

WARMING UP THE SCHOOL CLIMATE - PERCEPTION OF THE SCHOOL ENVIRONMENT AND PEER AGGRESSION

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Abstract. *The article sought answers to questions about the significance of subjectively perceived conditions of the school environment for students experiencing cyber aggression. The theoretical framework of the study was comprised by the socio-ecological concept of school environment (Bronfenbrenner, 1986) and the concept of resilience explaining the phenomenon of positive adaptation of children and young people (Garmezy, 1985). The research was carried out as part of a wider project oriented at introducing changes in schools and using a diagnostic survey. Participation was attended by: schools' representatives, a local institution dealing with social prevention, and a researcher in the person of the author of the article.*

Keywords: *cyber aggression, school environment, peer aggression, diagnostic survey, preventive activities*

Introduction

Various motives and perspectives have been applied to explain aggression and violence occurring at schools. For many years, research and literature have primarily focused on individual factors (Klewin, 2006; Olweus, 1997; Salmivalli, 2010; Smith, Pepler, & Rigby, 2004). Currently, several studies highlighting the importance of the context in which peer aggression emerges come to the fore (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996; Salmivalli, 2010; Salmivalli, Voeten, & Poskiparta, 2011; Rigby, 2010). Additionally, an increasing number of studies confirm the role played by the perception of the environment or existing relations with regard to the prevalence of undesirable behaviours (including peer aggression) in this environment (Brand, Felner, Shim, Seitsinger, & Dumas, 2003; Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004).

This article undertakes the problem of aggression experience in the perspective of school environment perception as an element of a broader social context, exerting a significant effect on adolescent development and socialisation processes (Eccles & Roeser, 2011). It focuses on three forms of aggression, including cyber aggression, given the fact that this form of violence is much less investigated. The conducted analysis is an element of a wider project, whose

purpose was to introduce changes preventing risky behaviours among adolescents to the social environment of six secondary schools. School representatives, a representative of a local institution and a representative of the academic community (the author of this article), acted as equal partners and the schools they represented were regarded not only as the research area, but also as a place of significant impact on aggression intensification, important from the perspective of undertaking preventive activities.

The article analyses questions concerning the perceived level of aggression experienced in the school environment by the examined subjects. However, the research of peer aggression focused on its three forms. These were: verbal aggression, physical aggression, and cyber aggression. The social-ecological approach, emphasizing the importance of relations between the human being and the environment on changes occurring in an individual, was considered the leading concept. It emphasizes the crucial role played by the type and quality of relations between people, institutions and organizations, as well as within families, schools and the local community (Bronfenbrenner, 1986). This is a transactional model of relations between man and the environment. Mutual interactions can favour or upset the development of individuals, e.g. by provoking aggressive behaviours or the experiencing of such behaviours. However, what is of greater importance is not so much objective factors but a subjective reception of reality, and in the context of the research presented here, this refers to experiencing features of the school environment, also known as the school climate (Kulesza, 2007). This term, used for the first time by Kurt Lewin to describe a specific type of psychological field in which a person is located, has gained various meanings (Anderson, 1982; Cohen & Geier 2010; Gaziel, 1997; Kulesza, 2007; Tableman, 2004).

A consensus as regards the final definition of school climate has not been reached. It includes a “series of indicators, both objective and subjective, which include the general feeling or impression made by the school on the individual” (Thůściak-Deliowska, 2014, 144). The viewpoints presented refer to areas indicated by Krzysztof Ostaszewski (2012, 26-27), such as: quality of social relations, learning environment features, emotional and physical safety and physical environment characteristics.

The theoretical framework of the entire project is supplemented by the resilience concept, emphasizing the role of various individual and environmental features on increasing or decreasing the risk of student exposure to various negative phenomena or for showing risky behaviour by students (Mastern & Powell, 2003). The reference here is made to an initiative oriented investigating the range and the specificity of various problem behaviours, as well as the level of protective factors and risk factors, using a multi-dimensional analysis, followed by designing and introducing relevant changes. This is all the more important

since, e.g. the results of analyses presented in the paper were used for creating and, further on, for implementing adequate corrective activities in the environment of the examined institutions.

Research procedure

The research was conducted as a diagnostic-verification study. It was a survey carried out on the total population (Babbie, 2005, 268-282). It was carried out using an original research tool, as the range of the examined issues was established by way of consultations held with participations of three entities implementing the project. The research analysed three crucial questions: What is the students' perception of the school environment? What is the range of the occurrence of aggression among students, taking into consideration its forms and manifestations? Is there any relation between school climate perception and aggression experience?

The study subjects included 1,086 students attending 40 first and second classes from six middle-schools in Olsztyn in Poland.

Table 1 Numbers of examined students in individual schools, taking into account the division into sexes and the class (N=1086)

Middle-school	Sex			Class		Total
	No data	Female	Male	Class I	Class II	
1	5	111	87	116	87	203
2	1	80	78	81	78	159
3	3	61	84	94	54	148
4	0	16	13	15	14	29
5	7	110	109	117	109	226
6	4	150	167	160	161	321
Total	20	528	538	583	503	1086

In view of the assumptions and the aim of the entire project (part of which was to carry out the study described in this paper), it was decided to conduct the research on the full sample. It was intended to create the best recommendations possible for preventive activities for students of individual schools and classes. It was equally important to identify certain general tendencies, as well as those which were typical of smaller groups.

Analysis of Research Results

The results of the research concerning perception of school environment are presented below. In a further part, the paper investigates the extent of three peer aggression types. Finally, the relations between the above-mentioned variables are examined.

Perception of the school environment

School climate perception was determined through the application of a model used in all-Polish studies carried out by a team under the supervision of dr A. Komendant-Brodowska (2011, 2014). The studies assumed that perception of school climate could be determined with the use of two components, i.e. perception of school atmosphere and feelings related to going to school. Students expressed their opinions with reference to thirteen sentences assigned to those constructs. The same method was followed in the research described in this paper. After examining the correlations between individual items and constructs, it was decided to reject the three statements with the lowest correlation (Pearson correlation coefficient for those items was $r=0.399$; $r=0.394$; $r=0.289$). Finally, for the purposes of further analyses, the following statements were used within the first construct (1-5): “In my school I feel completely safe”, “My school has a friendly and free atmosphere”, “I willingly go to my school”, “We can freely express our opinion during classes in my school”, “I like spending time in my school, even after classes”. The framework of the second construct was composed of ten statements (1-10): “I have true friends at school”, “I really develop at school”, “I like going to school”, “I am interested in lessons”, “I feel appreciated at school”, “Going to school makes me happy”, “I am afraid of some lessons”, “I feel nervous about going to school”, “At school I feel insecure”, “I am afraid to go to school”.

Results summarizing “rather yes” and “yes” vs. “rather no” and “no” responses are presented below.

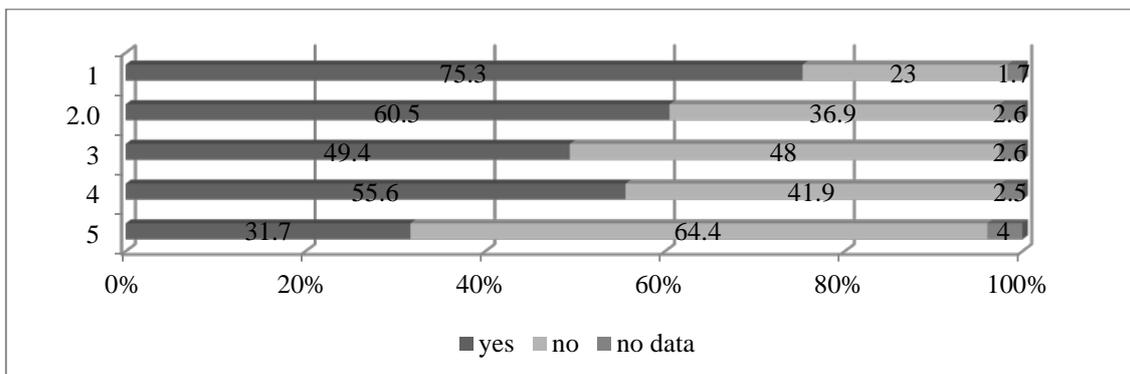


Figure 1 School atmosphere (I) in students' opinion (including “no data” responses)

The results show that more than a half of the examined students had a generally good opinion on school atmosphere, and every third student willingly spent time at school, even after classes. However, almost every fourth student provided a negative response to the statement “In my school I feel completely

safe”. What should also be emphasized is the fact that up to 42% of students believed that they could openly express their opinion during classes.

Three-fourths of the examined subjects believed that they had true friends at school (See Chart 2). On the other hand, 65% felt that they were developing at school, although only 40% liked going to school and 45% felt appreciated.

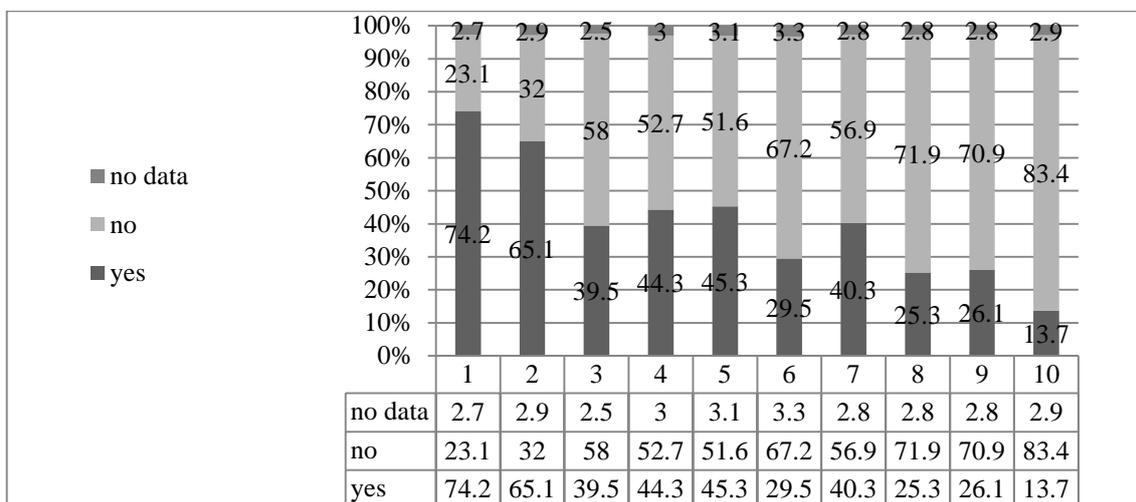


Figure 2 Feelings related to going to school (II) (including “no data” responses)

What should be considered alarming is that as many as 40% of the respondents agreed with the statement “I am afraid of some lessons”. Every fourth of the examined students felt insecure at school and felt nervous about going to school, and almost 14% of the respondents were afraid to go to school.

The extent of aggression

The following forms of aggression were included: cyber aggression, physical aggression and verbal aggression. The students answered whether (and if so, with what frequency) they experienced its specific forms in the year preceding the study. It was found that only every fourth respondent (24.86%) did not experience any form of peer aggression in the year preceding the research.

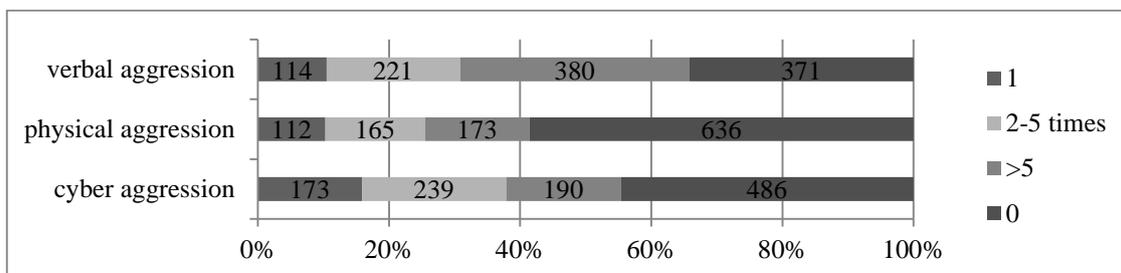


Figure 3 Extent and frequency of specific forms of aggression

The most common form was verbal aggression. The range included the following experiences: (1) threats (2) humiliation, taunting, (3) calling names, insulting (4) using rude names (5) saying insulting things about one's parents.

Table 2 Frequency of experiencing verbal aggression, including attitude towards its specific types (items)

Experiencing violence	item					Sum	%	% without zero values	Median	Mean
	1	2	3	4	5					
0	11	10	25	14	16	76	1.40%			
1	867	699	532	612	616	3326	61.25%	62.12%	616	665.2
2	115	151	182	204	181	833	15.34%	15.56%	181	166.6
3	39	110	145	127	119	540	9.94%	10.09%	119	108
4	54	116	202	129	154	655	12.06%	12.23%	129	131
						5430	100.00%	5354		

0-no data; 1-did not experience; 2-experienced once; 3-experienced 2-5 times; 4-experienced >5 times.

The most common form of verbal aggression is calling names and insulting. It is experienced by almost a half of students (48.8%, i.e. 529 children) including 347 who experienced it at least twice, and 202 who experienced it over 5 times. Almost 35% of the examined subjects, (377 students) were victims of humiliation or taunting, and rude names were used towards 22% of the respondents.

Table 3 Frequency of experiencing cyber aggression, including responses concerning its specific types (items)

Experiencing violence	item							Total	%	% without zero values	Median	Mean
	1	2	3	4	5	6	7					
0	4	5	13	13	4	3	4	46	0.61%			
1	691	978	870	904	810	1018	948	6219	81.81%	82.31%	904	888.428571
2	182	67	140	112	125	48	77	751	9.88%	9.94%	112	107.285714
3	118	17	38	26	76	3	27	305	4.01%	4.04%	27	43.5714286
4	91	19	25	31	71	14	30	281	3.70%	3.72%	30	40.1428571
								7602	100.00%	7556.00		

0-no data; 1-did not experience; 2-experienced once; 3-experienced 2-5 times; 4-experienced >5 times.

The level of cyber aggression occurrence was examined using the following statements (items): (1) being an object of photos or recordings without consent, (2) distribution of embarrassing recordings featuring the victim, (3) hacking a

profile or account (e.g. Facebook, e-mail), (4) impersonating using the account of the victim (e.g. on Facebook or e-mail), (5) posting insulting comments, taunting with the use of the Internet or cell phone, (6) creating a profile on social media, a blog or a website in order to ridicule or insult someone, (7) blackmailing or threatening to publish embarrassing photos or recordings.

Almost 10% of the examined subjects, i.e. 103 students, experienced dissemination of compromising recordings featuring them. In turn, more than 12% (134 students), were blackmailed or threatened with publication of embarrassing photos or recordings, and 15.6% experienced identity theft involving their account (e.g. Facebook, e-mail etc.). Other types of cyber aggression attacks were experienced by at least every fifth student. Students were most frequently objects of pictures or recordings made without their consent. Over the past school year, victims of this form of cyber aggression accounted for 36.1% of the respondents (391 students) of which 209 experienced this form of aggression more than once.

The table below presents the results of victimization intensity as regards physical aggression. The investigated types included: (1) hitting, (2) pulling and (3) pushing.

Table 4 Frequency of experiencing physical aggression, including responses concerning its specific types (items)

Experiencing violence	item			Total	%	% without zero values	Median	Mean
	1	2	3					
0	10	10	26	46	1.41%			
1	885	766	694	2345	71.98%	73.01%	826	781.6667
2	94	163	150	407	12.49%	12.67%	157	135.6667
3	46	78	118	242	7.43%	7.53%	98	80.66667
4	51	69	98	218	6.69%	6.79%	84	72.66667

0-no data; 1-did not experience; 2-experienced once; 3-experienced 2-5 times; 4-experienced >5 times.

The results show that every third student was pushed and almost every tenth was pushed more than five times. As many as 17.6% of them were hit.

School environment perception and aggression

The final part of the paper examines the key issue under investigation, which was to determine the importance of the subjectively perceived condition of the school environment for the occurrence of aggressive behaviours in students.

Table 5 Descriptive Statistics

	Mean	Std. Deviation	N
School atmosphere (I)			1086
Feelings (II)	17.68	6.62	1086
Cyber aggression (CA)	8.99	3.197	1086
Physical aggression (PA)	4.38	2.288	1086
Verbal aggression (VA)	8.5	4.064	1086

Data obtained from the analysis using Pearson's linear correlation coefficient are provided below.

Table 7 Pearson's linear correlation results for key factors

	Sex	I	II	CA	PA	VA	A
Sex	1						
I	-0.057	1					
II	-0.044	,594***	1				
CA	0.011	-,171***	-0.025	1			
PA	,162***	-,252***	-0.055	,444***	1		
VA	0.058	-,326***	-,103**	,501***	,562***	1	
A	,081**	-,311***	-,080**	,794***	,761***	,883***	1
Mean (Max Score)	-	16.17(20)	17.68(40)	8.99(28)	4.38(12)	8.50(20)	21.87(60)
Std. Deviation	-	4.12	6.62	3.20	2.29	4.06	7.87

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

I - School atmosphere; II - Feelings; CA - Cyber aggression; PA - Physical aggression; VA - Verbal aggression, A - Aggression (CA, PA, VA)

Generally, both school climate perception constructs are negatively correlated with peer aggression experience. This may indicate that there is a lower aggression prevalence rate with better perception. This can be determined only after performing a regression analysis.

Correlation coefficient values were very significant ($p < 0.001$) for examination of the relations between school atmosphere perception and experiencing peer aggression and its individual types. No correlation was found between the second school climate construct and experiencing cyber aggression and physical aggression, while a low value of this coefficient was found for verbal aggression.

In the next step, a multiple regression analysis was performed, with the aim of determining the effect of school atmosphere perception and feelings related to

going to school (independent variable) on the aggression experience intensity (dependent variable). The assumed significance level was $p < 0.05$.

Table 8 **Regression analysis for the examined factors**

Ln (CA)								
	B	Std. Error	β	t	Sig.	R2	$\Delta R2$	F (dfs)
sex	-0.003	0.016	-0.005	-0.157	0.875	0.041	0.044	12.47 (4, 1085)***
I	-0.017	0.004	-0.251	-4.11	<0,001***			
II	0.004	0.002	0.099	2.268	0.024*			
a Dependent Variable: Ln (PA)								
	B	Std. Error	Beta	t	Sig.	R2	$\Delta R2$	F (dfs)
sex	0.118	0.023	0.148	5.132	<0,001***	0.101	0.104	31.50 (4, 1085)***
I	-0.027	0.006	-0.264	-4.467	<0,001***			
II	0.011	0.003	0.166	3.923	<0,001***			
a Dependent Variable: Ln (VA)								
	B	Std. Error	β	t	Sig.	R2	$\Delta R2$	F (dfs)
sex	0.041	0.024	0.049	1.721	0.086	0.117	0.12	36.09 (4,1085)***
I	-0.04	0.006	-0.364	-6.225	<0,001***			
II	0.006	0.003	0.092	2.184	0.029*			
a Dependent Variable: Ln (VA)								
	B	Std. Error	β	t	Sig.	R2	$\Delta R2$	F (dfs)
sex	0.046	0.017	0.076	2.687	0.007	0.126	0.129	40.053 (4, 1085)***
I	-0.03	0.005	-0.378	-6.488	0			
II	0.007	0.002	0.135	3.231	0.001			

I - School atmosphere; II - Feelings

The analysed independent variables affected the dependent variable $F=12.47$, $p < 0.001$, $R^2=0.041$. It can be concluded that both school environment perception constructs significantly affect and even predict the level of aggression experience and its types. This particularly refers to verbal aggression. For this analysis, sex is not a differentiating variable.

Discussion

The conducted research aimed at establishing the level of experiencing peer aggression by students, as well as their perception of the school environment. The survey data clearly show that a significant number of students perceive school to be a place evoking fear and a feeling of insecurity and these aspects are of crucial importance for experiencing peer violence and aggression (Gower, McMorris, &

Eisenberg, 2015). In a survey concerning school climate perception, particular attention should be given to negative responses to the statement: “In my school I feel completely safe” (23%, in which 9.7% - “definitely not”) and positive responses to statements: “I am afraid of some lessons” (40.3%, in which 24.8% - “definitely yes”), and “I am afraid to go to school” (13.7%, in which 9.2% - “definitely yes”). With reference to the first of those statements, it seems obvious that data concerning specific reasons for such an attitude are missing. It would be recommended to include this aspect in further studies.

The next research question concerned the extent of the occurrence of aggression among students and it included its forms and manifestations. Out of the three investigated types of aggression, the most common proved to be verbal aggression, which confirms the general tendency reported in other studies (Komendant-Brodowska, 2014; Przewłocka, 2015). Moreover, the most commonly occurred form of verbal aggression was calling and insulting. It was also found that girls slightly more often experience various types of cyber aggression (although differences are not statistically significant). At the same time, it is worth emphasizing that the examined female students much less frequently fell victim to traditional types of peer aggression¹, which confirms a general tendency (Health Behaviour in School-aged Children, 2016). The most common manifestation of cyber aggression was spoofing someone's Facebook or e-mail account.

Examination of factors leading to peer aggression experience is of particular importance when searching for adequate methods to counteract it. Perception of the school environment is much more frequently analysed in the context of violence and bullying than aggression. Research results show that both perpetrators and victims of violence are usually less attached to school, have the weakest relations with teachers (McNeely & Falci, 2004; Wilson, 2004; Raskauskas, Gregory, Harvey, Rifshana, & Evans, 2010; Han, Zhang & Zhang, 2017) and they perceive the school atmosphere in more negative terms (Barboza, Schiamberg, Oehmke, Korzeniewski, Post, & Heraux, 2009; Loukas, Suzuki, & Horton, 2006).

The principal task in the study described in this paper was to describe possible relations between individual forms of aggressions and the perception of the school environment. The question was whether they would be visible in relation to cyber aggression, in which most attacks take place outside school (Smith, Mahdavi, Carvalho, Fisher, Russell, & Tippett 2008; Agatston,

¹In the case of physical aggression, a clear disproportion is found, i.e. 27% to 40%. Boys also more frequently became victims to all specific forms of verbal aggression and sexual aggression. As results from research conducted on experiencing the so-called traditional forms of aggression, girls more often than boys were only victims to relative aggression, including fabrication and/or spreading gossip and false information about them (242, i.e. 45.8% versus 210, i.e. 39%) and exclusion from the group - 18.9% versus 17.6% of boys.

Kowalski, & Limber, 2007). It was assumed that in view of a low number of studies, there is no certainty whether the climate prevailing in schools affects its prevalence (in comparison to traditional aggression types). As results from the analysis conducted, both school environment perception constructs significantly affect and even predict the level of aggression experience and its types. This is true for all three forms of aggression (including cyber aggression) and the relationship is particularly strong for verbal aggression.

The conducted research, a fragment of which is presented in this article, was an element of a broader project oriented towards the introduction of appropriate and adequate changes in the school environment. The results obtained confirm the importance of work on improving the school climate in the perspective of preventing peer aggression (although its importance in preventing other risky behaviours of young people should also be stressed here) (McNeely & Falci, 2004).

Consistent development and implementation of a common vision of school, including, in the first place, establishing interpersonal relations promoting improvement, help to build a friendly atmosphere at school. This is a particularly difficult challenge in the perspective of cultural conditions, postmodernism (Śliwerski, 2003), liquid modernity marked with omnipresent variability, impersonal organization of social life, depersonalization of relations and the disappearance of community relations. As Z. Bauman writes: “we live in times of pure individualism and the pursuit of the good life, (where) interpersonal relationships are not combined with responsibilities and do not involve any obligations” (Bauman, 1996, 7), also pointing to the need to develop dialogue skill, which in educational practice is disappearing or even dying out (Mizerek, 2018).

However, in Polish conditions, the instability of the educational system, resulting, e.g. from its continuous reforms, creates certain barriers. The need to adjust to subsequent far-reaching changes significantly impedes work on improving the quality of relations at school. Other important aspects include: a tendency to perceive preventive activities as an action-based short-term task, as well as low awareness concerning the importance of school environment perception for the occurrence of risky behaviours in adolescents. This is confirmed by the conversations taking place in the study preparation phase, during which teachers from individual schools did not understand the validity of including questions concerning the perception of the school environment in the survey. Additionally, most of them expected that the research would result in designing a short programme, which would help to significantly lower the peer aggression level.

The study described in this paper is a continuation of the research trend of analysing the importance of school environment perception. The obtained results

confirm the need to shift the focus in the prevention of problematic behaviours in adolescents. It is worth emphasizing that the mere inclusion of the issue concerning school climate perception into research on peer aggression, as well as communicating its results, can be treated as an element of increasing the awareness of school communities, and as the first step towards building motivation to undertake specific prevention activities.

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