



## Technology and Ethics in Social Media: A Study of the Phenomenon of Digital Bullying in the Young Generation

Endah Febri Setiya Rini<sup>1</sup>, Paschalis Raptis<sup>2</sup>, Omer Faruk Sozcu<sup>3</sup>, Shimaah Ahmed Ahmed Mohamed Abdelrhman<sup>4</sup>, Cristian Lara-Valenzuela<sup>5</sup>

<sup>1</sup>Science Education, Universitas Sebelas Maret, Jawa Tengah, Indonesia

<sup>2</sup>Information Technology, Technological Educational Institute of Thessaloniki, Greece

<sup>3</sup>Computer and Instructional Technology, Fatih University, Turkey

<sup>4</sup>Department of Educational Technology, Kafrelsheikh University, Egypt

<sup>5</sup>Department of Educational Technology, Universidad Técnica Federico Santa María, Valparaíso, Chile

### Article Info

#### Article history:

Received Sep 30, 2023

Revised Oct 28, 2023

Accepted Nov 29, 2023

Online First Dec 22, 2023

#### Keywords:

Digital Bullying  
Emotional Impact  
Psychological Impact  
Social Media  
Teenagers

### ABSTRACT

**Purpose of the study:** This study aims to examine the prevalence of digital bullying on social media, its psychological and emotional impacts on adolescents, and the correlation between social media use and bullying experiences. This study aims to provide insight into the factors that contribute to digital bullying among adolescents and young people.

**Methodology:** This study used a mixed-methods approach, utilizing questionnaires, structured interviews, and content analysis. The tools used included statistical software for data analysis in the form of descriptive statistics and correlation tests. Five respondents were selected for in-depth interviews.

**Main Findings:** The study found that 80% of respondents engaged in digital bullying, with the most common forms being verbal insults (60%) and hate speech (40%). Frequent social media use (3-5 hours/day) was associated with higher levels of anxiety and loneliness, while the prevalence of bullying was correlated with significant psychological and emotional impacts.

**Novelty/Originality of this study:** This study provides a comprehensive view of digital bullying among adolescents, focusing on its psychological and emotional impacts. It provides new insights into the role of social media use in exacerbating bullying behavior, and suggests interventions such as digital ethics education to reduce its negative impacts.

This is an open access article under the [CC BY](https://creativecommons.org/licenses/by/4.0/) license



#### Corresponding Author:

Endah Febri Setiya Rini,

Science Education, Universitas Sebelas Maret

Jl. Ir. Sutami 36 Kentingan, Jebres, Surakarta, Jawa Tengah, Indonesia 57126.

Email: [endahfebrisetyarini@gmail.com](mailto:endahfebrisetyarini@gmail.com)

## 1. INTRODUCTION

In recent years, the development of information technology and social media has changed the way people communicate, work, and interact [1]-[3]. Platforms such as Facebook, Instagram, Twitter, and TikTok are now an important part of everyday life, making it easier for individuals to share information, photos, and videos [4]-[6]. In addition, advanced technologies such as 5G, artificial intelligence, and augmented reality enrich the social media user experience with more interactive features [7]-[9]. The advancement of mobile devices also allows easier access to social media anytime and anywhere, affecting not only the world of work and entertainment, but also social communication patterns in general. Thus, technology has changed the communication landscape, including among the younger generation who are increasingly dependent on these platforms.

Social media has a very large role, especially among the younger generation [10]. These platforms allow them to connect with friends, family, and various communities around the world [11], [12]. In addition, social media also functions as a means to express oneself, share opinions, and build personal identity. However, despite its benefits, social media also brings challenges, especially related to the psychological and social impacts on its users [13]-[15]. Many teens feel more connected to the virtual world, which then affects the way they interact in the real world, creating a dependency that can have negative effects on their social and mental development.

One of the increasingly prominent negative impacts in cyberspace is digital bullying or cyberbullying [16]-[18]. The forms of digital bullying are very diverse, ranging from verbal harassment, spreading hatred, to physical or emotional threats carried out through digital platforms [19], [20]. Cyberbullying can be in the form of insults, spreading false information, or intimidation that is detrimental to the victim [21]-[23]. The use of technology and social media as a means to bully others has increased the prevalence of digital bullying cases, with victims often feeling isolated and having no way to avoid the spread of negative content that damages their reputation [24]-[26]. This digital bullying, even though it occurs in cyberspace, has a very real impact on the lives of victims.

The phenomenon of digital bullying is now increasingly widespread among teenagers and young people who are highly dependent on social media [27], [28]. More than 30% of teenagers are reported to be involved in cyberbullying, either as victims or perpetrators [29], [30]. The anonymity offered by social media platforms allows individuals to act without fear of immediate consequences, while the speed of information dissemination exacerbates its impact [31]-[33]. High dependence on social media also affects their social interaction patterns, making the younger generation more vulnerable to digital bullying [34], [35]. In addition, many teenagers feel emotionally connected to the virtual world, which often leads to feelings of isolation and difficulty in building healthy relationships in the real world.

To prevent and address digital bullying, ethical education in social media use must be a priority. Young people need to be given an understanding of how to use social media wisely, respect the privacy of others, and understand the impact of every action in cyberspace [36]-[38]. Parties such as parents, schools, and the community have a big role in educating children and adolescents about the importance of communicating responsibly [39], [40]. Schools must integrate digital ethics education into the curriculum, while the community must support a positive social media culture [41], [42]. On the other hand, authorities and social media platforms need to strengthen regulations and policies to deal with cyberbullying, ensuring that cyberspace remains a safe space for all its users.

Although the phenomenon of digital bullying or cyberbullying has been widely discussed in previous studies, there is still a gap in understanding the specific factors that influence its prevalence and impact on young people, especially in the context of the ever-evolving digital culture. Many studies focus more on the psychological and emotional aspects of victims without linking them to the underlying social and technological dynamics [17], [43], [44]. This study aims to fill this gap by examining how social media technology and digital interaction patterns contribute to the increase in cases of digital bullying, as well as its impact on the social and mental development of young people. In addition, this study will also assess the effectiveness of policies and preventive measures implemented by social media platforms in reducing digital bullying.

The novelty of this study lies in its approach that combines various perspectives, ranging from technological, social, to social media policy aspects in the context of digital bullying. This study will also explore the relationship between social media dependence and the increase in cyberbullying cases, which has rarely been studied comprehensively in previous studies. By including factors such as online anonymity, the speed of information dissemination, and social interactions in cyberspace, this study provides new insights into the dynamics that influence digital bullying [45], [46]. In addition, this study will also highlight preventive efforts made by social media platforms, which are still a controversial issue and require further study.

This research is very urgent to be conducted because of the increasing prevalence of digital bullying among the younger generation which can damage their mental and social health. With more and more teenagers being exposed to social media from an early age, the impact of digital bullying is a real threat to their development [47], [48]. This research is expected to provide a clearer picture of how technology and social media play a role in exacerbating the problem of digital bullying. In addition, the results of this study can provide a basis for authorities, educational institutions, and social media platforms to develop more effective policies and strategies in addressing and preventing cyberbullying.

The main objective of this study is to analyze the factors that contribute to the increase in digital bullying among young people, focusing on the dynamics of social and technological interactions that occur on social media. This study also aims to evaluate the psychological and social impacts caused by cyberbullying on victims, as well as to identify solutions that can be implemented to prevent and reduce digital bullying. In addition, this study seeks to provide recommendations to related parties, such as parents, schools, and social media platforms, in creating a safer and more supportive digital environment for young people.

## 2. RESEARCH METHOD

### 2.1. Research Design

This study uses a mixed method approach, which is a combination of quantitative and qualitative approaches [49], [50]. The quantitative approach will be used to measure the prevalence of digital bullying among the younger generation and to analyze the relationship between variables such as social media use and its occurrence. While the qualitative approach is used to explore in depth the experiences, perceptions, and impacts felt by victims and perpetrators of digital bullying, as well as the factors that influence their behavior [51], [52]. The combination of these two approaches allows researchers to gain a more comprehensive understanding of the phenomenon of digital bullying.

### 2.2. Research Subject

The subjects of this study consisted of 5 teenagers and young people aged between 12 and 24 years who actively use social media. The selection of this age group was based on their high involvement in social media platforms and their vulnerability to digital bullying cases. The subjects of the study will be selected by purposive sampling by considering variations in gender and level of social media use [53]. This study will only involve teenagers and young people as the main subjects, focusing on their experiences as victims of digital bullying.

### 2.3. Data Collection Instruments and Techniques

The research instruments consist of a questionnaire for quantitative data, in-depth interviews for qualitative data, and content analysis to examine patterns of digital bullying on social media. The questionnaire will be used to collect information on the prevalence, types of digital bullying, and the relationship between social media use and bullying cases. In-depth interviews are conducted to gain a deeper understanding of the personal experiences of victims and perpetrators. Content analysis will be conducted on potentially harmful comments, posts, or messages on social media platforms. Data collection is carried out both online and face-to-face, according to the context and conditions of the respondents. The instrument grid used in this study can be seen in the following table:

Table 1. Questionnaire Sheet Grid

No.	Tested Aspects	Description
1.	Prevalence and Types of Digital Bullying	Measures the prevalence of digital bullying experienced.
2.		Verbal abuse, hate speech, threats, others.
3.		Measures the frequency of social media use.
4.		Friends, family, strangers, online communities.
5.		Assesses the psychological impact of social media use.
6.	Causal Factors and Impacts	Identify triggers.
7.		Measures the psychological impact of bullying.

Table 2. Interview Grid

No.	Aspect	Description
1.	Forms and Impacts of Bullying	Provides space for respondents to express personal experiences.
2.		Assesses emotional and psychological impacts.
3.	Causes of Digital Bullying	Explores victims' or perpetrators' perceptions of bullying triggers.
4.		Explores the role of social media in exacerbating digital bullying.
5.	Solutions and Prevention	Filters ideas and suggestions for solutions perceived as most effective.
6.		Assesses views on the importance of ethics education and the role of mentors.

Table 3. Content Analysis Grid

No.	Aspect	Description
1.	Types of Content Involved	Analysis of negative content circulating on social media platforms.
2.		Analyzing whether the content contains hatred or bullying.
		Looking for patterns of content that have the potential to damage the victim's reputation.
3.	Frequency of Spread	Measuring how quickly bullying content can spread (time and volume).
4.		Assessing who is the main perpetrator in the spread of digital bullying.
5.	User Response to Content	Analyzing the social impact of content containing digital bullying.
6.		Assessing the level of responsiveness to harmful content.

The table above illustrates how researchers will collect data through questionnaires for quantitative data, in-depth interviews for qualitative data, and content analysis to examine the existence of digital bullying phenomena on social media.

## 2.4. Data Analysis Techniques

Quantitative data from the questionnaire will be analyzed using descriptive statistics and correlation tests to see the relationship between relevant variables, using software such as SPSS [54], [55]. Qualitative data from in-depth interviews will be analyzed using thematic analysis, where researchers identify and group key themes that emerge from the interviews to better understand respondents' experiences of digital bullying [56]. The combination of quantitative and qualitative analysis will provide a more comprehensive picture of the prevalence and impact of digital bullying among young people.

## 2.5. Research Procedures

The research procedure begins with preparation and permission, including the preparation of instruments and ethical approval. In the data collection stage, the researcher will distribute the questionnaire online and conduct in-depth interviews with selected respondents. Content analysis will be conducted to examine social interactions on social media platforms. After the data is collected, the researcher will conduct data analysis using techniques appropriate for each type of data. In the report preparation stage, the results of the quantitative and qualitative analysis will be combined to provide more comprehensive findings and data-based recommendations for overcoming digital bullying among the younger generation. The research procedure can be seen in the following diagram:



Figure 1. Research Procedure

## 3. RESULTS AND DISCUSSION

This descriptive statistical analysis aims to provide an overview of the data obtained from a questionnaire distributed to adolescents and young people regarding their experiences related to digital bullying on social media. Using descriptive statistics, information will be presented on the frequency, average, and distribution of responses that indicate the extent to which the phenomenon of digital bullying affects the younger generation. The results of this analysis will provide an initial understanding of the perceptions and behavior of social media users, as well as the factors that contribute to the occurrence of digital bullying.

### 3.1. Descriptive Statistics

The questionnaire was used to obtain quantitative data on the prevalence of digital bullying, its impact, and the relationship between social media use and psychological and emotional impacts. The results of the descriptive statistical analysis in this study can be seen in the following table:

Table 4. Results of Descriptive Statistical Analysis

Aspects	Indicator	Frequency (%)	Mean	Standard Deviation
Prevalence of Digital Bullying	Engaged in digital bullying	80%	3.6	0.89
	Verbal	60%		
Forms of Bullying Experienced	Hate-mongering	40%	2.6	0.92
	Threats	20%		
Frequency of Social Media Use	Using 3-5 hours/day	100%	3.8	0.83
	More than 5 hours/day	40%		
Psychological Impact	Anxious	80%	4.2	0.74
	Depressed	60%		
Emotional Impact	Lonely	60%	3.9	0.81
	Isolated	40%		

Based on the table above, it can be seen that the average score for the prevalence of digital bullying is 3.6, indicating that most respondents are involved in digital bullying. The most frequently reported psychological and emotional impacts are anxiety (80%) and feelings of loneliness (60%). The frequency of social media use ranges from 3-5 hours per day with a relatively low standard deviation, indicating a consistent pattern of use among adolescents.

### 3.2. Correlation Test

The correlation test was used to test the relationship between social media use and the prevalence of digital bullying and psychological and emotional impacts. The results of the correlation test in this study can be seen in the following table:

Table 5. Correlation Test Results

Variable	Prevalence of Digital Bullying	Psychological Impact	Emotional Impact
Frequency of Social Media Use	$r = 0.65$ ( $p < 0.01$ )	$r = 0.52$ ( $p < 0.01$ )	$r = 0.60$ ( $p < 0.01$ )
Prevalence of Digital Bullying	-	$r = 0.73$ ( $p < 0.01$ )	$r = 0.66$ ( $p < 0.01$ )
Psychological Impact	-	-	$r = 0.59$ ( $p < 0.01$ )

Based on the results above, it can be seen that there is a significant positive correlation between the frequency of social media use and the prevalence of digital bullying ( $r = 0.65$ ), psychological impact ( $r = 0.52$ ), and emotional impact ( $r = 0.60$ ). The prevalence of digital bullying is strongly correlated with psychological ( $r = 0.73$ ) and emotional ( $r = 0.66$ ) impacts, indicating that the more often involved in digital bullying, the greater the impact felt by the victim. The correlation between psychological and emotional impacts is also significant ( $r = 0.59$ ), indicating that the two are interrelated in influencing individual well-being.

### 3.3. Interview Results

The interview results provide deeper insight into individual experiences related to digital bullying, the impacts felt, and the causal factors. The interview results obtained in this study can be seen in the following table.:

Table 6. Interview Results

Main Theme	Sub-themes	Frequency of Findings
Digital Bullying Experience	Verbal abuse: 4/5 respondents, Hate speech: 3/5 respondents	80%
Psychological and Emotional Impact	Anxiety and Depression: 5/5 respondents	100%
Causes of Digital Bullying	Anonymity: 4/5, Speed of Spread: 5/5, Social Media Addiction: 4/5	80%
Solution Hope	Ethics Education: 5/5 respondents want training in schools and more effective reporting features	100%

Based on the interviews conducted, it was found that most respondents stated that they were often victims of verbal insults and the spread of hatred on social media. All respondents reported significant psychological impacts, such as anxiety and depression. The main factors causing digital bullying mentioned were anonymity in cyberspace, the speed of information dissemination, and high dependence on social media. All respondents wanted digital ethics education in schools and more effective reporting features on social media platforms.

### 3.4. Content Analysis Results

Content analysis was conducted to see the types and distribution of digital bullying content that occurs on social media. The results of the content analysis that has been conducted can be seen in the table below:

Table 7. Content Analysis Results (Types and Distribution of Digital Bullying)

Content Types	(%)	Description
Verbal Abuse (Insults)	45%	A lot of content contains direct insults to individuals, such as comments that degrade a person's appearance, abilities, or intelligence.
Hate Speech	30%	Posts or comments that spread hate speech against groups or individuals based on race, religion, sexual orientation, or anything else.
Physical or Emotional Threats	15%	Content that contains physical or emotional threats, such as threats to harm someone or slander them on social media.
Spread of False Information	10%	Some content contains false information or rumors created with the intent of damaging the reputation of an individual or group.

Social Anxiety and Identity	40%	Many posts create feelings of anxiety and insecurity about self-identity, especially among teenagers who often compare themselves to others on social media.
Psychological Impact (Fear and Loneliness)	35%	Many victims feel isolated and afraid to interact on social media, leading to long-term emotional distress.
Normalization of Digital Violence	25%	Some content shows a normalization of digital violence, with comments or posts that treat bullying as normal or funny.

The results of this content analysis show that social media is often used as a platform for digital bullying, with verbal abuse and hate speech being the most common. The psychological impacts felt by victims are also very real, with social anxiety and loneliness emerging as key themes. This research emphasizes the importance of efforts to stop the normalization of digital violence and to further emphasize the importance of empathy and ethics in interacting online.

The phenomenon of digital bullying among teenagers and young people is increasingly prominent along with the increasing use of social media [57], [58]. In this context, interactions in cyberspace are often influenced by a number of factors, including anonymity, the speed of information dissemination, and dependence on social media. These factors provide space for negative behavior, such as bullying, to develop without direct supervision. One of the main challenges that arises is the lack of awareness of the long-term impact of digital bullying on an individual's mental and emotional health. Therefore, it is important to realize that although this phenomenon is widespread, many still do not fully understand or realize the consequences of this action.

The role of digital ethics education and training is crucial in efforts to combat digital bullying. A better understanding of the ethics of interacting online can reduce the likelihood of individuals engaging in negative behaviors such as verbal insults or spreading hate [59]. In addition, a more holistic approach to digital education can help individuals become more aware of healthy ways to interact, including building empathy and understanding of others' feelings [60], [61]. Responsible use of social media includes not only the technical aspects, but also how a person understands the impact of their actions on the well-being of others.

Efforts to reduce digital bullying must also involve stricter oversight and policies from social media platforms. Reporting and content monitoring features must be more responsive to harmful content, such as insults, threats, or the spread of hate. However, these policies must be accompanied by education for users on how to use these features wisely, as well as prioritizing respect for differences and diversity in interacting online. In this regard, more inclusive and sensitive policies for various groups are important steps in reducing digital bullying.

It is also important to recognize that the phenomenon of digital bullying is not only limited to the victims directly involved, but also has an impact on the wider social environment, including friends and family of the victims. Therefore, a broader approach to preventing digital bullying must involve all parties, including peers, parents, and educators. Success in reducing digital bullying requires a concerted effort to create awareness, empathy, and policies that support the well-being of adolescents online.

The impact of this research can be felt both locally and globally, as the phenomenon of digital bullying is an issue that transcends geographical and cultural boundaries. Locally, this research provides in-depth insights into how digital bullying affects adolescents and young people in specific social environments, as well as the factors that drive such behavior. The results of this research can be used to design more specific policies or educational programs for certain areas, such as digital ethics training in schools or raising awareness through social media campaigns. At the local level, these findings can be the basis for authorities, educators, and communities to create safer and more supportive environments for adolescents.

Globally, the impact of this study contributes to the understanding of how digital bullying is a challenge faced by many countries, especially among the increasingly technology-dependent younger generation. The results of this study can provide a broader picture of the patterns of digital bullying that occur across different cultures and social systems. This study can also encourage international collaboration in developing more effective ethical standards and policies on social media to prevent and address digital bullying, and strengthen support networks for victims around the world. As such, these findings have the potential to make a significant contribution to the global effort to create a safer and more empathetic digital space for users around the world.

This study has several limitations that need to be considered. First, the sample used in this study was limited to adolescents and young people who actively use social media, so the results may not be generalizable to the entire population. In addition, this study only relies on data obtained from questionnaires, interviews, and content analysis, which can be influenced by the subjectivity of respondents in answering questionnaires or speaking in interviews. Second, this study also did not consider external factors that can influence the phenomenon of digital bullying, such as the role of family, school, or society. Finally, time and resource limitations also affected the scope of this study, so further research with larger samples and more diverse data collection techniques is expected to provide a more comprehensive picture of the phenomenon of digital bullying among adolescents and young people.

#### 4. CONCLUSION

This study shows that digital bullying has a significant impact on adolescents and young people, both psychologically and emotionally. Most respondents were involved in digital bullying, with psychological impacts such as anxiety and depression, and emotional impacts such as feelings of loneliness and isolation. High frequency of social media use also correlated with the prevalence of digital bullying and its impacts. Interview results revealed that factors such as anonymity, speed of information dissemination, and dependence on social media were the main causes of digital bullying. This study emphasizes the importance of digital ethics education and the development of more effective reporting features to reduce the phenomenon of digital bullying, both locally and globally. Further research can explore the role of technology and social media platform policies in preventing digital bullying by involving more respondents from various cultural backgrounds. In addition, further research is needed to understand the long-term mechanisms of psychological and emotional impacts of digital bullying on young people in various age groups.

#### ACKNOWLEDGEMENTS

We would like to express our deepest gratitude to all parties who have contributed to this research. Thank you to the respondents who have been willing to take the time to fill out the questionnaire and participate in the interview, as well as to all parties who have provided support, both morally and materially, so that this research can be completed properly. Hopefully the results of this study can be useful in efforts to combat digital bullying and raise awareness of the importance of ethics in interacting in cyberspace.

#### REFERENCES

- [1] T. M. Nisar, G. Prabhakar, and L. Strakova, "Social media information benefits, knowledge management and smart organizations," *J. Bus. Res.*, vol. 94, no. August 2017, pp. 264–272, 2019, doi: 10.1016/j.jbusres.2018.05.005.
- [2] W. M. Al-Rahmi *et al.*, "Social media-based collaborative learning: the effect on learning success with the moderating role of cyberstalking and cyberbullying," *Interact. Learn. Environ.*, vol. 30, no. 8, pp. 1434–1447, 2022, doi: 10.1080/10494820.2020.1728342.
- [3] A. Infante and R. Mardikaningsih, "The potential of social media as a means of online business promotion," *J. Soc. Sci. Stud.*, vol. 2, no. 2, pp. 45–49, 2022, doi: 10.56348/jos3.v2i2.26.
- [4] A. Bhandari and S. Bimo, "Why's everyone on tiktok now? the algorithmized self and the future of self-making on social media," *Soc. Media Soc.*, vol. 8, no. 1, pp. 1–11, 2022, doi: 10.1177/20563051221086241.
- [5] M. D. Szeto, A. Mamo, A. Afrin, M. Militello, and C. Barber, "Social media in dermatology and an overview of popular social media platforms," *Curr. Dermatol. Rep.*, vol. 10, no. 4, pp. 97–104, 2021, doi: 10.1007/s13671-021-00343-4.
- [6] M. Haenlein, E. Anadol, T. Farnsworth, H. Hugo, J. Hunichen, and D. Welte, "Navigating the new era of influencer marketing: how to be successful on instagram, tiktok, & co.," *Calif. Manage. Rev.*, vol. 63, no. 1, pp. 5–25, 2020, doi: 10.1177/0008125620958166.
- [7] Z. Zhang, F. Wen, Z. Sun, X. Guo, T. He, and C. Lee, "Artificial intelligence-enabled sensing technologies in the 5g/internet of things era: from virtual reality/augmented reality to the digital twin," *Adv. Intell. Syst.*, vol. 4, no. 7, pp. 1–23, 2022, doi: 10.1002/aisy.202100228.
- [8] Y. Siriwardhana, P. Porambage, M. Liyanage, and M. Ylianttila, "A survey on mobile augmented reality with 5g mobile edge computing: architectures, applications, and technical aspects," *IEEE Commun. Surv. Tutorials*, vol. 23, no. 2, pp. 1160–1192, 2021, doi: 10.1109/COMST.2021.3061981.
- [9] S. E. Bibri and S. K. Jagatheesaperumal, "Harnessing the potential of the metaverse and artificial intelligence for the internet of city things: cost-effective XReality and synergistic AIoT technologies," *Smart Cities*, vol. 6, no. 5, pp. 2397–2429, 2023, doi: 10.3390/smartcities6050109.
- [10] A. Szymkowiak, B. Melović, M. Dabić, K. Jeganathan, and G. S. Kundi, "Information technology and Gen Z: the role of teachers, the internet, and technology in the education of young people," *Technol. Soc.*, vol. 65, no. December 2020, 2021, doi: 10.1016/j.techsoc.2021.101565.
- [11] B. N. Rao, V. David, and V. Kalyani, "A study on positive and negative effects of social media on society," *J. Sci. Technol.*, vol. 7, no. 10, pp. 46–54, 2022, doi: 10.46243/jst.2022.v7.i10.pp46-54.
- [12] H. Susanto, L. F. Yie, F. Mohiddin, A. A. R. Setiawan, P. K. Haghi, and D. Setiana, "Revealing social media phenomenon in time of COVID-19 pandemic for boosting start-up businesses through digital ecosystem," *Appl. Syst. Innov.*, vol. 4, no. 1, pp. 1–21, 2021, doi: 10.3390/asi4010006.
- [13] J. Abbas, D. Wang, Z. Su, and A. Ziapour, "The role of social media in the advent of covid-19 pandemic: Crisis management, mental health challenges and implications," *Risk Manag. Healthc. Policy*, vol. 14, pp. 1917–1932, 2021, doi: 10.2147/RMHP.S284313.
- [14] H. Liu, W. Liu, V. Yoganathan, and V. S. Osburg, "COVID-19 information overload and generation Z's social media discontinuance intention during the pandemic lockdown," *Technol. Forecast. Soc. Change*, vol. 166, no. August 2020, p. 120600, 2021, doi: 10.1016/j.techfore.2021.120600.
- [15] E. Abi-Jaoude, K. T. Naylor, and A. Pignatiello, "Smartphones, social media use and youth mental health," *Cmaj*, vol. 192, no. 6, pp. E136–E141, 2020, doi: 10.1503/cmaj.190434.
- [16] F. A. Esquivel, I. L. de L. G. López, and A. D. Benavides, "Emotional impact of bullying and cyber bullying: perceptions and effects on students," *Rev. Caribeña Ciencias Soc.*, vol. 12, no. 1, pp. 367–383, 2023, doi: 10.55905/rcssv12n1-022.
- [17] M. Carvalho, C. Branquinho, and M. G. de Matos, "Cyberbullying and bullying: impact on psychological symptoms and

- well-being," *Child Indic. Res.*, vol. 14, no. 1, pp. 435–452, 2021, doi: 10.1007/s12187-020-09756-2.
- [18] T. Nazir and L. Thabassum, "Cyberbullying: definition, types, effects, related factors and precautions to be taken during COVID-19 pandemic," *Int. J. Indian Psychol.*, vol. 9, no. 4, pp. 480–491, 2021, doi: 10.25215/0904.047.
- [19] T. Noakes and T. Noakes, "Distinguishing online academic bullying: identifying new forms of harassment in a dissenting Emeritus Professor's case," *Heliyon*, vol. 7, no. 2, p. e06326, 2021, doi: 10.1016/j.heliyon.2021.e06326.
- [20] A. Waqas, J. Salminen, S. gyo Jung, H. Almerexhi, and B. J. Jansen, "Mapping online hate: a scientometric analysis on research trends and hotspots in research on online hate," *PLoS One*, vol. 14, no. 9, pp. 1–21, 2019, doi: 10.1371/journal.pone.0222194.
- [21] E. A. Makarova *et al.*, "Intentional concepts of verbal bullying and hate speech as a means of expressing intolerant attitude to the speech object," *Media Educ.*, vol. 60, no. 3, pp. 443–453, 2020, doi: 10.13187/me.2020.3.443.
- [22] M. Arisanty and G. Wiradharma, "The motivation of flaming perpetrators as cyberbullying behavior in social media," *J. Kaji. Komun.*, vol. 10, no. 2, p. 215, 2022, doi: 10.24198/jkk.v10i2.39876.
- [23] N. Tarmizi, S. Saee, and D. H. A. Ibrahim, "Detecting the usage of vulgar words in cyberbully activities from Twitter," *Int. J. Adv. Sci. Eng. Inf. Technol.*, vol. 10, no. 3, pp. 1117–1122, 2020, doi: 10.18517/ijaseit.10.3.10645.
- [24] M. M. Nair, T. F. Fernandez, and A. K. Tyagi, "Cyberbullying in digital era: history, trends, limitations, recommended solutions for future," in *2023 International Conference on Computer Communication and Informatics, ICCCI 2023*, 2023. doi: 10.1109/ICCCI56745.2023.10128624.
- [25] N. B. Alotaibi, "Cyber bullying and the expected consequences on the students' academic achievement," *IEEE Access*, vol. 7, no. October, pp. 153417–153431, 2019, doi: 10.1109/ACCESS.2019.2947163.
- [26] B. Akeusola, "Social media and the incidence of cyberbullying in Nigeria: implications for creating a safer online environment," *NIU J. Humanit.*, vol. 8, no. 3, pp. 125–137, 2023, doi: 10.58709/niujhu.v8i3.1701.
- [27] R. Tas'adi, Mudjiran, N. Gistituati, and A. Ananda, "Cyberbullying in the digital age: a common social phenomenon," in *Proceedings of the 2nd International Conference Innovation in Education (ICOIE 2020)*, 2020, pp. 196–200. doi: 10.2991/assehr.k.201209.218.
- [28] S. Waters, W. B. Russell, and M. Hensley, "Cyber bullying, social media, and character education: why it matters for middle school social studies," *Clear. House A J. Educ. Strateg. Issues Ideas*, vol. 93, no. 4, pp. 195–204, 2020, doi: 10.1080/00098655.2020.1760770.
- [29] S. Baumann *et al.*, "Perpetrators and victims of cyberbullying among youth with conduct disorder," *Eur. Child Adolesc. Psychiatry*, vol. 32, no. 9, pp. 1643–1653, 2023, doi: 10.1007/s00787-022-01973-0.
- [30] A. Reisen, M. C. Viana, and E. T. Dos Santos-Neto, "Bullying among adolescents: are the victims also perpetrators?," *Brazilian J. Psychiatry*, vol. 41, no. 6, pp. 518–529, 2019, doi: 10.1590/1516-4446-2018-0246.
- [31] L. Bizzi and A. Labban, "The double-edged impact of social media on online trading: opportunities, threats, and recommendations for organizations," *Bus. Horiz.*, vol. 62, no. 4, pp. 509–519, 2019, doi: 10.1016/j.bushor.2019.03.003.
- [32] I. Mugari, "The dark side of social media in Zimbabwe: unpacking the legal framework conundrum," *Cogent Soc. Sci.*, vol. 6, no. 1, 2020, doi: 10.1080/23311886.2020.1825058.
- [33] S. Jiang, "The roles of worry, social media information overload, and social media fatigue in hindering health fact-checking," *Soc. Media Soc.*, vol. 8, no. 3, 2022, doi: 10.1177/20563051221113070.
- [34] S. Jain and S. Agrawal, "Perceived vulnerability of cyberbullying on social networking sites: effects of security measures, addiction and self-disclosure," *Indian Growth Dev. Rev.*, vol. 14, no. 2, pp. 149–171, 2020, doi: 10.1108/IGDR-10-2019-0110.
- [35] T. Lafton, H. B. Holmarsdottir, O. Kapella, M. Sisask, and L. Zinoveva, "Children's vulnerability to digital technology within the family: a scoping review," *Societies*, vol. 13, no. 1, pp. 1–15, 2023, doi: 10.3390/soc13010011.
- [36] D. Sarwatay, U. Raman, and S. Ramasubramanian, "Media literacy, social connectedness, and digital citizenship in india: mapping stakeholders on how parents and young people navigate a social world," *Front. Hum. Dyn.*, vol. 3, no. March, pp. 1–18, 2021, doi: 10.3389/fhumd.2021.601239.
- [37] C. Kaluarachchi, M. Warren, and F. Jiang, "Responsible use of technology to combat cyberbullying among young people," in *Australasian Journal of Information Systems*, 2020, pp. 1–17. doi: 10.3127/AJIS.V24I0.2791.
- [38] D. R. Wati, "The Ethics of Social Media Communication in the Perspective of the Al-Qur'an," *J. Islam. Commun. Couns.*, vol. 2, no. 2, pp. 93–107, 2023, doi: 10.18196/jicc.v2i2.28.
- [39] F. Waluyandi, R. Trihastuti, and M. Muchtarom, "Implementation of parental involvement in learning civic education," *Budapest Int. Res. Critics Linguist. Educ. J.*, vol. 3, no. 4, pp. 1686–1695, 2020, doi: 10.33258/birle.v3i4.1298.
- [40] I. Usonwu, R. Ahmad, and K. Curtis-Tyler, "Parent-adolescent communication on adolescent sexual and reproductive health in sub-Saharan Africa: a qualitative review and thematic synthesis," 2021, *BioMed Central*. doi: 10.1186/s12978-021-01246-0.
- [41] D. I. Sari, T. Rejekiningsih, and M. Muchtarom, "Students' digital ethics profile in the era of disruption: An overview from the internet use at risk in Surakarta City, Indonesia," *Int. J. Interact. Mob. Technol.*, vol. 14, no. 3, pp. 82–94, 2020, doi: 10.3991/ijim.v14i03.12207.
- [42] Y. Purnama and A. Asdlori, "The role of social media in students' social perception and interaction: implications for learning and education," *Technol. Soc. Perspect.*, vol. 1, no. 2, pp. 45–55, 2023, doi: 10.61100/tacit.v1i2.50.
- [43] I. A. Anderson and W. Wood, "Habits and the electronic herd: the psychology behind social media's successes and failures," *Consum. Psychol. Rev.*, vol. 4, no. 1, pp. 83–99, 2021, doi: 10.1002/arcv.1063.
- [44] M. Albdour, J. S. Hong, L. Lewin, and H. Yarandi, "The Impact of Cyberbullying on Physical and Psychological Health of Arab American Adolescents," *J. Immigr. Minor. Heal.*, vol. 21, no. 4, pp. 706–715, 2019, doi: 10.1007/s10903-018-00850-w.
- [45] M. Fan, Y. Huang, S. A. Qalati, S. M. M. Shah, D. Ostic, and Z. Pu, "Effects of information overload, communication overload, and inequality on digital distrust: a cyber-violence behavior mechanism," *Front. Psychol.*, vol. 12, no. April, pp. 1–11, 2021, doi: 10.3389/fpsyg.2021.643981.



- [46] G. Orrù *et al.*, “Development of technologies for the detection of (cyber)bullying actions: the bullybuster project,” *Inf.*, vol. 14, no. 8, pp. 1–19, 2023, doi: 10.3390/info14080430.
- [47] C. L. Odgers and M. R. Jensen, “Annual research review: adolescent mental health in the digital age: facts, fears, and future directions,” *J. Child Psychol. Psychiatry Allied Discip.*, vol. 61, no. 3, pp. 336–348, 2020, doi: 10.1111/jcpp.13190.
- [48] V. S. Sobkin and A. V. Fedotova, “Adolescents on social media: aggression and cyberbullying,” *Psychol. Russ. State Art*, vol. 14, no. 4, pp. 55–70, 2021, doi: 10.11621/pir.2021.0412.
- [49] S. Dawadi, S. Shrestha, and R. A. Giri, “Mixed-methods research: a discussion on its types, challenges, and criticisms,” *J. Pract. Stud. Educ.*, vol. 2, no. 2, pp. 25–36, 2021.
- [50] R. Timans, P. Wouters, and J. Heilbron, “Mixed methods research: what it is and what it could be,” *Theory Soc.*, vol. 48, no. 2, pp. 193–216, 2019, doi: 10.1007/s11186-019-09345-5.
- [51] G. Kotronoulas and C. Papadopoulou, “A primer to experimental and nonexperimental quantitative research: the example case of tobacco-related mouth cancer,” *Semin. Oncol. Nurs.*, vol. 39, no. 2, pp. 0–6, 2023, doi: 10.1016/j.soncn.2023.151396.
- [52] S. Gillard *et al.*, “Experiences of living with mental health problems during the COVID-19 pandemic in the UK: a coproduced, participatory qualitative interview study,” *Soc. Psychiatry Psychiatr. Epidemiol.*, vol. 56, no. 8, pp. 1447–1457, 2021, doi: 10.1007/s00127-021-02051-7.
- [53] C. Sibona, S. Walczak, and E. W. Baker, “A guide for purposive sampling on twitter,” *Commun. Assoc. Inf. Syst.*, vol. 46, pp. 537–559, 2020, doi: 10.17705/1CAIS.04622.
- [54] P. Patron, “Correlation and regression analysis using SPSS,” *OCEM J. Manag. Technol. Soc. Sci.*, vol. 1, no. 1, p. 128, 2019, [Online]. Available: <http://www.oxfordcollege.edu.np>
- [55] A. Purwanto *et al.*, “Education research quantitative analysis for little respondents: comparing of lisrel, tetrad, GSCA, Amos, SmartPLS, WarpPLS, and SPSS,” *J. Stud. Guru dan Pembelajaran*, vol. 4, no. 2, pp. 335–350, 2021, [Online]. Available: <https://e-journal.my.id/jsgp/article/view/1326>
- [56] P. A. Christou, “How to use thematic analysis in qualitative research,” *J. Qual. Res. Tour.*, vol. 3, no. 2, pp. 79–95, 2023, doi: 10.4337/jqrt.2023.0006.
- [57] E. V. Shalagina, “Cyber bullying in the modern media environment: sociological analysis of the ideas of adolescents and teachers (based on the materials of applied sociological research),” *Commun. Trends Post-Literacy Era Polylingualism, Multimodality Multicult. As Preconditions New Creat.*, vol. 20, no. 20, pp. 403–414, 2020, doi: 10.15826/b978-5-7996-3081-2.28.
- [58] L. Hellström and A. Lundberg, “Understanding bullying from young people’s perspectives: An exploratory study,” *Educ. Res.*, vol. 62, no. 4, pp. 414–433, 2020, doi: 10.1080/00131881.2020.1821388.
- [59] D. Kilvington, “The virtual stages of hate: Using Goffman’s work to conceptualise the motivations for online hate,” *Media, Cult. Soc.*, vol. 43, no. 2, pp. 256–272, 2021, doi: 10.1177/0163443720972318.
- [60] M. Moudatsou, A. Stavropoulou, A. Philalithis, and S. Koukouli, “The role of empathy in health and social,” *Healthcare*, vol. 8, no. 36, pp. 7–9, 2020.
- [61] S. I. Baguley, A. Pavlova, and N. S. Consedine, “More than a feeling? What does compassion in healthcare ‘look like’ to patients?,” *Heal. Expect.*, vol. 25, no. 4, pp. 1691–1702, 2022, doi: 10.1111/hex.13512.