Cyberbullying and Social Isolation in Slovak Primary School Pupils

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Abstract

This study aims to identify the relationship between the phenomenon of social isolation and victimisation through cyberbullying. The Hikikomori Questionnaire (HQ-25) (Teo et al., 2018) was used to identify social isolation in the participants, and the prevalence of cyberbullying victims was monitored using a self-constructed scale Victimisation through Cyberbullying. The structure of the research instruments was determined using exploratory factor analysis, which revealed three factors in the Hikikomori Questionnaire and one factor in the Victimisation through Cyberbullying Scale. The research sample consisted of 2,768 pupils at the 2nd level of primary school. The average age of the pupils was 12.7 years (SD = 1.12). The empirical research confirmed a weak statistically significant positive correlation between the factors of the Hikikomori Questionnaire (avoidance of social interaction, isolation, engagement in social interaction) and the Victimisation through Cyberbullying Scale. The subsequent inferential analysis aimed to identify the statistically significant differences in cyberbullying victimisation according to gender and year of education. The results showed that females and older pupils scored significantly higher on the Victimisation through Cyberbullying Scale.

Key words: *cyberbullying; prevention; pupil; social isolation; victimisation.*

Introduction

Besides benefits, the technological progress related to the development of information and communication technologies is also accompanied by negative trends (Sujansky & Ferri-Reed, 2009), which are indicative of risks, especially with regard to the way

in which people spend their free time. At the same time, the age threshold at which risky behaviour emerges has become lower (Hasan et. al, 2023).

The virtual environment provides an opportunity for victimisation because the information is available and accessible 24/7. Manifestations of cyberbullying may vary depending on the progress in information technology development as well as the individual user level. In the past, it consisted mainly of insults and invective on social networks, but today, audio and audio-visual recordings presenting the victims in inappropriate situations are broadcast. Cyberbullying is a severe social and educational issue that requires attention in empirical research. Hidnuja and Patchin (2008) define cyberbullying as intentional and repeated harmful actions by means of an electronic text. However, this definition is no longer sufficient. The dynamic expansion of technology keeps bringing up new forms of cyberattacks targeted at individuals. Lim and Lee (2021) added further indicators to the definition of cyberbullying: it includes posting abusive texts, messages, e-mails, pictures, and videos, exclusion from online groups, slander, and spreading false information to humiliate or harm the victim.

A typology of cyberbullying is of key theoretical importance. For the purposes of this paper, Willard's typology (2006) differentiating seven forms of cyberbullying will be used:

- flaming – vulgar invective in online communication, threats, and insults, mainly in chat rooms;
- harassment – repeated electronic attacks in the form of insulting messages;
- impersonation – creating a false profile and sending materials that harm another person;
- outing – sending or publishing sensitive or humiliating information about the victim, including forwarding privately sent messages or pictures to third parties;
- denigration – sending of harmful, false, or cruel information about the victim to other people or publishing their edited photographs;
- cyberstalking – electronic harassment and threats;
- exclusion – exclusion from social network groups.

Kowalski et al. (2008) defined another form of cyberbullying – the "happy slapping." In this case, the victim is usually attacked by a group, and the attack is recorded and subsequently published on the Internet or a social network.

Cyberbullying is a severely traumatising situation for a child or an adolescent, and it significantly disrupts their mental or even physical health. They often suffer from emotional disorders such as anxiety and stress, social exclusion, isolation, or difficulty fitting in with peers, which have obvious negative consequences reflecting in mental health (Fajardo-Bullón et al., 2021; León et al., 2011). This paper focuses on social isolation as a possible consequence of cyberbullying. A person suffering from social isolation feels lonely and experiences negative and disturbing feelings. This can cause further withdrawal, decreased expression of feelings, depression, loneliness, hopelessness, and a

loss of self-esteem and self-worth. It affects both mental and physical health. Masoom (2016) characterises social isolation as a phenomenon resulting from interpersonal problems so severe that they prevent the individual from properly functioning in interpersonal relationships. This author points out that social isolation is a symptom of a dysfunctional society in which ethical norms have collapsed or lost their meaning. The Hikikomori syndrome is a specific form of social isolation defined as a state of social withdrawal, avoidance of social interactions and responsibilities for at least 6 months (Teo et al., 2018). Although this phenomenon originated in Japan, it has been drawing attention around the world. Among other things, it has also been studied in the context of online risks, with a particular focus on online addictions (Tateno et al., 2019; Stip et al., 2016).

Based on what has been said above, we aimed at performing empirical research focused on analysing the possible manifestations of social isolation in victims of cyberbullying.

Methodology

The victims of cyberbullying were monitored using a Victimisation through Cyberbullying Scale, which consisted of 18 items corresponding to different forms of cyberbullying. Its design draws on the relevant theory allowing for the identification of cyberbullying forms, which we adapted to victimisation. Our framework is rooted in the typology established by the following authors: Willard (2005), Domonkos (2014), Hollá (2014), and Niklová & Makúchová (2018). These authors concur on the delineation of cyberbullying into the following forms: flaming, harassment, impersonation, outing, and denigration. The defining features of these categories are delineated in the introductory section of this study. Various theoretical typologies of cyberbullying are outlined based on its form. However, this phenomenon is dynamic, continuously evolving over time. Despite the increasingly comprehensive scrutiny of this subject, the identified forms of cyberbullying persist as pertinent and prevalent issues within educational and social spheres. Thus, we consider the aforementioned theoretical frameworks pertinent for their adaptation to victimisation. The respondents provided their answers on a 5-point Likert scale; they focused on the forms and frequency of cyberbullying they had experienced over the last 3 months (1 – never; 2 – once; 3 – 2 to 3 times; 4 – 4 to 5 times; 5 – 6 and more times). The multidimensional internal structure of the research instrument was investigated by exploratory factor analysis. Subsequently, the factor structure was validated through confirmatory analysis, which involved the division of the resulting research sample into two segments. For the exploratory factor analysis, the varimax method with orthogonal rotation was identified as the most suitable. The KMO value (0.911) and Bartlett's sphericity test ($p = 0.000 < 0.05$) both confirmed that factor analysis was a suitable method to analyse the variables. The minimum factor loading per item to be included was 0.40. Due to higher factor load of items in multiple factors simultaneously (over 0.40), 11 items were removed from the scale. After removing these items and repeating the exploratory factor analysis, the scale

measuring the construct of victimisation through cyberbullying was identified as a one-factor scale. The final scale measuring victimisation through cyberbullying consisted of 7 items. The reliability of the scale was determined by Cronbach's alpha (0.890).

Table 1

Victimisation of elementary school pupils due to cyberbullying (rotated factor load matrix)

Factors Affecting Saturation of Items	Factors	
	α	I.
	0.890	
Someone fabricated a profile using my name and used it to propagate threats or derogatory messages.		0.835
An online video was uploaded including my face superimposed onto another person, with the purpose of mocking me.		0.744
A stranger uploaded a photograph on a social media platform that evoked a sense of humiliation within me.		0.595
I am being subjected to email threats.		0.728
I am being subjected to insulting emails.		0.766
Somebody fabricated a profile using my name with the purpose of mocking me.		0.771
I was photographed or filmed by someone while in a compromising setting, and they subsequently shared it on the internet.		0.819

Note: α - Cronbach's alpha value; I. - sign of the factor with the factor loading of individual items.

Conducting confirmatory factor analysis (maximum likelihood method) on the remaining half of the research sample affirmed the adequacy of the model, which was assessed through several indices: CFI - Comparative Fit Index (0.917), TLI - Tucker Lewis Index (0.911), RMSEA - Root Mean Square Error of Approximation (0.048), SRMR - Standardised Root Mean Squared Residual (0.045), and GFI - Goodness-of-Fit Index (0.980). The values of the standardised factor loadings of the items were above 0.40. The statistical significance of the chi-squared test was confirmed ($p < 0.001$).

The *Hikikomori Questionnaire (HQ-25)* (Teo et al., 2018) was used to identify social isolation in pupils. The respondents could express their agreement or lack thereof on a 5-point Likert scale (0 – Strongly disagree; 1 – Somewhat disagree; 2 – Neither agree, nor disagree; 3 – Somewhat agree; 4 – Strongly agree). The scale included 6 reverse items, which had to be recoded afterwards.

The latent factors of the *Hikikomori (HQ-25)* instrument were identified by an exploratory factor analysis using the method of principal components and varimax rotation. The rationale behind this selection also stems from the unavailability of an adapted Hikikomori HQ25 tool suited to the conditions prevalent in the Slovak Republic. KMO (0.932) and Bartlett's sphericity test ($p=0.000 < 0.05$) confirmed the suitability of factor analysis. Based on the Kaiser Rule, 3 factors were investigated. The minimum factor

loading per item to be included was 0.40.9 items in the measuring instrument showed a factor loading higher than 0.40 in two factors, which is why they were eliminated from the scale. In the context of the Slovak Republic, *Hikikomori HQ-5* for measuring social isolation was identified as a three-factor instrument. The factors were named based on the original study by Teo et al. (2018), which incorporated a Hikikomori HQ-25 scale containing the following factors: social interaction (11 items), isolation (8 items), and emotional support (6 items). However, the factors affecting saturation of items were slightly different in the context of the Slovak Republic in comparison to the original study, and the names of two factors were therefore modified in order to provide clearer denominations of the respective items. This study operates with the following three factors: avoidance of social interaction (originally socialisation), isolation, and participation in social interaction (originally emotional support). The reliability of the measuring instrument was determined by Cronbach's alpha. The reliability value of the whole research instruments was α = 0.824. In the original study (Teo et al., 2018), the calculated Cronbach's alpha value for the entire scale stood at 0.96. Cronbach's alpha for individual factors can be seen in Table 2.

Table 2

Social isolation in primary school pupils (rotated factor load matrix)

Items pertaining to individual factors	Factors			
	α	I	II	III
(I) Avoidance of social interaction	0.815			
I stay away from other people.		**0.540**	-0.083	0.333
I feel uncomfortable around other people.		**0.533**	0.115	0.380
I avoid talking with other people.		**0.710**	0.118	0.226
I have little contact with other people talking, writing, and so on.		**0.711**	0.064	0.060
I prefer to be alone than with others.		**0.792**	0.152	0.169
I spend very little time interacting with other people.		**0.726**	0.057	0.179
(II) Isolation	0.719			
I spend most of my time at home.		0.363	**0.630**	-0.026
I shut myself in my room.		0.212	**0.729**	0.018
I spend most of my time alone.		0.369	**0.712**	0.097
People bother me.		0.032	**0.638**	0.104
(III) Participation in social interaction	0.741			
I like meeting new people.		0.173	0.052	**0.690**
I like to share ideas with many people.		0.016	-0.091	**0.641**
I enjoy being in social situations.		0.109	0.258	**0.765**
There are people in my life who try to understand me.		-0.164	0.544	**0.644**
I strongly prefer to be around other people.		0.258	0.025	**0.716**

Note: **α -** Cronbach's alpha value for individual items; I, II, III - sign of the factor with the factor loading of individual items of the *Hikikomori Questionnaire (HQ-25).*

Conducting confirmatory factor analysis (maximum likelihood method), on the remaining half of the research sample affirmed the adequacy of the model. The adequacy of the model was assessed through several indices: CFI – Comparative Fit Index (0.928), TLI - Tucker Lewis Index (0.915), RMSEA – Root Mean Square Error of Approximation (0.059), SRMR - Standardised Root Mean Squared Residual (0.040), and GFI - Goodness-of-Fit Index (0.978). The values of the standardised factor loadings of the items were above 0.40. The statistical significance of the chi-squared test was confirmed ($p < 0.001$).

Convenience sampling was used to select respondents for the research sample. The research sample consisted of 2,768 pupils at the 2nd level of primary school aged 11 to 16 years, who attended grades 6 to 9. The average age of the respondents is 12.7 years. The data were collected through an online survey from September through November 2022. The questionnaire was distributed to elementary school principals, who were responsible for its subsequent circulation. The online data collection process ensured complete anonymity both for pupils and participating schools involved in the study. The research was approved by the school administration upon the procurement of informed consent from the pupils' parents. Approval for the research tool was obtained from the Ethical Committee of Matej Bel University in Banská Bystrica. The demographic characteristics of the research sample can be seen in Table 3.

Table 3
Characteristics of the pupil research sample

	N	%
Gender		
Boys	1,412	51.0
Girls	1,356	49.0
Average age	12.7 years	
Year		
6th grade	650	23.5
7th grade	812	29.4
8th grade	818	29.6
9th grade	488	17.6

Note: N – value of absolute abundance; % - value of the percentage representation of pupils in the research set from the aspect of measured variables.

The data were evaluated using non-parametric tests due to the fact that normality of the distribution was not ensured for all variables. The normality of the research sample was determined by the Kolmogorov–Smirnov test, Shapiro–Wilk test, skewness and kurtosis values. The significance of the correlation was determined by Spearman's test, while significant differences were identified by the Mann-Whitney U Test and the Kruskal-Wallis H test. The data were processed using SPSS Statistics 25 software.

Objectives and hypotheses

The research goal was to identify whether there was a significant correlation between social isolation and cyberbullying victimisation in the pupils at the 2nd level of primary schools.

Another goal was to identify any significant differences among the victims of cyberbullying in terms of gender and year of education.

Research hypotheses:

First hypothese: There is a statistically significant positive correlation between the "avoidance of social interaction" factor and victimisation through cyberbullying.

Second hypothese: There is a statistically significant positive correlation between the "isolation" factor and victimisation through cyberbullying.

Third hypothese: There is a statistically significant positive correlation between the "participation in social interaction" factor and victimisation through cyberbullying.

Fourth hypothese: There is a statistically significant difference between the victims of cyberbullying in terms of their gender.

Fifth hypothese: There is a statistically significant difference between the victims of cyberbullying in terms of their year of education.

Results

The data analysis focused on identifying a statistically significant correlation between cyberbullying and the risk of social isolation. The correlations were calculated based on the rough score in both scales. The results are presented in Table 4.

Table 4

Inference indicators of significant correlations between Victimisation through Cyberbullying and the Hikikomori subscales (HQ-25)

	Factors of social isolation – Hikikomori (HQ-25)		
	Avoidance of social interaction	Isolation	Participation in social interaction
Victimisation through cyberbullying			
Spearman's Rho	0.048	0.123	0.070
p-value	0.012	0.000	0.000

Note: Spearman's Rho - correlation value found by Spearman's test; p – significance value.

The inferential analysis confirmed a weak positive significant correlation between the "avoidance of social interaction" factor and the Victimisation through Cyberbullying Scale ($0.012 \leq 0.05$; rs = 0.048). Spearman's test also confirmed a weak positive significant correlation between the "isolation" factor ($0.000 \leq 0.05$; rs = 0.123), the "participation in social interaction" factor ($0.000 \leq 0.05$; rs = 0.070), and the Victimisation through Cyberbullying Scale.

Further statistical analysis of the research sample focused on identifying statistically significant differences in the Victimisation through Cyberbullying Scale in terms of gender and the year of education. The results are presented in Tables 5 and Table 6.

Table 5
Significant differences in pupil victimization through cyberbullying in terms of gender

	Mean	Me	SD	Min	Max	p value
Boys	0.17	1.00	0.39	1.00	5.00	0.005
Girls	1.16	1.00	0.33	1.00	5.00	

Table 6
Significant differences in pupil victimisation through cyberbullying in terms of the year of education

	Mean	Me	SD	Min	Max	P value
6th grade	0.12	0.23	0.04	1.00	3.05	
7th grade	1.16	1.00	0.35	1.00	4.72	0.000
8th grade	1.18	1.06	0.37	1.00	5.00	
9th grade	1.23	1.06	0.45	1.00	5.00	

Note: Me – median; SD - standard deviation; Min – minimal score; Max – maximal score; p – significance value.

The Mann-Whitney U Test showed that girls scored significantly higher than boys in the Victimisation through Cyberbullying Scale (girls: $p = 0.005$; AM = 1.16, Me = 1.00; boys: AM = 0.17; Me = 1.00).

The significant difference in terms of the year of education was verified by the Kruskal-Wallis H test. A significant difference in terms of the year of education was, indeed, identified ($p = 0.000$): 9th graders scored the highest (AM = 1.23, Me = 1.6), 8th graders ranked second (AM = 1.18; Me = 1.6), 7th graders ranked third (AM = 1.16; Me = 1), and 6th graders scored the lowest (AM = 0.12; Me = 0.23).

Discussion

The empirical research confirmed a weak statistically significant positive correlation between the factors of the Hikikomori Questionnaire, which focused on 3 aspects of social isolation, and victimisation through cyberbullying.

In the "avoidance of social interaction" and "isolation" factors, weak significant positive correlation with the Victimisation through Cyberbullying Scale was confirmed ($0.012 \leq 0.05$; rs = 0.048; $0.000 \leq 0.05$; rs = 0.123), as assumed in the first two hypotheses. Despite low correlation values, the results prove significant. Cowie (2013) obtained similar results in his research focused on the impact of cyberbullying on emotional health and well-being in adolescents. He found out that victims of cyberbullying felt rejected by their peers, which resulted in loneliness and could lead to social isolation. The victims of cyberbullying also feel sad, hopeless, and helpless (Raskauskas & Stoltz, 2007). The avoidance of social interaction and isolation due to cyberbullying may also decrease self-respect and cause anxiety and depression. Research has shown that

increased victimisation through cyberbullying correlates with a higher incidence of depression and anxiety among the victims (Tözun, 2018; Nixon, 2014), and that it also affects the general state of mental health (Mahanta & Khatoniyar, 2019; Fjeld et al., 2020). The third factor in the Hikikomori Questionnaire (HQ-25) is "participation in social interaction." The third hypothesis focused on the correlation between this factor and victimisation through cyberbullying. A weak significant positive correlation between these two factors was identified ($0.000 \leq 0.05$; rs = 0.070). After recoding the regression scales, it can be concluded that the higher the pupils scored on participation in social interaction, the less satisfied they were in this factor. In the items with positive connotations, such as "I like meeting new people" or "I like to share ideas with many people," the victims of cyberbullying scored in a way that indicated their negative attitude towards the situations described. The results indicate that the process of healthy social interaction has been disrupted in the victims of cyberbullying, which confirms that these individuals are at a higher risk of social isolation. Based on these findings, it can be stated that, to some extent, victims of cyberbullying lack emotional and social support, which makes it difficult to identify and resolve the problem. According to Fanti et al. (2012), emotional and social support helps at the onset of bullying and in general. Tözün (2018) also points out that the social support provided by family and friends contributes to the teenagers' self-esteem as well as their sense of security.

As for gender differences, our results are in line with the previous research findings (Wendt & Quandt, 2013; Fanti et al., 2012; Calvete et al., 2010). A significant difference in victimisation through cyberbullying was confirmed in terms of gender. On the scale tracking the prevalence of cyberbullying victims, girls (AM = 1.16) scored significantly higher than boys (AM = 1.16). Another goal of this research was to identify significant differences in victimisation through cyberbullying in different years of education. It was found that pupils in higher grades experience cyberbullying more often that their younger counterparts, i.e. the higher the grade, the more frequent cyberbullying. 9th graders aged 14 – 15 years scored the highest (AM = 1.23), while 6th graders aged 11 – 12 years scored the lowest (AM = 0.12). According to Williams & Guerra (2007), who investigated the age structure of cyberbullying victims, the proportion of cyberbullied pupils peaks in the 8th grade and declines afterwards. In Tokunaga's study (2010), victimisation through cyberbullying was the most common at the age between 12 and 14 years, which corresponds with 6th to 8th grades of a Slovak primary school. On the other hand, the study by Jaskulska et al. (2022) did not confirm any differences in age.

Conclusion

Cyberbullying is associated with social, educational, and health risks. Exposing the victim to mocking, humiliation, or other forms of aggression in the virtual environment may have far-reaching consequences, which are even more serious when it comes to children and adolescents. The feelings of fear, anxiety, and hopelessness may disrupt the victim's social relationships and lead to isolation, psychosomatic issues, self-harm, or, in the worst case, suicidal behaviour.

Cyberbullying is a multidisciplinary phenomenon that requires cooperation of several experts, whether in research or educational practice. Moreover, like other virtual risks, cyberbullying develops and transforms dynamically. Addressing the constantly emerging new risks requires ongoing empirical study. Research in this area is of great social importance, because it identifies the causes, consequences, and forms of virtual risks. Empirical findings are directly applicable in educational practice as they enable school prevention specialists to respond to current "trends" by developing efficient prevention strategies. In the Slovak Republic, cyberbullying resonates as a significant educational problem that needs to be addressed through primary prevention. As part of prevention at the 2nd level of primary schools, it is necessary to pay attention to developing the knowledge, but also the skills of pupils within the safe and responsible use of the Internet and modern technologies. Knowledge-based prevention orientations should include topics such as safe use of the Internet, protection of personal data and information, securing an account on social networks, principles of creating a secure password, and caution when meeting strangers online. Developing skills as part of prevention should be aimed at building responsibility, tolerance, empathy, positive and appropriate self-evaluation, students' self-perception, communication, or skills related to resolving conflict and issues.

Based on the inferential analysis of the data, we conclude that the existence of positive significant correlations between the factors of the Hikikomori Scale (HQ-25) and the Victimization Scale in the case of cyberbullying has been confirmed. According to this, we can state the confirmation of the hypotheses:

First hypothese: There is a statistically significant positive correlation between the "avoidance of social interaction" factor and victimisation through cyberbullying;

Second hypothese: There is a statistically significant positive correlation between the "isolation" factor and victimisation through cyberbullying, and

Third hypothese: There is a statistically significant positive correlation between the "participation in social interaction" factor and victimisation through cyberbullying.

We also determined a statistically significant difference in terms of gender and grades. Therefore, we accept these hypotheses:

Fourth hypothese: There is a statistically significant difference between the victims of cyberbullying in terms of their gender, and

Fifth hypothese: There is a statistically significant difference between the victims of cyberbullying in terms of their year of education.

The limitations of the study are identified in the following areas: the effort to examine the connections insufficiently researched so far (the relationship between social isolation and victimization in cyberspace) did not fully allow an objective comparison of the results of the empirical research with other relevant studies; the disproportionality of the research sample with regard to the representation of pupils from individual grades, and the use of a self-constructed scale for measuring victimization in cyberspace, which due to the dynamic development of the issue may not include all forms of cyberbullying.

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Elektroničko nasilje i društvena izolacija među osnovnoškolcima u Slovačkoj

Sažetak

Cilj je ovoga istraživanja utvrditi vezu između fenomena socijalne izolacije i viktimizacije putem elektroničkoga nasilja (engl. cyberbullying). Za prepoznavanje društvene izolacije kod sudionika korišten je Upitnik o hikikomoriju (HQ-25) (Teo i sur., 2018), dok se broj žrtava elektroničkoga nasilja pratio pomoću Skale viktimizacije putem elektroničkoga nasilja koju su izradili autori. Struktura instrumenata korištenih u istraživanju određena je pomoću eksploratorne faktorske analize kojom su utvrđena tri faktora u Upitniku o hikikomoriju i jedan faktor u Skali viktimizacije putem elektroničkoga nasilja. Uzorak ispitanika sastojao se od 2768 učenika na drugoj razini osnovne škole. Prosječna dob ispitanika bila je 12,7 godina (SD = 1,12). Empirijsko istraživanje potvrdilo je slabu statistički značajnu pozitivnu vezu između faktora u Upitniku o hikikomoriju (izbjegavanje društvene interakcije, izolacija, uključivanje u društvenu interakciju) i Skale viktimizacije putem elektroničkoga nasilja. Inferencijska analiza koja je uslijedila imala je za cilj utvrditi statistički značajne razlike u viktimizaciji putem elektroničkoga nasilja prema spolu i razini obrazovanja. Rezultati su pokazali da su učenice i stariji učenici imali znatno više rezultate na Skali viktimizacije outem elektroničkoga nasilja.

Ključne riječi: *elektroničko nasilje (engl. cyberbullying); prevencija; učenik; socijalna izolacija; viktimizacija.*

Uvod

Osim dobrobiti, tehnološki napredak povezan s razvojem informacijsko-komunikacijske tehnologije ima i negativne posljedice (Sujansky i Ferri-Reed, 2009) koje sa sobom donose brojne rizike. Ti su rizici vidljivi u načinu na koji ljudi provode svoje slobodno vrijeme. Isto tako, dobna granica do koje se rizično ponašanje pojavljuje postaje sve nižom (Hasan i sur., 2023).

Virtualno okružje omogućava viktimizaciju jer su informacije dostupne 24 sata dnevno, 7 dana u tjednu. Elektroničko nasilje može se manifestirati na razne načine, ovisno o stupnju razvoja informacijske tehnologije i vještinama korisnika. U prošlosti je ono uglavnom obuhvaćalo uvrede i pogrdne nazive na društvenim mrežama, no danas se javno emitiraju audio i audiovizualne snimke koje prikazuju žrtve u

neprimjerenim situacijama. Elektroničko nasilje je ozbiljan društveni i obrazovni izazov koji zahtijeva veliku pažnju u empirijskim istraživanjima. Hidnuja i Patchin (2008) definiraju elektroničko nasilje kao namjerne i ponovljene štetne radnje putem elektroničkoga teksta. Međutim, ova definicija više nije dovoljna. Dinamičan način napretka i širenja tehnologije neprestano nam donosi nove oblike elektroničkih napada usmjerenih na pojedince. Lim i Lee (2021) definiciji elektroničkoga nasilja dodali su još neke indikatore: objavljivanje nasilnih tekstova, poruka, e-poruka, slika i videozapisa; isključivanje iz grupa na društvenim mrežama; klevetanje te širenje krivih informacija s ciljem da se žrtvu ponizi ili povrijedi.

Tipovi elektroničkoga nasilja od ključne su teorijske važnosti. Za potrebe ovoga istraživanja korištena je Willardova tipologija (2006), prema kojoj postoji sedam oblika elektroničkoga nasilja:

- vrijeđanje porukama (engl. *flaming*) – vulgarne pogrde u internetskoj komunikaciji, prijetnje i uvrede, uglavnom u sobama za *chat*
- uznemiravanje (engl. *harassment*) – napadi u virtualnom svijetu koji se ponavljaju, a dolaze u obliku uvredljivih poruk;
- krađa identiteta (engl. *impersonation*) – izrada lažnoga profila i slanje materijala koji imaju za cilj povrijediti drugu osobu
- razotkrivanje (engl. *outing*) – slanje ili objavljivanje osjetljivih ili ponižavajućih informacija o žrtvi, uključujući prosljeđivanje privatnih poruka ili slika trećoj strani
- klevetanje (engl. *denigration*) – slanje štetnih, lažnih ili okrutnih informacija o žrtvi drugim osobama ili objavljivanje njihovih preuređenih fotografija
- uhođenje u virtualnom svijetu (engl. *cyberstalking*) – elektroničko uznemiravanje i prijetnje
- isključivanje (engl. *exclusion*) – isključivanje iz internetskih društvenih mreža.

Kowalski i sur. (2008) definiraju još jedan oblik elektroničkoga nasilja – videosnimanje napada (engl. *happy slapping*). U ovom slučaju žrtvu obično napada skupina počinitelja, a napad se snima i nakon toga objavljuje na internetu ili na društvenim mrežama.

Elektroničko nasilje ozbiljna je situacija koju dijete ili adolescent može doživjeti kao traumatsko iskustvo i značajno mu narušiti mentalno ili čak i fizičko zdravlje. Žrtve često pate od emocionalnih poremećaja kao što su anksioznost i stres, društvena isključenost, izolacija ili poteškoće u uklapanju u društvo vršnjaka. Sve navedeno očito ostavlja negativne posljedice na mentalno zdravlje (Fajardo-Bullón i sur., 2021; León i sur., 2011). U fokusu je ovoga rada društvena izolacija kao moguća posljedica elektroničkoga nasilja. Osoba koja pati od društvene izolacije osjeća se usamljeno i prolazi kroz negativne i uznemiravajuće emocije. To može dovesti do daljnjega povlačenja, smanjenoga izražavanja osjećaja, depresije, usamljenosti, beznadnosti te gubitka samopoštovanja i svijesti o vlastitoj vrijednosti, što utječe i na mentalno

i na fizičko zdravlje. Masoom (2016) opisuje društvenu izolaciju kao fenomen koji je posljedica interpersonalnih problema koji su toliko ozbiljni da onemogućavaju osobi ispravno funkcioniranje u interpersonalnim odnosima. Ovaj autor ističe da je društvena izolacija simptom disfunkcionalnoga društva u kojemu su etičke norme srušene ili su izgubile svoje značenje. Hikikomori sindrom specifičan je oblik društvene izolacije kojega karakterizira povlačenje iz društva, izbjegavanje društvene interakcije i obveza u periodu od barem 6 mjeseci (Teo i sur., 2018). Iako se ovaj fenomen pojavio u Japanu, prisutan je diljem svijeta i proučavan je u kontekstu *online* rizika, s posebnim naglaskom na *online* ovisnosti (Tateno i sur., 2019; Stip i sur., 2016).

Na temelju svega što je do sada u ovome radu spomenuto, cilj nam je bio provesti empirijsko istraživanje s fokusom na moguće manifestacije društvene izolacije kod žrtava elektroničkoga nasilja.

Metodologija

Žrtve elektroničkoga nasilja ispitane su pomoću Skale viktimizacije putem elektroničkoga nasilja sastavljene od 18 tvrdnji povezanih s različitim tipovima elektroničkoga nasilja. Skala je izrađena u skladu s relevantnom teorijom i omogućava prepoznavanje raznih tipova elektroničkoga nasilja, koje smo prilagodili viktimizaciji. Naš okvir utemeljen je na tipologiji koju su izradili sljedeći autori: Willard (2005), Domonkos, (2014), Hollá (2014) te Niklová i Makúchová (2018). Navedeni se autori slažu s opisom elektroničkoga nasilja kroz sljedeće oblike: vrijeđanje porukama, uznemiravanje, krađu identiteta, razotkrivanje i klevetanje. Karakteristike tih oblika elektroničkoga nasilja opisane su u uvodnom dijelu ovoga rada, a poslužile su kao polazište za opisivanje različitih teorijskih tipologija elektroničkog nasilja. Međutim, ovaj je fenomen dinamičan i cijelo vrijeme se mijenja. Usprkos sve većem i opsežnijem ispitivanju te teme, prepoznati oblici elektroničkoga nasilja i dalje ostaju značajan i rasprostranjen problem u obrazovanju i društvu. Zbog toga smo smatrali da su prethodno spomenuti teorijski okviri važni za prilagodbu viktimizaciji. Ispitanici su svoje odgovore označili na Likertovoj skali od 5 stupnjeva. Usredotočili su se na oblike i učestalost elektroničkoga nasilja koje su iskusili tijekom prethodna tri mjeseca (1 – nikada; 2 – jednom; 3 – 2-3 puta; 4 – 4-5 puta; 5 – 6 i više puta). Višedimenzionalna unutarnja struktura instrumenta koji je korišten u istraživanju ispitana je pomoću eksploratorne faktorske analize. Nakon toga je faktorska struktura provjerena konfirmatornom analizom, što je dovelo do podjele dobivenoga uzorka istraživanja na dva segmenta. Pokazalo se da je varimax metoda s ortogonalnom rotacijom najpogodnija za eksploratornu faktorsku analizu. Vrijednosti dobivene Kaiser-Mayer-Olkinovim testom (0,911) i Bartlettovim testom sfericiteta (p = 0,000 < 0,05) potvrdile su da je faktorska analiza pogodna metoda za analizu varijabli. Minimalno faktorsko opterećenje potrebno da bi se tvrdnja uvrstila u analizu bilo je 0,40. Zbog većega faktorskog opterećenja tvrdnji na više faktora istovremeno (iznad 0,40) iz skale je uklonjeno 11 tvrdnji. Nakon što su te tvrdnje uklonjene, ponovljena je eksploratorna faktorska analiza. Pokazalo se da skala kojom

se mjerio konstrukt viktimizacije putem elektroničkoga nasilja ima jednofaktorsku strukturu. Finalna skala za mjerenje viktimizacije putem elektroničkoga nasilja sastojala se od 7 tvrdnji. Pouzdanost skale određena je Cronbachovom alfom (0,890).

Tablica 1

Konfirmatorna faktorska analiza (metoda maksimalne vjerodostojnosti) provedena na drugoj polovici uzorka istraživanja potvrdila je prikladnost modela, što je procijenjeno pomoću nekoliko indeksa: CFI – komparativnoga indeksa prikladnosti (0,917); TLI – Tucker Lewisova indeksa (0,911); RMSEA – srednje kvadratne pogreške aproksimacije (0,048); SMRM – standardnoga kvadratnog odstupanja (0,045) i GFI – indeksa prikladnosti modela (0,980). Vrijednosti standardnih faktorskih opterećenja na tvrdnjama bile su iznad 0,40. Potvrđena je statistička značajnost hi-kvadrat testa (p < 0,001).

Upitnik o hikikomoriju (*HQ-25*) (Teo i sur., 2018) primijenjen je s ciljem određivanja društvene izolacije među učenicima. Ispitanici su mogli izraziti svoje slaganje ili neslaganje na Likertovoj skali od 5 stupnjeva (0 – uopće se ne slažem; 1 – donekle se ne slažem; 2- niti se slažem niti ne slažem; 3 – donekle se slažem; 4 – potpuno se slažem). Skala je obuhvatila 6 reverznih tvrdnji, koje su kasnije morale biti rekodirane.

Latentni faktori hikikomori instrumenta (HQ-25) utvrđeni su eksploratornom faktorskom analizom pomoću metode glavnih komponenti i varimax rotacije. Te su metode odabrane zato što zato što u Slovačkoj Republici nije dostupan prilagođen hikikomori HQ25 alat koji bi odgovarao tim uvjetima. Kaiser-Mayer-Olkinov test (0,932) i Bartlettov test sferociteta (p = 0,000 < 0,05) potvrdili su prikladnost faktorske analize. Prema Kaiserovom pravilu ispitana su 3 faktora. Minimalno faktorsko opterećenje na tvrdnji koja se mogla uključiti u skalu iznosilo je 0,40. Ukupno 9 tvrdnji u mjernom instrumentu pokazalo je faktorsko opterećenje veće od 0,40 na dva faktora te su oni zbog toga uklonjeni iz skale. U kontekstu Slovačke Republike, hikikomori HQ25 alat za mjerenje društvene izolacije smatra se trofaktorskim instrumentom. Faktori su imenovani na temelju originalne studije koju su proveli Teo i sur. (2018), u kojoj je korištena Hikikomori HQ-25 skala sastavljena od sljedećih faktora: društvene interakcije (11 tvrdnji), izolacije (8 tvrdnji) i emocionalne podrške (6 tvrdnji). Međutim, faktori koji su utjecali na zasićenje tvrdnji bili su nešto drugačiji u kontekstu Slovačke Republike nego u originalnoj studiji. Imena dvaju faktora stoga su modificirana kako bi se omogućili jasniji nazivi svake od tih tvrdnji pojedinačno. U ovome se istraživanju koriste sljedeća tri faktora: izbjegavanje društvene interakcije (originalan naziv bio je *socijalizacija*), izolacija te sudjelovanje u društvenoj interakciji (originalan naziv bio je *emocionalna podrška*). Pouzdanost mjernoga instrumenta provjerena je Cronbachovom alfom. Pouzdanost cijeloga instrumenta koji se koristio u istraživanju bila je α = 0,824. U originalnoj studiji (Teo i sur., 2018) izračunata vrijednost Cronbachove alfe za cijelu skalu iznosila je 0,96. Cronbachova alfa za pojedinačne faktore može se vidjeti u Tablici 2.

Tablica 2

Provedena konfirmatorna faktorska analiza (metoda maksimalne vjerodostojnosti) na drugoj polovici uzorka istraživanja potvrdila je prikladnost modela, što je procijenjeno pomoću nekoliko indeksa: CFI – komparativnoga indeksa prikladnosti (0,928); TLI – Tucker Lewisova indeksa (0,915); RMSEA – srednje kvadratne pogreške aproksimacije (0,059); SMRM – standardnoga kvadratnog odstupanja (0,040) i GFI – indeksa prikladnosti modela (0,978). Vrijednosti standardnih faktorskih opterećenja na tvrdnjama bile su iznad 0,40. Potvrđena je statistička značajnost hi-kvadrat testa (p < 0,001).

Uzorak je sastavljen od sudionika odabranih putem prigodnoga uzorkovanja. Obuhvatio je 2768 učenika druge razine osnovne škole (od 6. do 8. razreda), u dobi između 11 i 16 godina. Prosječna dob ispitanika bila je 12,7 godina. Podatci su prikupljeni putem *online* upitnika u razdoblju od rujna do studenoga 2022. godine. Upitnik je poslan ravnateljima osnovnih škola koji su bili zaduženi za njegovo podjelu sudionicima. Postupak *online* prikupljanja podataka osigurao je potpunu anonimnost i učenika i škola koje su sudjelovale u istraživanju. Istraživanje je odobrila uprava škole nakon što su roditelji učenika dali svoj pisani pristanak. Etičko povjerenstvo Sveučilišta Matej Bel u Banskoj Bystrici odobrilo je alate koji su korišteni u istraživanju. Demografske karakteristike uzorka istraživanja prikazane su u Tablici 3.

Tablici 3

Podatci su evaluirani pomoću neparametrijskih tekstova zbog toga što nije osigurana normalnost distribucije za sve varijable. Normalnost uzorka istraživanja određena je pomoću Kolomogorov-Smirnovljeva testa, Shapiro-Wilkova testa te vrijednosti spljoštenosti i asimetričnosti. Značajnost korelacije određena je Spearmanovim testom, dok su značajne razlike utvrđene pomoću Mann-Whitneyeva U testa i Kruskal-Wallisova H testa. Podatci su obrađeni pomoću računalnoga programa SPSS Statistics 25.

Ciljevi i hipoteze

Cilj je istraživanja bio utvrditi postoji li značajna veza između društvene izolacije i viktimizacije putem elektroničkoga nasilja kod učenika na drugoj razini osnovne škole.

Drugi je cilj bio utvrditi postoje li značajne razlike između žrtava elektroničkoga nasilja s obzirom na spol i godinu obrazovanja.

Hipoteze istraživanja:

Prva hipoteza: Postoji statistički značajna pozitivna korelacija između faktora „izbjegavanje društvene interakcije" i viktimizacije putem elektroničkoga nasilja.

Druga hipoteza: Postoji statistički značajna pozitivna korelacija između faktora „izolacija" i viktimizacije putem elektroničkoga nasilja.

Treća hipoteza: Postoji statistički značajna pozitivna korelacija između faktora „sudjelovanje u društvenoj interakciji" i viktimizacije putem elektroničkoga nasilja.

Četvrta hipoteza: Postoji statistički značajna razlika između žrtava elektroničkoga nasilja s obzirom na spol.

Peta hipoteza: Postoji statistički značajna razlika između žrtava elektroničkoga nasilja s obzirom na godinu obrazovanja.

Rezultati

Analiza podataka usmjerena je na utvrđivanje statistički značajne korelacije između elektroničkoga nasilja i rizika od društvene izolacije. Korelacije su izračunate na temelju dobivenih rezultata u obje skale. Rezultati su prikazani u Tablici 4.

Tablica 4

Inferencijska analiza potvrdila je slabu značajnu pozitivnu korelaciju između faktora „izbjegavanje društvene interakcije" i Skale viktimizacije putem elektroničkoga nasilja ($0,012 \leq 0,05$; rs = 0,048). Spearmanov test također je potvrdio slabu značajnu pozitivnu korelaciju između faktora „izolacija" ($0,000 \leq 0,05$; rs = 0,123), faktora „sudjelovanje u društvenoj interakciji" ($0,000 \leq 0,05$; rs = 0,070) i Skale viktimizacije putem elektroničkoga nasilja.

Daljnja statistička analiza uzorka istraživanja usmjerena je na utvrđivanje statistički značajnih razlika u Skali viktimizacije putem elektroničkoga nasilja s obzirom na spol i godinu obrazovanja. Rezultati su prikazani u Tablicama 5 i 6.

Tablica 5

Tablica 6

Mann-Whitneyev U test pokazao je da na Skali viktimizacije putem elektroničkoga nasilja djevojčice imaju značajno više rezultate od dječaka (djevojčice: p = 0,005; AM = 1,16, Me = 1,00; dječaci: AM = 0,17; Me = 1,00).

Značajna razlika s obzirom na godinu obrazovanja provjerena je Kruskal-Wallisovim H testom te je utvrđeno da ona doista postoji (p = 0,000). Najviše su rezultate imali učenici 9. razreda (AM = 1,23, Me = 1,6), na drugom su mjestu bili učenici 8. razreda (AM = 1,18; Me = 1,6), na trećem mjestu učenici 7. razreda (AM = 1.16; Me = 1), dok su najniži rezultat imali učenici 6. razreda (AM = 0,12; Me = 0,23).

Rasprava

Empirijsko istraživanje potvrdilo je slabu statistički značajnu pozitivnu korelaciju između faktora Upitnika o hikikomoriju, povezanu s 3 aspekta društvene izolacije i viktimizacijom putem elektroničkog nasilja.

U faktorima „izbjegavanje društvene interakcije" i „izolacija" potvrđena je slaba značajna pozitivna korelacija sa Skalom viktimizacije putem elektroničkog nasilja ($0,012 \leq 0,05$; rs = 0,048; $0,000 \leq 0,05$; rs = 0,123), kako je i pretpostavljeno u prve dvije hipoteze istraživanja. Usprkos niskim korelacijskim vrijednostima, rezultati su značajni. U istraživanju koje je proveo Cowie (2013) o utjecaju elektroničkoga nasilja na emocionalno zdravlje i dobrobiti adolescenata dobiveni su slični rezultati. Utvrdio je da su se žrtve elektroničkoga nasilja osjećale odbačenima od strane svojih vršnjaka,

što je dovelo do osjećaja samoće i društvene izolacije. Žrtve elektroničkoga nasilja također su se osjećale tužnima, beznadnima i bespomoćnima (Raskauskas i Stoltz, 2007). Izbjegavanje društvene interakcije i izolacija zbog elektroničkoga nasilja također mogu smanjiti samopoštovanje i dovesti do anksioznosti i depresije. Istraživanje je pokazalo da povećana viktimizacija putem elektroničkoga nasilja ima korelaciju s većom incidencijom depresije i anksioznosti među žrtvama (Tözun, 2018; Nixon, 2014) i da također utječe na opće stanje mentalnoga zdravlja (Mahanta i Khatoniyar, 2019; Fjeld i sur., 2020). Treći je faktor u Upitniku o hikikomoriju (HQ-25) „sudjelovanje u društvenoj interakciji”. Treća je hipoteza fokusirana na korelaciju između ovoga faktora i viktimizacije putem elektroničkoga nasilja. Utvrđena je slaba značajna pozitivna korelacija između ovih dvaju faktora (0,000 ≤ 0,05; rs = 0,070). Nakon rekodiranja regresijskih skala, može se zaključiti da što su veći rezultat učenici ostvarili na sudjelovanju u društvenoj interakciji, to su bili manje zadovoljni tim faktorom. Na tvrdnjama s pozitivnim konotacijama, kao što su „Volim upoznavati nove ljude” ili „Volim dijeliti ideje s mnogim ljudima”, rezultati žrtava elektroničkoga nasilja upućuju na to da imaju negativan stav prema opisanim situacijama. Rezultati također upućuju na to da je kod žrtava elektroničkoga nasilja narušen proces zdrave društvene interakcije, što samo potvrđuje da tim osobama prijeti veći rizik od društvene izolacije. Na temelju dobivenih rezultata može se u određenoj mjeri tvrditi da žrtvama elektroničkoga nasilja nedostaje emocionalna i socijalna podrška, što im otežava prepoznavanje i utvrđivanje problema. Kako tvrde Fanti i sur. (2012), emocionalna i socijalna podrška od velike je pomoći kada se zlostavljanje općenito počne događati. Tözün (2018) također ističe da socijalna podrška koju pružaju obitelj i prijatelji doprinosi većem samopoštovanju i osjećaju sigurnosti kod tinejdžera.

Što se tiče razlika s obzirom na spol, naši su rezultati u skladu s rezultatima ranije provedenih istraživanja (Wendt i Quandt, 2013; Fanti i sur., 2012; Calvete i sur., 2010). Potvrđena je značajna razlika u viktimizaciji putem elektroničkoga nasilja s obzirom na spol. Na skali kojom se pratio broj žrtava elektroničkoga nasilja, djevojčice (AM = 1,16) su imale značajno više rezultate od dječaka (AM = 1,16). Drugi je cilj ovoga istraživanja bio utvrditi značajne razlike u viktimizaciji putem elektroničkoga nasilja u različitim godinama obrazovanja. Utvrđeno je da učenici u višim razredima češće doživljavaju elektroničko nasilje nego učenici u nižim razredima, tj. što je viši razred, to je elektroničko nasilje češće. Najviše su rezultate imali učenici 9. razreda, u dobi između 14 i 15 godina (AM = 1,23), dok su učenici 6. razreda, u dobi između 11 i 12 godina imali najniže rezultate (AM = 0,12). Prema Williamsu i Guerri (2007), koji su ispitivali dobnu strukturu žrtava elektroničkoga nasilja, broj učenika koji su ga iskusili doseže vrhunac u 8. razredu, a zatim opada. Studija koju je proveo Tokunaga (2010) pokazuje da je viktimizacija putem elektroničkoga nasilja najčešća u dobi između 12 i 14 godina, što odgovara 6. i 8. razredu osnovne škole u Slovačkoj. S druge strane, Jakulska i sur. (2022) u svojoj studiji nisu potvrdili nikakve razlike s obzirom na dob.

Zaključak

Elektroničko nasilje povezano je s društvenim, obrazovnim i zdravstvenim rizicima. Izlaganje žrtve izrugivanju, ponižavanju ili drugim oblicima agresije u virtualnom okružju može imati dalekosežne posljedice, koje mogu biti i ozbiljnije kada se radi o djeci i adolescentima. Osjećaj straha, anksioznosti i beznadnosti može poremetiti žrtvine društvene odnose i dovesti do izolacije, psihosomatskih problema, samoozljeđivanja te, u najgorem slučaju, do suicidalnoga ponašanja.

Elektroničko je nasilje multidisciplinarni fenomen koji zahtijeva suradnju nekoliko stručnjaka, i u istraživačkoj i u obrazovnoj praksi. Štoviše, kao i ostali virtualni rizici, elektroničko nasilje razvija se i mijenja vrlo dinamično. Potrebna su stalna empirijska istraživanja koja se bave novim rizicima koji se neprestano pojavljuju. U tom su području istraživanja od velike društvene važnosti jer se pomoću njih prepoznaju uzroci, posljedice i oblici virtualnih rizika. Empirijski se rezultati mogu primijeniti izravno u obrazovnoj praksi jer pomažu stručnjacima koji se bave prevencijom u školama reagirati na aktualne „trendove" kroz razvijanje učinkovitih strategija prevencije. U Slovačkoj Republici elektroničko se nasilje smatra značajnim problemom u obrazovanju te se na njega mora odgovoriti kroz prevenciju u osnovnoj školi. U sklopu preventivnih mjera na drugoj razini osnovne škole potrebno je kod učenika razvijati znanja i vještine o sigurnom i odgovornom korištenju interneta i modernih tehnologija. Preventivne mjere koje se temelje na znanju uključuju teme poput sigurnoga korištenja interneta, zaštite osobnih podataka, sigurnosti računa na društvenim mrežama, osnova stvaranja sigurne lozinke te opreza pri upoznavanju stranaca u virtualnom okružju. Razvoj vještina kao mjera prevencije trebao bi biti usmjeren na razvoj odgovornosti, tolerancije, empatije, pozitivne i odgovarajuće samoevaluacije i samopercepcije kod učenika, komunikacije ili vještina koje su povezane s rješavanjem konflikta i problema.

Na temelju inferencijske analize podataka možemo zaključiti da je potvrđeno da postoje značajne pozitivne korelacije između faktora na Hikikomori skali (HQ-25) i Skali viktimizacije u slučaju elektroničkoga nasilja. Prema tome, možemo potvrditi hipoteze:

Prva hipoteza: Postoji statistički značajna pozitivna korelacija između faktora „izbjegavanje društvene interakcije" i viktimizacije putem elektroničkoga nasilja.

Druga hipoteza: Postoji statistički značajna pozitivna korelacija između faktora „izolacija" i viktimizacije putem elektroničkoga nasilja.

Treća hipoteza: Postoji statistički značajna pozitivna korelacija između faktora „sudjelovanje u društvenoj interakciji" i viktimizacije putem elektroničkoga nasilja.

Također smo utvrdili statistički značajnu razliku s obzirom na spol i razred. Stoga prihvaćamo ove hipoteze:

Četvrta hipoteza: Postoji statistički značajna razlika između žrtava elektroničkoga nasilja s obzirom na spol i

Peta hipoteza: Postoji statistički značajna razlika između žrtava elektroničkoga nasilja s obzirom na godinu obrazovanja.

No, postoje i ograničenja ovoga istraživanja: napori uloženi u ispitivanje veza koje do sada nisu dovoljno istražene (veza između društvene izolacije i viktimizacije u virtualnom svijetu) nisu u potpunosti omogućili objektivnu usporedbu rezultata empirijskih istraživanja s drugim relevantnim istraživanjima; neproporcionalnost uzorka istraživanja s obzirom na zastupljenost učenika iz pojedinih razreda te upotreba skale za mjerenje viktimizacije u virtualnom svijetu koju smo sami izradili, koja zbog dinamičnoga razvoja ispitivanoga problema možda ne uključuje sve oblike elektroničkoga nasilja.

Napomena

Ovo istraživanje rezultat je KEGA projekta br. 024UMB-4/2022 „Prevencija rizičnoga ponašanja na internetu".