

CYBERBULLYING AMONG SECONDARY SCHOOL STUDENTS: PREVALENCE, PATTERNS OF VICTIMIZATION, OFFENDING, AND RESPONSE

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Abstract: The digitalization of everyday communication among secondary school students has created opportunities for various forms of aggressive behavior mediated by digital technologies. The aim of this study was to examine the prevalence of cyberbullying victimization and offending among secondary school students, identify the most prevalent forms of victimization and offending, and examine the associations of these experiences with time spent on social media and the reporting of experienced cyberbullying. Particular attention was given to students' responses to experienced cyberbullying and the outcomes of reporting such experiences. The study was conducted on a sample of 229 secondary school students. Cyberbullying victimization and offending were assessed using the Cyberbullying Victimization Scale and Cyberbullying Offending Scale (Hinduja & Patchin, 2024), both of which demonstrated good internal consistency (Cronbach's $\alpha = .880$ and $\alpha = .823$, respectively). The results showed that 56.8% of students reported having experienced cyberbullying, while 32.8% reported having engaged in some form of cyberbullying offending. The frequency of both cyberbullying victimization and offending was positively associated with time spent on social media. Among students who had experienced cyberbullying, 43.8% reported it, with parents being the most frequently selected source of support (75.4%). Reporting cyberbullying was associated with lower levels of victimization. Nevertheless, among students who reported cyberbullying, the problem remained unresolved for the majority (59.6%), indicating a discrepancy between students' willingness to seek support and the outcomes of reporting. Overall, the findings indicate that cyberbullying is prevalent among secondary school students, with verbal and relational forms predominating in both victimization and offending, and that the frequency of these experiences is associated with the intensity of digital engagement. The findings underscore the need to strengthen mechanisms of protection, support, and institutional response, alongside empowering young people to recognize and report cyberbullying in a timely manner.

Keywords: cyberbullying, victimization, cyberbullying offending, secondary school students.

Field: Social Sciences

1. INTRODUCTION

The rapid expansion of digital media has profoundly transformed contemporary society, reshaping the ways individuals communicate, access information, and engage in learning. Digital technologies have increased the availability of information, facilitated communication, provided flexible access to contents, and expanded opportunities for education and personal development. At the same time, it has also introduced various challenges and negative consequences, such as excessive use and addiction, exposure to inappropriate and harmful content, threats to users' privacy and safety, and the growing prevalence of cyberbullying and other forms of online violence. Consequently, the expansion of digital violence and its consequences on adolescent development have become some of the priority topics in contemporary scientific research.

Digital or electronic violence is defined as "the use of mobile phones, computers, video cameras and similar electronic devices to intentionally scare, insult, humiliate or otherwise injure someone" (Popadić & Kuzmanović, 2016:20). If we take into account that even 90% of adolescents access social networks daily (Kuzmanović et al., 2019), their intense presence in the digital environment simultaneously increases the possibility of exposure or perpetration. Findings show that perceived anonymity, impulsive use of social networks, and subjective norms are associated with propensity for cyberaggressive behavior (Tennakoon et al., 2024).

The importance of studying digital violence is confirmed by findings on its prevalence and multiple consequences for adolescents. In particular, the results show that approximately every fifth adolescent experiences some form of digital violence as a perpetrator (Zhu et al., 2025). A more pronounced frequency of digital violence occurs when looking at the period of the last month stated that it was exposed

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to cyberbullying, while 16.1% of students stated that they had committed violence against others during the same period (Patchin, 2025).

When it comes to the consequences, adolescents who are victims of violence have an increased risk of depression, anxiety, loneliness, low self-esteem and reduced life satisfaction in the victims (Kasturiratna et al., 2025; Li et al., 2026), while aggression, self-regulation problems and depressive symptoms are more often registered in the perpetrators (Zhang et al., 2025; Kasturiratna et al., 2025).

Considering that the digital space has become a place of constant engagement and development for adolescents, the purpose of this study was to examine the current relevance of cyberbullying by exploring its prevalence and the characteristics of students' experiences in different roles, as well as its association with the intensity of social media use.

2. METHODS

The study was conducted with a sample of 229 secondary school students enrolled in the first through fourth grades in Niš, Serbia. The primary aim was to investigate the prevalence and characteristics of cyberbullying, with particular emphasis on students' experiences of cyberbullying victimization and perpetration, as well as the association between time spent on social media and involvement in cyberbullying. Three research hypotheses were formulated. H1: Time spent on social media is significantly and positively associated with the frequency of cyberbullying victimization. H2: Time spent on social media is significantly and positively associated with the frequency of cyberbullying perpetration. H3: There are statistically significant differences in the level of cyberbullying victimization between students who reported experiencing cyberbullying and those who did not report such experiences.

Data were collected using an anonymous online questionnaire, and participation was voluntary. Cyberbullying victimization and perpetration were assessed using the Cyberbullying Victimization Scale and the Cyberbullying Offending Scale developed by Hinduja and Patchin (2024). Each scale comprises nine items assessing the frequency of different forms of cyberbullying victimization and perpetration, respectively, during the preceding 30 days. Responses are rated on a four-point scale ranging from 0 ("never") to 3 ("multiple times"). For the purposes of the present study, both instruments were translated into Serbian. In the present sample, the Cyberbullying Victimization Scale demonstrated good internal consistency (Cronbach's $\alpha = .880$), as did the Cyberbullying Offending Scale (Cronbach's $\alpha = .823$).

Data analysis included descriptive statistics (frequencies, percentages, means, and standard deviations). Spearman's rank-order correlation coefficient was used to examine the associations between time spent on social media and the frequency of cyberbullying victimization and perpetration.

3. RESULTS AND DISCUSSIONS

The sample comprised 110 male secondary school students (48.0%) and 119 female secondary school students (52.0%). With regard to school type, 76 participants (33.2%) attended general secondary schools (gymnasias), whereas 153 participants (66.8%) attended vocational secondary schools. The largest proportion of participants were third-year students ($n = 96$; 41.9%), followed by fourth-year students ($n = 55$; 24.0%), first-year students ($n = 53$; 23.1%), and second-year students ($n = 25$; 10.9%). Regarding time spent on social media, the largest proportion of students reported spending five to six hours per day on social media ($n = 87$; 38.0%), followed by three to four hours per day ($n = 80$; 34.9%). Thirty students (13.1%) reported spending seven to eight hours per day on social media, while 17 students (7.4%) reported spending one to two hours per day. Nine students (3.9%) reported spending more than eight hours per day on social media, whereas 6 students (2.6%) reported spending less than one hour per day on social media.

Table 1. Frequency of cyberbullying victimization and offending		
Frequency	Cyberbullying victimization, N (%)	Cyberbullying offending, N (%)
Never	99 (43.2)	154 (67.2)
Once	55 (24.0)	39 (17.0)
Few times	33 (14.4)	32 (14.0)
Many times	42 (18.3)	4 (1.7)
Total	229 (100)	229 (100)

Source: Authors' survey data; response options from Hinduja and Patchin (2024)

As shown in Table 1, 130 secondary school students (56.8%) reported experiencing cyberbullying, while 75 secondary school students (32.8%) reported engaging in cyberbullying. Among the secondary school students who experienced cyberbullying, 18.3% reported that it had occurred multiple times, while 1.7% reported having engaged in cyberbullying multiple times.

Table 2. Frequency of specific forms of cyberbullying victimization and offending

Specific form	Victimization, N (%)	Offending, N (%)
Mean or hurtful comments posted online	78 (60.0)	43 (57.3)
A mean or hurtful picture posted online	56 (43.1)	25 (33.3)
A mean or hurtful video posted online	27 (20.8)	12 (16.0)
A mean or hurtful web page created about the person	10 (7.7)	4 (5.3)
Rumors spread online	91 (70.0)	40 (53.3)
Threats to hurt through a cell phone text message	32 (24.6)	8 (10.7)
Threats to hurt online	67 (51.5)	16 (21.3)
Pretending to be another person online and acting in a way that was mean or hurtful	24 (18.5)	11 (14.7)

Source: Authors' survey data; forms of cyberbullying from Hinduja and Patchin (2024), presented in neutral form

Note. Percentages for victimization are based on N = 130, and percentages for offending are based on N = 75. Participants could report more than one form of cyberbullying.

The analysis of specific forms of cyberbullying was conducted among students who reported experiencing (N = 130) or engaging in cyberbullying (N = 75). As shown in Table 2, among the forms of cyberbullying victimization, the most prevalent were rumors spread online (91; 70.0%), mean or hurtful comments posted online (78; 60.0%), and threats to hurt online (67; 51.5%). Among the forms of cyberbullying offending, the most prevalent were mean or hurtful comments posted online (43; 57.3%) and rumors spread online (40; 53.3%), while the remaining forms were reported by fewer than one-third of the students.

In the sample of 75 students who reported having perpetrated cyberbullying, the most common reasons for such behavior were anger and revenge, each reported by 28.0% of participants (n = 21). The desire to make jokes was reported by 14.7% of participants (n = 11), while peer pressure was reported by 10.7% (n = 8), and boredom by 9.3% (n = 7). Less frequently reported reasons included provocation, reported by 5.3% of participants (n = 4), and jealousy, reported by 4.0% (n = 3).

Table 3. Correlations of time spent on social media with cyberbullying victimization and offending

Variable	ρ	p	N
Time spent on social media – Cyberbullying victimization	.240	.006	130
Time spent on social media – Cyberbullying offending	.393	< .001	75

Source: Authors' research

As presented in Table 3, Spearman's rank-order correlation analysis demonstrated a statistically significant, weak positive association between time spent on social media and the frequency of cyberbullying victimization ($\rho = .240$, $p = .006$, $N = 130$). This finding indicates that greater time spent on social media was associated with a higher frequency of cyberbullying victimization. Furthermore, a statistically significant, moderate positive association was observed between time spent on social media and the frequency of cyberbullying perpetration ($\rho = .393$, $p < .001$, $N = 75$). Thus, greater time spent on social media was associated with a higher frequency of cyberbullying perpetration.

Among the secondary school students who reported experiencing digital violence ($N = 130$), 57 (43.8%) reported the incident, whereas 73 students (56.2%) did not report their experience. Among the students who reported digital violence ($N = 57$), parents were the most frequently approached source of support (43; 75.4%), followed by a friend (32; 56.1%). Fifteen students (26.3%) reported the violence to their homeroom teacher, while 9 students (15.8%) reported it to each of the school pedagogue and school psychologist. Five students (8.8%) reported the violence to the police, while 2 students (3.5%) contacted the National Contact Centre for Child Safety on the Internet. Given that participants could select more than one response, the reported percentages represent the proportions of students who approached each individual source of support. Regarding the outcomes of reporting, 23 students (40.4%) reported that the problem was resolved after reporting, whereas 34 (59.6%) reported that the problem was not resolved.

Regarding the extent to which the experienced violence affected participants' feelings, the largest proportion of participants ($n = 43$; 33.1%) reported a considerable impact. A moderate impact was reported by 39 participants (30.0%), while 29 participants (22.3%) indicated that the experienced violence had a strong impact on their feelings. A smaller proportion of participants ($n = 13$; 10.0%) reported a limited impact, whereas 6 participants (4.6%) reported no impact on their feelings.

Table 4. Differences in cyberbullying victimization according to reporting of cyberbullying

Reporting of cyberbullying	N	M	SD	t	df	p
Yes	57	5.61	4.64	-3.38	127.88	.001
No	73	8.81	6.14			

Source: Authors' research

Table 4 presents differences in cyberbullying victimization scores as a function of whether participants reported their experiences of cyberbullying. An independent-samples t-test revealed a statistically significant difference in cyberbullying victimization between participants who reported experiencing cyberbullying and those who did not, $t(127.88) = -3.38$, $p = .001$. Specifically, participants who did not report experiencing cyberbullying obtained significantly higher mean victimization scores ($M = 8.81$, $SD = 6.14$) than participants who reported experiencing cyberbullying ($M = 5.61$, $SD = 4.64$).

The findings indicate that cyberbullying represents a significant problem among students, with rumor spreading, offensive comments, and online threats being the most prevalent forms. A particularly significant finding was the positive association between the amount of time spent on social media and the frequency of cyberbullying perpetration, which is consistent with the results of Milošević and Milošević (2023), as well as more recent findings reported by Lahti et al. (2024) and Young et al. (2024). This consistency highlights the importance of not only the intensity but also the way in which social media are used, as adolescents primarily use these platforms for entertainment and communication with peers (UNICEF, 2016). Such an environment increases their exposure to various forms of digital interaction, including the risk of engaging in or being exposed to violent behavior. Supporting this, Cebollero-Salinas et al. (2025) emphasize the importance of social interactions and information sharing in the digital environment for the emergence and maintenance of cyberbullying.

The significance of these findings is further underscored by the potential consequences of cybervictimization. Recent research has linked experiences of cyberbullying to depressive and anxiety

symptoms, reduced well-being, and difficulties in adolescents' everyday functioning (Liu et al., 2024; Nickerson & Fredrick, 2026). In addition, longitudinal studies have indicated an association between cybervictimization and more severe forms of psychological distress, including suicidal ideation and self-harm (Morales-Arjona et al., 2024). These findings confirm that cyberbullying is not merely a form of unacceptable behavior in the digital environment, but rather a complex problem with potentially long-term consequences for adolescents' psychological and social functioning.

At the same time, the findings concerning the reporting of cyberbullying point to certain shortcomings in the accessibility and effectiveness of support systems. Although students most frequently turn to their parents and peers, they are considerably less likely to seek help from teachers and school counselors. Of particular concern is the finding that more than half of the students reported that the problem had not been resolved even after it was reported. These findings raise questions about students' trust in formal protection mechanisms, as well as their actual effectiveness in responding to cases of cyberbullying. Similar conclusions have been reported by Nagar and Talwar (2023), who emphasize that teacher support and a positive school climate can contribute to students' greater willingness to report bullying. Therefore, cyberbullying prevention should not focus exclusively on promoting responsible and safe internet use, but also on strengthening support systems for students through the establishment of accessible, confidential, and effective mechanisms for reporting, responding to, and monitoring cases of cyberbullying.

4. CONCLUSIONS

The main findings of the study indicate a significant prevalence of cyberbullying, with the most common forms being rumor spreading, offensive comments, and online threats. A significant positive association was found between the amount of time spent on social media and perpetration of cyberbullying, with a higher prevalence of students reporting experiences in the role of victims than in the role of perpetrators. Furthermore, the findings indicate that the problem of cyberbullying is not attributable solely to the amount of time adolescents spend on social media, but also to how they use these platforms, the quality of their peer relationships, and the availability and effectiveness of support systems. Therefore, cyberbullying prevention should not be based exclusively on limiting screen time, but rather on developing students' digital and socio-emotional competencies, empowering parents and teachers to recognize and respond appropriately to cyberbullying in a timely manner, and establishing accessible, confidential, and effective mechanisms for reporting and addressing cases of cyberbullying. Of particular importance is the integration of content related to digital safety, responsible online behavior, and cyberbullying prevention into everyday school practices, rather than limiting such content to occasional and one-time educational activities. At the same time, it is necessary to continuously monitor the outcomes of reported cases and provide students with support even after reporting, given that more than half of the students in this study reported that the problem had not been resolved following the report. Effective prevention therefore requires coordinated action among students, parents, teachers, school counselors and other relevant stakeholders, with the aim of creating a school environment in which students feel confident reporting cyberbullying and receive timely and appropriate protection.

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