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Original research paper

PREVENTION OF CYBERBULLYING IN SCHOOLS – STUDENTS' PERSPECTIVE*

Zorica Šaljić** • ORCID: 0000-0002-7139-4479
University of Belgrade, Faculty of Philosophy, Belgrade, Serbia

Mirjana Senić Ružić • ORCID: 0000-0001-8660-6131
University of Belgrade, Faculty of Philosophy, Belgrade, Serbia

ABSTRACT

Cyberbullying is becoming a more frequent and serious problem among students, thus indicating the importance of its prevention. The school context is recognised as a significant and suitable area for preventive action; therefore, research on students' perspectives on cyberbullying can substantially contribute to understanding the role of schools in its prevention. The focus of this research is to explore the students' perceptions of the presence and effectiveness of preventive measures in schools. The research included 856 students from the 5th to the 8th grade of elementary schools in Belgrade. Using descriptive statistics, it was established that only half of the students recognise the preventive efforts of schools, and that only a third of them are informed about the activities of the team for the protection of students against violence. The factor analysis identified three dimensions of students' perceptions of preventive measures effectiveness: educational, controlling and supportive. The findings indicated that students attribute the greatest preventive potential to the appropriate support to students and positive school climate, whereas they perceive the restrictions as less effective. The conclusion emphasises that it is essential to transform the existing preventive practice, which is not sufficiently oriented toward the holistic model and integration of socio-emotional learning, digital empowerment, and authentic involvement of all participants in creating a stimulative and safe school environment.

Keywords:
cyberbullying, prevention, preventive role of schools, students' perceptions.

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** E-mail: zorica.saljic@f.bg.ac.rs

INTRODUCTION

In the last few decades, the prevalence of violence in society, especially among children and young people, has captured the attention of the scientific and professional public analysing the indicators significant for the prevention of this societal problem. With the advancement of digital technologies, cyberbullying has become increasingly frequent; it is in many ways similar to some traditional types of violence, especially verbal and relational (Waasdorp et al., 2015), but it is also characterised by certain specificities. The starting assumption for its conceptualisation is the basic definition of violence as an aggressive act which deliberately and repeatedly hurts others and incurs harm in the interpersonal relations characterised by the real and perceived imbalance of power (Olweus, 1997). Cyberbullying modifies the traditional forms of aggressive behaviour and opens room for specific manifestations in the online environment. It includes a wide spectrum of behaviours, such as direct conflicts; sending insulting, disturbing or threatening messages and contents; unauthorised (and malicious) sharing of personal information; excluding individuals from online groups; masquerading and misuse of someone's identity to harass others (Kowalski et al., 2014). This type of violence is unique according to its characteristics, such as anonymity, public exposure, fast and uncontrolled spreading of information, which contribute to a victim's greater fear and insecurity, continuous exposure to violence and prolonged experience of victimisation (Gaffney et al., 2019; Menesini et al., 2012; Williams et al., 2023). In addition, the anonymity of perpetrators, followed by deindividualization, can be correlated with the attitudes justifying such behaviour (Barlett, 2015).

The empirical data on the experiences of children and young people indicate that this problem is becoming more frequent. Due to more intense activities in the digital environment, having multidirectional communication and sharing various personal data, there is a higher risk that adolescents will suffer (or commit) some form of cyberbullying (Arato et al., 2022). Although the frequency of victimisation varies in different countries in Europe, the percentage of children who experienced cyberbullying exceeds 20% (Smahel et al., 2020). The studies conducted in our country show that more than half of the elementary school students perceive that cyberbullying is permanently present in their surroundings (Senić Ružić & Šaljić, 2025), every third student states that he/she has had some disturbing experience on the internet, and 16% of them have experienced peer cyberbullying (Kuzmanović

et al., 2019). The findings indicate that the prevalence of cyberbullying increases with age and reaches almost one quarter of adolescents (Kuzmanović et al., 2019). Moreover, meta-analyses show that very few young people experience only cyberbullying; instead, there is a significant overlap between online and "face-to-face" violence (Finkelhor et al., 2007; Liu et al, 2021; Zych et al., 2015).

The serious consequences of cyberbullying – for society and individuals (victims and perpetrators) who are facing various problems in psychosocial functioning (Barlett, 2015; Lan et al., 2022; Waasdorp et al., 2015) – highlight the importance of exploring this complex phenomenon. Given its multidimensionality (diversity of manifestations, connection with traditional forms of violence, and complexity of causes leading to its occurrence), researching cyberbullying from different perspectives provides a significant basis for developing effective preventive strategies, particularly in light of evidence that research insufficiently deals with the effectiveness of preventive programmes directed toward decreasing cyberbullying (Kowalski et al., 2014).

Prevention of cyberbullying in schools

The school context is recognised as an exceptionally suitable environment for the implementation of preventive activities (Chicote-Beato et al., 2024; Kostić & Ranaldi, 2022; Tozzo et al., 2022). In view of the abundance of activities and contents, schools have an important role in promoting and developing values such as tolerance and empathy, positive social interactions with adults and peers, and consequently peer cohesion and togetherness. In addition to the considerable contribution of overall educational and formative work to school preventive activities, it is necessary to implement measures and activities especially directed towards preventing problems arising from students' behaviour, and consequently, cyberbullying. Since various forms of violence share common etiologic determinants, the comprehensive school preventive measures, focused on the positive development of the young and supportive school climate, are more efficient and effective than restrictive measures (Chicote-Beato et al., 2024; Ferreira et al., 2022; Rigby & Griffiths, 2018; Williams et al., 2023). Various activities are mentioned in the professional literature that are directed toward cyberbullying prevention, where some focus on educational content, development of socio-emotional skills, training of employees in educational institutions as well as parents, and improvement of school climate, while other activities are focused on

institutional rules and procedures or targeted responses to needs of children with a high risk of engaging in cyberbullying or being cyberbullied (Polanin et al., 2021; Tozzo et al., 2022). Regardless of the abundant modalities of preventive measures and activities, the findings (Gaffney et al., 2019) on the effectiveness of different approaches vary. However, they testify that a holistic approach to the school level prevention is recognised as the most successful (*whole-school approach).*

These data can provide explicit guidelines for action-taking; nevertheless, the school practise often presents a different image. Even though cyberbullying is becoming a more serious problem, the research confirms that schools are still primarily dealing with the prevention of traditional violence. Preventive activities directed toward cyberbullying prevention are considered incidental topics instead of being integrated into the overall school operations and programmes of prevention (Ansary, 2020; Polanin et al., 2021). Furthermore, the strategies directed to broadening knowledge about internet safety prevail in schools. However, their efficacy is questionable because they are not sufficiently linked with reducing violent incidents or changing attitudes and behaviour on the internet (Kowalski et al., 2014; Mishna et al., 2009; Polanin et al., 2021; Tozzo et al., 2022). As previously highlighted, productive prevention of risky behaviour is based on the development of behavioural skills, active learning, open dialogue, and sensitivity to the seriousness of various online activities that can put others into danger (Campbell, 2019; Chicote-Beato et al., 2024; Jones et al., 2014; Popovac & Fine, 2017; Williams et al., 2023).

In addition to emphasising the importance of developing students' competencies via versatile interactive activities, active and collaborative involvement of all school participants and relevant societal entities appear as a significant element of effective and preventive action-taking during the process of planning, implementing and evaluating the preventive activities as well as sharing the responsibility for achieving school goals and tasks in the domain of cyberbullying prevention (Gaffney et al., 2019; Šaljić, 2017). In accordance with the standpoint that certain decisions are based on the "best interest of the child", it is essential for students to participate in that process, thus representing their own interests and needs. Students should be given the opportunity to express their opinions, ideas, suggestions, or disagreement regarding the existing conditions across all segments of school life and work, which are significant for their daily experience, learning and development (Šaljić, 2017).

Within our education system, the prevention of violence and other student risk behaviour is implemented through various activities aimed at improving knowledge

of different types and procedures in cases of violence; fostering the adoption of positive norms and prosocial behaviour; and developing socio-emotional competencies and sensitivity of children to the issue of violence. The significant role in school preventive actions is attributed to the teams for the protection of students against violence with the recommendation that both parents and students take part in its work (by means of parents' councils and students' parliament), i.e. to plan, implement and evaluate preventive activities (Pravilnik o protokolu postupanja u ustanovi u odgovoru na nasilje, zlostavljanje i zanemarivanje, 2024).

Student participation in the process of planning, implementing, and evaluating preventive activities can lead to valuable insights into the alignment of these activities to their needs; therefore, exploring students' perspectives on all school-based efforts can be considered a valuable contribution to improving its preventive function. Grounded in this premise, the present study addresses the following research questions: *To what extent are students aware of the existing practices and strategies for cyberbullying prevention? How do students evaluate the efficacy of various preventive measures, i.e. how do they perceive the contribution of certain school activities to the prevention of cyberbu llying?*

METHOD

This research was conducted to examine student perspectives on achieving cyberbullying prevention in school practise, as well as the effectiveness of various preventive measures and activities. Taking into account that numerous studies have shown that the risk of cyberbullying increases at the beginning of adolescence and that preventive measures should be primarily directed toward this developmental stage (Arato et al., 2022), the sample included students at the age of early adolescence. A convenience sample was employed, comprising 856 students from the fifth to the eighth grade across 15 elementary schools in Belgrade, who accepted the invitation to participate in the study (Table 1). The study was carried out during the second semester of the 2024 school year, adhering to the necessary ethical principles. Participants were informed of the purpose and anonymity of the research, as well as the voluntary nature of their participation. The questionnaire was distributed electronically, through the mediation of school professional associates and teachers, who provided the parental consent for the students to participate in the research.

TABLE 1. Structure of the sample

		Frequency *f*	Percentage %
Gender	male	359	41.9
	female	497	58.1
Grade	5th	241	28.2
	6th	220	25.7
	7th	252	29.4
	8th	143	16.7

The instrument, consisting of survey-type questions and assessment scales, was constructed specifically for this study. The content validity of the instrument was established through the attentive analytical alignment of items with theoretical and empirical frameworks of the research. To collect data on whether the students were informed about the school activities directed toward cyberbullying prevention, 10 items were designed (with categorical responses: yes/no/I don't know). Two Likert-type three-point scales were used to examine the perceived effectiveness of the preventive activities (1 – lowest rating; 3 – highest rating): the scale for assessing the efficacy of preventive measures (10 items, α=.88), and the scale for assessing the potential contribution of certain school activities to preventing cyberbullying (9 items, α=.86). In view of the high theoretical affinity and empirical correlation between these assessments (r=.74, p<.001) and in order to identify the latent structures of students' perceptions, the said scales were integrated into a single scale of preventive measures' effectiveness (19 items), which proved to be highly reliable (α=.92).

The collected data were processed using IBM SPSS Statistics software, v. 26. Data analysis included descriptive statistics (frequencies, percentages, arithmetic mean and standard deviation) and factor analysis.

RESULTS AND DISCUSSION

Taking into consideration the theoretical insights, existing empirical findings and the provisions of regulatory frameworks governing the prevention of violence in schools, this research aimed to examine students' perceptions of various preventive activities implementation, involvement of key school actors in their delivery, as well

as their assessments regarding the effectiveness of the specific preventive and other school-based measures and activities.

Student awareness of cyberbullying prevention in schools

The obtained results present that half of the students are informed about various preventive activities at schools, while almost a third of them have no information about it (Table 2). Such findings can point to the insufficient visibility of school preventive efforts, or to their periodical implementation and orientation toward only individual cases of intervention. Similarly, since a small number of interviewees was informed about the existence of the team dealing with this aspect of school operations, it supports the issue of insufficient participation of students in its work. On the other hand, it is a significant finding that the majority of students are aware of whom they can address in case of cyberbullying, which does not necessarily show familiarity with institutional procedures and the role of certain members of the school community, but rather the fact that students have "trustworthy persons" and that they more often seek support in informal surroundings.

TABLE 2. Student awareness of school cyberbullying prevention measures

Items	Yes		No		I don't know	
	f	%	*f*	%	*f*	%
The school implements various activities aimed at preventing cyberbullying among students.	436	51	160	19	260	30
There is a team in school that addresses cyberbullying issues.	266	31	212	25	378	44
We learn in school how to use the internet safely and how to behave in the online environment.	540	63	167	20	149	17
There are rules regarding the use of digital technology and the internet in school.	580	68	127	15	149	17
Teachers talk with us about the cyberbullying problems during regular classes.	410	48	281	33	165	19
During form room classes, we talk about cyberbullying and the proper use of digital technology and the internet.	518	61	201	23	137	16
Experts come to the school and give us lectures on cyberbullying.	413	48	253	30	190	22
Workshops on cyberbullying are conducted in school.	295	34	305	36	256	30
The school pedagogue/psychologist organises various activities related to cyberbullying and the proper use of technology and the internet.	332	39	231	27	293	34

Items	Yes		No		I don't know	
	f	%	*f*	%	*f*	%
Parents, teachers and students work together in order to prevent cyberbullying.	385	45	223	26	248	29
Parents get involved in school preventive activities only in cases when an incident of cyberbullying occurs.	380	44	211	25	265	31
I know who I can turn to in school in case of cyberbullying.	572	67	146	17	138	16
Cyberbullying does not happen at school; therefore, the school does not have to deal with this problem.	189	22	454	53	213	25
Parents are primarily responsible for preventing cyberbullying among children.	411	48	215	25	230	27

According to the students' statements, the prevailing preventive measures in schools are directed towards broadening knowledge on safe internet usage and online behaviour, which can be considered the basic level of cyberbullying prevention. These topics are mainly discussed in form room classes, then in regular classes, but also in lectures on cyberbullying delivered by relevant experts. The obtained findings are consistent with the information that in school-based preventive work, the most prevalent activities are those through which students receive the information that can help them either protect themselves against cyberbullying or refrain from engaging in it (Polanin et al., 2022). It has been proven that lectures do not provide results in preventing any form of antisocial behaviour of children and the young (Jones et al., 2014; Lan et al., 2022; Wilson et al., 2001). The best results are provided by the programmes relying on interactive activities, such as role plays, debates, problem solving, and rehearsing behaviour in different contexts, which stimulate the development of cognitive, social and emotional skills (Ferreira et al., 2022; Jones et al., 2014). However, only one third of the students perceive that the school implements workshops, which precisely entail various interactive forms of work.

Joint involvement of key school participants in preventive activities is considered to be one of the fundamental prerequisites of effective prevention (Ferreira et al., 2022; Lan et al., 2022; Tozzo et al., 2022). It is a noteworthy finding that slightly less than half of the surveyed students recognise that parents, teachers and students work together on preventing cyberbullying, while a similar number believe that parents get involved only when the cyberbullying occurs. According to the students' observations, expert associates are not sufficiently proactive in this domain. Viz., only slightly more than a third of the students perceive that expert associates are engaged

in this field of school operations. With that reference, the question arises whether expert associates are really not sufficiently active, or whether their commitment is not sufficiently visible in this domain. All of this may have significant implications for further improving their participation in school preventive action-taking.

Having in mind the complexity of risks that the children and especially the adolescents are exposed to, as well as the vulnerability and sensitivity of this age, it is necessary for parents, schools and community to cooperate closely so that the children and young people would be enabled to have adequate support and to acquire a broad spectrum of important life skills needed for functioning in increasingly challenging interactions (Ang, 2015). Numerous studies show that greater involvement of parents in school life and work correlates with a lower rate of engaging in and suffering from cyberbullying among children (Ang, 2015; Chicote-Beato, 2024; Elsaesser et al., 2017; Gaffney et al., 2019; Ttofi & Farrington, 2011; Zych et al., 2019). Parents can be important partners in school preventive efforts due to their experiences, insights and familiarity with children's leisure-time online activities and peer interactions. In order for schools to use parents' potential in carrying out educational work, they should empower and encourage them to proactively participate in preventing cyber and other forms of violence.

Students' opinions are divided between the family and the school regarding the primary responsibility for accomplishing prevention (Table 2). This is in accordance with the practise, where opinions are also divided on the issue of who should be responsible for the formative guidance and behaviour of children, and who should be responsible for formal education. It is significant that students identify school as an important prevention factor, given its fundamental role in integrating the processes of formative guidance and education, harmonised with the children's needs and the context of where they grow up.

Perceptions of the effectiveness of cyberbullying prevention measures and activities

In order to examine the in-depth structure of students' perceptions and to identify the underlying dimensions of their assessments, factor analysis (Principal Axis Factoring with Direct Oblimin rotation) was applied on the integrated scale of the perceived effectiveness of school preventive measures and activities. The Kaiser-Meyer-Olkin test (KMO=.93) and Bartlett's test of sphericity (p<.001) confirmed the suitability of this data for factor analysis. Based on the Kaiser-Guttman criterion

and Scree plot analysis, three factors were identified with eigenvalues higher than 1.0 (6.89, 1.67, 1.13), cumulatively explaining 56.97% of the total variance (Table 3). The established significant inter-correlations between factors (r=.50, .68, .34) justified the use of Oblimin rotation, and items with factor loadings above .40 were retained.

The first factor, defined as educational activities (which form the basic level of prevention), refers to raising awareness on the problem of violence through workshops, lectures, counselling and developing the digital literacy of students. A significant finding is that within this factor, student participation in planning preventive activities is associated with measures that are primarily preventive in nature, indicating that students recognise opportunities for their own initiative and active involvement in school preventive measures. Taking into account this result, it is important to indicate that students do not assess the effectiveness of their participation in planning the preventive measures and activities in schools with the highest scores (M=2.27). A possible interpretation can be found in the students' insufficient experience and knowledge regarding the scope of their engagement, which is considered to be a significant prerequisite for genuine student participation (Šaljić, 2017).

The second factor encompasses supervision and control, namely measures of a restrictive nature, and it is clearly defined by prohibitions and limitations on using phones and the internet on school premises. Within the third factor, the measures are grouped in reference to cultivation of tolerance, togetherness, and providing support to students; therefore, it is interpreted as a supportive school climate (formative role of the school). The cross-loading of the item referring to discussions on general topics between teachers and students (.410 for Factor 3 and .401 for Factor 1) confirms that meaningful communication is perceived primarily as a foundation for support and positive climate, rather than merely "educational means". Interestingly, students perceive conversations with teachers on various topics and problems as more significant in preventing cyberbullying compared to discussions focused only on cyberbullying. In line with this is the finding that preventive measures, which refer to providing support and cultivating togetherness (total M=2.35, SD=0.58), are assessed as more effective than measures directed to educational strategies (total M=2.22, SD=0.57).

TABLE 3. Factor weight matrix and descriptive data of perceived efficacy and contribution to school preventive measures

Items	Factor loadings	*M*	*SD*
Factor 1: Educational activities			
Workshops on cyberbullying.	**.881**	2.24	0.76
Lectures on cyberbullying.	**.842**	2.29	0.76
Discussions on cyberbullying within various teaching subjects.	**.771**	2.14	0.72
Counselling sessions between teachers, pedagogues or psychologists and students.	**.700**	2.33	0.74
Developing digital literacy of students in schools (proper use of digital technologies and online conduct).	**.520**	2.24	0.77
Active student participation in extracurricular activities.	**.510**	2.02	0.76
Student participation in planning activities for cyberbullying prevention.	**.441**	2.27	0.71
Factor 2: Supervision and control			
Banning mobile phone use at school.	**.937**	1.88	0.83
Banning internet use at school.	**.854**	1.78	0.81
Limiting the use of digital technologies at school.	**.522**	1.97	0.81
Factor 3: Supportive school climate			
Cultivating values such as tolerance and the acceptance of diversity.	.777	2.39	0.74
Providing appropriate support to students in line with their needs.	.774	2.46	0.72
Fostering togetherness.	**.636**	2.32	0.76
Strengthening peer relations in school.	**.627**	2.29	0.77
Discussions between teachers and students about various topics and student problems.	**.410**	2.30	0.73
Items excluded from factor analysis			
Punishing those who commit cyberbullying.	.294	2.46	0.73
Greater presence of digital technologies in various school activities.	.242	2.05	0.76
More active participation of parents in school activities.	.355	2.10	0.75
Greater level of parental supervision over their children's online activities.	.348	2.38	0.75

Extraction method: Principal Axis Factoring.
Rotation method: Oblimin with Kaiser normalisation.
Rotation converged in 8 iterations

Note: Responses were collected via a three-point scale (from 1 – lowest rating of efficacy/contribution to 3 – highest rating of efficacy/contribution to peer cyberbullying prevention).

Factor analysis was employed to conceptualise the phenomenon of cyberbullying prevention as a coherent and comprehensive system of preventive measures, rather than as a group of fragmented and isolated activities. More precise insights are thus obtained to which action modalities the students attribute the greatest preventive potential – educational, controlling or supportive. Arithmetic means within the obtained factors indicate that the students attach greatest importance to the measures focusing on improving the school climate, skills and knowledge (through workshops, lectures and digital empowerment), whereas the supervising and controlling measures are perceived as less effective. Such opinion is consistent with the findings that emphasise school climate, peer support, sense of affiliation and clear structure of school activities as the most significant protective factors regarding any form of violence, including digital one (Kowalski et al., 2019; Rigby & Griffiths, 2018; Polanin et al., 2022; Zych et al., 2019).

Activities directed towards encouraging tolerance and togetherness or accepting diversity, which students perceive as the most effective, are linked to accepting and understanding others and consequently to developing empathy, which should represent a significant segment of preventing (digital) violence. In this way, adolescents are encouraged to view certain situations from another's perspective, i.e. they can put themselves in the victim's shoes, acknowledging their feelings and the problems arising from (potential) harm inflicted online, instead of neglecting that aspect and avoiding responsibility by dealing with typical reactions of accusing the victim (Ang, 2015). Therefore, it is important to personalise the severe and real consequences of cyberbullying through preventive actions, to clearly explain to students that it can happen to anyone. This is relevant since adolescents are more prone to getting involved in risky behaviour, and they believe that negative things which happen to others may not happen to them due to their egocentric thinking, personal fantasies, and feeling of invulnerability (Ang, 2015; Reyna & Farley, 2006).

Due to low factor loadings, the statements referring to punishment, greater presence of digital technologies in various school activities, supervision and parental participation in school activities are excluded from the final structure of factor distribution. Such a result indicates that students make a distinction between the school systematic approach to prevention, intervention measures or disciplinary measures, and the impact of the family context. It is possible that the students perceive the school preventive efforts as independent from the family context; that parents

are placed into the intervention domain since they are mostly engaged when the problem has arisen; that participation of parents in school life is insufficiently visible to students, so that they cannot fully perceive its importance in achieving positive results in the educational process. All of this indicates the need to develop integrated prevention models where parents would not be perceived as external observers or solely as the ones supervising their children, but as active participants within the unified preventive school system. According to the findings of meta-analyses, the prevention programmes in which parents are actively involved have proven to be more effective (Tozzo et al., 2022). Various forms of parental engagement in school operations are connected with improving the general functioning of children in schools, especially in the domains of academic achievements and behaviour, socio-behavioural competencies, as well as the overall mental health (Barger et al., 2019; Bond et al., 2025; Smith et al., 2021).

A particularly interesting finding is the status of the measure involving the punishment of cyberbullies. Although it is assessed, on the descriptive level, as one of the most effective individual measures (M=2.46), it is excluded from the factor structure due to the low loadings. This indicates that the students do not associate punishment with preventive activities of an educational nature (Factor 1) or the improvement of the school climate (Factor 3), which is expected. The students also make a clear distinction between restrictions and sanctions directed toward an individual. Bans and limitations are experienced as a less effective aspect of control, and punishment is a legitimate, but reactive response to an incident. This kind of discontinuity indicates that the students perceive punishment as an isolated act of intervention and "satisfaction of justice", and not as a proactive preventive school strategy (Rigby & Griffiths, 2018). Research consistently confirms that excessively strict and punitive policies are not effective in reducing violence or improving safety in schools (Hall, 2017; Rigby & Griffiths, 2018; Tozzo et al., 2022; Williams et al., 2023). The restrictive mediation, based on limitations and control of digital technologies usage, is less successful than evaluative mediation based on discussions about versatile topics, joint activities and close relations of students and trusted adults (Elsaesser et al., 2017; Perić Pavišić, 2023). Students often perceive limitations on the use of digital technologies as a punitive measure and, consequently, they do not report violence (Biernesser et al., 2023), emphasising that they do not need "the imposed rules" but rather a space for dialogue and proactive actions (Patel & Quan-Haase, 2023).

The exclusion of the measure referring to a greater presence of digital technologies in school activities indicates that students make a difference between the development of digital literacy (which is a part of the first Factor, and which is perceived as a preventive measure of an educational nature) and the diverse application of digital technologies in school activities. Without a clear preventive context, the students do not discern the contribution to cyberbullying prevention regarding the very integration of technology in various school activities. Contrary to the students' perceptions, the development of digital literacy is inseparable from the continuous integration of digital technologies into school activities (Senić Ružić, 2021), which demands more intensive work toward empowering students to engage responsibly in a digital environment. Studies validate that the application of digital tools provides positive results in the prevention of peer violence and point to the necessity for further research in this area. At the same time, the significance of interactive educational video games and immersive technology is emphasised, which can be used for modelling the developmentally appropriate online and direct communication, interaction and behaviour (Mishna et al., 2009; Nocentini et al., 2015), motivating students to learn about violence prevention as well as to strengthen self-esteem, socio-emotional skills and empathy in adolescents (Chen et al., 2025; Serritella et al., 2025; Tozzo et al., 2022).

Limitations of research

When considering possible limitations of the implemented research, it is necessary to point to the fact that a school is a complex system where different components are mutually conditioned and connected; therefore, it is difficult to separate preventive from other school activities since their basic functions – formative, educational and preventive – most often overlap. In part, this led to the inclusion of activities of different nature and levels of generality among those whose preventive role is being reviewed, while the interpretation of the results was aggravated by relying on insufficiently consistent research findings, where the effectiveness of specific preventive measures is interpreted differently (Cantone et al, 2015).

Students' perspective is important for comprehending peer violence prevention in school practise, but the triangulation with the data obtained from teachers and parents would significantly complement the overall picture. The quantitative approach did not provide more complete and profound insights into the reasons

why the students evaluate certain activities as more or less effective. For example, the result that the students observe the punishment as effective but not as a preventive measure could be understood better by applying the qualitative methodology, which would allow for an exploration of the subtle nuances in their contemplations on the given topic. Finally, the digital environment is changing faster than the research instruments are being developed and validated. New forms of cyberbullying or new tools (such as artificial intelligence) may not be sufficiently present in the questionnaire items, which can exert influence on the fact that students perceive the said preventive measures as not harmonised with their real challenges in the online environment.

CONCLUSION

Prevention of cyberbullying is recognised as an important segment of the school overall preventive actions, although the research shows that it is not sufficiently present in the school practise and that it mostly refers only to lectures on internet safety. Such an approach does not provide sufficiently good results in comparison with the activities based on active learning and developing versatile competencies of the students. On the other hand, even though research interest in cyberbullying has grown, particularly concerning its causes and consequences, there is a lack of consistent findings regarding effective prevention and intervention (Gaffney et al. 2019; Kowalski et al., 2014; Lan et al., 2022), as well as on the actual contribution of preventive measures to the wellbeing of the young (Jones et al., 2014). Addressing the risks of new forms of violence, which emerge and evolve alongside the advancement of digital technologies, demands exploring the perceptions of those who these measures are intended for, so that authentic, relevant, and supportive preventive measures could be created.

The obtained results show that the preventive measures are insufficiently visible to students, or that they are directed to individual cases, not reaching the whole community in a systematic manner. Students' perceptions are structured through educational, controlling and supportive dimensions, and they attribute the greatest preventive potential to the provision of appropriate support to students and the cultivation of positive school climate. In contrast to that, restrictions and disciplinary measures are considered insufficiently effective to comprehensively

address the issue of cyberbullying, and punishment is not perceived as an integral part of the proactive protection system. Such results can be explained by the dominant practise of reacting to the unacceptable behaviour of students, which they have adopted as the primary, prevailing and unquestionable. The obtained students' assessments confirm the findings of meta-analyses on insufficient application of cognitive-behavioural interventions focused on changing the internal cognition and affective processes that influence the change of behaviour (Williams et al., 2023). The existing prevention programmes "do not seem authentic" to students, since they find relational strategies more acceptable, especially peer mentoring and activities that they implement themselves and that encourage them to speak openly about their experiences (Biernesser et al., 2023).

If the (preventive) practise is really based on control and sanctions, the modification of such an approach must be directed toward changing the focus to constructive dialogue, mutual respect, understanding and togetherness, as well as on active involvement of students during the decision-making process relevant to them. The potential of interactive digital tools should be taken into consideration, which may be attractive to adolescents since they enable personalised learning in various formats and in a safe and controlled environment (Nocentini et al., 2015). If they are used to develop empathy and social skills, they can be "an excellent ally" against cyberbullying (Chen et al., 2025; Serritella et al., 2025). Therefore, it is necessary to work on digital empowerment of students, but also on a more explicit connection of the use of digital technologies with protective mechanisms in digital space (Senić Ružić & Šaljić, 2025).

The significance of this research lies in identifying the latent structures (educational, controlling and supportive dimensions) which students base their understanding of prevention on. In addition, the students' perspectives point to the necessary direction of changes regarding the approach to cyberbullying prevention both in theory and practise. Giving priority to support and climate compared to supervision and providing information indicates that the centre of prevention must be in the relational approach, authentic dialogue and what we recognise as pedagogy of care. Furthermore, the significant conclusion is that the effective prevention is not a group of isolated activities, but the quality of intergenerational communication and the power of togetherness, which enable students not only to feel safe in digital space but also empowered.

In light of the above-mentioned, developing the successful and effective cyberbullying prevention (especially targeting the young as a vulnerable social group), requires a multidimensional and holistic approach to the problem. This entails versatile, synchronised and integrated measures and activities, along with the active participation of all important and responsible societal entities. In this context, schools have an especially significant role, being entrusted with social care for the formative and educational impact on children and the young.

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