

DISTRIBUTION AND CHARACTERISTICS OF CYBER VIOLENCE AMONG ELEMENTARY SCHOOL STUDENTS - SURVEY RESULTS IN SERBIA

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Abstract

The paper aims to present the results of research on the prevalence and characteristics of cyber violence among elementary school pupils, and results with respect to connections of this form of bullying with age and gender of students, and facts like who are perpetrators or victims of this type of violence. The survey also sought to get a few answers to questions concerning: knowledge of elementary pupils about what cyber violence is; which means of electronic communication are preferred in communication with their peers; whether parents control their access to a personal computer and mobile phone, as well as whether the parents would report acts of violence, if they occurred? The study included 300 students of the 5th, 6th, 7th and 8th grade, in the Autonomous Province of Vojvodina, of which 147 were male and 153 females. Research has shown that every other elementary school student was the victim of cyber violence. Number of victims decreases with age, which means that least frequent victims were students in lower grades, and most frequent victims were students in higher grades, with the notable that girls, unlike boys were victims of a much higher percentage. Students were most often the victims of exclusion, misrepresentation, insults and gossip, but in smaller percentages were victims of unlawful communication, lying, stalking and harassment. Observed from the aspect of the perpetrator, the study found that one in four elementary school students was the perpetrator of some form of cyber violence, such as "online" exclusion, misrepresentation, slander and lying and deceiving. A practical and theoretical implications of these findings are discussed further in this text.

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Introduction

The informatics revolution accompanied by more intensive use of personal computers and mobile phones, has affected many aspects of modern life (Petrovic, 2009). It has, among other things, enabled not only easier communication between people, but also faster access to information of different content. Such progress is almost without any restrictions and it has opened the possibility of exploring the virtual world, both by those who know a lot, and by children and young people, who know much less (Pregrad, Tomić-Latinac, Mikulić, & Šeparović, 2009). As a result of the daily use of these technologies as well as new smart, so called "Wearables" and "IOT" (Internet of Things) devices open areas for many abuses. One of the relatively recent phenomenon that is being caused by an abuse of the Internet and mobile phones is the cyber violence among children peers (Kovačević-Lepojević & Lepojević, 2009; Popović-Čitić, 2009). This problem still has not received sufficient attention of researchers and experts. Anti-criminal and criminal politics measures in the area of protection of children from abuse through information technologies over the last decade, as noticed by Livingstone and associates, was far more focused on the threat of "dangerous strangers" pedophiles, but the risk of bullying in the virtual world (Livingstone, Kirwa, Ponte, & Staksrud, 2014).

Cyber violence is a special form of bullying that takes place by means of information and communication technologies, especially mobile phones and personal computers (Bamford, 2004; Baum, Catalano, Rand, & Rose, 2009; D'Ovidio & Doyle, 2003; Kowalski, Limber, & Agatson, 2008; Ogilvie, 2000; Popović-Čitić, 2009). The literature is sometimes referred to as the electronic violence, "online" violence, the Internet or digital violence (Ivanović, Uljanov, & Radojković 2013; Kuzmanović, Lajović, Grujić, & Medenica, 2016; Popović-Čitić, 2009). Cyber violence among children peers' parts essential features of the traditional forms of bullying, including aggressive behavior, existence of intention to hurt another person, imbalance of power between participants and repetitiveness (Olweus, 1993; Popović-Čitić, 2009; Shariff,

2008). Cyber bully strives to inflict direct or indirect injury or damage to the victim by his (or her) actions. Direct cyber violence consists in direct exercise of violence against others, while indirect violence or through intermediaries, implies involvement of others with or without their knowledge in carrying out violent activities (Aftab, 2006; Kuzmanović et al., 2016; Popović-Ćitić, 2009). Therefore, cyber bullies use cyberspace for their deliberate and repeated attacks on other persons in respect of whom they are in positions of power (Popović-Ćitić, 2009; Žunić-Pavlović & Kovačević-Lepojević, 2009). This position of power that can be real or observed, just exists thanks to the knowledge and skilfulness of using electronic technology (Kowalski, Limber, & Agatson, 2008; Popović-Ćitić, 2009). Behavior of cyber bullies survives and is repeated over time, and in many cases, leads to repeated victimization of the victim, especially if some compromising content in the form of images or messages is sent by electronic means to a wide number of different people (Popović-Ćitić, 2009). Victims of cyber violence often suffer equally intense, and in some cases more intense emotional consequences than those affecting victims' traditional forms of violence, which include the whole range of negative reactions such as fear, anxiety, anger, frustration, shame, sadness, helplessness and depression (Slonje, Smith, & Frise, 2013).

In addition to common features, cyber violence is characterized by certain peculiarities that make it different from traditional bullying, which are a result of peculiarities of communication in cyberspace. Characteristics of cyber violence can be analyzed according to baseline characteristics of bullies, victims and observers, as participants in violence in cyberspace. Key specifics of cyber violence are anonymity of bullies, availability of victims, continuity of expression and infinite audience (Popović-Ćitić, 2009). The negative psychological and social consequences affecting victims in some cases can be extremely powerful, both for very serious and far-reaching stigmatization, and also because of the circumstances that the victim sometimes does not know who and why attacks, and the fact that cyber violence is very hard to evade (Slonje, Smith, & Frise, 2013).

Willard (2006) states that it is possible according to the specifics of the *modi operandi*, to distinguish eight forms of cyber violence: insults, harassment, slander and defamation, misrepresentation, unauthorized disclosure, deceiving, exclusion and stalking. As a special form of cyber violence, some authors distinguish and "cheerful" (happy) slapping (Kowalski,

Limber, & Agatston, 2008). In the opinion of Kuzmanović and associates (2016) the most common forms of cyber violence are: posting disturbing, offensive or threatening messages, pictures or video recordings on other people's profiles on social networks or to send these materials by SMS, instant messaging, email, leaving them on the chat; recording and distribution of images, messages and materials with sexual content; harassing phone calls; phishing, abuse of identity, ID theft, creating of a profile on social networks on behalf of others; unauthorized disclosure of people's private information, publishing false allegations or rumors about the other person on social networking profiles, blogs, etc.; changes or stealing passwords; planting of the viruses or other malware; ridiculing in online chat rooms and Internet forums, improper comment on others' pictures, or messages on profiles, blogs; ignorance, exclusion (e.g. from groups on social networks) and incitement on hatred on various grounds.

Today, digital violence is usually done via (Kuzmanović et al., 2016; Popović-Ćitić, 2009): social networks and platforms for video sharing (e.g. Facebook, Google+, MySpace, Twitter, Ask.fm, Omegle, YouTube, instagram, Flickr, Snapchat, etc.); SMS messages and phone calls; emails; instant messages (IMs - Instant messages) and text messages (eg. WhatsApp, Skype, Viber and others); picture messages and video material; chat rooms; blogs, forums; online video games. In Serbia, according to research (Žarković, Drakulić, Miladinović, Urošević et al., 2014), the most commonly used social networks and mobile social applications such as Facebook and Snapchat.

Researches conducted over the past decades have shown that the perpetrators of cyber violence were mostly boys and that girls were victims (Adam, 2002; Lee, 2005). According to Herring (2002), 25% of Internet users aged 10 to 17 years were exposed to unwanted sexual pornographic images. Moreover, Mitchell et al. (2003) found that 19% of young people (mostly women) underwent at least one online sexual harassment. Although women are more likely to be victims of cyber violence, adolescents are becoming increasingly active instigators of cyber bullying. So Ybarra and Mitchell (2004) found that equal opportunities for men and women to declare that they are harassing someone online. The study (Kowalski, according to Chu, 2005) which was attended by 3,700 adolescents, showed that 17% of girls compared to 10% of boys were online harassing others. Taking into account that girls between 12 and 18 years of age spend at least 74% of their time on social

networks, Berson, Berson and Ferron (2002) believe that this information is not surprising.

The problem of cyber violence in primary schools was almost never investigated on the territory of Serbia. In some studies, that are related to bullying in general, was identified the presence of some form of cyber violence among elementary school students, but the focus of these studies was on traditional forms of violence, not the forms of cyber violence (Popadić & Kuzmanović, 2013).

In late 2012, was conducted the first study on the use of digital technology, risks and digital violence among students in elementary and secondary schools (Popadić & Kuzmanović, 2013).¹ The study included the 3786 students (2272 elementary and from secondary schools 1514), 3078 parents and 1379 teachers. The results showed that most respondents had not been subjected to harassment by digital media. However, it was found that there wasn't a student who has not been exposed to some form of cyber violence. It was also found that with growing age of students rose the number of those who were exposed to every kind of cyber violence, indicating that those in the high school as opposed to the primary, were subjected to almost every form of cyber violence. The number of students who are violent increases with age. A quarter of students in the 4th grade of primary school have been at least once subjected to cyber violence, 19% of students had experienced violence through mobile phones, and 12% via the Internet. A third of older pupils at least once experienced some form of cyber violence, 32% were harassed through mobile phone and 39% via the Internet. Taken as a whole, the total number of the children, 66% of them had experienced at least one of the 11 forms of cyber violence, where 23% of children experienced only one of these forms of violence, 16% had had two, and 27% three or more types of violence. Students are more willing to admit that they were victims of cyber violence, than to admit that they were the perpetrators of the same. Every tenth student of the 4th grade of primary schools and almost one third of older pupils

¹ Research has been conducted in organization of Ministry of education, science and technological development (MPNTR) of Republic of Serbia, UNICEF and company Telenor, under project Stop digital violence.

and 1/3 of high school students were the perpetrators of some form of cyber violence.

Results of research conducted in 2015 in the National Study of the social problem of child sexual abuse, which included 2053 students, aged 10 to 18 years from 97 primary and secondary schools in Serbia, show that sexual harassment and violence usually occurs in home (33%), social networks (22%), in a park / nature (14%) and at school (7%). Almost a third of respondents (31%) received images or messages with explicit sexual content via SMS or the Internet (E-mail, Facebook and other social networks), and more often girls than boys (Bogavac & Otašević, 2015).

Given the fact that the problem of cyber violence, including cyber victimization of children is still under-explored, particularly in Serbia, research of appearances of cyber violence among primary school pupils in the area of Autonomous Province of Vojvodina², whose results will be presented below, is an important source of knowledge on distribution and main characteristics of cyber violence among children of primary school age.

Objectives

The research was primarily aimed to determine the prevalence and phenomenological characteristics of cyber violence among elementary school students in the autonomous province of Vojvodina, and results with respect to this form of violence with age and gender of students, who were actors (perpetrators or victims) of violence.

Method

Sample

Convenience sample consisted of 300 students 5th, 6th, 7th and 8th graders (aged 11-14 years), attending primary schools in the territory of the Autonomous Province of Vojvodina. Male students comprised 49% of the sample, while 51% of the sample students were female.

² Vojvodina is an autonomous province within the Republic of Serbia, which is located in the north of the country. It covers an area of 21,506 square kilometers with a population of 1,931,809 inhabitants.

The average age of participants was 12.6 years ($SD=1.12$). The gender and age division of the sample was even (*see* Table 1).

Table 1. Sample structure by age and gender

		Grade of primary school who attend				In total
		5 Class	6 Class	7 Class	8 Class	
female	N	35	37	40	41	153
	%	50	50.7	51.3	51.9	51
Male	N	35	36	38	38	147
	%	50	49.3	48.7	48.1	49
In total	N	70	73	78	79	300
	%	23.3	24.3	26	26.3	100

In terms of structure of sample by school success, it was found that the highest percentage of respondents, namely 62.3%, had a great success - excelled, 31.7% had very good success, 5% of the good success, and 1% had sufficient success. Because in our sample 94% of respondents had an excellent and very good success, the connection of cyber violence and school achievement was not considered.

With regard to the participants' family structure, 81.7% of respondents reported they lived with both parents, 16.7% of respondents lived with their mother only, while 1.7% of respondents lived with father only.

Instrument

For the purposes of research by the authors was designed a questionnaire (see Appendix) which consisted of four parts. In the first part, there are issues related to some of the basic socio-demographic characteristics (gender, age, class attending, school grading, and to status in the household in which respondents are living). The second part includes a set of dichotomous (*yes/no*) questions in which the respondents identified themselves as follows: their knowledge of what is cyber violence; whether parents control their access to the computer and mobile phone; whether the social networks Facebook, Instagram, Twitter, Viber, Skype are used, and whether the parents reported act of cyber violence when it happens to them. The third part of the questionnaire consisted of dichotomous (*yes/no*) questions aimed to gather information

regarding respondents' exposure to cyber violence, and included a list of basic forms of cyber violence victimization. Finally, the fourth part of the questionnaire contained a set of dichotomous (*yes/no*) questions aimed to self-report of violent behavior in cyber space towards the peers.

The sets of items regarding forms of cyber violence and violent cyber victimization were constructed with consideration of definitions of cyber violence in contemporary literature (Popadić, 2009). The survey covers the following forms of cyber violence:

- 1) Insulting - sending text messages and e-mails with offensive, malicious, degrading or vulgar expressions;
- 2) Harassment - sending disturbing, provocative, coarse message;
- 3) The gossip and slander - sending messages, pictures and false information about another person;
- 4) False representation and abuse of identity - Phishing - when someone impersonates and represents himself or herself as another person;
- 5) Unauthorized disclosure - showing, posting or forwarding other people's private files, messages or e-mails to other people;
- 6) Lying or deceiving - when someone deliberately publishes private information of another person entrusted with them and continues with disseminating those forward;
- 7) Exculpation - deliberate exclusion of a person from your friends list, e-mail lists, chat rooms, etc.;
- 8) Stalking - repetitively sending insulting or threatening content.

Design and Procedure

It was conducted non-experimental, descriptive, cross-sectional questionnaire-based study. The data were collected in ten primary schools in the Autonomous Province of Vojvodina (Republic of Serbia) in February and March, 2016. Before conducting research as mandatory by the law to the management of schools has been submitted a letter containing information on the objectives and the manner of carrying out the survey. After obtaining consent, the research was conducted in departments (classes) that were designated by the school's management. The students have voluntarily completed the questionnaire during school hours, for a total duration of 20 minutes. Before completing the questionnaire, they were familiarized with the goals of the research and their anonymity with handling of the data.

Results and discussion

The forms of cyber violence to which elementary school students are exposed

Survey results show that 49.3% of primary school students have experienced some form of cyber violence. Girls were more exposed to violence (54.9%) than boys (43.6%), and gender differences in exposure to victimization were statistically significant ($\chi^2(1, N=300)=3.87, p<.05$).

Significant age differences in terms of exposure to violence were determined ($\chi^2(3, N=300)=14.28, p<.01$), with the fact that mostly to the violence were exposed 8th graders (64.5%), slightly less were students of the 7th grade (51.3%) and 6th grade students (45.2%), but at least were exposed the 5th grade students (34.3%).

In terms of gender and age structure, to some forms of cyber violence were mostly exposed girls (70.7%) and boys (57.9%) of the 8th grade, then come girls (55%) and boys (47.7%) of 7th grade, following them were girls (51.4%) and boys (38.9%) of the 6th grade and at least girls (40%) and boys (28.8%) of the 5th grade (Table 2).

Table 2. Students' exposure to some form of cyber violence via the Internet or mobile phone

		N	%	In total
5. grade	female	14	40	35
	male	10	28.8	35
	In total	24	34.3	70
6. grade	female	19	51.4	37
	male	14	38.9	36
	In total	33	45.2	73
7. grade	female	22	55	40
	male	18	47.7	38
	In total	40	51.3	78
8. grade	female	29	70.7	41
	male	22	57.9	38
	In total	51	64.5	79
In total	female	84	54.9	153
	male	64	43.5	147
	In total	148	49.3	300

The findings that the victims of cyber violence most often were girls, and older students, were expected and consistent with former empirical research evidence (Holt & Bossler, 2009; Bossler, Holt, & May, 2012).

The research results show that the most common forms of victimization primary cyber violence: exclusion (30.3%), phishing and false representation (27.7%), insulting (22.7%), gossiping and slander (20%), unauthorized disclosure (16.7%), lying or deceiving (16%), stalking (15.7%) and harassment (5.7%). In terms of individual forms of victimization, girls are most exposed to exclusion (35.9%), false representation or phishing (27.4%), insults (23.5%), gossip (21.6%) and lying and deceiving (18.3%), and boys are more prone to false representation (27.9 %), exclusion (24.5%), insults (21.8%), unauthorized disclosure (18.4%) and gossip or slander (18.4%) (Figure 1).

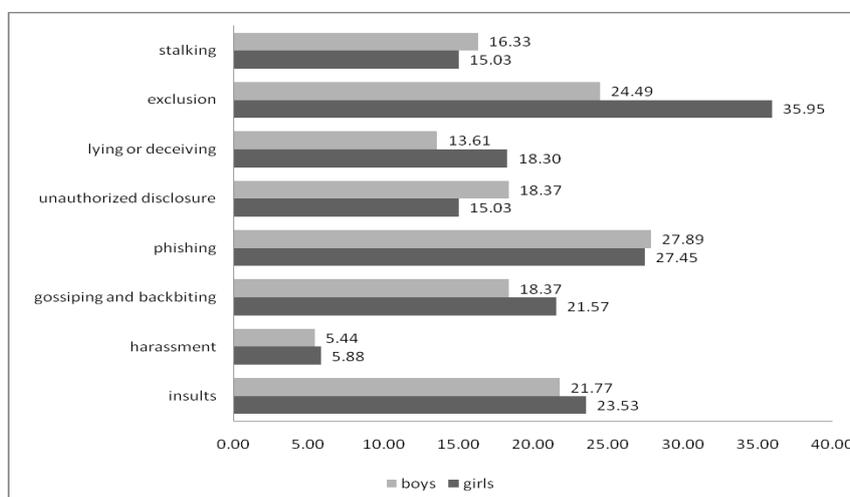


Figure 1. Frequency forms of cyber victimization

The forms of cyber violence perpetrated by elementary school students

In previous analyzes, we showed how the students were exposed to cyber violence by their peers and which forms of cyber violence they experienced. The following information is relating to those students who perpetrated various forms of cyber violence.

Results of research show us that 25% of elementary school students have performed some form of cyber violence. Almost twice as many of those

who reported that they used violence was among boys (32.7%) than among girls (17.6%), and this difference proved statistically significant ($\chi^2(1, N=300)=12:49, p<.01$).

In terms of age structure, the results show that the older students, specifically students of 8th grade (33%), 7th grade (27%), and 6th grade (24.7%) were more often violent, and the students from 5th grade (14.3%) were smallest group but the age difference was not statistically significant.

In terms of gender and age structure, of the most violent were boys - 8th grade students (47.4%), followed by the 7th grade (36.8%) and 6th grade students (33.3%), while the least violent were 5th grade students (17.1%) (Table 3). The girls were generally less violent than boys, but the most violent were also among pupils 8th grade (19.5%), 7th grade (17.5%) and 6th grade (16.2%), while the least violent were among pupils fifth class (11.4%).

Table 3. Self-assessment of the perpetration of acts of violence by gender and age

		N	%	In total
5. grade	female	4	11.4	35
	male	6	17.1	35
	In total	10	14.3	70
6. grade	female	6	16.2	37
	male	12	33.3	36
	In total	18	24.7	73
7. grade	female	7	17.5	40
	male	14	36.8	38
	In total	21	27	78
8. grade	female	8	19.5	41
	male	18	47.4	38
	In total	26	33	79
In total	female	25	17.6	153
	male	50	32.7	147
	In total	75	25	300

We assume that the students were less willing to admit their illegal activities in cyberspace, which is why the number of perpetrators of cyber violence probably bigger than presented. The finding that boys are more likely to identify themselves as violent, and girls as victims of violence, indicates that the boys were same violent toward other boys, and to the girls.

The forms of cyber violence that respondents most frequently perpetrated are: on-line exclusion (31.3%), false representation or phishing (12.3%), gossiping and slander (7.7%) and lying and deceiving (7%). Among boys the most frequent were: on-line exclusion (38.1%), false representation or phishing (13.6%), harassment (9.5%), lying (7.5%) and gossiping (7.5%), while among girls most frequent were: on-line exclusion (24.8%), false representation or phishing (11.1%), gossiping or slander (7.8%) and lying and deceiving (6.5%) (Figure 2).

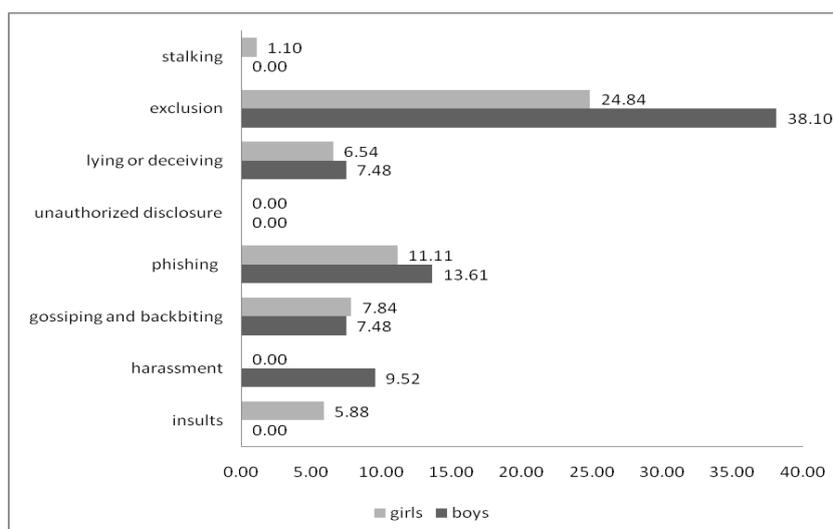


Figure 2. The frequency of performing certain forms of cyber violence

Involvement in social networks

The research results show us that among primary school pupils most popular following social networks are as following: Facebook (91.3%), Viber (89.3%), Instagram (54.7%), Twitter (10.3%) and Skype (7%). It is noticeable that girls (87.6%), in a significantly higher percentage of boys (20.4%) have been used Instagram ($\chi^2(1, N=300)=136,503, p<.01$), and Twitter ($\chi^2(1, N=300)=5.734, p<.05$) (Figure 3).

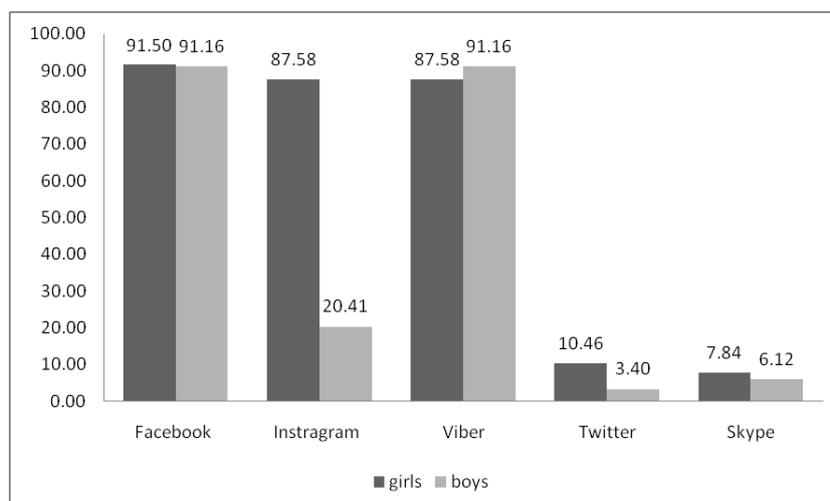


Figure 3. Share of various means of electronic communication

Knowledge of cyber violence, parental/access control, and reporting of violent cyber victimization

In retrospective of the few remaining questions in the questionnaire, elementary school students gave the following answers. In relation to issues pertaining to the self-assessment of knowledge about cyber, internet or digital violence, 47% of students pleaded affirmative. Significantly more girls than boys ($\chi^2(1, N=300)=21.61, p<.01$) confirmed that they know what digitally violence is (Table 4).

Table 4. Frequences of positive answers to questions regarding knowledge of cyber violence, parental control and reporting of victimization, according to gender

		female	male	In total
<i>My parents have access control to computer and mobile phone</i>	N	73	135	208
	%	47.7	91.8	69.3
<i>I would tell parents about insulting or vulgar things that happened to me in cyberspace</i>	N	65	42	107
	%	42.5	28.6	35.7
<i>I know what is online, internet or digital violence</i>	N	92	49	141
	%	60.1	33.3	47

Note: The table shows the number and percentage of students who responded to the questions with YES

The finding that two thirds of students aren't ready to report such a violent act of to parents. Namely, Kuzmanović et al. (2016) also report that

students in cases of exposure to cyber violence usually were entrusted to companions or friends, while they are less willing to talk about it with their parents, teachers and psychologists. Very often, in such cases they do not do almost anything.

Regarding questions relating to respondents' knowledge of the occurrence of cyber violence, the results show that just over half of respondents do not know what is cyber violence (Table 4). Respondents who identify themselves as those who know what cyber violence are, probably as well as those respondents who on cyber violence do not know anything, are not aware of the consequences that can hit the victims, including those to the emotional and psychological, and social nature (Kuzmanović et al., 2016).

Bearing in mind that the respondents declare that their parents are significantly controlling their access to a personal computer and a mobile phone, the question is to what extent they were honest. Greater parental supervision should be associated with a lower risk exposure to the Internet and less involvement of students in cyber violence (Popadić & Kuzmanović, 2013), while the results show just the opposite, namely that the problem of cyber violence is significant in their online communication.

Conclusions

The results of the present study showed that half of elementary school students were victims of cyber violence, while one in four of students in elementary school has exercised cyber violence. Victims of cyber violence were mostly girls, and older students. Students were most often the victims of exclusion, misrepresentation, insults and gossiping, but in smaller percentages were victims of unlawful disclosure, lying, stalking and harassment. Two thirds of students aren't ready to report such a violent act of to parents, while just over half of respondents do not even know what cyber violence is. Bullies are more likely to be boys, and students in higher grades. The boys are most likely to do online exclusion, false impersonation, harassment, lying and gossip and girls' exclusion, false impersonation, slander and lying.

The results of the study have shown that all forms of cyber violence are significantly present in Serbian primary schools. Exposure to risks, as well as its own victimization are directly linked to the time that students spend on the Internet or online communication (Kuzmanović et al., 2016). It is not disputed

that digital technology provides various educational opportunities, as well as the possibility of personal development, but also the use of this technology brings with itself the potential risks, such as after all, the risk of cyber violence (Hasebrink, Livingstone, Haddon, & Ólafsson, 2009). If we bear in mind that children more and more at earlier age are starting to use digital devices, and that the number of children and adolescents as users of digital technology and the Internet every day more increases, there is a real danger that the growth and the risk of cyber violence (Livingstone, Haddon, Görzig, & Ólafsson, 2011; Kuzmanović et al., 2016; Popadić & Kuzmanović, 2013, OFCOM, 2015). At the same time, the increasing use of digital communication encourages neglect of direct communication, which reflects negatively on the social development of children. Another type of risk is the fact that digital technology allows greater anonymity in communication, which in extreme cases can lead to disinhibiting behavior, characterized with easier to get in touch with strangers, easier communication of confidential information, the use of hate speech, etc. (Popadić & Kuzmanović, 2013). Greater openness and confidentiality associated with the ease of hiding the real and presenting of false identity, which can be a problem if behind false representation are not peers, but adults and ill-intentioned people, crooks or even "sexual predators" (Kuzmanović et al., 2016).

It seems that this issue is very complex because the digital violence does not occur only in school, but more often outside of school, and the problem goes beyond the area of responsibility of schools and school staff. However, even when violence happens outside the school environment, relationships that are disturbed in the course of digital communication inevitably have an impact on the quality of the social climate in the school environment (Kowalski, Limber, & Agatston, 2008; Kuzmanović et al., 2016). In this sense Popadić and Kuzmanović (2013) considered that is very necessary to take comprehensive, systematic approach to the prevention of violence, in which the school has a very important educational and correctional role. Law on the Basis of the Education System³, as well as the Special Protocol for the Protection of Children and students from violence, abuse and neglect in

³ *Official Messenger of Republic of Serbia*, no. 72/09, 52/11, 55/13, 35/15 - authentic interpretation, 68/15 and 62/16 – constitutional court decision.

educational institutions⁴, which is mandatory for all educational institutions, clearly prescribes the role of the school, and activities and procedures for student safety of all forms of violence, including cyber violence (Kuzmanović et al., 2016). Such procedures are going to defuse the situation with a strong preventive role, but the scope is not complete, since it does not provide sufficiently effective mechanisms to influence this issue. In this sense, we can see the modern solutions, ranging from the punishment of juveniles and children in the form of increased parental control, which includes the application of the prohibition of access to the Internet and social networks, and ban or restrict the use of mobile social networks and the Internet.

In the case of cyber violence, as well as bullying in general, prevention has no plausible alternative. It is important to implement preventive interventions at all levels - from individuals, families, educational institutions, as well as in society as a whole. Prevention of cyber violence should be designed as a component of violence prevention in general. Given the connection between cyber violence and traditional forms of school violence, undertaking systematic preventive measures to reduce traditional bullying can contribute to the reduction of cyber violence (Papadić & Kuzmanović, 2013). As part of prevention, it is important to deal with the issue of developing digital competence to young people and their parents and teachers, in order to develop and improve their skills in the application of technical protection measures. At the repressive plan, we believe it necessary to foresee adequate mechanisms to prevent (of time limiting and domain restricting) access of children and minors to means through which violence can occur.

Comprehensive approach to the problem of cyber violence would enable raising awareness to the risks and consequences of violence, and the potential and the positive aspects of the use of digital technology (Kuzmanović et al., 2016). The educational component should be the center of preventing cyber violence, with the active participation of children in general and young people in prevention activities, which is considered a guarantor of successful

⁴ Protocol has been brought by Ministry of education of Repubil of Serbia 04.10. 2007. Document is accessible on: www.mpn.gov.rs/wp-content/uploads/2015/08/Posebni_protokol_-_obrazovanje1.pdf

development of preventive measures (Redondo-alone, Pulido-Rodriguez, Larena, & de Botton, 2014).

Limitations of the study and the need for future reseach

Apart from the question of the generalizability of findings (since research was conducted on a sample of respondents selected in only several primary schools in one Serbian province), the research was a cross-sectional and could not meet more than exploratory or descriptive purposes.

Further studies of the problem of cyber violence are necessary, since the improvement of knowledge of its phenomenological features and both the risk and protective factors represent the foundation and premise for effectively preventing violence and protecting victims in the future.

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Appendix

Questionnaire

Sex	1 male						2 female					
How old are you?	10	11	12	13	14	15	10	11	12	13	14	15
Which class do you attend?	5		6		7 8		5		6		7 8	
Whom you live with?	1. With both parents			2. With mother			3. With father			4. With ____		
	Father						Mother					
Do your parents work full time?	No			Yes			No			Yes		
What was your academic achievement in the last school year?							1. Insufficient 2. Sufficient 3. Good 4. Very good 5. Excellent					
Do you know what cyber (internet) violence is?							No			Yes		
Do your parents know what cyber (internet) violence is?							No			Yes		
Do you know that cyber violence happens in the course of using computer and mobile phones?							No			Yes		
Do your parents control your access to computer and mobile phone?							No			Yes		
Do you have a Facebook profile?							No			Yes		
Do you use Instagram?							No			Yes		
Do you use Viber?							No			Yes		
Do you use Twitter?							No			Yes		
Do you use Skype?							No			Yes		
Have you ever been exposed to some of these forms of abusive behavior via Internet or mobile phones:												
<i>Sending text messages or e-mails with offensive, malicious, degrading or vulgar expressions</i>							No			Yes		
<i>Sending disturbing, provocative, coarse messages</i>							No			Yes		
<i>Sending messages, photos and false information about another person</i>							No			Yes		
<i>Someone impersonates and represents himself/herself as another person</i>							No			Yes		
<i>Showing, posting or forwarding other people's private files, messages or e-mails to other people</i>							No			Yes		
<i>Deliberate publishing private information of another person entrusted with them and forwarding such information</i>							No			Yes		
<i>Deliberate exclusion of a person from your friends list, e-mail lists, chat rooms, etc.</i>							No			Yes		
<i>Repetitively sending insulting or threatening content</i>							No			Yes		

<i>Have you ever (via Internet or mobile phone):</i>		
<i>Sent text messages or e-mails with offensive, malicious, degrading or vulgar expressions?</i>	No	Yes
<i>Disturbed someone by sending e-mails or SMSs?</i>	No	Yes
<i>Sent messages, photos and false information about another person?</i>	No	Yes
<i>Made a false representation or lied about yourself?</i>	No	Yes
<i>Deliberately published private information of another person entrusted with them and forwarding such information?</i>	No	Yes
<i>Deliberately exclusion of a person from your friends list, e-mail lists, chat rooms, etc.?</i>	No	Yes
<i>Sent repetitively messages with insulting or threatening content?</i>	No	Yes
<i>Have you informed your parents about insulting or abusive experience on the Internet?</i>	No	Yes