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Motivation to Engage in Online Challenges Among Cyberbullying Actors in Primary School Settings and Their Risks

Motivácia zapájania sa do online výziev u aktérov kyberšikanovania v podmienkach základných škôl a ich riziká

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Abstract:

The paper aims to analyse the motivation of primary school pupils in the roles of cyberbullying actors (aggressors, victims) engaging in online challenges and to bring to light other risks associated with online challenges. As part of empirical research, we used the questionnaire method to address 2,768 primary school pupils in the Slovak Republic. In the research set, we identified 256 (9.3%) aggressors and 322 (11.6%) victims of cyberbullying. Based on the inferential analysis of the data, we identified a statistically significant weak positive relationship between the Cyberaggression Scale and the Social Motivation subscale of the Viral Internet Challenges Scale VICH-S (p= 0.040, rs=128) and also a statistically significant weak positive relationship between the Cyberspace Victimization Scale and subscale Social motivation (p= 0.001, rs=166).

Keywords:

Cyberbullying; online challenges; aggressor; victim

Abstrakt:

Cieľom príspevku je analyzovať motiváciu žiakov základných škôl v roly aktérov kyberšikanovania (agresori, obete) pri zapájaní sa do online výziev a priblížiť ďalšie riziká, ktoré sa s online výzvami spájajú. V rámci empirického výskumu sme oslovili 2 768 žiakov základných škôl v SR prostredníctvom dotazníkovej metódy. Vo výskumnom súbore sme identifikovali 256 (9,3%) agresorov a 322 (11,6%) obetí kyberšikanovania. Na základe inferenčnej analýzy dát sme identifikovali štatisticky významný slabý pozitívny vzťah medzi Škálou kyberagresie a subškálou Sociálna motivácia meracieho nástroja Viral Internet Challenges Scale VICH-S (p= 0,040, rs=128) a tiež štatisticky významný slabý pozitívny vzťah medzi Škálou viktimizácia v kyberpriestore a subškálou Sociálna motivácia (p= 0,001, rs=166).

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Kľúčové slová:
Kyberšikanovanie; online výzvy; agresor; obeť

Introduction

The image of society has changed dramatically in recent decades. The dominant factor in this change has been the advent of information and communication technologies, which have made everyday life much easier for people. However, in addition to their positive aspects, they also carry considerable risks, which have been increasing in intensity over the years. It is therefore necessary to pay close attention to them.

The problem of risky online behaviour is most acute in the age group of children and adolescents. Especially during the period of pubescence, adolescent individuals are considerably determined by their own, often stormy, physical and mental changes characteristic of the period of human development. The emotional instability and impulsivity inherent in this age increase the risk of any form of risky behaviour, including risky behaviour in the online environment. For this reason, selected forms of risky online behaviour - cyberbullying and online risk challenges among primary school pupils in grades 6-9 in Slovakia - became the focus of this study.

Thanks to the Internet, cyberbullying has spread to almost all corners of the world in recent years, not excluding Slovakia. Therefore, many foreign and domestic authors have contributed to its theoretical anchoring (Patchin & Hinduja, 2012; Kopecký, 2016; Hollá, 2017; Strohmeier & Gradinger, 2022; Niklová et al., 2022 and others). Cyberbullying has also become the focus of much empirical research (Vogels, 2022; Izrael et al., 2020; Ševčíková & Šmahel, 2009), which only demonstrates the urgent need to address this exponential socio-educational problem. The above is not a new phenomenon. Cyberbullying has been transformed from bullying, which, owing to information and communication technologies, has been transposed from everyday life to virtual space.

Balsey (2019) defines cyberbullying as an activity involving the use of information and communication technologies to promote deliberate, repeated and hostile behaviour by an individual or group intended to harm others. According to Kolář (2011, p. 83), cyberbullying is "deliberate violent behaviour through modern means of communication, especially the Internet and mobile phones". Cyberbullying takes place in a seemingly anonymous environment. It is a premeditated act on the part of the aggressors.

Janková (2020) states that cyberbullying occurs in the majority (73.6%) of Slovak schools. The forms of cyberbullying are varied. According to the nature of the attacks, they can be divided into:

- *social* – excluding Internet users from online groups, stealing and misusing passwords, identity theft;
- *verbal* – takes place through communication programs and applications supporting online calls and voice messaging (e.g. Skype, Messenger, Telegram, and others) and includes slander, insults, gossiping and the like;
- *non-verbal* – takes place in written form by sending offensive texts, defamatory images and photographs (Hollá, 2017).

In domestic and foreign sources, we can encounter different typologies of cyberbullying actors, most often classified based on their motivation to participate in this pathological behaviour. Hollá (2013) divides cyberbullying actors into:

- *cyber-aggressor* (or also cyberbully) - carries out online bullying;
- *combined aggressor* - carries out both offline and online bullying;
- *aggressive cyberbully* - can be a cyber-aggressor and a cyberbully at the same time;
- *passive cyberbully*;
- *fake cyber-victim*, this is not a victim in the true sense of the word, but a person who is the aggressor pretending to be a victim;
- *bystanders and supporters* - they are characterised by inaction.

Alarming in this regard is the empirical finding (Hollá, 2017, p. 97) that many *"cyber-aggressors were first cyber-victims and use the forms of cyberbullying they themselves have been subjected to to bully"*. For this reason, it is imperative to work with all actors involved in cyberbullying as part of school-based prevention.

Risky online challenges are another form of risky behaviour we focus on in the study. The Internet and social media have led to the emergence and development of a relatively new form of risky online behaviour—the so-called online challenges. These challenges can not only be a fun way for children and young people to escape boredom but also extremely harmful, and in some cases even health- and life-threatening.

For example, online challenges such as *Blue Whale* have made the list of the most dangerous online challenges on the Internet. It is a perilous game in which participants complete set tasks for 50 days (one per day). The intensity and danger of the challenges escalate from humiliating tasks to self-harm and, on the last day of the challenge, to participants committing suicide. A considerably dangerous online challenge is also *The Hot Pepper Challenge*, which appears in various forms worldwide. The challenge tasks participants with eating as much of the spicy food as possible in large quantities. Another dangerous online challenge has been the *Sunburn Art Challenge*, where participants apply various objects or sunscreen to their exposed skin to get the rest of their untreated skin sunburned, creating a visible pattern on their skin. Also hazardous is the 2022 *NyQuil Chicken* online challenge, in which participants cook and consume chicken breasts cooked in a blue syrup designed to treat NyQuil colds and rhinitis, which contains acetaminophen, dextromethorphan, and doxylamine. This activity can significantly harm the participants' health in the challenge because even if they do not consume the food, cooking the food results in inhaling harmful fumes from the medication in question. Other risky online challenges are the *Cinnamon Challenge, Swatting*, and many others.

1 Methodological background and characteristics of the research sample

For the study, we will work with two scales of our construction that are aimed at measuring cyberaggression and victimisation in cyberspace and the *Viral Internet Challenges Scale - VICH-S* (Ortega-Barón et al., 2022), which measures motivation to engage in online challenges.

The Cyberbullying Scale consists of 19 items and measures the frequency of cyberbullying perpetrated by the pupils in the last three months. The scale's reliability, measured using Cronbach's alpha, has a value of $\alpha = 0.904$. The Cyberbullying Victimization Scale consists of 17 items and measures the frequency of the respondent's contact with cyberbullying in the past three months. The internal reliability of the scale has a value of $\alpha=0.789$. In establishing the construct validity of the cyberbullying scales,

we did not identify any hidden factors through exploratory factor analysis so that we will work with the scales as single-factor instruments.

We used the *Viral Internet Challenges Scale - VICH-S* (Ortega-Barón et al., 2022) to measure pupils' motivation to engage in online challenges. It is a 10-item scale in which pupils were given the opportunity to express their level of agreement on a 5-point Likert scale. Through exploratory factor analysis and the principal components method, we also identified two latent factors in the VICH-S scale in our setting: *Psychological Motivation and Social Motivation*. The minimum factor loading of an item for its inclusion in one of the factors was 0.50. Cronbach's alpha for the entire VICH-S scale has a value of $\alpha = 0.876$.

We also asked the pupils dichotomous questions in which they could indicate whether they had participated in each online challenge and an open-ended question in which they could indicate other challenges in which they had participated.

The implementation of the empirical research took place at the end of 2022. The target group was pupils in grades 6 to 9 in primary schools in Slovakia. After data collection and cleaning, the research sample consisted of 2,768 pupils. We used the available sample in the research intentions. To identify aggressors and victims, we used the mean scores achieved by the respondents on the Cyber Aggression Scale and the Victimization in Cyberspace Scale. The cutoff mean score at which we identified pupils as aggressors or victims was AM=1.4 or higher. That mean score indicated repeated exposure to one or more forms of cyberbullying as a victim or aggressor. Subsequently, within the subgroup of aggressors and victims, we identified those pupils who engaged in one or more risky online challenges simultaneously.

2 Results and discussion

Cyberbullying dramatically affects the school climate, achievement, well-being of pupils and ultimately, the educational process itself. Theoretical attention has been paid to the forms (Vagaská et al., 2023; Nazir & Thabassum, 2021), causes (Nuray et al., 2019), and consequences of cyberbullying (Fan et al., 2019; Gardella et al., 2017). The ambition of the authors of this paper is to highlight the possible comorbidity of risky online behaviour, i.e. to identify the correlation between cyberbullying and the motivation to engage in online challenges in pupils. Also, to further analyse the prevalence of cyberbullying actors who participated in risky online challenges.

We identified 256 (9.3%) aggressors and 322 (11.6%) victims of cyberbullying in the study sample. In terms of gender structure, boys (169/66%) were more likely to be aggressors than girls (87/34%). In the case of victims, the gender difference is not so marked, but there is still a higher prevalence of victims among boys (166/51.6%) than among girls (156/48.5%). Also, Cava et al. (2022) point out that boys are more likely to commit cyberbullying than girls. Similar trends are confirmed by research on victims of cyberbullying. Agus et al. (2021), in a research sample of 650 pupils aged 12 to 16 years, identified 53% of boys and 47% of girls among the victims.

Cyberbullying from the perspective of aggressors is a multifactorial phenomenon. Based on the current scientific knowledge, we can include among its causes, without claiming completeness, e.g. boredom, reduced social control in cyberspace, or the desire to attract attention (Hollá, 2016). In the context of victims, rather negative consequences of cyberbullying are logically discussed, which include social isolation, difficulties in establishing relationships, anxiety, lowered self-esteem, sleep disturbances or even self-

harm and suicidal thoughts (Ju, 2023; Šmahaj, 2014). Several of these factors associated with cyberbullying can also be seen as a motivating factor in engaging in (risky) online challenges. Abraham et al. (2022) report that engaging in online challenges is both a source of fun for young people and a way of gaining attention from those around them and being part of a community. A strong desire to be part of a peer group, especially during adolescence, often leads to acceptance and embracing of some form of risk. Engaging in (risky) online challenges can be influenced by several factors on the part of both aggressors and victims, e.g. the desire to draw attention to oneself or to gain the admiration of peers.

In this context, we were interested in whether there is a relationship between the motivation to engage in online challenges and cyberbullying from the perspective of aggressors and victims.

We present an inferential analysis of the relationship between scales measuring cyberaggression and victimisation in cyberspace and the *Viral Internet Challenges Scale VICH-S* measuring motivation to engage in (risky) online challenges in Table 1. When analysing motivation, we worked with the total number of aggressors and victims, regardless of whether they engaged in risky online challenges or not. We find significant relationships at a significance level of $\alpha = 0.05$.

Table 1 *Inferring significant relationships between scales measuring the prevalence of cyber-aggression/victimisation and the VICH-S scale*

	Factors of VICH-S scale	
Cyber-Aggression Scale	**Psychological motivation**	**Social motivation**
Spearman's rho	0.030	0.128
p value	0.636	0.040
Victimisation in Cyberspace Scale		
Spearman's rho	0.046	0.166
p value	0.416	0.003

Correlation analysis revealed a statistically significant weak positive relationship between the *Cyber-Aggression Scale* and the VICH-S *Social Motivation* subscale ($p=0.040$; $r_s= 0.128$). Similarly, we identified a statistically significant weak positive relationship between the *Cyberspace Victimization Scale* and the VICH-S *Social Motivation* subscale ($p=0.003$; $r_s= 0.166$). The higher the pupils scored on scales measuring the prevalence of cyberbullying, the higher they scored on the subscale focusing on social motivation to engage in online challenges. For Psychological Motivation, there was no statistically significant relationship with scales measuring the prevalence of cyberbullying. The above suggests that the influence of the social environment plays a more dominant role in the engagement of cyberbullying actors in online challenges.

In the following, we focus on describing cyberbullying actors who engage in one or more risky online challenges simultaneously. Of the aggressors, 118 (46.1%) and 156 (48.5%) of the victims engaged in risky challenges, indicating a tendency for young people to engage in risky behaviour in multiple domains at the same time. Širůčková (in Miovský et al., 2010, p. 31) states in this context that: 'A person who behaves riskily in one

way also tends to behave riskily in other areas. It is the interconnectedness of certain manifestations of risk behaviour that takes the form of a lifestyle". This phenomenon can be referred to as the risk behaviour syndrome (Jessor & Jessor, 1977).

We present the structure of cyberbullying actors in terms of their involvement in selected risky online challenges in Table 2.

Table 2 *Engaging cyberbullying actors in risky online challenges*

Risky online challenges	Aggressors		Victims		Total	
#Ghost Pepper Challenge	72	61.0%	92	59.0%	164	59.9%
#Cinnamon Challenge	69	58.5%	95	60.6%	164	59.9%
#Choking Challenge	49	41.5%	67	43.0%	116	42.3%
#Eyeballing Challenge	40	33.9%	47	30.1%	87	31.8%
#Until Tomorrow	53	44.9%	33	31.1%	86	31.4%
Total	118	100%	156	100%	274	100%

The findings presented above are alarming, especially with risky challenges such as the #Cinnamon Challenge, #Choking Challenge or #Eyeballing Challenge, which can cause serious health problems and even death. Another issue arising from the findings is the fact that many pupils were engaging in multiple challenges at the same time.

We did not observe significant percentage differences between aggressors and victims when engaging in risky online challenges. The exception is the #Until Tomorrow challenge, which involved a much higher number of cyberbullying aggressors (44.9%) than victims (31.1%). The essence of the challenge is to post an embarrassing or unflattering photo. The risk of this challenge lies primarily in the possibility of such a photo being misused or in the fact that the individual will be targeted by cyber aggressors, which may have acted in particular as a deterrent in the case of the victims.

In the open-ended questions, rather innocuous online prompts were given, with the exception of prompts such as 'jump out of a first-floor window' and 'blue whale', which were given by pupils in the role of cyberbullying aggressors.

Conclusion

The research results presented here confirm how dangerous virtual environments can be for children and adolescents. They also declare that risky behaviour often does not occur in isolation. The knowledge that a child can be at risk of several risks at the same time is essential in creating prevention projects and strategies in the school environment and in the setting of proper family education in relation to digital technologies.

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