SOCIO-PEDAGOGICAL ASPECTS OF CYBERBULLYING IN HIGH SCHOOL STUDENTS

SOCIOPEDAGOŠKI SPEKTI CYBER NASILJA KOD UČENIKA SREDNJIH ŠKOLA

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ABSTRACT

Excessive and uncontrolled use of the internet while neglecting other agents and aspects of socialization with the lack of awareness of the risks of this use, negatively affects the proper psychosocial development of young people, it can also negatively affect the strengthening of their competencies and general alienation. The aim of this research within the project of the Federal Ministry of Education and Science, significant for the Federation of Bosnia and Herzegovina, which was realized in 2019 in the Tuzla Canton, Central Bosnia Canton and Sarajevo Canton, was to investigate and establish the frequency and risks of improper and uncontrolled Internet use and their connection with certain forms of disorders in behaviour. The research was conducted on a sample of 333 high school students in these cantons, both genders, aged from 15 to 19. The results showed that 92.2% of students have access to the internet and that they use it every day mainly for the purpose of chatting and entertainment. Students are generally not sufficiently familiar with the dangers and risks of the internet. 8.7% of students experienced cyberbullying, which resulted in various manifestations of stress reactions. 1/3 of the respondents are not sufficiently aware and responsible when communicating/chatting and in the same proportion neglect their regular obligations due to uncontrolled use of the internet. The results of our research are significant in terms of providing a more detailed insight into the researched issues and facilitating the provision of recommendations and guidelines for improved solutions, as well as for possible further research.

Key words: students, high school, internet, behavioural problems.

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SAŽETAK

Prekomjerno i nekontrolisano korištenje interneta uz istovremeno zanemarivanje ostalih agenasa i aspekata socijalizacije uz, po pravilu nedostatak svjesnosti rizika ovakvog načina korištenja se može negativno odraziti na pravilan psihosocijalni razvoj mlade osobe, jačanju i osnaživanju njenih kompetenecija kao i jedne opšte alijenacije. Cilj ovog istraživanja u sklopu projekta Federalnog ministarstva obrazovanja i nauke od značaja za FBiH koje je realizirano tokom 2019. godine na području Tuzlanskog, Srednjebosanskog i Kantona Sarajevo je bio istražiti i ustanoviti učestalost i rizike nepravilnog i nekontroliranog korištenja interneta i njihovu povezanost sa pojedinim oblicima poremećaja u ponašanju.Istraživanje je realizirano na uzorku od 333 učenika srednjih škola navedenih kantona oba spola, uzrasta od 15-19 godina. Rezultati su pokazali da 92,2% učenika ima pristup internetu i da svakodnevno koristi isti uglavnom u svrhu dopisivanja i zabave Učenici uglavnom nisu dovoljno upoznati sa opasnostima i rizicima na internetu. 8,7 % učenika je doživjelo cyber nasilje što za posljedicu ima različite manifestacije stresnih reakcija. 1/3 ispitanika nije dovoljno svjesno i odgovorno prilikom komunikacije a u istom omjeru zapostavlja svoje redovne obaveze znog nekontrolisanog korištenja interneta. Rezultati našeg istraživanja su značajni u smislu omogućavanja detaljnijeg uvida u istraživanu problematiku i olakšavanja davanja preporuka i smjernica za poboljšana rješenja, kao i za eventualna daljnja istraživanja.

Ključne riječi: učenici, srednja škola, internet, problemi u ponašanju.

INTRODUCTION

Knowledge of the current situation when it comes to problematic behaviour of adolescents on the internet surfaces includes empirical research that includes several segments or knowledge about the presence, frequency and purpose of internet usage, advantages and disadvantages/dangers of electronic media, frequency of experiencing and committing cyberbullying, intensity of the stress reactions and responses to cyberbullying, the involvement of parents in the child's use of the internet, as well as the habits of using the internet with reference to the presence and frequency of unethical behaviour on the internet. Problems of behaviour on the internet surfaces are a problem of the modern age, it can be said that the use of the internet nowadays is inevitable and useful, but with respect to certain rules and norms of behaviour. The situation is further complicated when it comes to adolescents due to the rebellious period they are going through and insufficient knowledge, so in this research, high school students were interviewed. The Internet is a global network connected by a network of computers or other electronic devices, characterized by top speed in the flow of information and accessible to almost everyone. Internet bullying or cyberbullying is any communication activity via the internet by which an individual is humiliated and threatened or harassed in some other way, and the constant goal of those bullies is to harass, humiliate, harm either in the form of text or video messages, photographs, calls or embarrassing comments. (Pandžić, Karić, Bijedić, 2016). According to Valkenburg and Peter (2011), the answer to the question about the reasons for the prevalence of communication via the internet refers to a greater possibility of control during self-presentation and self-disclosure in relation to "face-to-face" communication. This is made possible by: anonymity, asynchrony and

accessibility. With the development of new communication technologies, as Ciboci (2014) points out, a new form of violence/bullying has appeared, and that is the so-called cyberbullying or electronic bullying. Ciboci (2014) states that today's children and young people can be called the digital generation because they grow up with new media and the development of technology, especially "Smart phones" has enabled younger generations to use the internet no matter where they are and what they do. Smith and co-workers (2008) define cyberbullying as aggressive, deliberate behaviour toward individuals or groups over the internet that recurs toward individuals who cannot easily defended themselves, and emphasizes that the rise in online bullying/violence is also determined by the increase in internet users. According to Bedić and Filipović (2014), bullying/violence on the internet ("cyberbullying", "online" bullying/violence, digital bullying/violence) implies any communication activity with "cyber" technology that can be considered harmful to an individual, but also to the common good. Electronic bullying/violence, cyberbullying, virtual bullying/violence, internet bullying/violence - these are just some of the names for the increasingly common form of bullying/violence among children and young people. (Ciboci, 2014) Hodak - Kodžoman, Velki and Cakić (2013) explain cyberbullying as virtual violence to which victims are exposed via the internet and mobile phones. Cyberbullying is carried out through electronic media such as e-mail, social networks, forums and the like.

Specifics of cyberbullying

Unlike cyberbullying, as pointed out by Bilić, Buljan - Flander and Rafajac (2014), classic bullying/violence takes place in a certain physical place, for students most often at school, with easy identification and punishment of the perpetrator, and the victim can respond and ask for protection. Electronic peer bullying/violence is a modern form of peer bullying/violence that is realized through the means of mass communication by students, primarily via the internet and mobile phones, in order to humiliate, discredit, belittle and in other ways harm others. According to Miladinovic, Petričević (2013) main specifics of cyberbullying are stated as: the possibility in terms of anonymity of the perpetrator - the anonymity of the perpetrator is usually guaranteed, i.e. it is very difficult to reveal the identity of the perpetrator, as a result of which the perpetrator most often intensifies bullying/violent activities; content of bullying/violence - bullying/violence is emphasized by sending threatening, insulting, humiliating, degrading, derogatory and similar negative messages, comments, photos and videos; forms of manifestation of violent content - the most common forms of manifestation of electronic peer bullying/violence are insults, harassment, gossip and slander, false representation, illicit communication, deception, exclusion, persecution, sexual harassment, assault and the like; rapid spread of content - due to the higher speed of spreading compromising content, it is certain that the speed of harm to the victim is proportionally higher, which is why this form of violence can be considered much more dangerous than the classic form of peer bullying/violence; availability of violent content to a large number of people; constancy and continuity of the manifestation of bullying/violence and the environment within which the bullying/violence is realized and the like.

Forms of cyberbullying

According to Đuraković, Šincek, Tomašić - Humer (2014), cyberbullying can be manifested through various forms of internet communication, such as the use of unpleasant expressions, insults and jokes, presenting false names, stalking and the like. One of the most common forms of cyberbullying, according to Ciboca (2014) are hate groups on social networks, especially when it comes to children and young people, there is more and more abuse among peers on social networks. The ten forms of cyberbullying according to Ciboca, Osmancevic and Preselj (2015) are as follows: "Catfishing" which refers to the creation of fake profiles through which the bully leads another person or victim to a love affair via the internet; "Cyberstalking" means frequent threats and harm to someone's privacy; "Flaming" means deliberately sending aggressive, offensive and inappropriate messages with the aim of inciting online quarrels and violence; "Malware" refers to malware that can damage your computer; "Spam" refers to unsolicited e-mail, most often in the form of advertisements and fake advertisements, and can be dangerous if it contains a virus that can harm the computer by opening the e-mail message; "Phishing" means fraud that causes a user to reveal a username and password and enter it on a counterfeit website; "Grooming" is a form of cyberbullying that involves luring children because of sexual needs; "Sexting" refers to sending inappropriate sexual messages and photos to other people via mobile phones or the internet; "Trolling" is the deliberate spread of sarcastic comments made to a random person with the aim of provoking conflict; and "happy slapping" means that a group attacks an individual, records the violence with a mobile phone or camera, and later publishes the recording on the internet.

Consequences of cyberbullying

The consequences of cyberbullying are numerous. Patchin and Hinduja (2010) point out, that victims of cyberbullying lose their sense of self-esteem and often become depressed. Machmutow et al. (2012) have shown that experiencing cyberbullying is a longitudinal predictor of higher levels of depressive symptoms in victims. Aoyama and Talbert (2010) argue that cyberbullying leaves significantly greater consequences, compared to traditional peer bullying/violence. The victim of cyberbullying, as reported by Strabić and Tokić-Milaković (2016), and explained by Heirman and Walrave (2008), is often insecure and stressed because it is difficult to find out who the perpetrator is, in the context of whether it is one person or more people as well as whether the person(s) is(are) known to the victim or not. In the context of consequences, Menesini and Spiel (2012) state that experiencing cyberbullying is associated with higher perceived levels of stress. Cyberbullying can be a very frightening experience for the victim because the identity of the perpetrator of the bullying/violence can remain unknown and the bullying/violence can happen anywhere and at any time. (Bilić et al., 2012, according to Velka and Kuterovac - Jagodić, 2016) Von Marées and Petermann (2012) point out, that victims of cyberbullying experience more emotional problems, and complain more of psychosomatic disorders such as headaches and abdominal pain, and have more difficulty sleeping. Based on the results of research conducted by Patchin and Hindu (2006), results have been found that suggest that victims of cyberbullying experience frustration and anger, as well as feelings of hopelessness, reticence, and low self-

esteem. The results of other research show similar findings, i.e. that in a victim of cyberbullying, the consequences can occur in the form of strong negative emotions, including fear and helplessness, feelings of threat and loneliness, as well as a decrease in self-esteem (Baumann, 2010; Boulton et al., 2010; Spears et al., 2009, according to Von Marées, Petermann, 2012). The inability of victims to escape cyberbullying and the inability to control acts of bullying/violence according to Dooley, Pyzalski, and Cross (2009) can result in feelings of helplessness on the part of the victim. According to Breguet (2007), cyberbullying causes emotional pain, and its victims often feel lonely, insecure and humiliated. Experiencing cyberbullying negatively affects the ability to perform tasks, relationships with others, leads to mental health difficulties and / or feelings of emotional or physical insecurity. (Faucher, Jackson, Cassidy, 2014)

Subject, aims and hypotheses of the research

The subject of the research is aimed at understanding the risk of exposure to internet content and the connection with behavioural problems in high school students.

Aim of the research:

Research and identify the frequency and risks of improper and uncontrolled use of the internet surfaces and their connection with certain forms of behavioural disorders

Sub-aims of the research

1. Research and identify the frequency and risks of improper and uncontrolled use of the internet;
2. Investigate and identify to what extent and in what way improper and uncontrolled use of the internet is related to internalized and externalized modalities of behavioural disorders;
3. Based on the results of the obtained research, create and implement purposeful, planned and targeted educational workshops for students

Hypothesis:

It is assumed that students who use and browse the internet surfaces incorrectly and uncontrollably have a higher risk of manifesting cyberbullying and internalized and externalized modalities of behavioural disorders.

MATERIAL AND METHODS
Research sample and meansuring instrument

The research was conducted on a sample of 333 students in the Sarajevo Canton, Central Bosnia Canton and Tuzla Canton; students aged 15-19 years, both genders. The schools included in the research are: PI High School (mixed) Gračanica, PI High School (mixed) of Economics and Chemistry Lukavac, Technical High School Travnik, Medical School Travnik as well as two schools in the Sarajevo Canton. A total of 450 students were planned to be surveyed, but in the end, 333 students were available due to problems with irregular classes

due to the strike of teachers during the research period. Before starting the survey, students were given detailed instructions. Instructions for completing the questionnaire were an integral part of the questionnaire. The importance and purpose of the survey was emphasized, as well as adherence to the principles of anonymity and honesty when filling it out. During the survey, the survey conductor was available to the respondent in case of elimination of possible difficulties. The time allotted for the survey was one school hour (45 minutes). For the purposes of this research, a modified battery of questionnaires for students, a set of questions from the Instrument CAB (Clinical assessment of behaviour) and BRP (Behaviour Rating Profile) were used. An example of previous research is the research conducted by UNICEF within the program for the prevention of cyberbullying "Break the chain!" (Pregrad et al., 2010). The questionnaire consists of 13 sets of questions and for the purposes of the research seven sets of questions were used, which are also presented by the following variables: Variables related to general data on high school students, i.e. name and place of high school, gender, school achievement and behaviour at the end of the previous school year; variables related to the availability, frequency, and purpose of internet use. The presence of internet use is related to two questions with two answer options (yes and no). One question with six categories of answers refers to the frequency of internet usage. The purpose internet usage is a set of variables that consists of 11 statements with four answer options on the Likert Scale. The answer options are: never, rarely, sometimes, and often. Variables related to students' attitudes about the advantages and dangers of using electronic media: This set of variables consists of 20 statements with five answer options. The answer options are: "I don't agree at all, I mostly don't agree, I don't agree nor disagree, I mostly agree and I completely agree". Variables related to the presence and frequency of experiencing and committing cyberbullying: This set of variables consists of two questions with four answer options. The answer options are: never, occasionally, often, and very often. Variables related to the intensity of stress reactions to cyberbullying as well as ways of reacting to the mentioned bullying: This set of variables is contained through 9 possible stress reactions through three answer options (no reaction, little / mild reaction and strong reaction). Variables related to students 'attitudes about cyberbullying: This set of questions consists of 5 statements with 5 answer options from "don't agree at all to completely agree". Variables related to internet usage habits as well as the presence and frequency of unethical online behaviour by high school students: The set of questions related to internet usage habits consists of 10 questions with 5 answer options. The categories of answers are: never, rarely, sometimes, often and always. The set of unethical behaviour questions consists of five questions with identical answer categories as in the previous set.

Statistical data processing

The statistical program SPSS 22.0 was used for statistical processing of collected data. The level of significance when testing the set hypotheses is $p < 0.05$. Data analysis consists of the following: frequency analysis and testing of set hypotheses through tests/surveys to compare differences for independent samples.

RESULTS AND DISCUSSION

After analyzing the structure of respondents - high school students, the issues related to the availability or use of electronic media were analyzed.

Table 1. Distribution of answer frequencies on the possession of a mobile phone with the possibility/availability of internet access

Possession of a mobile phone with the possibility/availability of internet access	Total students	
	N	%
yes	328	98,5
no	5	1,5
Total students	333	100,0

In the sample of 333 high school students, only 5 (1.5%) students do not have a mobile phone with internet access, and 328 (98.5%) high school students have a mobile phone with internet access.

Table 2. Distribution of answer frequencies on the possession of a computer at home with the possibility/availability of internet access

Possession of a computer at home with the possibility/availability of internet access	Total students	
	N	%
yes	307	92,2
no	26	7,8
Total students	333	100,0

In a sample of 333 high school students, 307 (92.2%) students have a computer at home with internet access/availability, while 26 (7.8%) students don't have a computer at home with internet access/availability. The frequency of internet usage by high school students is analyzed below.

Table 3. Distribution of answer frequencies on the frequency of internet usage

Frequency of internet usage	Total students	
	N	%
every day/ daily	323	97,0
several times a week	6	1,8
once a week	2	0,6
once a month	1	0,3
once in two to three months	0	0,0
never	1	0,3
Total students	333	100,0

Out of a total of 333 surveyed high school students, 323 (97.0%) students use the internet every day/ daily, 6 (1.8%) students use the internet several times a week, 2 (0.6%) students use the internet once a week, and 1 (0.3%) student uses the internet only once a month or never.

Table 4. Distribution of answer frequencies on the purpose of internet usage

No.	Purpose of internet usage	Answer options (%)			
		never	rarely	sometimes	often
1.	I'm looking for entertainment. (music, movies, games, etc.)	0,6	0,6	21,3	77,5
2.	I chat with friends.	0,3	3,0	7,2	89,5
3.	I visit specialized social networking sites. (Facebook, MySpace, etc.)	5,1	10,8	30,9	53,2
4.	I play various online games.	21,0	32,4	24,9	21,6
5.	I surf websites and look for interesting content.	5,7	20,7	39,9	33,6
6.	I am looking for content that can help me write an assignment, paper or book report.	4,2	9,6	37,8	48,3
7.	I am looking for additional literature related to school and school assignments.	11,7	28,5	36,9	22,8
8.	I visit forums and various chat sites. (so-called "chat rooms")	63,4	21,9	9,9	4,8
9.	I visit sites with adult content.	60,4	13,8	10,8	15,0
10.	I visit and read other people's blogs.	52,0	25,2	17,1	5,7
11.	I write my own blog.	90,1	5,1	3,3	1,5

When asked about the purpose of using the internet, high school students answered as follows: 300 (90.1%) high school students never write their own blog; 298 (89.5%) high school students often chat with friends; 258 (77.5%) high school students often look for entertainment (music, movies, games, etc.); 211 (63.4%) high school students never visit forums and various chat rooms; 201 (60.4%) high school student never visits sites with adult content; 177 (53.2%) high school students often visit specialized social networking sites (Facebook, MySpace, etc.); 173 (52.0%) high school students never visit or read other people's blogs; 161 (48.3%) high school students often look for content that can help them write homework, papers or book reports; 133 (39.9%) high school students sometimes surf websites and look for interesting content; 123 (36.9%) high school students sometimes look for additional literature related to school and school assignments and 108 (32.4%) high school students rarely play various online games. In the following, the scale of attitudes about the advantages and dangers of using electronic media is analyzed, i.e. the scale of attitudes about modern technologies, which we have divided into two tables.

Table 5. Distribution of answer frequencies on the advantages when using electronic media (modern technologies)

No.	Advantages when using electronic media (modern technologies)	Answer options (%)				
		I don't agree at all	I mostly don't agree	I don't agree nor disagree	I mostly agree	I completely agree
2.	Despite all the dangers, I believe that children should be taught to use the internet.	9,3	9,6	27,6	32,4	21,0
4.	Computers make learning easier.	4,8	3,9	15,9	32,7	42,6
6.	Modern technologies have invaluably improved people's lives.	3,9	7,5	26,4	32,7	29,4
8.	The internet helps me to be informed.	2,7	2,4	7,2	36,6	51,1
10.	Browsing the internet is fun.	2,4	3,9	20,4	37,5	35,7
12.	I can meet new people online.	3,6	1,2	16,5	34,2	44,4
14.	The computer and mobile phone have significantly accelerated and made it easier for employees to do their job.	2,1	2,7	15,0	32,7	47,4
16.	I consider internet usage to be a combination of the pleasant with the useful.	0,9	3,6	31,5	41,4	22,5
18.	I am thrilled that it is so easy to communicate with anyone in the world via the internet.	2,4	4,2	16,8	26,4	50,2
20.	It would be difficult for me to live without modern technologies.	6,9	6,6	25,2	16,4	34,8

When asked about the advantages of using electronic media (modern technologies), high school students answered as follows: 170 (51.1%) high school students completely agree that the internet helps them to be informed; 167 (50.2%) high school students are completely thrilled that it is so easy to communicate with anyone in the world via the Internet; 158 (47.4%) high school students completely agree that the computer and mobile phone have significantly accelerated and facilitated the work of employees; 148 (44.4%) high school students completely agree that they can meet new people online; 142 (42.6%) high school

students completely agree that computers make learning easier; 138 (41.4%) high school students mostly agree that internet usage is a combination of the pleasant and useful; 125 (37.5%) high school students mostly agree that browsing the internet is fun; 116 (34.8%) high school students completely agree that it would be difficult for them to live without modern technologies; 109 (32.7%) high school students mostly agree that modern technologies have invaluably improved people's lives and 108 (32.4%) high school students mostly agree that despite all the dangers, children should be taught to use the internet. If the affirmative answers of high school students are singled out, i.e. the distribution of answer frequencies that high school students mostly or completely agree with certain statements which present advantages when using electronic media (modern technologies), then the findings are as follows: 292 (87.7%) students think that the Internet helps them to be informed; 267 (80.1%) students claim that the computer and mobile phone have significantly accelerated and facilitated the work of employees; 262 (78.6%) students are of the opinion that they can meet new people on the internet; 255 (76.6%) students said they were thrilled that it was so easy to communicate with anyone in the world via the internet; 251 (75.3%) students are of the opinion that computers make learning easier; 244 (73.2%) students claim that browsing the internet is fun; 213 (63.9%) students believe that internet usage is a combination of the pleasant and useful; 207 (62.1%) students agree that modern technologies have invaluably improved people's lives, 204 (61.2%) students are of the opinion that it would be difficult for them to live without modern technologies and 178 (53.4%) students mostly or completely agree that despite all the dangers, children should be taught to use the internet

Table 6. Distribution of answer frequencies to dangers/harmful content when using electronic media (modern technologies)

| No. | Dangers/harmful content when using electronic media (modern technologies) | Answer options (%) | | | | |
		I don't agree at all	I mostly don't agree	I don't agree nor disagree	I mostly agree	I completely agree
1.	With the use of modern technologies, vocabulary/language is gradually impoverished.	12,9	14,7	30,6	30,9	10,8
3.	With the development of modern technologies, social interaction between people is decreasing.	3,9	9,6	23,1	37,5	25,8
5.	There is more dangerous/harmful content than useful content on the internet.	11,4	18,0	39,3	17,4	13,8
7.	The mobile phone should only be used for emergency calls.	51,7	25,5	11,4	5,7	5,7
9.	I rarely use a computer in my spare time.	27,0	17,7	15,9	25,2	14,1
11.	The Internet leads to excessive isolation of children and adults because they spend too much time online.	5,4	7,5	22,5	27,6	36,9
13.	The development of modern technologies leads to the alienation and collapse of society.	10,5	11,7	37,8	19,2	20,7
15.	Due to aggressive content video games, nowadays, more and more people have problems with curbing aggression and anger.	9,9	8,4	23,4	23,4	34,8
17.	Frequent use of personal computers makes people	16,2	15,3	33,9	18,0	16,5

	"less" intelligent.					
19.	The Internet is a global evil.	31,2	20,7	32,7	8,1	7,2

When asked about the dangers of using electronic media (modern technologies), high school students answered as follows: 172 (51.7%) high school students do not agree at all that mobile phones should be used only for emergency calls; 131 (39.3%) high school students don't agree nor disagree on whether there is more dangerous/harmful content than useful content on the internet; 126 (37.8%) high school students don't agree nor disagree whether the development of modern technologies leads to alienation and the collapse of society; 125 (37.5%) high school students mostly agree that the development of modern technologies reduces social interaction between people; 123 (36.9%) high school students completely agree that the internet leads to excessive isolation of children and adults because they spend too much time online; 116 (34.8%) high school students completely agree that due to aggressive content video games, nowadays, more and more people have problems with curbing aggression and anger; 113 (33.9%) high school students don't agree nor disagree on whether frequent use of personal computers makes people "less" intelligent; 109 (32.7%) high school students don't agree nor disagree on whether the internet is a global evil; 103 (30.9%) high school students mostly agree that the use of modern technologies gradually leads to the impoverishment of vocabulary/language and 90 (27.0%) high school students completely disagree that they rarely use a computer in their free/spare time. If the affirmative answers of high school students are singled out, i.e. the distribution of answer frequencies that high school students mostly or completely agree with certain statements that present dangers/harms when using electronic media (modern technologies) then the findings are as follows: 215 (64.5%) students believe that the internet leads to excessive isolation of children and adults because they spend too much time online; 211 (63.3%) students claim that the development of modern technologies reduces social interaction between people; 194 (58.2%) students are of the opinion that due to aggressive content video games, nowadays, more and more people have problems with curbing aggression and anger; 139 (41.7%) students stated that the use of modern technologies gradually leads to the impoverishment of vocabulary/language; 133 (39.9%) students agree that the development of modern technologies leads to the alienation and collapse of society; 131 (39.3%) students are of the opinion that they rarely use a computer in their free/spare time; 115 (34.5%) students claim that frequent use of personal computers makes people "less" intelligent; 104 (31.2%) students mostly or completely agree that there is more dangerous/harmful content than useful content on the internet; only 51 (15.3%) students believe that the internet is a global evil, i.e. 173 (51.9%) students completely or mostly disagree that the Internet is a global evil and only 38 (11.4%) students are of the opinion that the mobile phone should be used only for emergency calls, while 257 (77.2%) students completely or mostly disagree with the statement about emergency call phone usage. The issues related to cyberbullying are analyzed below.

Table 7. Distribution of answer frequencies on the presence and frequency of suffering or experiencing cyberbullying

Frequency of suffering or experiencing cyberbullying	Total students	
	N	%
never	304	91,3
occasionally (1 to 3 times in the last few months)	25	7,5
often (2 to 3 times a month)	1	0,3
very often (every week)	3	0,9
Total students	333	100,0

In the context of experiencing or suffering from cyberbullying, 304 (91.3%) high school students have never been exposed to cyberbullying, while the remaining 29 (8.7%) students have experienced cyberbullying, and when it comes to the frequency of the mentioned cyberbullying , in 25 (7.5%) students it is occasionally present, i.e. one to three times in the last few months, in 3 (0.9%) students it is present very often, i.e. they suffer or experience cyberbullying every week and 1 (0.3%) student often (two to three times a month) experiences cyberbullying.

Table 8. Distribution of answer frequencies on the presence and frequency of doing cyberbullying

Frequency of doing cyberbullying	Total students	
	N	%
never	310	93,1
occasionally (1 to 3 times in the last few months)	16	4,8
often (2 to 3 times a month)	2	0,6
very often (every week)	5	1,5
Total students	333	100,0

In the context of doing/committing cyberbullying, 310 (93.1%) students claim that they have never committed cyberbullying, while cyberbullying was committed by 23 (6.9%) students, with 16 (4.8%) students occasionally or one to three times in the last few months committing cyberbullying, 5 (1.5%) students stated that they do cyberbullying every week or very often and 2 (0.6%) students often or two to three times a month.

Table 9. Distribution of answer frequencies on stress reactions to cyberbullying

No.	Stress reactions to cyberbullying	Answer options (%)		
		No reaction	little / mild reaction	Strong reaction
1.	I feel angry	30,9	42,6	26,4
2.	I feel upset	35,4	39,0	25,5
3.	I have a hard time concentrating (at school, at home)	41,4	41,4	17,1
4.	I feel worried	44,1	33,6	22,2
5.	I don't want to go to school	54,7	25,2	20,1
6.	I feel sick (I have headaches, my stomach hurts)	58,9	30,3	10,8
7.	I avoid going online for a while	54,4	32,7	12,9
8.	I have trouble sleeping	61,0	26,7	12,3
9.	I can't eat	69,4	21,9	8,7

High school students answered the question about stress reactions to cyberbullying as follows: 231 (69.4%) students claim that they do not eat at all or that they do not have an appetite for food due to stress caused by cyberbullying; 203 (61.0%) students have no sleeping problems in terms of stress response to cyberbullying; 196 (58.9%) students do not feel sick at all in terms of headaches, abdominal pain and the like; 182 (54.7%) students do not want to go to school at all due to cyberbullying; 181 (54.4%) students do not avoid going online at all; 147 (44.1%) students aren't worried at all because of cyberbullying; 138 (41.4%) students have no problems with concentration as a consequence of cyberbullying, i.e. mild difficulty concentrating (at school, at home); 142 (42.6%) students feel slightly angry in terms of stressful reaction to cyberbullying and 130 (39.0%) students feel slightly upset. A note related to previous responses to stress reactions caused by cyberbullying is that a relatively small number of students in our sample actually experienced or suffered from cyberbullying, so respondents had to guess what their stress reactions might be in case they experience cyberbullying.

Table 10. Distribution of answer frequencies on the response to cyberbullying

No.	Response to cyberbullying	Answer options (%)				
		I'm sure I wouldn't do that	I don't think I would do that, but I'm not sure	I'm indecisive about that	I think I would do that, but I'm not quite sure	I'm pretty sure I'd do that
1.	I would inform the parents	11,7	8,4	15,0	13,5	51,4
2.	I would no longer visit that website, I would block the person who is insulting me	8,7	5,7	9,0	11,1	65,5
3.	I would tell a friend	9,0	4,8	15,9	22,8	47,4
4.	I would show it to an adult	13,5	7,5	20,4	20,7	37,8
5.	I would tell my brother / sister	16,8	7,5	12,9	15,9	46,8
6.	I would officially report it (site administrator, police, etc.)	14,4	8,7	22,5	15,9	38,4
7.	I would tell the teacher / class teacher	30,0	12,6	23,7	16,5	17,1
8.	I would reciprocate equally	43,2	18,6	15,6	9,0	13,5
9.	I would laugh at that	41,7	12,0	20,1	9,3	16,8
10.	I wouldn't do anything	57,4	8,7	19,5	6,9	7,5

High school students answered the question about the response to cyberbullying, and the distribution of answers (i.e. answers with the highest frequency) is as follows: 219 (65.8%) students are sure that they would not act in a way of no longer visiting the internet; 218 (65.5%) students are quite sure that they would not visit that website anymore, they would block the person who insults them; 191 (57.4%) students are sure that they would not act in a way of doing nothing; 171 (51.4%) students are quite sure that they would inform parents about cyberbullying; 158 (47.4%) students are quite sure that they would tell a friend about cyberbullying; 156 (46.8%) students are quite sure that they would tell their siblings about cyberbullying; 144 (43.2%) students are sure that they wouldn't reciprocate equally or to the same extent; 139 (41.7%) students are sure that they would not laugh in terms of reaction to cyberbullying; 128 (38.4%) students are quite sure that they would officially report cyberbullying (site administrator, police, etc.); 126 (37.8%) students are quite sure that they would show an adult that they are exposed to cyberbullying; and 100 (30.0%) students are sure that they would not inform the teacher about their exposure to cyberbullying.

Table 11. Distribution of answer frequencies on attitudes about cyberbullying

No.	Attitudes about cyberbullying	Answer options (%)				
		I don't agree at all	I mostly don't agree	I don't agree nor disagree	I mostly agree	I completely agree
1.	If someone harassed me via the internet or mobile phone, I would feel bad.	23,1	10,8	16,5	21,3	28,2
2.	People become victims of cyberbullying for no particular reason.	12,6	8,7	33,0	25,2	20,4
3.	If I heard about a case of cyberbullying at school I would try to stop it.	10,8	5,7	27,9	27,6	27,9
4.	Bullying/violence via the internet and cell phones is much more serious than that in real life.	22,5	16,2	31,2	15,9	14,1
5.	If you abuse someone online, it is easier to go unpunished, because no one knows your identity.	20,7	12,3	25,2	21,6	20,1
6.	It's fun to send disturbing messages to someone anonymously.	70,9	9,6	10,2	2,7	6,6

Answers to questions about high school students 'attitudes towards cyberbullying have the following highest frequencies: 236 (70.9%) students completely disagree that it is fun to send disturbing messages to someone anonymously; 110 (33.0%) students don't agree nor disagree on whether people become victims of cyberbullying for no particular reason; 104 (31.2%) students don't agree nor disagree on whether bullying via the Internet and mobile phones is much more serious than in real life; 94 (28.2%) students completely agree that they would feel bad if someone harassed them via the internet or cell phone; 93 (27.9%) students are undecided or completely agree with the statement that they would try to stop cyberbullying if they heard about a case of cyberbullying at school; 84 (25.2%) students don't agree nor disagree with the statement that online bullying goes easier unpunished, because no one knows your identity. If the affirmative answers of high school students are singled out, i.e. the distribution of response frequencies that high school students mostly or completely agree with certain statements that represent attitudes about cyberbullying, then the findings are as follows: 185 (55.5%) students would try to stop a case of cyberbullying at school; 165 (49.5%) students would feel bad if someone harassed them via the internet or mobile phone; 152 (45.6%) students agree that victims of cyberbullying become so for no particular reason; 139 (41.7%) students believe that if you abuse someone online, it is easier to go unpunished, because no one knows your identity; 100 (30.0%) students claim that bullying via the internet and mobile is much more serious than that in real life and only 31 (9.3%) students mostly or completely agree that it is fun to send disturbing messages to someone anonymously.

Table 12. Distribution of answer frequencies on internet usage habits

No.	Internet usage habits	Answer options (%)				
		never	rarely	sometimes	often	always
1.	Do you get nervous when the internet connection is lost?	12,6	15,6	26,1	21,9	23,7
2.	How often does your school achievement suffer because of the time you spend online?	16,5	20,7	29,4	22,8	10,5
3.	Do you avoid your daily responsibilities due to internet preoccupation?	21,6	25,8	29,7	15,9	6,9
4.	How often do you stay online longer than you planned?	3,6	12,0	22,8	35,7	25,8
5.	Would you rather talk to your friends online than meet them live?	32,7	30,9	22,5	5,7	8,1
6.	Do you talk and do things on the internet that you wouldn't in real life?	48,6	23,1	15,6	7,8	4,8
7.	Do you think that the internet is a completely safe medium?	34,2	28,8	25,8	7,2	3,9
8.	Do you feel that you are responsible and aware enough when communicating on the internet?	10,5	11,4	22,5	25,8	29,7
9.	Have you seduced a girl / boy online?	27,6	16,8	21,0	16,5	18,0
10.	Have you made honest friends using social media?	21,9	14,1	27,3	18,6	18,0

When asked about internet usage habits, high school students answered as follows: 162 (48.6%) students never say and do things online that they would not in real life; 119 (35.7%) students often stay online longer than planned; 114 (34.2%) students never think that the internet is a completely safe medium; 109 (32.7%) students never talk to their friends online instead of meeting them live; 99 (29.7%) students believe that they are always sufficiently responsible and aware when communicating on the internet; 99 (29.7%) students claim that they sometimes avoid their daily obligations due to internet preoccupation; 98 (29.4%) students feel that their school achievement sometimes suffers because of the time they spend online; 92 (27.6%) students have never seduced a girl / boy online; 91 (27.3%) students claim to have sometimes made honest friends using social networks; and 87 (26.1%) students sometimes become nervous when the internet connection is lost.

Table 13. Distribution of answer frequencies on unethical behaviour on the internet

No.	Unethical behaviour on the internet	Answer options (%)				
		never	rarely	sometimes	often	always
1.	Have you misrepresented yourself (made a fake profile) on the internet?	67,0	14,1	13,8	3,6	1,5
2.	Have you abused/bullied others online?	83,8	8,7	4,2	1,8	1,5
3.	Have you anonymously threatened others online?	85,3	6,0	6,0	1,5	1,2
4.	Have you violated anyone's privacy online?	78,7	9,0	7,2	3,3	1,8
5.	Did you suggest meetings with people you met online?	58,0	13,8	11,7	9,6	6,9

When asked about unethical behaviour on the Internet, high school students answered as follows: 284 (85.3%) students never threatened others anonymously on the internet; 279 (83.8%) students never abused/bullied others online; 262 (78.7%) students have never violated someone's privacy online; 223 (67.0%) students never misrepresented themselves on the internet and 193 (58.0%) students never suggested meetings with people they met online.

After analyzing the data from the research instrument for 333 high school students, the following was concluded: When asked about the availability of internet access and the frequency of internet usage, high school students answered as follows: 328 (98.5%) high school students have a mobile phone with internet access; 307 (92.2%) students have a computer at home with internet access; 323 (97.0%) students use the internet every day, 6 (1.8%) students use the internet several times a week. This indicates the fact that almost all students have access to the internet through mobile phones and computers in their homes, as well as that they use the internet every day, which also indicates the fact that this makes it difficult to control the use of the internet.

When asked about the purpose internet usage, high school students answered as follows: 300 (90.1%) high school students never write their own blog; 298 (89.5%) high school students often chats with friends; 258 (77.5%) high school students often look for entertainment online (music, movies, games, etc.); 211 (63.4%) high school students never visit forums and various chat rooms; 201 (60.4%) high school student never visits sites with adult content; 177 (53.2%) high school students often visit specialized social networking sites (Facebook, MySpace, etc.); 173 (52.0%) high school students never visit or read other people's blogs. This indicates that for high school students, the internet primarily serves to socialize in the virtual world as a substitute for the real world as well as for entertainment. The purpose and frequency of internet usage by high school students differ statistically significantly according to gender, based on the "Mann Whitney Test" for the following [results are presented in the form (M rank for male students <or> M rank for female students); (Mann Whitney U Test; p)]: chatting with friends (151.2 <176.5); (11021,000; p = 0.000); in favour of female students; playing various online games (218.9> 135.8); (6516,500; p = 0.000); in favour of male students; surfing websites and searching for interesting content (189.2> 153.6); (10219,500; p = 0.001); in favour of male students; searching for content that can help

students write assignments, papers or book reports (145.3 <180.0); (10289,500; p = 0.000); in favour of female students; searching for additional literature related to school and school assignments (143.3 <181.2); (10039,000; p = 0.000); in favour of female students; visiting forums and various chat rooms (189.4> 153.5); (10194,000; p = 0.000); in favour of male students; visiting sites with adult content (234.6> 126.4); (4551,000; p = 0.000) in favour of male students; visiting and reading other people's blogs (154.2 <174.7); (11405,000; p = 0.041) in favour of female students; writing your own blog (176.8> 161.1); (11778,500; p = 0.006) in favour of male students. Only for two purposes of internet usage, i.e. for searching for entertainment (music, movies, games, etc.) as well as for visiting specialized social networking sites (Facebook, MySpace, etc.), no statistically significant difference was found in terms of student gender.

Attitudes of high school students about the advantages of using electronic media differ statistically significantly with respect to the grade they attend, based on the "Kruskal Wallis Test" for the following [results are presented in the form (M rank for first grade students; M rank for second grade students; M rank for third grade students and M rank for fourth grade students); (χ^2test; p)]: regardless of all the dangers, children should be taught to use the internet (151.0; 184.4; 153.5 and 179.5); (9.127; p = 0.028); new people can be met on the internet (170.8; 176.3; 177.6 and 132.2); (11,284; p = 0.010); computer and mobile phones significantly accelerated and facilitated the work of employees (147.4; 180.4; 176.2 and 165.9); (7,918; p = 0.048) and internet usage is a combination of the pleasant and useful (150.0; 185.0; 175.8 and 154.2); (9.406; p = 0.024). For the remaining six claims that represent advantages when using electronic media, no statistically significant difference was found with respect to the grade that students attend.

Attitudes of high school students about the dangers of using electronic media differ statistically significantly with respect to the grade they attend, based on the "Kruskal Wallis Test" for the following [results are presented in the form (M rank for first grade students; M rank for second grade students; M rank for third grade students and M rank for fourth grade students); (χ^2 test; p)]: the use of modern technologies gradually leads to the impoverishment of vocabulary/language (147.4; 160.4; 182.1 and 193.4); (11,622; p = 0.009); the development of modern technologies reduces social interactions between people (154.9; 150.0; 194.7 and 184.0); (13,594; p = 0.004); mobile phones should be used only for emergency calls (181.1; 151.8; 186.0 and 147.5); (11,734; p = 0.008); frequent use of personal computers makes people "less" intelligent (173.6; 139.4; 192.1 and 174.0); (14,877; p = 0.002); the internet is a global evil (165.7; 142.9; 198.6 and 173.7); (15,521; p = 0.001); for the remaining five claims about dangers when using electronic media, no statistically significant difference was found with respect to the grade that students attend. The presence and frequency of experiencing and committing cyberbullying by high school students vary with respect to school achievement and behaviour in school. Based on the obtained results (from the aspect of school achievement: for suffering or experiencing cyberbullying χ^2 = 0.413; p = 0.938; for committing/doing cyberbullying χ^2 = 3.675; p = 0.299; and from the aspect of behaviour in school: for suffering or experiencing cyberbullying χ^2 = 3.014; p = 0.389; for committing/doing cyberbullying χ^2 = 3.747; p = 0.290). It can be concluded that for the

presence and frequency of experiencing and committing/doing cyberbullying by high school students, no statistically significant difference was found with regard to school achievement and behaviour in school.

Ways of responding to cyberbullying by high school students differ statistically significantly according to gender, based on the "Mann Whitney Test" for the following: results are presented in the form (M rank for male students <or> M rank for female students); (Mann Whitney U Test; p)]: if cyberbullying happened, they would inform parents (122.3 <193.9); (7413,000; p = 0.000) in favour of female students; they would no longer visit that website, they would block the person insulting them (131.1 <188.6); (8514,500; p = 0.000) in favour of female students; they would tell a friend (147.1 <178.9); (10514,000; p = 0.002) in favour of female students; they would show an adult that they are exposed to cyberbullying (140.4 <183.0); (9674,500; p = 0.000) in favour of female students; they would tell their brother / sister (138.6 <184.0); (9455,500; p = 0.000) in favour of female students; they would officially report it to the site administrator, the police, etc. (140.0 <183.2); (9630,500; p = 0.000) in favour of female students; they would inform the teacher (140.1 <183.2); (9638,000; p = 0.000) in favour of female students; they would reciprocate equally or in the same extent (202.6> 145.6); 8554,500; p = 0.000) in favour of male students; they would laugh at cyberbullying (205.5> 143.9); (8189,500; p = 0.000) in favour of male students; they would do nothing (192.2> 151.9); (9850,000; p = 0.000) in favour of male students. Only for one response to cyberbullying, and that is that high school students would no longer visit the Internet, no statistically significant difference was found from the aspect of gender.

CONCLUSION

According to the presented results, the hypothesis that correlates the risk of manifestation of cyberbullying and certain modalities of behavioural disorders can be confirmed. Referring to Glasser's definition of behaviour that "Behaviour is the way an individual governs him/herself", it is questionable to confirm that students are fully aware of the advantages and disadvantages (dangers) of using the internet. The results presented above may indicate a potential risk of internet usage, especially in the context of inadequate socialization of children, given the purpose of using the internet in the context of chatting and entertainment. All of this results in the adoption of an impoverished vocabulary/language and a reduction in social interaction. The results, which indicate exceptional and uncontrolled availability and usage of the internet, result in a wide range of manifestations of stress reactions in students who have experienced one form of cyberbullying. These risks of untimely response by parents may be implied by the adoption of inadequate forms of age and gender behaviours that students do not perceive in this way but as an example of a desirable form of behaviour among peers and in the environment.

Nowadays, it's not possible to imagine everyday life without the internet, nor is it a goal, but the use of the internet should be based on knowledge and understanding of the advantages and dangers of internet usage. Special attention should be paid to children as the most exposed population, giving the necessary guidelines in order to use the internet as safely as possible, emphasizing the numerous advantages of using the internet, for example for educational

purposes. It is extremely important to emphasize the need for a joint approach of children and youth, parents, the education system, the local community, social, health, judicial and other organizations in providing safety and protection of children, both in the real and virtual world.

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