

STUDENTS' EXPERIENCES OF VICTIMIZATION AND PERPETRATION OF ONLINE VIOLENCE

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INTRODUCTION

The modern world is unimaginable without numerous benefits of rapid technological development, among which information and communication technologies (ICT) certainly occupy a significant place. The COVID-19 pandemic has led to an accelerated shift to digital services and platforms in all areas, including distance learning and work from home in many professions. For many young people, modern technology has an important role in their daily lives from an early age (Wright, 2013), which was confirmed by Smith et al. (2008), who found that back in 2006 in the United Kingdom 51% of children aged 10 and 91% of children aged 12 owned a mobile phone. Adolescents and young people are vanguards of the consumption of new technologies. Rapid technological development and increasing use of the ICT by young people have made them benefit from outstanding opportunities on the Internet, in terms of availability of knowledge, information and skills, and social interactions with other young people from all around the world (Mirić, Vasiljević-Prodanović, 2022). Today, computers and the Internet are used in higher education for the teaching process, communication between professors and students, fulfilment of studying obligations, etc. (Vasiljević-Prodanović, 2020). Moreover, for students, the ICT, in addition to being used for private purposes, has also become a necessary resource for acquiring new knowledge during

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studies. The wide variety of digital and technological tools currently available, such as text messages, social networks (e.g., Facebook, Instagram, TikTok or Twitter), email, mobile phones and the use of a webcam, among others, allow young people to establish easily an online dating relationship as well (Burk et al., 2011). Digital technology enables people to seek, maintain or end intimate relationships in new and innovative ways. Although many youngsters may find these intimate interactions as fun and exciting, these same technologies can be used for malicious purposes. Moreover, the ICT has facilitated opportunities for the perpetration of criminal harms, such as hacking, online fraud, and identity theft. Although significant attention has been given to these existing and emerging cybersecurity threats, far less attention has been paid to the diverse ways in which digital technologies are used by offenders to perpetrate or continue the harms of interpersonal violence (Henry & Powell, 2015; Henry et al., 2020).

Online interactions have unique features that promote and encourage intimidating tactics, such as control and monitoring (Stephenson et al., 2018). It has been reported that ICT contributes to making adolescents and young people more susceptible to interpersonal intrusiveness, thus endorsing different forms of victimization such as cyberstalking (Borrajó, 2020), cyberbullying, sexting (Neves et al., 2020) and cyber dating abuse (Caridade, et al., 2020; Caridade & Dinis, 2020; Caridade, et al., 2020), trolling, hate-based harassment, and hate speech (Henry et al., 2020), among other forms of online victimization and perpetration. According to recent studies, these forms of violence have received several labels, using prefixes such as “technology”, “digital”, “cyber”, “electronic” and “online” to describe different types of harassment, victimization, violence, aggression and abuse using the technological devices and platforms (Henry et al., 2020). The current literature uses aggression, abuse and violence as commutable, although they are not the same (Geffner, 2016; Machado et al., 2022). Hence, the term abuse indicates the victim’s context, motive and outcomes. Nevertheless, the existing measures do not contemplate these characteristics and are more dedicated to evaluating a specific behaviour. We used terms such as violence, aggression and abuse in our survey to cover a wide range of hurtful behaviours, including image-based sexual violence (Harris & Woodlock, 2019), and technology-facilitated coercive control (Dragiewicz et al., 2018). In online settings, aggression can occur at any moment, the aggressor does not see the victim’s reaction, so it is tempting to diminish the consequences of their acts (Muñoz-Fernández & Sánchez-Jiménez, 2020), and what is more important, he or she may feel immune due to the anonymity that the online context provides, while the victim, at the same time, experiences more humiliation and harm due to a growing potential audience (Stonard, 2020). Online violence is not an isolated phenomenon, often following the same patterns as offline violence (European Institute for Gender Equality, 2020).



Studies conducted on the student population revealed the prevalence of online victimization (OV) and perpetration varies immensely. For example, a study among female college students showed that 27.2% of them were involved in online violence as a victim or as a perpetrator, or both (Kokkinos et al., 2014). Another study revealed that 15% of university students reported OV during their studies (Varghese & Pistole, 2017). In the UK 46% of trainee doctors reported at least one incident of OV (Farley, 2015), and among college students in Greece, it was found that 58.4% of the students were involved in online abuse (Kokkinos et al., 2014). The prevalence of OV is even higher in Turkey, where 55.3% of university students have experienced OV at least once (Dilmac, 2009). A study from Pakistan on a convenient sample of 100 students revealed that 37% of them reported having been hacked, 23% of them have experienced cyberstalking, 29% impersonation, while 59% of them have experienced spreading lies online and defamation. Further, receiving messages with violent content was reported by 40% of students (Avais et al., 2014). A qualitative study on cyber intimate partner violence on a sample of 39 college students revealed the high risk of (mis)use of the ICT to control a partner - monitoring partner's online activities and location, intimidation (Merlander, 2010). Domestic violence support professionals have reported the increasing use of digital technologies in the tactics and strategies of domestic violence offenders (Wodlock, 2017). It was found that those victims are mostly intimidated by text messages, and for most of them, online abuse is just a continuation of intimate partner violence (IPV) in real life. A study of OV and online violent perpetration (OVP), conducted on a sample of 338 students of Belgrade University students, revealed that the majority of students (91.7%) experienced at least one form of victimization in cyberspace, with receiving content infected by a virus or Trojan as the most common (55.9%), followed by cyberstalking (51.8%), cyber insults (49.7%) and sexual harassment (46.6%) (Stevković et al., 2019).

This paper aims at presenting a part of the findings from our research on the negative online experiences of students in Serbia. Specifically, the results on the prevalence, characteristics and interaction between the experiences of online victimization (EOV) and online victimizing behaviours (OVB) are presented.

THE PRESENT STUDY

Research questions

1. To what extent are the prevalence rates of online and offline victimization and online perpetration among the university students in Serbia?
2. Is there any significant difference in the prevalence rates of EOV and OVB online across genders?



3. Is there a correlation between EOv and OVb?

Design and Procedure

In this cross-sectional quantitative study, the data were collected during the spring semester of 2021/22 academic year. We used an online questionnaire as a convenient method of data collection that enables higher response rates, guarantees the anonymity of the respondents, and eliminates any tendency toward bias. Moreover, at the time of data collection, many faculties were still performing online classes, which also influenced the decision-making about the online approach in the data collection process. The questionnaire used in this survey represents a combination of a victimisation survey and a self-report survey. The questionnaire was initially made available through an online survey on the Google Docs online platform. The link and the invitation for participation in the study were disseminated by the authors of this study through an informative announcement by e-mail, social networks (e.g., e-mail, Facebook, Twitter or Viber) and contacts established with different universities. Before asking the participants to complete the questionnaire, a brief description of the study was presented, clarifying the objectives, the confidentiality and anonymity of the data, the voluntary nature of the responses, as well as the time to complete the questionnaires (about 20 min). The participants were also informed that they should answer only once. The questionnaires were available starting from March 2022 and are still available. For this paper, a cross-section of the study was made at the end of May 2022.

Sample

This study included a random sample of 332 Serbian students of all levels of studying (undergraduate, master and PhD studies), studying different study programs at different universities (faculties of social sciences and humanities, medical sciences, sciences and mathematics and technology and engineering sciences), mostly female (81.0%), aged between 19 and over 30 years. A significant percentage of the participants were attending the first level of studies (55.4%), with the same percentage in the second level of studies and college (17.2%), and 10.2% in postgraduate attendance (Table 1).



Table 1. Sample characteristics (N=332)

Variables	n	%
Sex		
Female	269	81.0
Male	61	18.4
Other	2	0.6
Age		
19-22	155	46.7
23-25	74	22.3
26-30	49	14.8
above 30	54	16.3
Level of study		
College	57	17.2
Undergraduate	184	55.4
Master	57	17.2
PhD	34	10.2
Study programme		
Social sciences and humanities	230	69.3
Medical sciences	37	11.1
Sciences and mathematics	34	10.2
Technology and engineering sciences	31	9.3

Measures/Instruments

The instrument used in this study was created by the authors of the paper² and it consisted of the Background questionnaire, Offline Experiences of Victimization Questionnaire, Online Experiences of Victimization Questionnaire and Online Victimizing Behaviours Perpetration.

Background Questionnaire included a series of questions about age, sex, level of study, study programme, social media (SM) (e.g., on which SM they have a profile, how much time they spend on SM, which data they share, how careful they are, etc.).

Offline Experiences of Victimization Questionnaire (OffEVQ): The participants were asked if they were a victim of several nonviolent and violent crimes: theft, insults (based on their sex, look, background, religion and sexual orientation),

² Specifically, the instrument was created by Ljiljana Stevkovic and it is an adapted instrument used in her previous study. See: Stevković et al, 2019.



physical violence (slapping, pushing, grabbing, punching in the face or other parts of the body, hitting with objects or some other way of using a physical force and hurting them), threats, sexual harassment and direct sexual violence (rape).

The participants had to indicate whether they had ever experienced victimization, who the perpetrator was (an unknown person, a friend, a colleague, parents, an intimate partner or another known person) and the frequency of these experiences through a 5-point Likert scale: 1 (never), 2 (once or twice), 3 (three to five), 4 (six to ten), 5 (more than ten times).

Experiences of Online Victimization Questionnaire (EOVQ) and *Online Victimizing Behaviours Perpetration Questionnaire (OVBPQ)* are self-report measures, each consisting of 11 items about various types of EOVB and OVBPB, such as verbal-emotional and sexual violence and control IPV. Additionally, the EOVQ included three more items about the consequences (if the EOVB caused any consequence, and which one) and support system (if they shared their EOVB with someone close to them, and what the reaction of that person(s) was). The perpetrator or the victims of each type of online aggression (abuse) and/or victimizing behaviour can be a current or ex-intimate partner, an unknown person (offline or online), someone known in a real life or a virtual friend. The emotional abuse subscale comprises three items, describing situations in which the participants have experienced and/or perpetrated verbal or emotional abuse by/to someone: insults, threats, sending content infected by virus/worms/Trojans (e.g. "You/Someone posted or distributed insulting comments and lies about you/someone"). The sexual abuse subscale comprises five items, describing situations in which the participants have experienced and/or perpetrated sexual violence by/to someone, such as sexual harassment, revenge porn (e.g. "You/Someone posted someone's/your photograph and personal information on a porn website") and intimate partner sexual abuse (e.g. "You/Your partner recorded your sexual intercourse without his-her/your knowledge and distributed to others"). Three items regarding control IPV, such as using an online application for location, monitoring the partner's online activities, messages, DMs, and SM profiles (e.g., "Your ex/current partner was using an application to locate you, without your knowledge or approval." or "Your ex/current partner was reading your messages, entering and changing your SM profiles, reading DMs, etc, without your knowledge or approval" or "Your ex/current partner was checking your online activities such as your browsing history, without your knowledge or approval."). The participants responded to these items with five options: 1 (never), 2 (once or twice), 3 (three to five times), 4 (six to ten times), and 5 (more than ten times), except for the last three items of the EOVQ related to the partner's controlling tactics, which included the option 0 (I don't know). Also, these two questionnaires included several additional questions. The EOVQ included six questions regarding the onset and frequency of OV (before



or during the COVID-19 pandemic; less often, more often, neither less nor more often), reporting (to a friend, parents, siblings, colleagues and/or police) and the outcome of reporting (support, minimization, ignoring, ridicule, blaming and persuading to report to the police), and the consequences of the online victimization experiences. The OVPBQ included the same two questions regarding the onset and frequency of OVB perpetration. Cronbach's alpha (α) was measured, and reliable values for the EOVBQ ($\alpha=0.89$) and OVPBQ ($\alpha=0.78$) were obtained.

Data Analysis

The data were analyzed by using an IBM SPSS for Windows 23.0. The descriptive univariate analyses were computed to characterize the sample, to determine the prevalence of EOVB and OVB perpetration and their consequences, as well as the reporting and support system. Due to the highly skewed distribution of responses for EOVB and OVB, we crosschecked these counts with a preliminary dichotomous question on whether or not the respondents experienced and/or perpetrated online victimization. The final binary for EOVB was divided between no experience ($n=81$, 24.4%) and the experience of victimization ($n=251$, 75.6%). The final binary for OVPB was divided between no experience of perpetration of OVB ($n=177$, 53.3%) and perpetration of OVB ($n=155$, 46.7%). Bivariate descriptive and inferential statistics were computed to investigate the relationship between EOVB and OVPB. More specifically, Pearson's correlations were computed. For testing the gender differences in the EOVB and OVPB the t-test for the independent sample was applied.

FINDINGS

Frequency and gender differences between OVB use and OV

Prevalence rates for online and offline victimization and online victimizing behaviours are shown in Table 2. Offline victimization presented indicators that were the most prevalent and disturbing, with 91.3% of the participants reporting to have been subjected to some kind of abusive behaviour in their real life. Additionally, online victimization also presented indicators that were quite prevalent and disturbing as well, with 75.6% of the respondents reported having experienced at least some type of online victimizing behaviour and 53.3% acknowledged having perpetrated at least some form of online victimizing behaviour (Table 2). Moreover, 89.4% of the participants experienced both online and offline victimization, while for 50.9% there was a victim-offender overlap: in addition to experiencing online victimization, they exhibited some victimizing behaviour at least once.



In terms of the assumption that the COVID-19 pandemic may have influenced the frequency of the OV and OVB, the data showed that 57.7% of the respondents were victimized for the first time before the pandemic, while 51.1% of them reported that these victimizing experiences were less frequent or neither less nor more frequent during the pandemic that before.

Table 2. *Prevalence of online and offline victimization and online victimizing behaviours*

	Yes % (n)	No % (n)
Online victimization (OV)	75.6 (251)	24.4 (81)
Online victimizing behaviours (OVB)	46.7 (155)	53.3 (177)
Offline victimization (OffV)	91.3 (303)	8.7 (29)

Table 3 shows a statistically significant difference in the mean score of males and females in terms of the prevalence rates of the OVB among university students, indicating that male students perform OVB significantly more than female students. On the other hand, there was no significant difference in the mean score of males and females concerning the prevalence rates of OV among university students (Table 3).

Table 3. *Gender differences in experiences of online victimization and online victimizing behaviours*

	Female				Male				F	t-test
	n	%	M	SD	n	%	M	SD		
Online victimization	188	75.5	2.88	0.32	48	78.7	2.79	0.41	13.070	1.668
Online victimizing behaviours	119	44.2	2.49	0.41	36	59.1	2.34	0.79	28.474	2.191*

*p<.05

Prevalence of perpetration of online victimizing behaviours

In relation to the different types of OVB, most of the respondents practised some type of online IPV control. More specifically, 63.2% of them acknowledged that they have monitored their partners online activities and browsing history, while 57.4% of them have read their partners text and email messages, DMs or have controlled and changed their partners profiles on SM without his/her approval (Table 4).



Table 4. *Prevalence of different forms of online victimizing behaviours*

Forms of online victimizing behaviour	n	%
Writing insults	16	10.3
Writing threats	23	14.8
Sending someone online content infected by a virus	5	3.2
Sending someone messages with a sexual connotation	18	11.6
Sending someone explicit photographs and videos	6	3.9
Requesting someone to send you explicit photographs or videos of himself/herself	3	1.9
Revenge pornography	12	7.7
Recording sexual intercourse with your partner without his/her knowledge	1	0.6
Using a location tracking app to control your partner	18	11.6
Reading partner's msgs, DMs, changing SM profiles, without his/her approval	89	57.4
Checking partner's online activities and browsing history without his/her approval	98	63.2
N=332		

Prevalence of online victimization

Analysing the different types of OV, it can be concluded that the majority of the participants (91.8%) revealed to have experienced receiving an infected online content that might jeopardize their digital devices (phone, laptop, computer tablet, etc.) and some type of online sexual harassment, in a form of receiving unwanted explicit photographs and/or videos from someone (74.5%, messages with sexual connotations 57.6%) and a request to send someone an explicit photograph/videos of themselves (45.5%) (Table 4). Further, it should be mentioned that 40.7% of the respondents have experienced receiving online threats to their physical integrity, which carries the risk that some of these threats become realistic in offline life (Table 4).

Concerning online IPV, in terms of controlling behaviours, 40.7% of the respondents have experienced that their partner was reading their text messages and/or emails, DMs, or checking and changing their SM profiles, while 35.9% of them have experienced that the partner was monitoring all their online activities and browsing history (Table 4). It should be noted that among the respondents who did not report being the victim of these specific four forms of online IPV, some were not aware of these partners' behaviours: 8.6% (20) of the respondents have chosen the option "I don't know" for the indicator "partner was recording and distributing video of your sexual intercourse without your approval", 25.1% (58) for



the indicator “the partner was using a location tracking app to control you”, 12.6% (29) for the indicator “the partner was reading your messages, DMs, checking and changing your SM profiles”, and 25.9% (60) of the respondents was not aware of the fact that their partner was monitoring all their online activities and browsing history without their approval.

Table 4. *Prevalence of different forms of online victimization*

Forms of online victimization	n	%
Online insults	14	6.1
Online threats	94	40.7
Receiving online content infected by a virus	212	91.8
Receiving messages with a sexual connotation	133	57.6
Receiving explicit photographs and videos	172	74.5
Someone asked you to send them explicit photographs or videos of yourself	105	45.5
Revenge pornography	12	5.2
Partner recorded your sexual intercourse without your approval	1	0.4
Partner was using a location tracking app to control the victim	27	11.7
Partner was reading victim's msgs, and DMs, changing SM profiles, without approval	94	40.7
Partner was checking victim's online activities and browsing history without approval	83	35.9
N=332		

Concerning the consequence of OV, 19.1% (48) of the respondents stated that these experiences had some negative effect on their life. Among them, 60.4% (29) of the respondents answered an open-ended question regarding the type of consequence of OV. Several consequences were repeated in their responses: fear, discomfort, anxiety, depression, mistrust, insecurity, helplessness and disappointment. One female respondent described it in these words: *“A feeling of incredible discomfort and helplessness. Although I always try to sweep such unpleasant experiences under the carpet and not to think about them as something important, I certainly can't stop thinking about them for a few days, weeks.”*

In relation to reporting victimizing online experiences, half (50.6%) of the respondents who had such experiences shared them with someone close to them, mostly a friend. For most of them (63.2%) the reaction of a trusted person with whom they have shared their experience was emotional support. However, every fifth respondent (21.4%) who shared their experience with someone was exposed to secondary victimization manifested in minimizing their experiences, ignoring, ridicule and blaming.

*Association between experiences of online victimization and
perpetration of online victimizing behaviours*

Table 6 shows the correlations between the variables included in the study, in terms of victimization and perpetration. The upper section of Table 6 shows the correlations between overall online and offline victimization and overall OVB. The middle section demonstrates the correlations between different types of OV and OVB, while the lowest section shows the correlations among different types of OV. Looking at overall, there is a significant positive correlation between OV and OVB, between OV and OffV, as well as between OVB and OffV. However, although these correlations were found significant, correlation coefficients were considered low ($r < 0.35$)³.

When observing the correlations among different types of OV and OVB, more detailed information is obtained. The results indicated significant positive correlations among all forms of OVB and most forms of OV, with each type of OVB correlating with one or more types of OV, except with receiving online insults and experiencing that partner was recording sexual intercourse and sharing that video with others without the participant's approval. However, given that the correlation coefficients are low ($r < 0.35$) for most of these correlations, they are considered weak, except for the correlation between performing online IPV control 2 and experiencing this type of online IPV, as well as the correlation between performing online IPV control 3 and experiencing this victimizing behaviour, which could be considered moderate ($0.35 < r < 0.70$) (Table 6). These findings indicate that the respondents, who reported being a victim of one or more types of OV, were more likely to report performing one or more types of OVB, and vice versa.

³ For more information regarding the strength of relationship in Pearson correlation please see: Moore et al., 2013.



Table 6. Person's correlation between different types of online victimization and online victimizing behaviours

				Online victimization			Online victimizing behaviours		Offline victimization		
Online victimization				1			.212**		.283**		
Online victimizing behaviours				.212**			1		.076		
Offline victimization				.283**			.076		1		
Online victimization											
Online victimizing behaviours	1 (V)	2 (V)	3 (V)	4 (V)	5 (V)	6 (V)	7 (V)	8 (V)	9 (V)	10 (V)	11 (V)
Online insults (P)	.023	.202***	.052	.074	.048	.089	.182**	.012	.139*	.046	.065
Online threats (P)	.061	.276***	.105	.140*	.144**	.095	.265***	.101	.006	.066	.062
Online virus (P)	.026	.087	.093	.050	.020	.022	.241***	.007	.054	.087	.157**
SH1 (P)	.016	.115*	.014	.157**	.178**	.152**	.096	.013	.023	.145**	.077
SH2 (P)	.028	.115*	.102	.028	.086	.151*	.216***	.007	.125	.166**	.131*
SH3 (P)	.020	.011	.006	.052	.028	.072	.152**	.005	.088	.011	.092
SIPV (P)	.012	.087	.041	.067	.053	.081	.284***	.003	.016	.087	.095
IPV control 1 (P)	.016	.056	.097	.076	.098	.066	.046	.013	.269***	.086	.139*
IPV control 2 (P)	.042	.228***	.201***	.227***	.243***	.232***	.174**	.033	.039	.405***	.373***
IPV control 3 (P)	.037	.062	.171**	.131*	.122*	.185**	.122*	.036	.097	.355***	.450**
Online victimization											
1 (V)	1	.267***	.064	.073	.052	.018	.041	.012	.047	.001	.052
2 (V)	.267***	1									
3 (V)	.064	.222***	1								
4 (V)	.073	.332***	.078	1							
5 (V)	.052	.356***	.128	.788***	1						
6 (V)	.018	.306***	.134	.422***	.449***	1					
7 (V)	.041	.165*	.011	.138*	.122*	.077	1				
8 (V)	.012	.035	.041	.045	.057	.037	.011	1			
9 (V)	.047	.155*	.040	.162	.133*	.153**	.179**	.016	1		
10 (V)	.001	.213	.091	.237***	.218***	.277***	.201***	.035	.278***	1	
11 (V)	.052	.162*	.101	.209***	.139*	.191***	.149**	.032	.312***	.564***	1

*p<0.05 **p<0.01 ***p<0.001



Regarding the correlations among different types of OV, the data presented in Table 6 show high and moderate correlations among different types of online sexual harassment. Specifically, receiving messages with sexual connotations highly (strongly) correlate with receiving photos and/or video with explicit content (one's genitals, one's sexual intercourse, etc.) ($r > 0.70$). Similarly, receiving a request for photographs/video with explicit content moderately correlates with receiving messages with sexual connotations and receiving photographs/video with explicit content ($0.35 < r < 0.70$). A moderate correlation was found between two types of online IPV as well. More precisely, experiencing that partner was checking the participant's text messages, DMs and/or SM profiles were positively correlated with experiencing that the partner was monitoring the participant's online activity and browsing history (Table 6). Although the correlations between other types of OV were also positive, their correlation coefficients were considered low, indicating a weak relationship. The correlations between different types of OV indicate that some respondents were experiencing multiple OV. However, it should be noted that there is no correlation between experiencing that the partner was recording sexual intercourse and sharing that video with others without the participant's approval and other types of OV. Given that only one participant reported experiencing this type of online IPV, it was not expected that there would be a correlation with any type of OV and OVB.

Perpetration (P): SH1 - sending msgs with sexual connotation; SH2 - sending to someone a photo/video with explicit content; SH3 - Requesting from someone a photo/video with explicit content; SIPV - recording sexual intercourse with a partner without his/her approval; IPV control 1 - using location tracking app to control partner; IPV control 2 - checking partner's msgs, DMs, SN profiles; IPV control 3 - monitoring partner's online activity

Victimization (V): 1 - receiving online insults; 2 - receiving online threats; 3 - receiving online virus; 4 - receiving messages with sexual connotation; 5 - receiving photo/video with explicit content; 6 - receiving a request for photo/video with explicit content; 7 - revenge pornography; 8 - partner was recording and distributing a video of your SI without your consent; 9 - partner was using a location tracking app to control you; 10 - partner was checking your msgs, DMs, SM profiles; 11 - partner was monitoring your online activity and browsing history.

DISCUSSION AND CONCLUSIONS

The main purpose of the present study was to investigate the prevalence of OV and OVB and examine the relationship between different types of victimization and victimizing behaviours since these are two under-researched topics in the



Serbian context. The present study shows a high prevalence of OV (75.6%) and relatively mild prevalence rates of OVB (46.7%). Such a high prevalence of OV is much higher than the one found in previous studies that show the prevalence rates between 8.6% and 55.3%, depending on the applied research methodology and instruments used (e.g., Finn, 2004; Dilmac, 2009; Schenk & Fremouw, 2012; Crosslin & Crosslin, 2014;). One possible explanation for these discrepancies could be in the time distance given that over the past decade the development of ICT had progressed rapidly, which has been accompanied by an increase in the number of users, opportunities for use of these technologies, as well as opportunities for misuse. However, our findings comply with the results of recent international studies (e.g., Cava et al., 2020; Gracia-Leiva, et al., 2020; Mohseny et al., 2021). For example, Mohseny et al. (2021) reported even a higher prevalence rate of OV among Iranian students (about 90%).

A half or even two-thirds of our respondents (for some types of SH) have experienced different forms of online sexual harassment (OSH) at least once. One of the female participants explained: *"In our generation, unfortunately, it is normalized for maniacs to send their genitals to girls on a daily basis. Although you try to ignore it, it's not harmless. It makes you feel insecure."* The prevalence of OSH in our study is higher than it was found in previous research (e.g., Powell & Henry, 2017; Woodlock, 2017; Douglass et al., 2018). For example, a study of Australian participants aged 15 to 29 years (n=1,272), found that 34% of them have experienced OSH through SM and 26% via phone (Douglass et al. 2018). Similarly, another study (n=5,798; Powell & Henry, 2018), found that 20% of Australian participants and 16.6% of the UK participants reported having experienced OSH in their lifetime. Bearing this in mind, our findings on OSH clearly emphasise the necessity of conducting more extensive and detailed research into this phenomenon in the student population, given the specifics of this period in young people's lives.

High indicators of online control IPV, in terms of perpetration (11.6% - 57.4% - 63.2%), found in our study, are in the line with recent international studies (e.g., Caridade & Braga, 2019; Cava et al., 2020). The prevalence of online control IPV, in terms of victimization, found in the present study (11.7% - 40.7% - 35.9%), is consistent with other studies (e.g., Burke et al., 2011; Zweig et al., 2013a; Zweig, et al., 2013b), reporting the rates below 50%. This is still a high percentage of control online IPV and it may be explained by the fact that online controlling behaviour in an emotional relationship is perceived as a sign of love or jealousy (Francis & Pearson, 2019). However, these results indicate the importance of better understanding the risk factors that may be at the origin of these abusive behaviours.

As for the consequences of OV, our research showed that every fifth respondent reported that OV had left consequences and that almost two thirds of them shared their experience with someone. This does not necessarily indicate the absence of



consequences, but rather the possibility that the respondents do not recognize some of these behaviours as hurtful, or the emotional consequences it causes. Sharing victimizing experiences with close friends and relatives is certainly one way, and even maybe the best way (Schenk & Fremouw, 2012) of overcoming negative emotions caused by those experiences. However, it is worrisome that every fifth respondent who turned to someone for help experienced secondary victimization, which supports findings from the previous study by Stevković et al. (2019). This result highlights the need to raise awareness among the wider public, especially young people, about the seriousness of OV and its consequences.

Our study showed that there were significant gender differences in the prevalence rates of OVB in the sense that a higher prevalence of victimizing behaviours was found for male students, which is in line with the results of the Hashemi's study (2021). However, our findings are inconsistent with the results of other studies (e.g., Wozencroft et al., 2015; Almenayes, 2017; Stewart et al., 2018) that found no gender differences in the prevalence rates of OVB. Interestingly, the result concerning OV indicates that there was no significant gender difference in the prevalence rate of victimization, which supports the findings of many other studies (e.g., Schenk et al., 2013; Antoniadou & Kokkinos, 2015; Wozencroft et al., 2015; Smith et al., 2018; Abaido, 2020; Hashemi, 2021).

Finally, the results of this study showed positive correlations between all types of OVB and most types of OV, indicating the overlap between victimization and perpetration, as well as revictimization of some of the respondents. This result is in line with other studies (e.g., Caridade et al., 2020; Brewer & Kerslake, 2015; Hashemi, 2021; Francisko et al., 2015).

In light of the results obtained, there is a need of undertaking additional quantitative study to understand the various kinds of OV and OVB, and qualitative studies to thoroughly examine the socio-psychological effects of OVB on victims. The need to get knowledge of the main characteristics of OV and OVB is an imperative and prerequisite for the protection of the existing and potential victims, and for planning the preventive activities (Stevković, 2012). Further, the victims must be encouraged to report any acts of OV that may have a negative impact on their mental health and wellbeing. The initiatives of OV and OVB prevention and intervention should be implemented at schools and universities. Moreover, universities should be focusing on encouraging students to report OV by assuring them that appropriate action will be taken upon their report. Finally, students should be informed about the responsibilities and the risks that come with the use of the ICT, and the need of seeking assistance from responsible adults when OV happens.



ORIGINALITY/VALUE

This study represents a relevant contribution to the understanding of the OV and OVB phenomenon among the students in Serbia. Our research only sheds the light on this problem and emphasises the need for more comprehensive research on a sample of this category of young people and the development of preventive strategies adjusted to them, in order to prevent their victimisation and perpetration of online violence. In addition to addressing this problem from a research and theoretical point of view, a broader social strategy is needed aiming at raising youth awareness about OV, as well as designing concrete knowledge-based preventive and support programmes to overcome the negative consequences of the OV experience.

REFERENCES

- Abaido, G. M. (2020). Cyberbullying on social media platforms among university students in the United Arab Emirates. *International Journal of Adolescence and Youth*, 25(1), 407–420. <https://doi.org/10.1080/02673843.2019.1669059>
- Almenayes, J. (2017). The Relationship between Cyberbullying Victimization and Depression: The Moderating Effects of Gender and Age. *Social Networking*, 6, 215–223.
- Antoniadou, N. & Kokkinos, C. M. (2015). Cyber and school bullying: Same or different phenomena? *Aggression and Violent Behavior*, 25(part B), 363–372. <https://doi.org/10.1016/j.avb.2015.09.013>
- Avais, M. A., Wassan, A. A., Narejo, H. & Khan, J.A. (2014). Awareness Regarding Cyber Victimization Among Students of University of Sindh, Jamshoro. *International Journal of Asian Social Science*, 4(5), 632–641.
- Bernardo, A. B., Tuero, E., Cervero, A., Dobarro, A. & Galve- González, C. (2020). Bullying and cyberbullying: Variables that influence university dropout. *Communicar*, 28(64), 61–69. <https://doi.org/10.3916/C64-2020-06>
- Brewer, G. & Kerslake, J. (2015). Cyberbullying, self-esteem, empathy and loneliness. *Computers in Human Behavior*, 48, 255–260. <https://doi.org/10.1016/j.chb.2015.01.073>
- Borrajo, E. (2020). Cyberdating abuse and relational variables. In: S. Caridade & A. M. Dinis (eds.) *Adolescent Dating Violence: Outcomes, Challenges and Digital Tools* (pp. 49–72). Nova Science Publishers: USA, NY, Hauppauge.
- Burke, S., Wallen, M., Vail-Smith, K., Knox, D. (2011). Using technology to control intimate partners: An exploratory study of college undergraduates. *Computers in Human Behavior*, 27(3), str. 1162–1167.



- Caridade, S., Ataíde, I. & Dinis, A. (2020). Cyberdating abuse victimization and association with online dating violence. In M.L. Knudsen (Ed.) *Victims of Violence: Support, Challenges and Outcomes* (pp. 231-250). USA, NY, Nova Science Publishers: Hauppauge.
- Caridade, S. & Braga, T. (2019). Versão portuguesa do Cyber Dating Abuse Questionnaire (CDAQ): Adaptação e propriedades psicométricas [Portuguese Version of Cyber Dating Abuse Questionnaire (CDAQ): Adaptation and Psychometric Properties]. *Análise Psicológica*, 37(1), 93–105. <https://doi.org/10.14417/ap.1543>
- Caridade, S. & Dinis, A. M. (2020) Adolescent Dating Violence: Outcomes, Preventive Practices and Further Challenges. In S. Caridade, A. M. Dinis (eds.) *Adolescent Dating Violence: Outcomes, Challenges and Digital Tools* (pp. 1-18). Nova Science Publishers: USA, NY, Hauppauge.
- Caridade, S., Pedrosa e Sousa, H. F. & Pimenta, A. & Dinis, M. A. (2020) Cyber and offline dating abuse in a Portuguese sample: Prevalence and context of abuse. *Behavioral Science*, 10. doi:10.3390/bs10100152
- Cava, M. J., Buelga, S., Carrascosa, L. & Ortega-Baron, J. (2020). Relations among romantic myths, online dating violence victimization and cyber dating violence victimization in adolescents. *International Journal of Environmental Research and Public Health*, 17(5), 1551. <https://doi.org/10.3390%2Fijerph17051551>
- Crosslin, K. L. & Crosslin, M. B. (2014). Cyberbullying at a Texas university: A mixed-methods approach to examining online aggression. *Texas Public Health Journal*, 66(3), str. 26–31.
- Dilmac, B. (2009). Psychological needs as a predictor of cyberbullying: A preliminary report on college students. *Educational Sciences: Theory and Practice*, 9, str. 1307–1325.
- Douglass, C. H., Wright, C. J. C., Davis, A. C. & Lim, M. S. C. (2018). Correlates in person and technology-facilitated sexual harassment from an online survey among young Australians. *Sexual Health*, 15 (4), 361-365. <https://doi.org/10.1071/sh17208>
- Dragiewicz, M., Burgess, J., Matamoros-Fernandez, A., Salter, M., Suzor, N. P., Woodlock, D. & Harris, B. (2018). Technology facilitated coercive control: Domestic violence and the competing roles of digital media platforms. *Feminist Media Studies*, 18(4), 609-625. <https://doi.org/10.1080/14680777.2018.1447341>
- European Institute for Gender Equality. 2020. Violence at a Glance. Available online: <https://eige.europa.eu/gender-equality-index/2020/domain/violence>, accessed on 12 July 2022.



- Farley, S., Coyne, I., Sprigg, C., Axtell, C. & Subramanian, G. (2015). Exploring the impact of workplace cyberbullying on trainee doctors. *Medical Education*, 49(4), 436–443. <https://doi.org/10.1111/medu.12666>
- Finn, J. (2004). A survey of online harassment at a university campus. *Journal of Interpersonal Violence*, 19(4), str. 468–483.
- Francis, L. & Pearson, D. (2019). The recognition of emotional abuse: Adolescents' responses to warning signs in romantic relationships. *Journal of Interpersonal Violence*, 36(17-18), 8289-8313. doi: 10.1177/0886260519850537
- Francisco, S. M., Veiga Simão, A. M., Ferreira, P. C. & Martins, M. J. D. D. (2015). Cyberbullying: The hidden side of college students. *Computers in Human Behavior*, 43, 167–182. <https://doi.org/10.1016/j.chb.2014.10.045>
- Gracia-Leiva, M., Puente-Martínez, A. & Ubillos-Landa, S. (2020). Off and online heterosexual dating violence, perceived attachment to parents and peers and suicide risk in young women. *International Journal of Environmental Research and Public Health*, 17(9), 3174. <https://doi.org/10.3390/ijerph17093174>
- Geffner, R. (2016). Partner aggression versus partner abuse terminology: Moving the field forward and resolving controversies. *Journal of Family Violence*, 31(8), 923–25. <https://doi.org/10.1007/s10896-016-9898-8>
- Hashemi, A. (2021). Cyberbullying phenomenon: An investigation among Afghan university students. *Cogent Social Sciences*, 7(1), 1988217. <https://doi.org/10.1080/23311886.2021.1988217>
- Harris, B. A. & Woodlock, D. (2019). Digital coercive control: Insights from two landmark domestic violence studies. *British Journal of Criminology*, 59(3), 530-550. <https://doi.org/10.1093/bjc/azy052>
- Henry, N., Flynn, A. & Powel, A. (2020). *Technology-facilitated domestic and sexual violence: A review*. *Violence Against Women*, 26(16), 1828-1854.
- Henry, N. & Powell, A. (2015). Beyond the “sext”: Technology-facilitated sexual violence and harassment against adult women. *Australian & New Zealand Journal of Criminology*, 48(1), 104-118.
- Kokkinos, C. M., Antoniadou, N. & Markos, A. (2014). Cyber-bullying: An investigation of the psychological profile of university student participants. *Journal of Applied Developmental Psychology*, 35(3), str. 204–214.
- Kokkinos, C. M., Baltzidis, E. & Xynogala, D. (2016). Computers in human behavior prevalence and personality correlates of Facebook bullying among university undergraduates. *Computers in Human Behavior*, 55, part B, 840–850. <https://doi.org/10.1016/j.chb.2015.10.017>
- Machado, B., Caridade, S., Araújo, I. & Lobato Faria, P. (2022). Mapping the cyber interpersonal violence among young populations: A scoping review. *Social Sciences* 11(5), 1-16. <https://doi.org/10.3390/socsci11050207>



- Merlander, L. (2010). College students' perceptions of intimate partner cyber harassment. *Cyberpsychology, Behavior and Social Networking*, 13(3), 263-268. <https://doi.org/10.1089/cyber.2009.0221>
- Mirić, F., Vasiljević-Prodanović, D. (2022). Viktimološki osvrt na vršnjačko nasilje u digitalnom okruženju [Victimological review of peer violence in digital environment]. *Temida*, 20(1), 79-92. <https://doi.org/10.2298/TEM2201079M>
- Moore, D. S., Notz, W. I. & Flinger, M. A. (2013). *The basic practice of statistics* (6th ed.). New York, NY: W. H. Freeman and Company.
- Mohseny, M., Zamani, Z., Basti, S. A., Sohrabi, M. R., Najafi, A. & Tajdini, F. (2021). Exposure to cyberbullying, cyber victimization, and related factors among high school students. *Iranian Journal of Psychiatry and Behavioral Sciences*, 14(4), 1-8. <https://dx.doi.org/10.5812/ijpbs.99357>
- Muñoz-Fernández, N. & Sánchez-Jiménez, V., (2020). Cyber-aggression and psychological aggression in adolescent couples: A short-term longitudinal study on prevalence and common and differential predictors. *Computers in Human Behavior*, 104: 106191. <https://doi.org/10.1016/j.chb.2019.106191>
- Neves, S., Forte, A., Pereira, M. & Castro, A. (2020) Sexting and dating violence in Portugal: Framing knowledge, evidence, consequences and impacts. In S. Caridade, A.M. Dinis (Eds.) *Adolescent Dating Violence: Outcomes, Challenges and Digital Tools* (pp. 73-88). Nova USA, NY, Hauppauge: Science Publishers.
- Powell, A. & Henry, N. (2018). Policing technology-facilitated sexual violence against adult victims: Police and service sector perspectives. *Policing and Society*, 28(3), 291-307. <https://doi.org/10.1080/10439463.2016.1154964>
- Schenk, A. & Fremouw, J. (2012). Prevalence, psychological impact, and coping of cyberbully victims among college students. *Journal of School Violence*, 11(1), str. 21-37. <https://doi.org/10.1080/15388220.2011.630310>
- Schenk, A. M., Fremouw, W. J. & Keelan, C. M. (2013). Characteristics of college cyberbullies. *Computers in Human Behavior*, 29(6), 2320-2327. <https://doi.org/10.1016/j.chb.2013.05.013>
- Smith, P., Mahdavi, J., Carvalho, M., Fisher, S., Russel, S. & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, 49(4), 376-385.
- Smith, K., Mary, J., Lapierre, A., Dion, J., Hébert, M., & Côté, K. (2018). Cyberdating violence: Prevalence and correlates among high school students from small urban areas in Quebec. *Journal of Affective Disorders*, 234, 220-223. <https://doi.org/10.1016/j.jad.2018.02.043>
- Stephenson, V. L., Wickham, B. M. & Capezza, N. M. (2018). Psychological abuse in the context of social media. *Violence and Gender*, 5(3), 129-134. <https://psycnet.apa.org/doi/10.1089/vio.2017.0061>



- Stevković, Lj. (2012). Evidentiranje i prikaz podataka o nasilnom kriminalitetu maloletnika: inostrana i iskustva iz Srbije [Recording and availability of data on the violent crime of juveniles: foreign and experiences from Serbia]. U: V. Nikolić-Ristanović (ur.) *Evidentiranje kriminaliteta: iskustva iz sveta i Srbije* (str. 105-130). Beograd: IGP „Prometej“.
- Stevković, Lj., Popović, M. & Kovačević, M. (2019). Viktimizacija studenata u sajber prostoru: Iskustva iz Srbije [Students' Experiences in Cyberspace: Experiences from Serbia]. *Kriminalističke teme*, 20(5), 247-270.
- Stonard, K. E. (2020). "Technology was designed for this": Adolescents' perceptions of the role and impact of the use of technology in cyber dating violence. *Computers in Human Behavior*, 105: 106211. <https://doi.org/10.1016/j.chb.2019.106211>
- Stonard, K. E., Bowen, E., Walker, K. & Price, S. A. (2017) "They'll always find a way to get to you": Technology use in adolescent romantic relationships and its role in dating violence and abuse. *Journal of Interpersonal Violence*, 32(14), 2083–2117. <https://doi.org/10.1177/0886260515590787>
- Wright, M. F. (2013). The relationship between young adults' beliefs about anonymity and subsequent cyber aggression. *Cyberpsychology, Behavior and Social Networking*, 16, 858–862. <https://doi.org/10.1089/cyber.2013.0009>
- Woodlock, D. (2017). The Abuse of technology in domestic violence and stalking. *Violence against Women*, 23(5), 584-602.
- Wozencroft, K., Campbell, M., Orel, A., Kimpton, M. & Leong, E. (2015). University students' intentions to report cyberbullying. *Australian Journal of Educational and Developmental Psychology*, 15, 1–12.
- Varghese, M. E. & Pistole, M.C. (2017). College student cyberbullying: Self-esteem, depression, loneliness, and attachment. *Journal of College Counseling*, 20(1), 7–21. <https://doi.org/10.1002/jocc.12055>
- Vasiljević-Prodanović, D. (2020). Primena računara i interneta u nastavi i učenju na Fakultetu za specijalnu edukaciju i rehabilitaciju. *Teme*, 44(3), 763-775. <http://dx.doi.org/10.22190/TEME190205056V>
- Zweig, J. M., Dank, M., Lachman, P. & Yahner, J. (2013a). *Technology, teen dating violence and abuse, and bullying*. Washington: Urban Institute Justice Policy Center.
- Zweig, J. M., Dank, M., Yahner, J. & Lachman, P. (2013b). The rate of cyber dating abuse among teens and how it relates to other forms of teen dating violence. *Journal of Youth Adolescence*, 42, 1063–1077. <https://doi.org/10.1007/s10964-013-9922-8>

