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How Minors Perceive Online Violence? A Comparative Analysis of Slovenian and Bulgarian Reality*

Jak nieletni postrzegają przemoc w Internecie? Analiza porównawcza rzeczywistości słoweńskiej i bułgarskiej

ABSTRACT

The paper represents both the qualitative and quantitative analyses of the LEAGUE project results, taking into account the sample collected in Slovenia and Bulgaria, on the perception of online violence against minors and online safety. The quantitative analysis is based on data collected via an online survey answered by 200 male participants ($n = 200$) aged 10 to 18 from Slovenia and Bulgaria. Most participants were between 15 and 18 years old (75%). A quarter of participants were aged 10 to 14. It became evident that children are not safe online, which is no mystery given that the majority of online spaces were not made for children nor with children in mind. Prepubescents, pubescents and adolescents all face considerable threats online, ranging from less severe yet damaging ones, such as cyberbullying and false impersonation, to much more serious threats that involve sexual abuse and other sexually motivated crimes.

Keywords: online violence; comparative analysis; online gaming; violence against minors

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INTRODUCTION

The technological advances of the current century have ensured that many more people have access to the Internet, notably, children. In 2015, and for the first time globally, every 1 out of 3 internet users was a child[1] and thus, with this ever-increasing online presence, children may encounter risks that they are not equipped to deal with, neither cognitively nor emotionally. Online risks to children are broadly classified into four general categories: aggressive, sexual, values and commercial,[2] with the nature of these risks varying according to how a child interacts with the digital world. This dimension is meant to recognize the role of children in online interactions, both as recipients and participants. It is important to note that the purpose of the assignment of kids as participants is not to blame kids for encountering harmful online situations but rather to elucidate the complex relationships and interactions that pave the way for online risk.

Due to the technological leaps of the current century, these online risks may occur across a variety of media and encompass different threats. Keeping in mind that cybersecurity is a common good that must be protected by law,[3] it is urgent to ensure its effective action. As of now, there are a large number of online platforms and websites, initially designed for use by adults, that children can easily access, which puts them at risk both online and offline. Around half of secondary school pupils and a quarter of primary school have disclosed communicating with unfamiliar individuals online,[4] and over 1 in 10 students aged 8 to 11 as well as almost 2 in 10 students aged 12 to 15 have admitted encountering online behaviour that they considered inappropriate or disconcerting.[5] These findings are closely related to the results of the questionnaire conducted in LEAGUE project, where 23% of the respondents said that they either feel somewhat safe (19%) or not safe at all (4%), highlighting that a significant proportion of children do not feel adequately safe when online, with the risks varying from violence to pornography.

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[1] A. Green, C. Wilkins, G. Wyld, *Keeping Children Safe Online*, 2019, https://www.thinknpc.org/wp-content/uploads/2019/07/Keeping-Children-Safe-Online-NPC-Nominet-ParentZone-2019.pdf (access: 27.3.2025).

[2] S. Livingstone, J. Davidson, J. Bryce, S. Batool, C. Haughton, A. Nandi, *Children's Online Activities, Risks and Safety: A Literature Review by the UKCCIS Evidence Group*, 2017, https://www.lse.ac.uk/business/consulting/assets/documents/childrens-online-activities-risks-and-safety.pdf (access: 27.3.2025).

[3] J. Kostrubiec, M. Karpiuk, D. Tyrawa, *The Status of Municipal Government in the Sphere of Ecological Security*, "Hungarian Journal of Legal Studies" 2024, vol. 65(2), p. 175.

[4] A. Green, C. Wilkins, G. Wyld, *op. cit*.

[5] *Ibidem*; S. Livingstone, J. Davidson, J. Bryce, S. Batool, C. Haughton, A. Nandi, *op. cit*.

Thus far, efforts to tackle online risk towards children, often resulting in abuse, have not been sufficient, and children to this day remain significantly unsafe online.[6] It is no mystery that children are confident using a variety of electronic devices, from computers to smartphones, and the impression often attributed by adults, that younger generations are "tech natives", presents an obstacle towards effectively tackling the lack of online safety for children. It is a reality that the online space is one that children have occupied for many years and will continue to do so in even greater numbers in the future, which is why ensuring the protection of children's rights and safety online is adamantly moving forward. Additionally, aside from online safety, children should have access to means that provide them with the critical skills and resilience required to mediate online risks, as opposed to excessively restrictive strategies that aim, but often fail to repel any risks involved.[7] The LEAGUE project ultimately aims to assist in the creation of artificial intelligence software that is capable of assisting children directly and independently in situations where this is a real or perceived risk by a child online.[8]

Children's widespread access to electronic devices includes, e.g., access to various gaming consoles and devices, which in turn provide children with entry to spaces that are much less monitored and controlled compared to social media platforms.[9] Around 54% of children aged 7 to 16 use the Internet to play games, preceded only by watching video clips (59%) and listening to music (56%), yet, it is worth noting that, as children age, interest in playing online games (54%) declines, while social networking (40%) and listening to music (56%) are prioritized.[10] Thus, a significant proportion of children participate in online gaming, as the questionnaire results suggest, where 85% of children surveyed reported playing games online. Moreover, the genre and the nature of the games being played vary significantly across both gender and age, as boys aged 13 to 18 are significantly more engaged in online gaming in relation to their female counterparts; additionally, boys in the same age group prefer aggressive and/or violent games,[11] often MMORPGs (mas-

[6] A. Green, C. Wilkins, G. Wyld, *op. Cit.*; S. Livingstone, J. Davidson, J. Bryce, S. Batool, C. Haughton, A. Nandi, *op. cit.*; H. Bentley, O. O'Hagan, A. Raff, I. Bhatti, *How Safe Are Our Children? The Most Comprehensive Overview of Child Protection in the UK*, 2016, https://careleaverpp.org/wp-content/uploads/2017/03/how-safe-children-2016-report.pdf (access: 27.3.2025).

[7] S. Livingstone, J. Davidson, J. Bryce, S. Batool, C. Haughton, A. Nandi, *op. cit*.

[8] It should also be remembered that the large-scale collection of data, which is necessary for the proper functioning of artificial intelligence and automated decision-making processes, always poses a risk of violating certain human rights and freedoms. This applies both to the development of algorithms and to the functioning of artificial intelligence. See J. Kostrubiec, *Sztuczna inteligencja a prawa i wolności człowieka*, Warszawa 2021, p. 21.

[9] S. Livingstone, J. Davidson, J. Bryce, S. Batool, C. Haughton, A. Nandi, *op. cit*.

[10] *Ibidem*.

[11] C. Hellström, K.W. Nilsson, J. Leppert, C. Åslund, *Influences of Motives to Play and Time Spent Gaming on the Negative Consequences of Adolescent Online Computer Gaming*, "Computers in Human Behavior" 2012, vol. 28(4).

sively multiplayer online role-playing games), whereas girls in that age range do not engage in that genre often.

However, a more important aspect of children's online gaming is the prevalence of risk and harm associated with their online gaming habits. As previously mentioned, there is a considerable risk against children across online spaces, including online gaming spaces. Some of these spaces are meant for online gamers as young as 8 years old,[12] such as the popular gaming website Roblox, with many of the surveyed participants in the questionnaire stating that they do play Roblox, and, in 2017, the Canadian Center for Child Protection issued a warning after a series of numerous reports that the gaming website was being used to lure and groom children,[13] with some children reportedly receiving sexually explicit chat messages and requests to meet up through the website's chat service. Similar warnings have been issued in the US, the UK, and Australia, yet, Roblox is not the only game where there are instances of sexual harassment or sexual grooming against children. Online gaming platforms such as Minecraft, League of Legends, and Fortnite have been used by sex offenders as means to communicate with children to obtain child sex abuse material (CSAM).[14]

The games mentioned previously were all accessed by the children surveyed through the questionnaire, which further highlights the need for proper support and strategies that children desperately require online if they are ever to feel safe surfing the World Wide Web. According to the LEAGUE questionnaire, around 47% of children surveyed say they never accept friend requests from individuals they are not familiar with, yet almost 10% of these children report that they do share their contact information with a stranger. However, a significant number of children surveyed indicated that they either share fake information instead or that they do not come across these situations because they only communicate with friends. Nonetheless, this does not negate the need for a better approach to the associated harms and risks revolving around children's online gaming habits, especially with 10% of children reporting upsetting content[15] as they engage in online gaming. As aforementioned, equipping children with the necessary tools and knowledge to deal with potentially harmful and stressful situations is much more effective in contrast to overly restrictive approaches.

[12] R. Broadhurst, *Child Sex Abuse Images and Exploitation Materials*, [in:] *The Human Factor of Cybercrime*, eds. R. Leukfeldt, T. Holt, London 2019.

[13] *Ibidem*.

[14] *Ibidem*.

[15] A. Green, C. Wilkins, G. Wyld, *op. cit*.

INTERNET USE AND ONLINE GAMING

Children have unprecedented access to the Internet, which provides them with the opportunity to view a plethora of digital content that comes in various forms, and they access this content through a variety of means as well. A breakdown of the various devices available to children shows that the use of standard TV sets and desktop computers has been decreasing, while the use of tablet computers, smartphones and smart TV sets has been increasing over the same period.[16] Furthermore, across eight countries in Europe and including 6,400 parents, the analysis also highlighted that 50% to 70% of children, depending on the country, aged 6 to 14 have access to a personal smartphone while access to a tablet or a laptop/desktop was considerably lower.[17]

It is also worth noting that children have Internet access virtually everywhere. The majority of children aged 6 to 14, 75% to 90%, access the Internet in a public room at home, followed by their room 42% to 76%, at school, and at someone else's home, such as friends or relatives.[18] This adds to the potential occurrences of harmful situations for children online, especially in spaces that are not supervised or monitored by adults. With the availability of several devices that enable fast and continuous access to the Internet and social media, as well as the variety of locations that enable ease of access to the web, it comes as no surprise that children spend a notable amount of time on these devices, and in turn, the Internet.

On average, boys spend much more time on the Internet compared to girls, 3.1 hours compared to 2.6 hours, and several children, often by the age of 16, spend around 4 hours per day on average. Moreover, while children aged 5 to 10 access and use the Internet less than their older peers, there still has been a significant increase in Internet usage among that age group.[19]

Age represents the primary factor that distinguishes between children's time spent online and the nature of the content being viewed, while gender concerns the viewing patterns and preferences regarding Internet use as opposed to its accessibility.

When it comes to the reasons children go online, that also varies depending on age. Children aged 7 to 10 prioritize using the Internet for playing games over listening to music, watching videos and even doing homework. This trend significantly decreases as children reach the age of 11 when using the Internet to listen to music, watch videos, message friends and family, and use social media becomes much more important. Facebook and Instagram emerged as the top applications for general use and communications, both amongst children aged 8 to 12 and

[16] S. Livingstone, J. Davidson, J. Bryce, S. Batool, C. Haughton, A. Nandi, *op. cit*.
[17] *Ibidem*.
[18] *Ibidem*.
[19] *Ibidem*.

children aged 13 to 15, while YouTube was the most visited website for watching and listening to content.[20]

The games mentioned previously were all accessed by the children surveyed through the questionnaire, which further highlights the need for proper support and strategies that children desperately require online if they are ever to feel safe surfing the World Wide Web.

CHILDREN'S PERCEPTION OF ONLINE RISK AND ONLINE PRACTISES

The perception of risk is something that varies significantly across cultures, as risk perception is reliant on cultural, social, economic and even historical factors.[21] Additionally, individual characteristics also play a role in risk perception amongst children online. Children are often regarded as too young and naive to understand the actual privacy implications of the Internet, which may explain the lack of conclusive research on children's perception of online harm and risk as well as the different coping mechanisms that children employ in situations of perceived or actual online risk. Yet, this understanding of children's perception of online risk, and equally important, the manner through which children approach and resolve risky online situations, is of utmost importance to tackling the incidence of child sexual abuse online.[22] In fact, children are quite capable of identifying certain online risks,[23] such as revealing private information online and oversharing personal information, while children are not fully aware of online privacy concepts, including online tracking and targeted advertising. Similarly, cybersecurity warnings commonly found on websites where there is content that is not safe for everyone, do not go unnoticed by children,[24] and there is a fairly clear understanding of these commonly used symbols that even adults confuse sometimes.

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[20] *Ibidem*.

[21] G. Mascheroni, A. Jorge, L. Farrugia, *Media Representations and Children's Discourses on Online Risks: Findings from Qualitative Research in Nine European Countries*, "Cyberpsychology: Journal of Psychosocial Research on Cyberspace" 2014, vol. 8(2).

[22] P. Bocij, *Cyberstalking: Harassment in the Internet Age and How to Protect Your Family*, Westport 2004.

[23] J. Zhao, G. Wang, C. Dally, P. Slovak, J. Edbrooke-Childs, M. Van Kleek, N. Shadbolt, *'I Make Up a Silly Name': Understanding Children's Perception of Privacy Risks Online*, [in:] *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19)*, New York 2019.

[24] R. Jeong, S. Chiasson, *'Lime', 'Open Lock', and 'Blocked' Children's Perception of Colors, Symbols, and Words in Cybersecurity Warnings*, [in:] *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20)*, New York 2020.

Moreover, when it comes to online encounters of a sexual nature, such as sexting,[25] children possess sufficient awareness of cyber grooming and online sexual solicitation,[26] and mediation factors, such as the media and parents, play a pivotal role in the perception and understanding of these online risks. The notion of "stranger danger" translates across cultures, and after bullying, whether online or offline, children consider strangers to be the most threatening risk, both online and offline. Concerning online grooming specifically, children aged 9 to 16 are aware of the process of cyber grooming, an awareness that is heavily influenced by the media,[27] and this awareness extends to terms often used when discussing the topic of online sexual abuse against children, including but not limited to: "paedophiles", "perverts", "rape", "rapist", and "kidnap".[28] Moreover, it appears that children in the same age group adhere to the stereotypical representation of sexual abusers as mentally diseased individuals whose intentions are to harm children. These findings are congruent with the results of the LEAGUE questionnaire, where the majority of children revealed that they are aware of terms such as cyberbullying (89%), sexting (53%), online grooming (61%), sexual harassment (74%) and sextortion (48%).

Thus far, it is more than evident that children face a plethora of unimaginable risks and harms online, from the compromise of personal information to the potential of sexual abuse.[29] How exactly children deal with these perceived or actual risks varies significantly, and understanding how children deal with harmful situations online is essential to the development and implementation of approaches and strategies that would ensure a safer online environment for children. In a situation of perceived or actual threat online, children adopt an approach based on two major dimensions, engagement vs disengagement, and technical vs non-technical.[30] It is important to distinguish between behavioural avoidance tactics, which are planned behaviours aimed at withdrawing from threatening situations, and general indifference or passive behaviour. Additionally, girls seem to be more responsive and communicative in threatening online situations in comparison to their male counterparts[31] which may be explained by girls' tendency for higher engagement levels, on average, as opposed to boys'.

Based on the information highlighted to this point, there is a clear need for better strategies aimed at protecting children online, and these approaches have to vary ac-

[25] M.R. Lorang, D.E. McNiel, R.L. Binder, *Minors and Sexting: Legal Implications*, "Journal of the American Academy of Psychiatry and the Law" 2016, vol. 44(1).

[26] G. Mascheroni, A. Jorge, L. Farrugia, *op. cit*.

[27] *Ibidem*.

[28] *Ibidem*.

[29] T. Tomažič, N. Bessa-Vilela, *Ongoing Criminal Activities in Cyberspace: From the Protection of Minors to the Deep Web*, "Revija za kriminalistiko in kriminologijo" 2017, vol. 68(4).

[30] R. Jeong, S. Chiasson, *op. cit*.

[31] S. Vandoninck, L. d'Haenens, *Children's Online Coping Strategies: Rethinking Coping Typologies in a Risk-Specific Approach*, "Journal of Adolescence" 2015, vol. 45(1).

cording to social, cultural and individual needs. However, to understand these needs, an analysis of how children employ online safety approaches is adamant, and before that, a definition of digital literacy is equally important. Digital literacy is the ability of individuals to use their skills, knowledge and understanding to not only make the most out of their online activities but to also protect themselves from any potential risks or harms they may encounter online.[32] From the age of 8, children's digital literacy grows steadily, and they begin to understand the digital world better, which is expressed in their knowledge of targeted advertisements, false online information and data privacy violations.[33] However, although children's digital literacy improves significantly with age, there are still notable gaps in children's ability to safeguard themselves online.

To elaborate, 94% of children aged 8 to 15 reported having received information regarding their online safety practices from online sources.[34] Parents and teachers represent the primary source of information for children, while social media represents the last, which would indicate that children in that age group rely more on familiar adult figures in their lives, as opposed to social media and the Internet, when it comes to information-seeking behaviour. With that being said, half of 12 to 15-year-olds have admitted they were aware of the technical means required to protect themselves online, but few have adopted these means.[35] On the other hand, it appears that children's ability to get around certain safeguards that are put in place to protect them, such as "safe search" filters and proxy servers, is fairly low, as the majority of children aged 12 to 15 are not able to evade these technical controls.[36]

METHODOLOGICAL FRAMEWORK

Surveys are a useful tool in law studies, helping researchers gather real data on legal matters, people's views and how well laws work.[37] When looking at childrens' views on online harm, surveys assist in checking the effect of current rules, learning what young people know about online harm, and looking into the link between childrens' experiences, digital spaces and legal safety. This method could provide both quantitative and qualitative insights into how minors understand and react to online violence.

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[32] S. Livingstone, J. Davidson, J. Bryce, S. Batool, C. Haughton, A. Nandi, *op. cit*.

[33] *Ibidem*.

[34] *Ibidem*.

[35] *Ibidem*.

[36] S. Livingstone, L. Kirwil, C. Ponte, E. Staksrud, *In Their Own Words: What Bothers Children Online?*, "European Journal of Communication" 2014, vol. 29(3).

[37] A. Zienkiewicz, *Objectives of Mediation and Selection and Implementation of Mediation Strategies and Techniques by Mediators in Civil Disputes – Study Report (Part I)*, "Studia Iuridica Lublinensia" 2021, vol. 30(5).

Methodology used in the research was based on online survey, which is a valuable research method in social science. Online surveys provide a convenient and efficient means to gather data on the topics, including behaviors and attitudes among various population groups, offering good insights into the prevalence and impact of online violence.[38] After the survey, we used different quantitative technics to manage collected data which we gathered through an online survey. In online survey we included 200 male participants ($n = 200$) aged 10 to 18 from Slovenia and Bulgaria. Most participants were between 15 and 18 years old (75%). A quarter of the participants were between 10 and 14 years old. It has to be stressed that we also took care to use a proper sampling strategy. Namely, the suitability of the sampling strategy is prominent which has an impact on the quality of research which has been adopted.[39] The sampling technique that has been adapted for this study is the stratified sampling technique which is a type of probability sampling design where it also carries the meaning of a technique used at the point when a populace is first divided into meaningful segments and, in this manner, the subjects are attracted extent to their unique numbers in the populace.[40] The data was then analyzed with descriptive statistics which gave us an insight into the general picture of the topic, based on the sample we used. Data obtained from the survey is analysed using Statistical Package for Social Science (SPSS). The descriptive and inferential statistics were used to analyse and produce the results. Inferential statistics are used to make inferences or to project characteristics from a sample to an entire population.

Descriptive statistics serve various purposes in social science research. They aid in summarizing large datasets, identifying key characteristics and providing a foundation for more advanced statistical analyses. Moreover, these methods assist in making data more accessible and understandable for policymakers, stakeholders and the general public, facilitating informed decision-making processes. It involves techniques that aim to describe and summarize the characteristics of a dataset without making inferences beyond the collected data. It encompasses measures of central tendency, variability and distribution, offering insights into the basic features and patterns present within the data. One of the fundamental measures in descriptive statistics is the mean, which represents the average value of a dataset. For social scientists, calculating the mean helps in understanding typical values within a dataset, whether it is the average income in a population, the average age of a group or the average response on a survey question. Another crucial measure is the median, which repre-

[38] L.T. McLoughlin, B. Spears, C. Taddeo, D.F. Hermens, *Remaining Connected in the Face of Cyberbullying: Why Social Connectedness Is Important for Mental Health*, "Psychology in the Schools" 2019, vol. 56(6).

[39] L. Cohen, L. Manion, K. Morrison, *Research Methods in Education*, London 2002.

[40] U. Sekaran, R. Bougie, *Research Methods for Business: A Skill-Building Approach*, New York 2016.

sents the middle value in a dataset when arranged in ascending or descending order. Variability measures, such as standard deviation or variance, offer insights into the spread or dispersion of data points around the central tendency. These measures help social scientists understand the extent of diversity or consistency within a dataset.[41]

RESULTS

According to our research, most participants of this research feel safe (43%) or very safe (34%) online. However, a significant percentage of participants feel only somewhat safe online (19%) and some do not feel safe online (4%).

When we conducted a more detailed analysis of the answers to the multiple choice questions: If you play games, which games do you like to play? What was the most unpleasant thing that happened to you online?, we analyzed the answers of 200 participants from Slovenia and Bulgaria. There were 18 participants who did not choose any answer, available under the question: If you play games, which games do you like to play? The options, offered in the survey, were: *PUBG*, *Valorant*, *CS:GO*, *Fortnite*, *Call of Duty*, *Warzone*, *League of Legends*, *DOTA*, *Minecraft*, *Sea of Thieves*, *Lost Arc*, *FIFA*, *Elden Ring*, *GTA*, *Apex Legends*, and other. Seventy participants did not choose any answer, available under the question: What was the most unpleasant thing that happened to you online? The experiences, included in the survey, were: I saw some content that disturbed me; Somebody sent me something inappropriate; Someone asked me for something; Somebody was harassing me for a long time; Someone was bullying me; Someone hacked my account; Somebody posted fake information about me; Somebody posted something using my (user)name; Other.

All 200 participants responded to the question: If you play games, which games do you like to play? Almost half of the participants play *Minecraft* (42.7%). Around a third play *GTA* (36.5%), *CS:GO* (33.5%) and *FIFA* (33%). Less than a third of the participants play the other games. *Sea of Thieves* (6.9%), *Elden Ring* (4.7%), *DOTA* (4.3%) and *Lost Ark* (3.4%) are played by the least of the participants of this research.

A total of 181 participants responded to the question: What was the most unpleasant thing that happened to you online? Around a third of them stated that the most unpleasant thing that they experienced online was that someone hacked their account (34.3%), that they saw some content that disturbed them (31.5%) and that somebody sent them something inappropriate (24.9%). The last of them chose the answer "other" (6.6%).

Next, we looked at the percentages of participants experiencing the before-mentioned unpleasant things online per each game included in this research. Out of all the participants, 42 played *PUGB*. Out of those 42 participants, 9 saw some content that

[41] W.C. Zikmund, B.J. Babin, J.C. Carr, M. Griffin, *Business Research Methods*, Boston 2013.

disturbed them, 12 experienced somebody sending them something inappropriate, 7 were asked for something by someone, 3 were harassed for a long time, and 2 were bullied. Eleven stated that their account got hacked, 7 experienced someone posting fake information about them, 6 experienced somebody posting something using their (user)name and 2 experienced something else. Together, the participants who played *PUGB* shared 59 unpleasant things that happened to them online.

Out of all the participants, 40 played *Valorant*. Out of those 40 participants, 14 saw some content that disturbed them, 8 experienced that somebody sent them something inappropriate, 12 were asked for something by someone, 6 were harassed for a long time and 6 were bullied. Nine stated that their account got hacked, 3 experienced someone posting fake information about them, 3 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *Valorant* experienced 62 unpleasant things that happened to them online.

Out of all the participants, 78 played *CS:GO*. Out of those 78 participants, 19 saw some content that disturbed them, 15 experienced that somebody sent them something inappropriate, 12 were asked for something by someone, 6 were harassed for a long time and 7 were bullied. Twenty-one stated that their account got hacked, 3 experienced someone posting fake information about them, 7 experienced somebody posting something using their (user)name and 2 experienced something else. Together, the participants who played *CS:GO* experienced 92 unpleasant things that happened to them online.

Out of all the participants, 56 played *Fortnite*. Out of those 56 participants, 12 saw some content that disturbed them, 9 experienced that somebody sent them something inappropriate, 11 were asked for something by someone, 3 were harassed for a long time and 3 were bullied. Fifteen stated that their account got hacked, 3 experienced someone posting fake information about them, 3 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *Fortnite* experienced 60 unpleasant things that happened to them online.

Out of all the participants, 33 played *Call of Duty*. Out of those 33 participants, 10 saw some content that disturbed them, 6 experienced that somebody sent them something inappropriate, 8 were asked for something by someone, 4 were harassed for a long time and 5 were bullied. Ten stated that their account got hacked, 3 experienced someone posting fake information about them, 4 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *Call of Duty* experienced 51 unpleasant things that happened to them online.

Out of all the participants, 29 played *Warzone*. Out of those 29 participants, 9 saw some content that disturbed them, 6 experienced that somebody sent them something inappropriate, 7 were asked for something by someone, 2 were harassed

for a long time and 3 were bullied. Seven stated that their account got hacked, 3 experienced someone posting fake information about them, 5 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *Warzone* experienced 43 unpleasant things that happened to them online.

Out of all the participants, 57 played *League of Legends*. Out of those 57 participants, 12 saw some content that disturbed them, 7 experienced that somebody sent them something inappropriate, 12 were asked for something by someone, 8 were harassed for a long time and 5 were bullied. Seventeen stated that their account got hacked, 3 experienced someone posting fake information about them, 5 experienced somebody posting something using their (user)name and 2 experienced something else. Together, the participants who played *League of Legends* experienced 71 unpleasant things that happened to them online.

Out of all the participants, 10 played *DOTA*. Out of those 10 participants, 4 saw some content that disturbed them, 2 experienced that somebody sent them something inappropriate, 2 were asked for something by someone, 1 was harassed for a long time and 2 were bullied. One stated that their account got hacked, 2 experienced someone posting fake information about them, 2 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *DOTA* have experienced 17 unpleasant things that happened to them online.

Out of all the participants, 99 played *Minecraft*. Out of those 99 participants, 25 saw some content that disturbed them, 19 experienced that somebody sent them something inappropriate, 17 were asked for something by someone, 10 were harassed for a long time and 11 were bullied. Twenty-seven stated that their account got hacked, 9 experienced someone posting fake information about them, 9 experienced somebody posting something using their (user)name and 3 experienced something else. Together, the participants who played *Minecraft* experienced 130 unpleasant things that happened to them online.

Out of all the participants, 16 played *Sea of Thieves*. Out of those 16 participants, 3 saw some content that disturbed them, 2 experienced that somebody sent them something inappropriate, 7 were asked for something by someone, 2 were harassed for a long time and 2 were bullied. Three stated that their account got hacked, 2 experienced someone posting fake information about them, 2 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *Sea of Thieves* experienced 24 unpleasant things that happened to them online.

Out of all the participants, 8 played *Lost Arc*. Out of those 8 participants, 3 saw some content that disturbed them, 2 experienced that somebody sent them something inappropriate, 2 were asked for something by someone, 2 were harassed for a long time and 1 were bullied. One stated that their account got hacked, 2 experienced someone

posting fake information about them, 1 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *Lost Arc* experienced 15 unpleasant things that happened to them online.

Out of all the participants, 77 played *FIFA*. Out of those 77 participants, 15 saw some content that disturbed them, 11 experienced that somebody sent them something inappropriate, 17 were asked for something by someone, 7 were harassed for a long time and 4 were bullied. Twenty-four stated that their account got hacked, 8 experienced someone posting fake information about them, 7 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *FIFA* experienced 94 unpleasant things that happened to them online.

Out of all the participants, 11 played *Elden Ring*. Out of those 11 participants, 6 saw some content that disturbed them, 3 experienced that somebody sent them something inappropriate, 2 were asked for something by someone, 3 were harassed for a long time and 1 was bullied. Two stated that their account got hacked, 1 experienced someone posting fake information about them, 2 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *Elden Ring* experienced 21 unpleasant things that happened to them online.

Out of all the participants, 85 played *GTA*. Out of those 85 participants, 23 saw some content that disturbed them, 14 experienced that somebody sent them something inappropriate, 12 were asked for something by someone, 10 were harassed for a long time and 10 were bullied. Twenty-four stated that their account got hacked, 3 experienced someone posting fake information about them, 7 experienced somebody posting something using their (user)name and 1 experienced something else. Together, the participants who played *GTA* experienced 104 unpleasant things that happened to them online.

Out of all the participants, 33 play *Apex Legends*. Out of those 33 participants, 7 saw some content that disturbed them, 5 experienced that somebody sent them something inappropriate, 11 were asked for something by someone, 5 were harassed for a long time and 3 were bullied. Thirteen stated that their account got hacked, 4 experienced someone posting fake information about them, 5 experienced somebody posting something using their (user)name and 2 experienced something else. Together, the participants who played *Apex Legends* experienced 55 unpleasant things that happened to them online.

Out of all the participants, 61 played other games. Out of those 61 participants, 10 saw some content that disturbed them, 10 experienced that somebody sent them something inappropriate, 13 were asked for something by someone, 8 were harassed for a long time and 5 were bullied. Eighteen stated that their account got hacked, 6 experienced someone posting fake information about them, 8 experienced somebody posting something using their (user)name and 3 experienced something else.

Together, the participants who played other games experienced 81 unpleasant things that happened to them online.

When the participants were asked what kind of unpleasant things can happen while playing the game most of them chose swearing (21%), rude speech (21%), insults (18%) and name-calling (16%) as the most common. Other experiences include sexual talk (10%) and mean gifs/emojis (8%). Under "other" (6%), participants mostly pointed out that they talk nicely and are kind and encouraging to each other.

To access the Internet and social media most participants use their own smartphone (42%) and/or their computer/laptop (33%). The next most used devices are iPad/tablets (8%) and family computers/laptops (8%). Very few kids that participated use their own smartwatch (5%) and even fewer use something else (2%), e.g., PlayStation or Xbox, as they mentioned.

Most of the participants spend more than 5 hours per day on the web and social media during the week (41%) – and that pattern does not change much over the weekend (42%). Very few participants spend less than one hour per day on the web and social media during the week (3%) and on the weekends (4%). YouTube (21%), Instagram (17%), TikTok (15%), Discord (12%) and Facebook (10%) are the most used internet platforms/social media amongst our participants. Some participants use Twitch (7%), Steam (7%), Reddit (5%) and Twitter (4%). Barely anyone from our sample used other platforms (2%), e.g., PicsArt, Pinterest and Netflix, as the participants noted. Messenger (22%), Snapchat (21%), Viber (16%) and WhatsApp (12%) are the most used applications that our participants use to talk with their friends. They use Facetime (5%), Telegram (5%), Skype (4%), Zoom (3%) and Signal (1%) significantly less. Quite a lot of participants use other platforms to talk with friends (11%), like Instagram, Discord, Microsoft Teams and Kik, among others.

Most participants of our research communicate through other applications (33%), voice chat (27%) and/or text chat (24%) when playing online games. Some don't communicate at all and some chose the option "other" (1%).

Almost half of the participants never accept friend requests from people they do not know (47%), if somebody asks them about them during the game or sends them friend requests. Some ask the person to share first (12%) or do not know what to do (5%). Almost a tenth of them share their contacts (9%). Twelve percent answered with "other" – among other things they mentioned that they do not do anything, give fake information or that something like this never happened to them because they always play with friends.

Most participants are familiar with the terms cyberbullying (89%), sexting (53%), online grooming (61%), sexual harassment (74%) and sextortion (48%). The most familiar term (of the ones included) to our participants is cyberbullying – only 9% do not know it and 3% are not sure. The least familiar term to them is sextortion – 39% do not know it and 13% are not sure.

Three-quarters of the participants answered that they would know if someone would be grooming them online (76%); 5% of the participants would not know if somebody would be grooming them online, 12% do not know and 7% do not know what that is.

If, when they are online, something unpleasant happens to the participants of this research, most of them tell their peers/friends (27%), or their parents (25%) or they do not do anything (24%). Some participants report the incident to the police (8%), tell another adult (6%), report the incident to other institutions (5%) or do something else (5%), e.g. block the person that caused the unpleasant thing to happen to the participant (some also mentioned that they were never in such a situation).

Peer support is, as rated by the participants, the most useful tool to guide them after they have encountered an unpleasant online situation (36% rated it with 5), although 20% rated it with 1. On the other hand, chatbots seem to be the least popular tool, since 38% rated it with 1 and only 9% rated it with 5. All tools but peer support were more often rated with 1 than 5, so it is also interesting to look at the suggestions that the participants added themselves, such as "Psychologist I can talk to" or "Talking with someone who was in a similar situation".

Most of the participants receive information about online safety online (38%), from their parents (23%) or from their friends and peers (23%). Some get it during their free time activities (9%) and some from other sources (7%) – participants often added schools and teachers as their source of information about online safety.

Most of the participants stated that they know how to protect themselves online (79). Only 3% of the participants think they do not know how to protect themselves online. However, a significant percentage (18%) of the participants stated that they do not know or are unsure how to protect themselves online.

Most of the participants would need a clear understanding of right and wrong (29%), technical knowledge (28%) or information on how to respond (23%) to efficiently protect themselves during online time. A significant number of participants also think that they could use psychological knowledge (17%) for that purpose, and some added their suggestions (3%), e.g., a VPN.

Less than half of the participants know where to get help in their country, in case of online abuse (42%). Others do not know (34%) where to get help in case of online abuse (34%) or they do not know if they know/are unsure (24%).

CONCLUSIONS

There is no doubt that technology has had an undeniable influence on modern life, and with that influence comes a plethora of positive implications, but unfortunately, negative implications as well. Children, although reaping many of the benefits of a constantly connected world, are also dealing with the most negative of

consequences, with online harm towards children being one of the most researched topics in cybersecurity.[42] In line with this, a significant percentage of participants in our research feel only somewhat safe online (19%) and some do not feel safe online (4%). Thus, it comes as no surprise that continuous efforts are needed to ensure that the internet is a safer place for children, and once again, due to the technological advancements in the 21st century, technology represents a prominent solution to the very problem that it has created.

This paper explored the various risks children face online, the coping mechanisms through which they tackle these risks, and more importantly, the various nuances of their online behaviour.

By now, it should be beyond evident that children are not safe online, which is no mystery given that the majority of online spaces were not made for children, or at least, not with children in mind. Prepubescents, pubescents and adolescents all face considerable threats online, and these threats range from less severe yet damaging ones, such as cyberbullying and false impersonation, to much more serious threats that involve sexual abuse and other sexually motivated crimes. These risks are only compounded by the fact that most children's set of social, cognitive and emotional skills are not sufficiently developed to the point where they can identify risk, confront it and resolve it in a manner that presents the least harm possible.

The participants of our research mostly spend a significant portion of their day on the Internet and social media, even during weekends. However, according to our data analysis, almost a fifth of them feel only somewhat safe online and some do not feel safe online at all. It is true that a relatively small (but still very significant) percentage of the participants think they do not know how to protect themselves online (3%). However, almost a fifth of them are unsure or do not know. It's also important to note that most of the participants get information about online safety online, from their parents or from their friends and peers. Participants often added schools and teachers as their source of information about online safety.

It is a shallow comfort that almost half of the participants never accept friend requests from people they do not know. That means that a lot of them might accept friend requests from people they do not know at some point. At the same time, three-quarters of the participants answered that they would know if someone would be grooming them online (76%), which is a slightly higher percentage, but nevertheless, a lot of participants still would not know if somebody would be grooming them online, do not know whether they would recognize such behaviour or do not know what grooming is. In the same line it should be mentioned that the chat box seems to be the least

[42] S. Livingstone, L. Haddon, A. Görzig, K. Ólafsson, *Risks and Safety on the Internet: The UK Report*, 2010, http://eprints.lse.ac.uk/33730/1/EU_Kids_Online_Report_April2014.pdf (access: 27.3.2025); K. Chałubińska-Jentkiewicz, M. Karpiuk, J. Kostrubiec, *The Legal Status of Public Entities in the Field of Cybersecurity in Poland*, Maribor 2021, p. 43.

popular tool to guide them after they have encountered an unpleasant online situation and peer support is rated by the participants of the research as the most useful tool. It also seems important to pay attention to their suggestions – a psychologist they could talk to or talking to someone who was in a similar situation.

Considering the presented information, it seems important to combine different techniques for educating children about online safety and to use a combination of different tools to guide them after they have encountered an unpleasant online situation. Additional effort to achieve more safety online for children is still very much needed.

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ABSTRAKT

Artykuł zawiera analizę zarówno jakościową, jak i ilościową wyników projektu LEAGUE, z uwzględnieniem próbki pobranej w Słowenii i Bułgarii, na temat postrzegania przemocy w Internecie wobec nieletnich i bezpieczeństwa online. Analiza ilościowa oparta jest na danych zebranych w drodze ankiety internetowej wypełnionej przez 200 uczestników płci męskiej (n = 200) w wieku od 10 do 18 lat, pochodzących ze Słowenii i Bułgarii. Większość uczestników miała od 15 do 18 lat (75%). Jedna czwarta uczestników była w wieku od 10 do 14 lat. Stwierdzono, że dzieci nie są w Internecie bezpieczne, co nie jest zaskoczeniem, gdyż większość przestrzeni w Internecie nie była tworzona ani dla dzieci, ani z uwzględnieniem dzieci. Dzieci w wieku przed i w okresie dojrzewania oraz młodzież stoją wobec poważnych zagrożeń w sieci, począwszy od mniej poważnych, lecz nadal szkodliwych, jak cyberbullying (nękanie w sieci) czy podawanie się za inne osoby, po poważniejsze zagrożenia, obejmujące molestowanie seksualne i inne przestępstwa o podłożu seksualnym.

Słowa kluczowe: przemoc w Internecie; analiza porównawcza; gry online; przemoc wobec nieletnich