (Hanish & Guerra, 2004) and that victimisation and bullying may even co-occur. These two phenomena should therefore not be viewed separately.

Cultural diversity and TSD as potential protective factors

With increasing cultural diversity in in-class settings, it is becoming more and more important to understand the links to social behaviour and social-emotional experiences in classroom interactions. In the past, studies on cultural diversity have mainly focused on educational outcomes, but much less on social behaviour and experiences. As compared to the proportion of students with migrant background in classes, cultural diversity can be an indicator of majorities and minorities and with it an indicator of power imbalance (Juvonen, Nishina, & Graham, 2006), which is one of the defining characteristics of bullying. High cultural diversity (as indicated by a diversity index) implies a lack of numerical majority, low cultural diversity a numerical majority of one or more ethnic groups. Juvonen et al. (2006) found that more cultural diversity in schools was related to lower levels of bullying victimisation, leading them to conclude that power relations were more balanced in more ethnically diverse settings. It was the first study to show protective effects

of greater cultural diversity against bullying and victimisation and supported the imbalance of power hypothesis (Graham, 2006), which explains the power of a specific group in the school context with its relative number of members and is especially applicable to ethnic contexts.

Other, inconsistent, results regarding the association of cultural diversity with bullying finding no relationship (e.g. Stefanek, Strohmeier, van de Schoot, & Spiel, 2011) or finding cultural diversity to be a risk factor for bullying and victimisation (e.g. Tolsma, van Deurzen, Stark, & Veenstra, 2013) might indicate that cultural diversity may not by itself be sufficient to promote tolerance and social competences. Since cultural diversity can hardly be actively influenced by school staff, the question arises what teachers can do to foster positive effects of cultural diversity on bullying and victimisation. Class or school factors, such as (perceived) TSD, may be important in this regard (Thijs & Verkuyten, 2014). Support for diversity encompasses teaching about topics of diversity as well as creating a climate appreciative of diversity (Schachner, Noack, Van de Vijver, & Eckstein, 2016) and supporting contact. It has been associated with better academic, behavioural and social-emotional adjustment in minority students and is therefore an important dimension of climate (Brand, Felner, Shim, Seitsinger, & Dumas, 2003). Verkuyten and Thijs (2013) propose that multicultural education (i.e. support for diversity) in a class might be a reason for the substantial differences between classrooms regarding interethnic attitudes, which in turn influence ethnic-based peer victimisation and discrimination. To the best of our knowledge, TSD has not explicitly been examined in regards to bullying. However, studies on related topics such as the one by Schwarzenath, Schachner, van de Vijver, and Juang (2018), which examined effects on perceived ethnic discrimination through classmates, found that while support for equality and positive contact was associated with less perceived ethnic discrimination, support for cultural pluralism was associated with more perceived ethnic discrimination. TSD in the current study taps into both contact and pluralism and we study effects on general bullying and victimisation as opposed to ethnic discrimination specifically. We therefore expect that more TSD will be associated with less bullying and victimisation. TSD can be conceived as operationalising one of the four conditions specified by Allport (1954) for successful or optimal intergroup contact, namely the condition of authority support.

Cognitive and affective empathy as protective factors

Cultural diversity and TSD might show protective effects on bullying and victimisation at the individual level

because reported contact between ethnic groups has been linked to increased cognitive and affective empathy in individuals by numerous studies (see Pettigrew, Tropp, Wagner, & Christ, 2011, for a review). Since TSD fosters learning about other cultures, it should also promote understanding and feeling the emotions (affective empathy) of people of other cultures and in general, as well as taking their perspectives (cognitive empathy). Todd and Galinsky (2012, p. 1397) conclude from their results that multiculturalism, which focuses both on differences and similarities may be able to promote more positive intergroup sentiments and perspective-taking.

Both affective and cognitive empathy are associated with prosocial and inhibit anti-social behaviour (e.g. Eisenberg, Eggum, & Di Giunta, 2010). While the literature on the link between cognitive empathy and bullying finds either no association or a negative one (van Noorden, Haselager, Cillessen, & Bukowski, 2015), the negative association of bullying with affective empathy is quite consistent across studies (Zych, Ttofi, & Farrington, 2019, for a review). For victimisation, a clear pattern has not yet become apparent: some studies find significant links to affective empathy while others do not. The same was shown for the relation with cognitive empathy (Zych et al., 2019, for a review). Our examination of this link is therefore of exploratory nature.

THE PRESENT STUDY

Based on the contact hypothesis by Allport (1954) and the imbalance of power hypothesis by Graham (2006), the present study examines whether there is a protective effect of in-class cultural diversity and perceived TSD on bullying and victimisation, and whether this effect is mediated by individual social competences, that is, cognitive and affective empathy. In detail, we expected:

H1. Cultural diversity on the class level to predict lower rates of victimisation and bullying on the individual level.

H2. Cultural diversity on the class level to predict empathy on the individual level and empathy to mediate an effect on victimisation and bullying.

H3. Perceived TSD on the individual as well as on the class level to predict lower rates of victimisation and bullying on the individual level.

H4. Perceived TSD on the individual level as well as on the class level to predict empathy on the individual level and empathy to mediate an effect on victimisation and bullying.

We did not have specific assumptions on the direction of the effect of empathy on victimisation. Due to inconsistent findings in prior research, research questions pertaining to this effect were exploratory.

We conducted multilevel mediation analyses with classroom cultural diversity and perceived TSD as independent variables at Level 2 (L2; classroom level), cognitive and affective empathy as independent variables at Level 1 (L1; individual level), and bullying and victimisation, separately, as dependent variable at L1, resulting in a $2 \rightarrow 1 \rightarrow 1$ mediation model.

METHOD

Participants

The present data were collected as part of a more comprehensive 3-wave evaluation study of a school-based intervention program. For the present analyses, only the data from the first wave (baseline assessment) were used to prevent distortions caused by intervention effects. Participants were initially 897 seventh to tenth grade students from 36 classes in five schools in a major German city (1 vocational track high school, 4 academic track high schools). Students were on average 13.45 years old ($SD_{age} = 1.07$, range: 11–17 years) and 51.3% were female, 46.7% were male and 2.0% did not indicate their gender. 844 (missing rate = 5.9%) adolescents provided complete data on all indicators included in the bullying analysis and 853 (missing rate = 4.9%) provided complete data for the victimisation analyses.

Procedure

In line with the local regulations for empirical studies in schools, active parental consent was collected for students younger than 14 years and active student consent was collected for all participating students. Standardised self-report paper-and-pencil questionnaires were distributed and completed during regular school lessons. A member of the research team was present during data assessment in each class, was available for questions and collected the questionnaires. All participants were guaranteed anonymity and voluntariness. The procedure was approved by the responsible school administration of the federate state, where data collection took place.

Measures

A multitude of indicators was assessed in the overall study using a questionnaire. In the present study, cognitive and affective empathy on the individual level are used to predict individual bullying and victimisation, and cultural diversity and perceived TSD are used to examine direct effects as well as indirect effects on individual bullying and victimisation via individual cognitive and affective empathy. Gender and age were used as control variables on the individual level.

Student-level measures

Participants' sex, grade, age in years, country of birth and language spoken with the parents were assessed as demographics.

Students' migrant background (which is the basis of the cultural diversity index on L2) was determined through the country of birth of the students combined with the language spoken with the parents. Students who were born in a country other than Germany and those who mostly or only speak a language other than German with their parents were categorised as having a migrant background. Answers on country and language were categorised into 12 different cultural regions (cf. Jordan, 2005; Stefanek et al., 2011). This approach was chosen due to data protection regulations.

Bullying and victimisation in the offline context were measured with the bullying and victimisation scales of the European Cyberbullying Intervention Project Questionnaire (ECIPQ; Brighi et al., 2012). Each scale comprised seven items rated on 5-point answer scales (1 *never* to 5 *more than once a week*), for example, "I said mean things to someone or insulted them" and "Someone said mean things to me or insulted me"; Cronbach's $\alpha = .80$ for bullying and $\alpha = .77$ for victimisation, respectively.

Cognitive empathy was assessed with the 8-item perspective-taking subscale of the Interpersonal Reactivity Index (German translation: Lamsfuss, Silbereisen, & Boehnke, 1992) using a 5-point answer scale (1 *never true* to 5 *almost always true*), Cronbach's $\alpha = .85$. An example is "I sometimes try to understand my friends better by imagining how things look from their perspective."

Affective empathy was operationalised as adolescents' tendency to show affective empathy in a given situation. This was assessed by presenting a stimulus situation from the Sympathy Reactivity Questionnaire (Volland, Ulich, Kienbaum, & Hölzle, 2008), which we adapted for the school context: "Imagine, during break time you see a person in the school yard who is all alone and is being excluded from all groups. The person is obviously lonely. What would you think?". After reading this stimulus situation, adolescents answered questions about how they would react emotionally on a 6-point scale (1 *not at all true* to 6 *completely true*), for example, "Because I see that the person is lonely I am sad myself.". Initially, seven items were assessed, but only four (being touched by the situation, caring about whether the person is doing better soon, being sad oneself about the situation, and worrying about the person) were included into scale computation to include only the affective components in the analyses, Cronbach's $\alpha = .81$. Negatively worded items were reverse coded.

Perceived TSD was assessed using the 4-item support-for-cultural-pluralism subscale of the Inventory of School Climate—Student (ISC-S; Brand et al., 2003) with a 4-point answer scale (1 *never* to 4 *often*),

for example "You get to do something which helps you learn about students of different races and cultures at your school.", Cronbach's $\alpha = .67$. Since it is not very common nor socially acceptable to use the term "race" in Germany, this word was replaced by "origin."

Class-level measures

To assess diversity, we used the proportion of ethnic minority students for each class as well as a more differentiated diversity measure by computing the diversity index (Simpson, 1949), which incorporates the number of different cultural or ethnic groups in the class with the relative size of each cultural or ethnic group (Juvonen et al., 2006).

$$D_C = 1 - \sum_{i=1}^g p_i^2.$$

In this formula for the diversity index, D_C stands for the cultural diversity of the class and p_i represents the proportion of ethnic or cultural group i in the class, which is then squared and summed across g groups within a class. The index ranges from 0 to 1 with larger scores indicating greater diversity. We chose this approach to incorporate both approaches to research on the effect of the ethnic make-up of a class: a very simple majority-minority distinction versus a differentiated measure taking into account different ethnic backgrounds.

To assess perceived TSD on class level, the mean score of students' answers on the cultural pluralism scale described in the individual measures was computed for each class.

Data analysis

We computed 2-1-1 multilevel mediation models separately for bullying and victimisation to take into account the nested structure of the data, but also to address our research questions regarding class-level influences (level 2, L2, between) and indirect effects via individual-level (level 1, L1, within) predictors. A combined model for bullying and victimisation was not implemented because the number of parameters exceeded the number of level-2 units resulting in estimation problems. For the same reason manifest models were chosen. The baseline model did not contain any predictors, but was used to estimate the intra-class correlations and the proportion of variance at the different levels. The second model was a random-intercepts model estimating class- and individual direct and indirect effects on individual cognitive and affective empathy, and bullying or victimisation, respectively (see Figure 1). Individual perceived TSD used on the within-level was centred around the group mean. Independent variables used on the between-level were centred around their grand mean before being

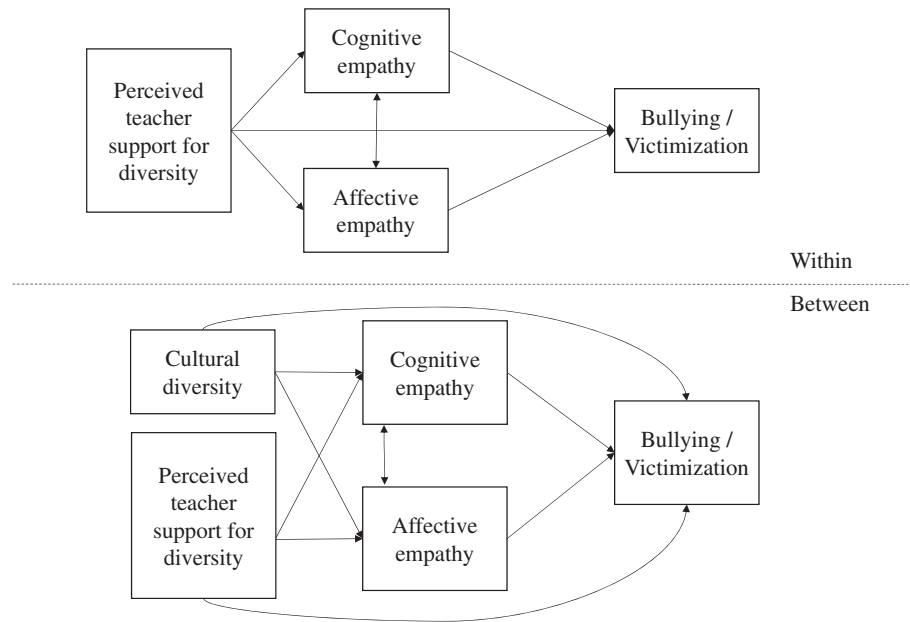


Figure 1. Overview of the second analytical (random-intercepts-) models. Analyses were carried out separately for the dependent variables bullying and victimisation.

entered into the prediction (Enders & Tofghi, 2007). Due to skewness of some of the variables, the maximum likelihood robust (MLR) estimator was used. Gender and age were included as control variables at the individual level. Both students without and with migrant background were included in the analyses. The multilevel modelling was conducted with Mplus 8 (Muthén & Muthén, 1998–2017).

RESULTS

Descriptive results

Based on self-reports, 82.1% of the students were categorised as not having a migrant background, 16.3% indicated a migrant background, and 1.7% of the adolescents did not provide information on this. The proportion of students with migrant background in the class ranged from 0 to 72.2%. The cultural regions represented most frequently in the overall sample were Turkey/Arab countries/Middle East (3.9%), Western Europe (3.3%), Central Europe including Poland (2.1%), and Eastern Europe/Russia (1.9%).

Mean scores (see Table 1) show that bullying and victimisation are not highly prevalent on average in the present sample given that the means range between 0.3 and 0.4, while scores of up to 4 were possible. Also, while a diversity index of 1 was theoretically possible, the mean diversity score was only 0.25 and the empirical range was from 0 to 0.63. Due to skewness of the data on some of the variables, correlations between the study variables on L1 (Table 2) and L2 (Table 3) were computed using

TABLE 1
Means and standard deviations of study variables (*n* = 846)

Variable	<i>M</i>	<i>SD</i>	Range
L1 (Individual)			
Bullying	0.34	0.51	0–4
Victimisation	0.40	0.52	0–4
Cognitive empathy	3.19	0.69	1–5
Affective empathy	3.59	1.13	1–6
Perceived TSD	2.98	0.62	1–4
L2 (class)			
Cultural diversity	0.25	0.16	0–1
Perceived TSD	2.99	0.19	1–4

Note: Range refers to the potential answer range provided by the number of answer categories.

Kendall’s Tau. On L1, bullying is significantly correlated with all the variables and victimisation is correlated with the individual perception of TSD and bullying. On L2, the only significant correlation is between bullying and victimisation.

Model 1—Baseline model

Analysis of the respective baseline models showed that for bullying the ICC was .046 ($\sigma^2 = 0.264, p < .001; \tau_{00} = 0.013, p = .25$), indicating that 4.6% of the variance were due to differences between classes while 95.4% could be ascribed to individual differences. For victimisation, the ICC was .026 ($\sigma^2 = 0.261, p < .001; \tau_{00} = 0.007, p = .05$), meaning that 2.6% of the variance were on the class level while 97.4% of the variance in victimisation was due to individual differences. Thus, most of the

TABLE 2
Individual level (L1) bivariate correlations ($n = 843$)

Variable	1	2	3	4	5
1. Bullying	—				
2. Victimization	.376***	—			
3. Cognitive empathy	-.145***	-.034	—		
4. Affective empathy	-.207***	-.041	.313***	—	
5. Perceived TSD	-.112***	-.070**	.155***	.172***	—

Note: Correlation coefficients are Kendall–Tau-b.

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

TABLE 3
Classroom level (L2) bivariate correlations ($n = 36$)

Variable	1	2	3	4	5	6
1. Cultural diversity	—					
2. Perceived TSD	.163	—				
3. Bullying	.027	-.081	—			
4. Victimization	.032	.029	.326**	—		
5. Cognitive empathy	-.139	.097	-.134	-.125	—	
6. Affective empathy	-.109	.194	-.214	-.010	.071	—

Note: Correlation coefficients are Kendall–Tau-b.

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

variance in bullying and victimisation was found between students, not between classes. We also computed the design effects (Kish, 1965). Based on a simulation study Lai and Kwok (2015) recommend conducting multilevel modelling when the design effect is larger than 1.1 or when researchers are interested in L2 effects. The design effects were 2.09 for bullying and 1.62 for victimisation.

Model 2—Random intercepts

On the individual level, showing lower affective empathy scores than the overall sample was associated with higher levels of bullying behaviour ($B = -0.104$, $p < .001$; see Table 4). Moreover, students who perceived more TSD reported less bullying ($B = -0.081$, $p < .05$; H3). Higher levels of perceived TSD were associated with more cognitive ($B = 0.245$, $p < .001$) and affective empathy ($B = 0.378$, $p < .001$) (H4). A significant negative indirect effect was found for perceived TSD on bullying via affective empathy ($B = -0.039$, $p < .01$) (H4). The control variables age and gender were significant. On the class level, perceived TSD significantly predicted lower levels of individual level cognitive empathy ($B = -0.307$, $p < .05$; H4), but not bullying (H3). No other direct or indirect effects were found on the class level. The model explained approximately 13% of the variance on L1 and 43% of the variance on L2.

Regarding victimisation, there was no association with any type of empathy ($B_{cognitive} = -0.007$, $p > .05$ and $B_{affective} = -0.010$, $p > .05$, respectively). As in the model for bullying, perceived TSD was positively linked to cognitive ($B = 0.243$, $p < .001$) and affective empathy

($B = 0.369$, $p < .001$) (H4). The control variables age and gender were significant. Again, on the class level, cultural diversity was negatively linked to cognitive empathy ($B = -0.311$, $p < .05$; H2). Otherwise, there were no significant direct or indirect effects. The model explained approximately 4% of the variance on L1 and 27% of the variance on L2. An overview of the regression coefficients and standard errors can be found in Table 4.

DISCUSSION

In this study, we examined the link of culturally diverse class compositions and perceived TSD with bullying and victimisation. We assumed that this might be mediated by empathy, that is, cultural diversity and TSD are negatively linked to bullying and victimisation by being positively linked to empathy, which has been shown to be a protective factor against bullying and victimisation.

As expected, we found that students who perceived more TSD were less likely to bully others (H3). These results indicate that TSD in a class is associated with less engagement in negative peer interactions. Supporting joint activities and learning about other cultures might foster contact between students with and without migrant background and in line with the contact hypothesis (Allport, 1954) might lead to less bullying perpetration and more intercultural competence (Schwarzenthal, Schachner, Juang, & van de Vijver, 2019). Classroom diversity and TSD can be viewed as two aspects of contact. Further, TSD represents the dimension of

TABLE 4
Model 2 (random intercept) individual and class level variables predicting bullying and victimisation

	<i>Bullying</i>		<i>Victimisation</i>	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Individual variables (L1) (<i>n</i> = 876)				
Direct effects				
Cognitive empathy	-0.031	0.030	0.007	0.029
Affective empathy	-0.104***	0.022	-0.010	0.017
Perceived teacher support for diversity	-0.081*	0.039	-0.042	0.028
Perceived teacher support for diversity → Cognitive empathy	0.245***	0.057	0.243***	0.056
Perceived teacher support for diversity → Affective empathy	0.378***	0.068	0.369***	0.066
Cognitive empathy ↔ Affective empathy	0.257***	0.024	0.257***	0.024
Indirect effects				
Perceived teacher support for diversity → Cognitive empathy → Bullying/Victimisation	-0.008	0.008	0.002	0.007
Perceived teacher support for diversity → Affective empathy → Bullying/Victimisation	-0.039**	0.012	-0.004	0.006
Class variables (L2) (<i>n</i> = 36)				
Direct effects				
Cultural diversity	0.403	0.666	0.081	0.495
Perceived teacher support for diversity	-0.147	0.410	-0.047	0.237
Cultural diversity → Cognitive empathy	-0.307*	0.125	-0.311*	0.128
Perceived teacher support for diversity → Cognitive empathy	0.139	0.175	0.135	0.172
Cultural diversity → Affective empathy	-0.332	0.286	-0.334	0.285
Perceived teacher support for diversity → Affective empathy	0.147	0.223	0.129	0.226
Indirect effects				
Cultural diversity → Cognitive empathy → Bullying/Victimisation	-0.258	0.412	-0.040	0.274
Perceived teacher support for diversity → Cognitive empathy → Bullying/Victimisation	0.117	0.260	0.017	0.122
Cultural diversity → Affective empathy → Bullying/Victimisation	-0.128	0.327	0.055	0.216
Perceived teacher support for diversity → Affective empathy → Bullying/Victimisation	0.057	0.169	-0.021	0.100
<i>R</i> ² for bullying/victimisation				
L1	0.131***		0.044**	
L2	0.397		0.164	
Model fit	CFI = 1.00, TLI = 1.00, RMSEA = 0.00		CFI = 1.00, TLI = 1.00, RMSEA = 0.00	

Note: Reported regression coefficients are unstandardised.

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

authority support suggested by Allport. Also, the measure we used mostly captured opportunities and support for contact. This interpretation, however, still needs clear empirical support since the present analyses did not focus on (inter)ethnic bullying and was moreover of cross-sectional nature. Our study shows that perceived TSD might foster a positive climate within a class, operationalised as lower frequencies of victimising peers. However, perceived TSD was not associated with victimisation scores (H3). It might be necessary to examine the ethnic background of the victims. TSD might not have a positive effect if the victims are members of the majority group and their ethnic background is not the reason for their victimisation. Schwarzenthal et al. (2018) even found in their study that TSD was associated with more perceived discrimination. They suggest that non-immigrant students might feel excluded by pluralistic norms in a class.

In line with our hypothesis, individually perceived TSD was linked to higher scores of cognitive and affective

empathy in individual students (H4) indicating that measures in class fostering interactions between students of different cultures might be used to enhance social competences like empathy. Numerous studies showing that intergroup contact and multicultural education foster cognitive and affective empathy (Pettigrew et al., 2011; Todd & Galinsky, 2012) support this interpretation. Moreover, there is an indirect link: through being positively linked to affective empathy, perceived TSD is negatively linked to bullying. If supported by future longitudinal data, this might indicate that creating a climate supportive of diversity could be important for bullying prevention. Moreover, research has shown that intergroup contact is also associated with assertive bystander intentions through the paths of empathy, cultural openness, and low in-group bias (Abbott & Cameron, 2014). Our results might therefore also be relevant for the bystanders of bullying situations.

On the class level, no direct or indirect links were found for perceived TSD. The mean level of perceived

TSD within a class thus has no association with individual competences or behaviour. This is in contrast to the current trend in bullying research of moving away from individual factors towards contextual influences (Smith et al., 2019) and does so far not support the assumption that multicultural education in the classroom context promotes perspective-taking (e.g. Todd & Galinsky, 2012). Overall, influences on the class level were small in our sample although comparable to those of other studies on bullying (e.g. Stefanek et al., 2011), but in contrast to studies on inter-ethnic attitudes, which found larger influences on the class level (Verkuyten & Thijs, 2013). Our results therefore support the assumption that bullying is mostly influenced by individual factors or by how contextual factors are perceived and processed individually.

The cultural diversity index showed a negative relation with cognitive empathy, no link with affective empathy (H2) and no direct or indirect association with victimisation or bullying (H1). This might indicate that the less power imbalance there is in a class, the less students are willing to take over the perspective of others, that is, there are more in-group members that students might identify with making it less likely that they connect with members of out-groups. If groups and power are more balanced across a class, a stronger separation might take place and students might see less need to take into consideration minority students, as they seem to have a peer group more similar to themselves available. Regarding general bullying and victimisation, the lack of significant associations with cultural diversity does not provide support for the power imbalance hypothesis by Graham (2006).

Regarding empathy, the results on the individual level show the expected links of empathy only between affective empathy and bullying. Below-average scores on affective empathy predicted higher rates of bullying. No such link was found for victimisation. Both results are in line with previous research (van Noorden et al., 2015). The lack of any significant link between bullying/victimisation and cognitive empathy contributes to the inconsistent picture of the role of cognitive empathy in peer victimisation among adolescent students (Zych et al., 2019).

Contrary to our expectations, we did not find any significant associations for victimisation and the model only explained very little differences on the individual level. There was an even smaller influence of the class level than for bullying and also than in other studies (Stefanek et al., 2011). The results indicate that in our sample victimisation was not related to diversity (H1), TSD (H3) or empathy and that other indicators are needed to develop effective prevention approaches against victimisation.

Limitations

One limitation is that the method of self-reports requires self-incrimination and may thus lead to an

underestimation of bullying. We tried to prevent this as best as possible by assessing a list of typical behaviours associated with bullying but avoiding the label of bullying itself.

The present analyses are based on cross-sectional data. Conclusions can only be drawn regarding associations, but not about cause and effects. Future analyses should establish causal links or at least a time sequence of effects.

Our measure of cognitive empathy only consisted of the subscale “perspective-taking” from an established instrument and its focus is more on understanding others cognitions than their emotions. It therefore does not assess the complete range of aspects of cognitive empathy.

Regarding migrant background, the assessment used is not as detailed as desirable. Country of birth was not assessed for parents due to data protection issues. Instead, language spoken at home with the parents was assessed, but only with reference to parents generally, not separately for each parent leaving out families with one immigrant parent where at least two languages are spoken equally or families with a migrant background who speak German at home. Rather, with our procedure we categorised students according to the dominant culture in the family. We also did not differentiate first and second generation migrant-background students, because the subsample of these students was comparatively small already. Students with migrant background were generally underrepresented, which might be confounded with the school track included in our study. Of the five participating schools, four were college preparatory high schools while only one was a general high school. Students with migrant background, however, are much more likely to visit schools of lower educational tracks (OECD, 2018).

The present data were collected in 2011. Composition of ethnic backgrounds were likely different then and the present analyses might not be applicable to the current situation. In addition, public awareness of the topic might be different today; efforts might have increased, for example, in the education system, and perceptions might be different today.

CONCLUSIONS AND FUTURE DIRECTIONS

In the present study, bullying and victimisation were not associated with the cultural composition of a class. However, perceived TSD seemed to be a protective factor against bullying, but not victimisation. The proportion of variance on the class level indicated that bullying and victimisation take place equally in all (participating) classes, independent of class composition. Teacher efforts, however, may be successful in fostering social competences such as cognitive and affective empathy, which in turn seem to be suitable to reduce or prevent bullying, at least

regarding affective empathy. Future studies need to replicate or refute these findings.

As the present analyses were of a rather universal nature, including all students and not focusing on sub-samples, future analyses and studies should examine whether the present constructs show differential effects for subgroups. Also, school track and socio-economic status of students and schools should be taken into account in future analyses.

As political and societal situations are constantly changing, researchers might need to constantly update and repeat their studies (or use ongoing study designs) in order to map developments and changes over time and to regularly update prevention and intervention measures.

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