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Bullying and Perceived School Climate: Victims' and Bullies' Perspective

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Research shows that school climate has an important effect on the prevalence of peer bullying. Therefore, the aims of our study were to determine: 1) if there are differences in the perceptions of bullying-related school climate by victims, bullies, non-victims and non-bullies, and 2) which sociodemographic and school climate factors predict the roles of chronic victims and bullies. The results suggest that there are more victims in younger students and more bullies among boys. We also found significant differences in perceptions of school climate by victims and bullies and were able to predict a small/moderate amount of variance in the roles of chronic victims/bullies by sociodemographic and school climate variables. Implications of the study findings are also discussed.

Key words: bullying, school climate, victims, bullies

Introduction

Peer bullying (PB) is a problem present in schools all around the world and met by students and teachers on daily basis. Research shows that PB has a negative impact on the physical and mental health of students (Chen, Liu, & Cheng, 2012; Pečjak, 2014), thus, researchers are trying to understand the nature of PB and minimize its negative impact on students through prevention and intervention.

From the systemic theories' (e.g., Bronfenbrenner's ecological theory, 1979) point of view, school has an important role in these aspirations, because school policy and existing prevention and intervention programs regarding PB are derived from "school philosophy" (Sullivan, 2011), which could also be termed school culture/climate. Therefore, one of the aims of our study was to determine which sociodemographic and school climate factors predict the roles of chronic victims and bullies.

School climate is a complex, multidimensional construct. It refers to the quality and character of social interactions at school and is defined by the norms, values, rules, organizational structures and relationship patterns unique to each school (Cohen, McCabe, Michelli, & Pickeral, 2009). Positive school climate may be a protective factor for different risk behaviors, and for students' aggression towards their peers (Cook, Williams, Guerra, Kim, & Sadek, 2010; Hong & Espelage, 2012).

The school climate in PB refers to social interactions between students participating in PB – bullies, victims and non-involved students, and to interactions between teachers and these students. There are certain values and norms in the background of these social interactions, which are advocated by schools. There are also

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sets of rules regarding students' behavior towards peers, and teachers' responses to PB occurrence, which are stated (or not) by the school.

School climate research includes students' perceptions of their peer's behavior towards them and their perceptions of how much teachers (and other school staff) care about them and treat them fairly (Hoy, Smith, & Sweetland, 2002).

The schools where PB is tolerated and ignored, where a clear set of rules of behavior is not in place and where the rules are not carried out, are dysfunctional schools (Sullivan, 2011). These schools are unsafe and the only rule is survival of the fittest. On the other side, there are safe schools (Sullivan, 2011) with the philosophy that school is a safe place for students and teachers, where rules of mutual respect are enforced and fair play in mutual relations is present.

Two elements have to be present for an optimal school climate: structure and support (Gregory & Cornell, 2009). The authors consider schools with clear structure and support as schools with authoritative (school) discipline. The school structure is the degree to which schools consistently and fairly enforce rules – also in cases of PB. Research shows that students' perceptions of rules as clear and fair are consistently linked to better behavior and to less victimization (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005).

A supportive school climate includes teachers caring for students and supporting them. Two important elements of this climate are the teachers' positive expectations towards students and their feelings of responsibility for students and for what goes on in the school (Austin & Duerr, 2005; Gregory & Cornell, 2009).

Adolescents' perceptions of teachers as caring and supportive have been linked to higher academic adjustment (Gregory, Cornell, Fan, Sheras, Shih, & Huang, 2010) and social adjustment by PB – they were more likely to seek help (Wilson & Deane, 2001), less likely to experience re-victimization (Smith, Talamelli, & Cowie, 2004) and had higher commitment to school (Hong & Espelage, 2012).

Research Problem

The aim of our study was to investigate individual elements of school climate in PB (prevalence of teasing and bullying, aggressive attitudes, willingness to seek help, supportive climate and school rules, commitment to school) from the perspective of different groups of bullies and victims. Considering the fact that less research has been carried out to assess school climate regarding PB in late adolescence, our sample consisted of all groups of adolescents – early, middle and late.

Adolescents in the group of bullies as well as in the group of victims were divided into two groups: occasional bullies/victims (performed/experienced PB 1-2 times in one month) and chronic bullies/victims (performed/experienced PB 3 or more times in one month), taking into account the assumptions of the questionnaire we used. Usually, researchers of PB take 2-3 times performed/experienced PB in one month as a criterion for determining the roles of bullies/victims, but in our opinion, there are differences between occasional and chronic bullies/victims, which are important for effective intervention.

Thus, our goal was to determine:

1) How diverse are different groups of victims/bullies regarding sociodemographic characteristics (school, age, gender, nationality and academic achievement) in their perceptions of school climate features.

2) How different sociodemographic characteristics of students and school climate (regarding PB) predict the roles of victims and bullies? This information is important for planning pre-

vention and intervention programs, because they are based on those features of school climate (regarding PB) in which interventions should begin.

Methodology of Research

Sample of Research

In total, 414 students from 18 Slovene schools participated in the study, 113 of which were primary (27.3%) and 301 secondary school students (72.7%). The average age was 13.31 (SD = 1.09) years and 17.85 (SD = 1.00) years for primary school and secondary school students, respectively. There were no significant differences found in any of the groups regarding gender ($X^2(1) = .851$, $p = .208$) and nationality ($X^2(1) = 3.623$, $p = .163$). There were also no significant gender differences found in different groups of adolescents (early, middle and late) ($X^2(2) = 1.183$, $p = .553$).

Instruments and Procedures

We used four questionnaires:

School Climate Bullying Survey (Cornell, 2012) has four parts: 1) demographics of school, gender, age and ethnicity/nationality; 2) assessment of bullying behaviors (frequency of bullying or being bullied by others in general and by physical, verbal, social and cyber bullying); 3) descriptions of locations, where bullying occurs and to whom the students tell about being bullied; 4) three factors of school climate bullying: prevalence of teasing and bullying (5 items, Cronbach α in our sample is .60), aggressive attitudes (7 items, α = .80) and willingness to seek help (9 items, α = .79). In School Climate Bullying Survey students responded on a 4-point scale (1 – strongly disagree, 4 – strongly agree), higher results indicating that the measured characteristic was more expressed.

Supportive Climate (Austin & Duerr, 2005). Students responded to an 8-item questionnaire on a 5-point scale (1 – strongly disagree, 5 – strongly agree), higher results indicating more supportive school climate in PB. Cronbach α coefficient in our sample is .89.

Experience of School Rules (NCES, 2005). The questionnaire on knowing and implementing school rules has 7 items. Students responded on a 4-point scale (1 – strongly disagree, 4 – strongly agree), higher results indicating better awareness of school rules and higher perceptions of consistent implementation of school rules in all students. Cronbach α coefficient in our sample is .70.

Commitment to School (Thornberry, Lizotte, Krohn, Farnworth, & Hang, 1991). The questionnaire has 9 items, to which students responded on a 4-point scale (1 – strongly disagree, 4 – strongly agree), higher results showing higher sense of student's belonging to school and their better academic adjustment. Cronbach α coefficient in our sample is .72.

The information on students' average academic achievement on a 5-point scale was also gathered [1 – insufficient, 2 – sufficient, 3 – good, 4 – very good and 5 – excellent (knowledge)].

Data were collected in April and May 2015. Students filled in the questionnaires during their study courses.

Data Analysis

Students were divided into groups, based on their involvement in PB, as follows: non-victims (did not experience bullying in past month), occasional victims (were victims of PB 1-2 times in past month); chronic victims (were victims of PB one or more times per week); non-bullies (did not perform bullying in past month); occasional bullies (performed bullying 1-2 times in past month) and chronic bullies (performed bullying one or more times per week). χ^2 and

one-way ANOVA were used to determine the differences between different groups of (student) victims and bullies. Eta coefficient (η^2) was used to calculate the effect sizes and hierarchical regression analysis to predict the role of students in PB (victims and bullies) by demographic characteristic (student-level predictors) and school climate characteristics (school-level predictors).

Results

Perceived School Climate Regarding PB in Groups of Student Victims and Bullies

Differences Between Groups of Student Victims and Bullies in Terms of Sociodemographic Characteristics

First, we were interested in possible differences between groups of student victims and bullies in terms of sociodemographic characteristics (school level, age, gender, nationality and academic achievement) (Table 1).

Table 1 shows statistically significant differences between victims with regard to their school level, gender, age group of adolescents and GPA. Significantly more students in the role of chronic victims and less non-involved students were found in primary than in secondary schools. Significantly more girls were found in the group of non-bullies and significantly more boys were among occasional and chronic bullies. Further, the following trend was established in the age groups of adolescents: the number of non-involved adolescents increases and the number of occasional, and even more so, chronic victims, decreases with age. Among students, who were not involved in PB, more students with higher academic achievement were found and more academically less successful students were found among chronic bullies.

Table 1 *Differences between groups of victims and bullies regarding selected sociodemographic characteristics*

Victims/Bullies (%)		Non-victims/ *Non-bullies*	Occasional/ *occasional*	Chronic/ *chronic*	χ^2 *(df)*	*p*
school	primary	34.8 / *42.9*	50.0 / *49.1*	15.2 / *8.0*	26.158 (2)	.000***
	secondary	53.8 / *50.5*	43.2 / *44.9*	3.0 / *4.7*	*2.985 (2)*	*.225*
gender	male	50.6 / *36.1*	43.8 / *54.5*	5.6 / *9.6*	.561 (2)	.755
	female	47.2 / *57.8*	46.0 / *39.6*	6.8 / *2.6*	*23.853 (2)*	*.000***
group of adolescents	younger	37.2 / *46.5*	51.2 / *46.5*	11.6 / *7.0*	11.318 (4)	.023*
	middle	46.8 / *45.9*	45.9 / *50.5*	7.3 / *6.7*	*2.225 (4)*	*.694*
	older	54.1 / *50.5*	42.2 / *43.6*	3.7 / *6.0*		
nationality	Slovene	49.6 / *50.1*	44.7 / *44.7*	5.7 / *5.2*	4.759 (4)	.313
	others[1]	33.3 / *22.2*	50.0 / *66.7*	16.7 / *11.1*	*7.170 (4)*	*.127*
GPA	1	37.5 / *25.0*	37.5 / *37.5*	25.0 / *37.5*	12.951 (8)	.114
	2	43.8 / *31.2*	43.8 / *43.8*	12.5 / *25.0*	*34.802 (8)*	*.000****
	3	52.7 / *43.3*	41.9 / *53.3*	5.4 / *3.1*		
	4	53.0 / *53.6*	43.0 / *40.6*	4.0 / *6.0*		
	5	38.9 / *51.9*	52.8 / *45.4*	8.3 / *2.8*		

Note. others[1] – Serbian, Croatian, Bosnian, English, Hungarian
p <.05*; p < .01**; p < .001***

Differences in the Perceptions of School Climate between Non-Victims, Occasional Victims and Chronic Victims

We were interested in how different groups of students in the roles of victims or non-victims perceive school climate regarding PB. We hypothesized that their perceptions of school environment would be a "filter", through which they adjust to this environment and regulate their behavior.

Table 2 shows significant differences between individual groups of victims in the perceptions of school climate regarding PB in two dimensions – prevalence of teasing and bullying, and aggressive attitudes. η^2 indicates a moderate effect size for differences in perceptions of school climate regarding prevalence of teasing and bullying. As much as 51% of the total variance in the perceptions of school climate could be attributed to the effect of this variable. 26% of the total variance in the perceptions of school climate could be explained with aggressive attitudes.

Bonferroni's post hoc test showed highly significant differences in the prevalence of teasing and bullying between all three groups (at 0.1% risk rate). Chronic victims perceived that schools allow significantly more bullying among students because of clothing, nationality and sexual orientation than the group of occasional victims (mean difference I - J = 2.3156, p = .000) did and the latter perceived significantly more allowing of bullying at school than non-victims (mean difference I – J =.7303, p = .022) did.

In aggressive attitudes, Bonferroni's post hoc test showed differences between groups at 5% risk rate. According to this test, there are significant differences between non-victims and chronic victims (mean difference I - J = - 2.1889, p = .028) and between occasional and chronic victims (mean difference I - J = - 2.2798, p = .021).

Table 2 *Differences in perceptions of school climate between non-victims, occasional victims and chronic victims*

School climate	Victims			F	p	η^2
	Non-victims	Occasional	Chronic			
	M (SD)	*M (SD)*	*M (SD)*	(df =2)		
Prevalence of teasing and bullying	10.49 (2.71)	11.12 (2.64)	13.54 (2.39)	16.140	.000***	.51
Aggressive attitudes	12.21 (4.10)	12.12 (3.68)	14.40 (4.56)	3.783	.024*	.26
Willingness to seek help	24.74 (4.75)	24.59 (5.06)	23.56 (4.89)	.650	.523	.07
Supportive climate	26.04 (6.07)	26.21 (6.40)	24.93 (4.21)	.491	.612	.08
School rules	17.71 (3.20)	17.58 (3.30)	17.46 (2.23)	.112	.894	.01
Commitment to school	25.08 (4.20)	25.45 (4.25)	26.08 (3.62)	.839	.433	.07

Note. N = 201 non-victims, N = 184 occasional victims; N = 26 chronic victims;
η^2 – effect sizes
p <.05*; p < .01**; p < .001***

Table 3 *Differences in the perceptions of school climate between non-bullies, occasional bullies and chronic bullies*

School climate	Bullies			F	*p*	η^2
	Non-bullies	Occasional	Chronic			
	M (SD)	*M (SD)*	*M (SD)*	(df =2)		
Prevalence of teasing and bullying	10.71 (2.80)	11.21 (2.73)	12.04 (2.27)	3.389	.035*	.03
Aggressive attitudes	11.29 (3.84)	12.82 (3.64)	17.05 (3.71)	26.650	.000***	.42
Willingness to seek help	25.15 (4.86)	24.33 (4.89)	21.91 (4.10)	5.142	.006**	.14
Supportive climate	26.68 (5.97)	25.74 (6.30)	23.01 (4.89)	4.203	.016*	.17
School rules	17.98 (3.26)	17.42 (3.07)	16.36 (3.19)	3.350	.036*	.04
Commitment to school	26.14 (4.22)	24.76 (4.03)	22.70 (3.43)	10.476	.000***	.20

Note. N = 200 non-bullies, N = 185 occasional bullies; N = 23 chronic bullies;
η^2 – effect sizes
p <.05*; p < .01**; p < .001***

Differences in the Perceptions of School Climate between Non-Bullies, Occasional Bullies and Chronic Bullies

The results showed significant differences between all groups of students in perceptions of all school climate dimensions (Table 3).

We found highly significant differences between groups in aggressive attitudes, where chronic bullies were significantly more convinced that school allows their social affirmation through violence than occasional bullies (Bonferroni post-hoc test: mean difference I - J = 4.2273, p = .000) were and occasional bullies significantly more than non-bullies (mean difference I - J = -1.3795, p = .000). Highly significant differences between groups were also present in perceived commitment to school, but the effect sizes were smaller.

The results also showed slightly smaller, but still significant differences in other variables (willingness to seek help, supportive climate), with smaller effect sizes. Thus, chronic bullies were the least willing to seek help from teachers, occasional bullies somewhat more and non-bullies were the most willing to seek help from teachers. In addition, chronic bullies were the most convinced, occasional bullies somewhat less so and non-bullies were the least convinced that teachers do not express enough care for students, students are not familiar with school rules (enough) and that school rules are not enforced.

Students' Sociodemographic Characteristics and School Climate as Predictors of the Roles of Bullies and Victims

In addition, we tried to establish which students' sociodemographic and school climate characteristics best predict the role of a victim or a bully (occasional and chronic).

It appears that in the group of victims as well as in the group of bullies both sets of variables – students' sociodemographic characteristics and school climate significantly predicted their roles. Namely, 18% of the differ-

Table 4 *Sociodemographic and school climate predictors of victims and bullies*

Predictors	Victims		Bullies	
	Step 1 (β)	Step 2 (β)	Step 1 (β)	Step 2 (β)
School	-.40***	-.39**	-.18	-.16
Gender	.03	.04	-.16*	-.08
Group of adolescents	.13	.15	.12	.13
Language at home	.04	.02	.08	.06
GPA	-.08	-.12	-.17*	-.07
Prevalence of teasing and bullying		.15*		.06
Aggressive attitudes		.19*		.32***
Willingness to seek help		-.05		-.02
Commitment to school		.07		.01
Supportive climate		-.10		.00
School rules		.03		-.03
R^2	.10	.18	.08	.19
ΔR^2	.10	.08	.08	.11
F for change in R^2	4.16***	3.15**	3.48**	3.98***

Note. β – standardized β coefficient; R^2 – determinant multiple correlation coefficient; ΔR^2 – multiple correlation coefficient change
$p < .05$*; $p < .01$**; $p < .001$***

ences between students in the victim's position (10% with sociodemographic characteristics and 8% with school climate variables), and 19% in the bully's position (8% with sociodemographic differences and 11% with school climate variables) could be explained by the two sets of variables.

The most significant predictor among sociodemographic factors for the role of a victim was the school level. There were significantly more victims in primary than in secondary school ($\beta = .40$). In school climate, however, the most significant predictors of the victim's position were the prevalence of teasing and bullying ($\beta = .15$) and aggressive attitudes ($\beta = .19$).

Among sociodemographic characteristics (model 1), the position of bullies was most significantly predicted by gender ($\beta = .16$) and academic achievement ($\beta = .17$). There were significantly more boys than girls and academically less successful students found in the roles of chronic bullies. In addition, after school climate factors were included (model 2), sociodemographic factors lost their predictive power and among school climate factors only aggressive attitudes remained to be an important predictor ($\beta = .32$).

Discussion

The purpose of our study was to investigate the role of students' sociodemographic characteristics and their interaction with school climate characteristic from the victims', bullies' and non-involved students' point of view. First, we established the differences between groups of victims and bullies regarding sociodemographic characteristics. Second, we investigated their perceptions of school climate regarding PB. At

the end, we used regression analysis to find out the interactive predictive power of both sets of variables considering the roles of victims and bullies.

Differences between Groups of Victims and Bullies Regarding Sociodemographic Characteristics

We found significantly more victims (chronic and occasional) in primary than in secondary schools. It was established in the age group of adolescents, that the number of non-involved adolescents increases and the number of occasional and chronic victims decreases with age. These results confirm the findings of many previous studies, which report a decrease of PB during the years of schooling (Benitez & Justicia, 2006; Olweus, 1995; Pellegrini, 2002). Researchers attribute the decrease especially to adolescents' greater social maturity and their better competencies for resolving problems with peers.

Significantly more girls were found in the group of non-bullies and significantly more boys were among occasional and chronic bullies. These results confirm the empirical results of previous studies, which reported the same trend (Cook et al., 2010; Marsh, Nagengast, Morin, Parada, Craven, & Hamilton, 2011; Olweus, 1993; Polak, Smrtnik Vitulić, & Vošnjak, 2011). The most common explanation of such results refers to different patterns of socialization in boys and girls. Parents and broader social environment give boys and girls different guidance for social behavior and expressions of distress. In boys, the ability of independent and active ways of making themselves recognized is encouraged. In addition, they are more often rewarded for expressing power and not showing their hurts. On the contrary, girls are often encouraged to show, e.g., dependence, passivity, more searching for help and expressing emotions in distress.

Among boys who are not involved in PB, more students with higher academic achievement were found and more academically less successful boys were found among chronic bullies, which is reported in other studies as well (Gottfredson et al., 2005; Olweus, 1986; Polak et al., 2011; Spriggs, Ianoti, Nansel, & Haynie, 2007).

In short, our sample confirms the general empirical findings of previous research on PB dynamics with regard to age, gender and achievement.

The Perceptions of School Climate between Different Groups of Victims and Bullies

The results showed differences in the groups of victims (occasional and chronic) regarding their perceptions of school climate in two dimensions – in prevalence of teasing and bullying and in aggressive attitudes. Both groups of student victims perceived higher prevalence of teasing and bullying and higher aggressive attitudes in their schools. They believe schools allow different forms of PB. On the other side, it appears as if students, who are not victims, might not be sensitive enough to this phenomenon. It seems that from their perspective, PB does not exist if it is not happening to them. This phenomenon occurs in individualistically oriented school climate, where the philosophy of each one taking care of only oneself in academic and social areas prevails. With concern to aggressive attitudes, especially chronic victims held the perception that school allows for a culture, where aggression is one of the legitimate ways for students' affirmation and entertainment among their peers and where aggressive reactions are one of the possible strategies for resolving mutual problems.

In the group of student bullies, significant differences in all dimensions of school climate considering PB were found. The differences in aggressive attitudes were highly significant in

both groups of student bullies. Chronic bullies were significantly more convinced that school allows their social affirmation through violence. At the same time, these students perceived lower commitment to school and lower academic adjustment. They found school boring and attributed their poor academic achievement to their sense of not belonging in school. Furthermore, chronic bullies, compared to occasional bullies and non-bullies, were significantly less willing to help the others. In addition, they more often reported about not being familiar with school rules, and about not following them repeatedly. These beliefs consequently lead chronic bullies to perform PB more frequently and seek help from teachers on the rarest of occasions, which is consistent with their awareness of the inadequacy of their behavior that is usually present. The results of chronic bullies are congruent with the authoritative discipline theory (Gregory & Cornell, 2009), which states that rule clarity and teacher support diminish latitude for bullies in PB. On the basis of the post-hoc tests in individual groups of bullies, a general conclusion can be made that both groups of bullies (occasional and chronic) are significantly more similar in perceptions of school climate regarding PB compared to the group of non-bullies.

Comparison between chronic and occasional bullies is also interesting. The occasional bullies consistently showed more positive beliefs than chronic bullies did – they had less aggressive beliefs towards peers, they were willing to seek help from adults earlier, they perceived school climate regarding PB as more supportive and were more academically adjusted. This suggests that besides crisis-curative work with chronic bullies, preventive work with occasional bullies is also important. Preventive work probably has a greater and faster effect on them due to their more favorable beliefs. This assumption should be taken into consideration in further research.

Students' Sociodemographic Characteristics and School Climate as Predictors of the Roles of Bullies and Victims

With variables, included in the model, 18% of the differences among victims and 19% of the differences among bullies could be explained. Both sets of variables – student's sociodemographic characteristics and school environment characteristics – significantly contributed to explaining these differences. In student victims, the stronger predictors were sociodemographic variables (with them, 10% of the differences among victims could be explained), but in student-bullies, the dimensions of school culture/environment were the stronger predictors by explaining 11% of the differences among bullies. This indicates that by changing school climate, slightly faster changes could be expected in bullies than in victims.

In student victims we found the prevalence of teasing and bullying (β = .15) and aggressive attitudes (β = .19) as significant predictors of their role. Despite the relatively low predictive power of these two school climate bullying coefficients, this shows that encouraging positive aspects of both school climate dimensions (e.g., higher social status is easier to earn by helping peers than by fighting with them or, better than being the first to hit is finding a non-aggressive solution to a conflict) could have a protective function (Klein, Cornell, & Konold, 2012). Moreover, these results lead to a conclusion that working with chronic victims should be focused on giving them psychological support and empowering them to cope with PB. At the same time, an environment, in which teachers and other school staff clearly state to students that they will not tolerate PB should be created. Developing such a culture is important because bullying does not affect the victims only, but also damages the entire school's atmosphere

by creating a climate of fear and intimidation (Olweus & Limber, 2000).

We also found gender and academic achievement as important predictors of the student bullies role. Boys and academically less successful students were more often bullies, but the predictive power was weak. Gottfredson et al. (2005) reported similarly that schools with higher percentage of male students experienced higher level of victimization.

After including the school climate variables, sociodemographic factors were no longer significant, which indicates the stronger predictive power of the former. Aggressive attitudes proved to be the most important predictor among school climate factors. It had the most predictive power in explaining the role of an occasional and a chronic bully (e.g., the role of a bully leads to a special position which brings admiration from peers and even new friends, and sometimes represents the only strategy of problem solving). Therefore, these forms of beliefs in students – especially in boys, have to be addressed by all school staff and reduced through constant communication in the classroom community.

Conclusions

Our distinguishing occasional and chronic victims and bullies showed that in perceiving school bullying climate two different groups of students exist. Chronic bullies perceived school climate as allowing more violence for reaching goals in social areas. Regardless of whether their perceptions were realistic or not, this finding is an important feedback for intervention(s).

Prevention and intervention programs in PB should try to change school climate by modifying students' attitudes that promote bullying. Our results confirm that reduction of aggressive attitudes among students predicts fewer bullies and victims (occasional and chronic). If we assume that perceived school climate regarding PB is a starting point for student behavior, more active/assertive prevention and intervention work methods are necessary for bullies. They should be more clearly informed that bullying will not be tolerated and any unacceptable behavior should be consistently responded to – stopped. Teachers play an especially important part in this. For example, the study of Berkowitz (2014) showed that positive reactions of teachers (stopping the violence) were related to students' positive reactions to violence and vice versa. It seems that reactions, which reflect teachers' beliefs about bullying as unacceptable, are an important factor in preventing bullying. Therefore, it is crucial that the prevention and intervention programs for stopping the bullying at schools are comprehensive, including all school participators – students and teachers. The latter having the key role in forming authoritative school climate, protecting against bullying (Gregory et al., 2010).

When dealing with specific problem situations, bullies should take part in finding more acceptable, non-aggressive strategies of problem solving and should be trained to use them. It is also important to work with the whole classroom communities to establish clear rules of unacceptable behavior.

At the same time, the fact that research shows that peer influence is the strongest predictor for PB (Cook et al., 2010) should be considered. Namely, the non-involved students play an important part in PB. This leads to a conclusion that non-victims and non-bullies should be made sensitive to PB. If peers have the power of pushing the bullies, especially occasional bullies, to perform violence, they could also be the ones who draw them away from such behavior. In an attempt to activate the non-involved students, a more thorough examination of some of their psychological characteristics, e.g., their ability of moral judgement, is needed. Namely, Oberman (2011) found low levels of moral endeavor in non-involved students, which

do not intervene in PB. In addition to peers, teachers can also contribute a lot to minimize PB with better discipline management and by creating a classroom environment in which students feel a sense of belonging in school.

One limitation of the study concerns the fact that only students' sociodemographic characteristics were considered. Some of their psychological characteristics (e.g., social competence, peer status, ability of moral judgements, problems of exter- and internalizing) should also be included, presuming that a considerably larger amount of differences between groups of student victims/bullies could be explained by adding them. Finally, examination of the roles in traditional PB should extend to researching the roles in cyber bullying, because the results of some studies suggest this form of violence is greatly expanding among students (e.g., Kowalski, Limber, & Agatston, 2012).

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