SEMINARS
IN MEDICAL WRITING AND EDUCATION

Check for updates

ORIGINAL

Cyberbullying in Higher Education: Challenges and Interventions from College to University

Ciberbullying en la educación superior: desafíos e intervenciones desde la facultad hasta la universidad

Alok Kumar Ananad[1] ✉, Awadhesh Prasad[2] ✉

[1]Department of Computer Science, V. K. S. University. Ara, India
[2]Department of Physics, V. K. S. University. Ara, India

Corresponding author: Alok Kumar Ananad ✉

ABSTRACT

Introduction: cyberbullying among students has typically been studied within isolated educational contexts, such as colleges or universities, overlooking its presence across the entire educational lifespan. This article seeks to bridge this gap by offering a comprehensive analysis of cyberbullying's nature, social dynamics, legal implications, and potential interventions.
Objective: the findings highlight that cyberbullying remains a persistent issue throughout various stages of education, affecting students' mental well-being and academic experiences. Despite its continuity, effective intervention strategies remain insufficient, particularly at the university level, where the misconception that 'nothing can be done' often prevails. This perception leaves victims feeling helpless and unprotected. Addressing cyberbullying requires a proactive, multi-tiered approach that incorporates legal frameworks, institutional policies, and digital literacy programs to equip students with the necessary tools to recognize, report, and counteract online harassment.
Method: the study underscores the importance of fostering safe online environments, promoting awareness, and encouraging collaborative efforts between educators, policymakers, and students.
Result: to enhance protective measures, institutions must develop evidence-based policies and integrate cyberbullying prevention strategies across all educational levels.
Conclusion: the article concludes by presenting five key recommendations for future research and practice, advocating for a more holistic and continuous approach to tackling cyberbullying throughout the educational journey.

Keywords: Cyberbullying; Bystanders; Mental Health; Cyberbullying Interventions; Educational Lifespan.

RESUMEN

Introducción: el ciberacoso entre estudiantes normalmente se ha estudiado en contextos educativos aislados, como colegios o universidades, pasando por alto su presencia a lo largo de toda la vida educativa. Este artículo busca cerrar esta brecha ofreciendo un análisis integral de la naturaleza, la dinámica social, las implicaciones legales y las posibles intervenciones del ciberacoso.
Objetivo: los hallazgos resaltan que el ciberacoso sigue siendo un problema persistente en varias etapas de la educación, que afecta el bienestar mental y las experiencias académicas de los estudiantes. A pesar de su continuidad, las estrategias de intervención efectivas siguen siendo insuficientes, particularmente en el nivel universitario, donde a menudo prevalece la idea errónea de que "no se puede hacer nada". Esta percepción

deja a las víctimas sintiéndose impotentes y desprotegidas. Abordar el ciberacoso requiere un enfoque proactivo y de múltiples niveles que incorpore marcos legales, políticas institucionales y programas de alfabetización digital para dotar a los estudiantes de las herramientas necesarias para reconocer, denunciar y contrarrestar el acoso en línea.

Método: el estudio subraya la importancia de fomentar entornos en línea seguros, promover la concientización y fomentar los esfuerzos de colaboración entre educadores, formuladores de políticas y estudiantes. Resultado; Para mejorar las medidas de protección, las instituciones deben desarrollar políticas basadas en evidencia e integrar estrategias de prevención del ciberacoso en todos los niveles educativos.

Conclusión: el artículo concluye presentando cinco recomendaciones clave para futuras investigaciones y prácticas, abogando por un enfoque más holístico y continuo para abordar el ciberacoso a lo largo del recorrido educativo.

Palabras clave: Ciberbullying; Espectadores; Salud Mental; Intervenciones de Ciberacoso; Esperanza de Vida Educativa.

INTRODUCTION

The transformation and consequences of cyberbullying in academic settings

In the last decade, cyberbullying has escalated into a widespread issue across different levels of education, including primary schools, secondary schools, and higher education institutions. Researchers continue to debate its definition, generally falling into two primary schools of thought. Some scholars argue that cyberbullying is merely an extension of traditional bullying, aligning with the classic model proposed by Olweus. This traditional framework defines bullying as a repetitive act over time that involves an imbalance of power between the aggressor and the victim, with the explicit intent to cause harm. From this standpoint, cyberbullying is simply an adaptation of conventional bullying to digital platforms. On the other hand, some researchers assert that cyberbullying is a fundamentally different phenomenon from traditional bullying. Unlike physical or verbal bullying, which typically occurs in specific locations such as school corridors or playgrounds, cyberbullying infiltrates all areas of a target's life. It can occur at any time and place, whether at home or within educational settings. Digital platforms grant perpetrators anonymity, which further exacerbates victims' anxiety and insecurity about their relationships. The inability to identify their tormentors fosters deep mistrust, as victims may suspect members of their peer group without certainty.[1]

The impact of cyberbullying is further intensified by the rapid dissemination of harmful content through digital networks. Unlike traditional bullying, which has a limited audience, cyberbullying can expose victims to widespread humiliation on a global scale. A single harmful post can quickly become viral, significantly amplifying emotional distress. In severe cases, such as the distribution of explicit images without consent, cyberbullying can transcend its categorization and become a criminal offense, subject to legal repercussions in some jurisdictions. Acknowledging these unique characteristics, this discussion highlights both the overlap between traditional bullying and cyberbullying, as well as the necessity of examining cyberbullying as a separate category. Given the dynamic nature of digital technology and the continuous evolution of social media, understanding the distinct complexities of cyberbullying is crucial.[2] Studying cyberbullying independently allows for a deeper understanding of its psychological and social consequences on victims, perpetrators, and bystanders alike.

The Prevalence of Cyberbullying in the Digital World

With the increasing ubiquity of the internet and social media, cyberbullying has surpassed traditional boundaries of time and space. Unlike traditional bullying, which is typically confined to school hours, cyberbullying can persist around the clock. This unrelenting exposure leaves victims without respite, exacerbating emotional distress and increasing the risk of long-term psychological issues such as anxiety, depression, and suicidal ideation. A particularly concerning aspect of cyberbullying is the anonymity afforded to perpetrators. The ability to act without immediate consequences emboldens aggressors, making it easier for them to target individuals. This anonymity also presents significant challenges for parents, educators, and authorities attempting to intervene. Unlike traditional bullying, where witnesses can step in or report incidents to school officials, cyberbullying often occurs in private digital spaces, reducing opportunities for timely intervention. Bystanders play a crucial role in cyberbullying. In traditional bullying scenarios, onlookers may choose to step in and defend the victim. However, in online settings, bystanders may inadvertently worsen the situation by sharing, liking, or commenting on harmful content. The viral nature of social media intensifies the impact of cyberbullying, making it much more damaging than isolated incidents of in-person bullying. Victims often feel

overwhelmed by the sheer reach of their humiliation, which can result in profound social withdrawal and a sense of helplessness.[3]

Psychological and Social Repercussions of Cyberbullying

The effects of cyberbullying extend far beyond immediate emotional distress. Research has shown that victims often suffer from long-term psychological issues, including diminished self-esteem, academic struggles, and social isolation. Victims frequently exhibit symptoms of anxiety and depression, experiencing deep feelings of inadequacy and rejection. In extreme cases, the prolonged effects of cyberbullying can lead to self-harm or suicidal ideation, emphasizing the urgency of addressing this issue.[4]

Cyberbullying does not only impact victims—it also affects perpetrators and bystanders. Studies indicate that individuals who engage in cyberbullying are more likely to demonstrate aggressive tendencies in other areas of their lives. Many cyberbullies struggle with emotional regulation and may later experience guilt and shame as they recognize the damage they have inflicted. Bystanders who witness cyberbullying without intervening may also develop feelings of guilt, reinforcing a broader culture of apathy and inaction. To effectively combat cyberbullying, educators, parents, and policymakers must adopt comprehensive strategies. Implementing digital literacy programs and social-emotional learning initiatives can equip students with the knowledge and skills to navigate online interactions responsibly. Schools should also establish clear policies and reporting procedures to ensure victims receive timely support and that perpetrators face appropriate consequences.

Legal and Ethical Challenges in Addressing Cyberbullying

As cyberbullying continues to evolve, legal frameworks must be adapted to address its growing complexities. Many countries have extended their laws on harassment, defamation, and privacy breaches to include cyberbullying-related offenses. However, the legal response remains inconsistent across jurisdictions, with some regions enforcing stricter regulations than others. One of the most contentious legal debates regarding cyberbullying is balancing the right to free speech with the need to protect individuals from online harassment. Digital platforms have created unprecedented opportunities for self-expression, but they have also facilitated harmful behaviors. Lawmakers and technology companies face an ongoing challenge in regulating online interactions while safeguarding personal freedoms. Additionally, the responsibility of social media companies in addressing cyberbullying remains a point of debate. Platforms like Facebook, Instagram, and TikTok have implemented content moderation policies and reporting mechanisms to combat cyberbullying. However, critics argue that these efforts often fall short, allowing harmful content to remain accessible before any action is taken. Greater collaboration between policymakers, educators, and technology companies is necessary to develop more effective strategies to mitigate cyberbullying.[5]

Cyberbullying across the educational lifespan

Research suggests that bullying behavior can persist from childhood through adolescence and into early adulthood. Although the prevalence of bullying tends to decrease as individuals transition from high school to university, studies indicate that many individuals who engaged in bullying during their early years continue similar behaviors later in life. A retrospective study by Curwen et al. involving 186 university students who admitted to bullying peers found that, while verbal and physical bullying declined between high school and university, a significant number of those who bullied in university had also engaged in bullying behaviors at earlier educational stages.[6] Similarly, research by Chapell et al. revealed that more than half of the adult bullies in their study had also exhibited bullying tendencies during childhood and adolescence. This continuity suggests that bullying behavior may provide long-term social advantages, allowing individuals to maintain or enhance their status among peers. Over time, this pattern of behavior can become ingrained, reinforcing bullying as a successful strategy for achieving social dominance. Additionally, studies highlight that bullies often enjoy popularity within their peer groups. Many bystanders remain indifferent to the suffering of victims, and research suggests that this lack of empathy tends to increase over time. This detachment further enables bullying behavior, as those who witness it may feel no moral obligation to intervene.

The Shift to Cyberbullying in Higher Education

While traditional bullying has been well-documented in school settings, research is now focusing more on cyberbullying, particularly within universities. Cyberbullying follows the same fundamental principles as traditional bullying, with an imbalance of power between the aggressor and the victim. However, the internet introduces an additional layer of complexity. The anonymity provided by digital platforms gives perpetrators a heightened sense of power, making their actions more impactful and harder to counteract.[7]

For victims, this anonymity increases feelings of helplessness, as they often cannot identify their tormentors or seek direct intervention. Unlike face-to-face bullying, where individuals may have opportunities for confrontation or support from peers and authorities, cyberbullying creates an environment where harassment can occur continuously and without immediate consequences for the perpetrator. Moreover, online anonymity

enables former victims to reverse roles, allowing them to retaliate against those who once bullied them. In an online setting, these individuals may feel emboldened to seek revenge without facing the social or disciplinary repercussions that would arise in a physical context. This dynamic further complicates the understanding of bullying behaviors, as the roles of victim and perpetrator can shift in digital spaces.

METHOD
Dataset of cybercrime in India

The dataset contains detailed information about various types of cyber-crimes reported in different cities across India. It includes 17 columns, with each column representing a specific type of cyber-crime, such as fraud, extortion, and sexual exploitation, along with a total count for each city.[8] The data is structured to allow for analysis of crime distribution and trends across different regions. The dataset provides comprehensive data regarding different types of cyber-crimes. This means that it likely includes specific incidents, statistics, or reports that give insight into how prevalent these crimes are in various locations. The dataset is geographically focused on India, indicating that it collects data from multiple cities within the country. This allows for a comparative analysis of how cyber-crimes vary from one city to another. The dataset is organized into 17 columns, each representing a different aspect of the data. While the specific columns are not detailed in the statement, they could include: City names, Types of cybercrimes, Total counts of reported incidents for each type of crime, Timeframes for the data (e.g., yearly, monthly), Demographic information related to victims or perpetrators. The structure of the dataset is designed to facilitate analysis. Researchers, policymakers, or law enforcement agencies can use this data to:

- Identify which types of cyber-crimes are most prevalent in specific cities.
- Analyze trends over time to see if certain crimes are increasing or decreasing.
- Compare crime rates between different regions to allocate resources effectively or develop targeted prevention strategies.

Understanding the distribution and trends of cyber-crimes can help in formulating policies aimed at prevention and response. For instance, if a particular city shows a spike in online fraud, local authorities might implement educational campaigns or increase law enforcement efforts in that area. https://www.kaggle.com/datasets/seanangelonathanael/dataset-cybercrime-in-india

The pie chart illustrating the proportion of cyber-crimes by type has been successfully created. This visualization provides a clear understanding of the distribution of different types of cyber-crimes across all cities, highlighting which crimes are more prevalent.
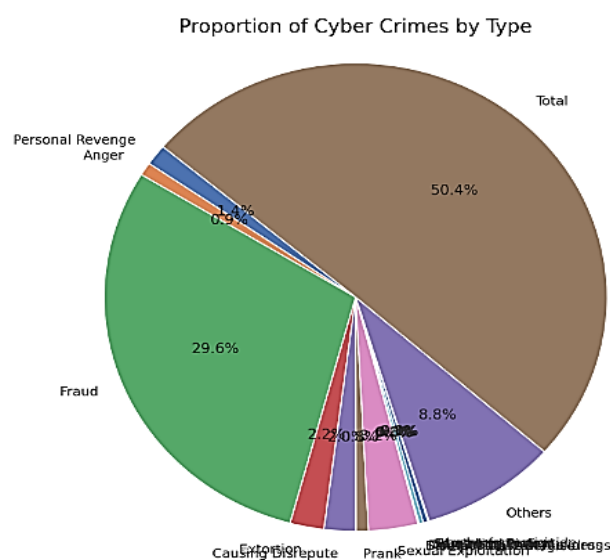

Figure 1. Proportion of cyber-crimes by type[8]

Correlation heatmap of cyber crimes

A correlation heatmap is a visual tool that displays the correlation coefficients between multiple variables. 1 indicates a perfect positive correlation (as one variable increases, the other also increases). -1 indicates a perfect negative correlation (as one variable increases, the other decreases). 0 indicates no correlation (the variables do not affect each other). The heatmap helps to quickly identify patterns or relationships between different types of cyber-crimes. For example, if there is a high positive correlation between "Fraud" and "Extortion," it suggests that these two types of crimes often occur together or may be related in some way.
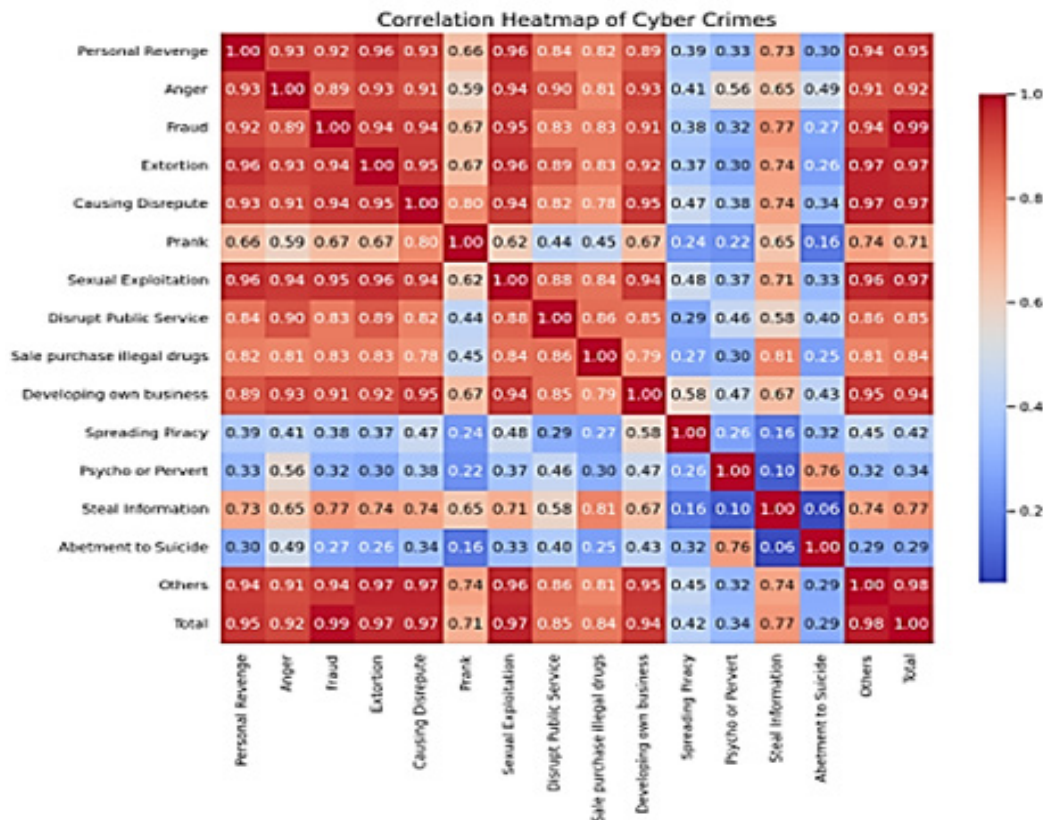
Figure 2. Correlation heatmap of cybercrimes[8]

Box Plot of Cyber Crimes Distribution

The box plot serves as a powerful tool for visualizing and understanding the distribution, variability, and potential anomalies in cyber-crime data, enabling stakeholders to make informed decisions based on the observed patterns. In the context of the dataset, the box plot would illustrate the distribution of specific types of cyber-crimes (e.g., fraud, extortion, etc.). Each type of crime would have its own box plot, allowing for a visual comparison of how crime counts vary. The spread of the data is indicated by the length of the box and the whiskers. A longer box indicates greater variability in crime counts, while a shorter box suggests that the counts are more consistent across different cities. Outliers are data points that fall significantly outside the range of the rest of the data. In a box plot, these are typically represented as individual points beyond the whiskers. Identifying outliers can be crucial for understanding anomalies in crime data, such as a city with an unusually high number of a specific type of cyber-crime. By examining the box plot, one can gain insights into the variability of crime counts across different categories. For example, if one type of cyber-crime shows a wide range with several outliers, it may indicate that certain cities are experiencing significantly higher rates of that crime compared to others.

Figure 3. Type of cybercrimes[8]

Intervening to prevent and reduce cyberbullying

Research evaluating cyberbullying interventions in higher education has highlighted both successes and shortcomings. While schools have established more structured approaches, universities and colleges are still developing coherent strategies. A growing focus on rehabilitation is emerging, emphasizing cultural shifts toward tolerance and community-building. However, there remains a lack of shared best practices across institutions. Many studies document the prevalence of cyberbullying at different educational stages, but there is significant variation in approaches to addressing the issue. Research suggests that actively involving students in shaping solutions is key to creating effective anti-cyberbullying measures. Cunningham et al. (2015) identified five crucial areas for combating cyberbullying in universities:[9]

1. Highlighting the impact on victims.
2. Changing attitudes toward cyberbullying prevention.
3. Teaching strategies to counter cyberbullying.
4. Providing anonymous online reporting mechanisms.
5. Balancing prevention efforts with clear consequences.

These recommendations, derived from student input, underscore the importance of student engagement in designing university policies. Unlike younger school students, undergraduates are adults who must be consulted on what works best to create a safer learning environment. Given the increasing reliance on digital platforms for university functions—such as online registration, attendance tracking, virtual learning, and assignment submission—it is crucial to integrate robust support systems for students navigating these spaces. As universities continue expanding their digital infrastructure, they must also enhance mechanisms for addressing cyberbullying, ensuring that online engagement remains a safe and positive experience for all students. By prioritizing student involvement and implementing comprehensive strategies, higher education institutions can foster a more inclusive and supportive academic environment while effectively addressing cyberbullying.

CONCLUSION

Cyberbullying has become a widespread problem in the digital age, affecting students at all levels of education. Unlike traditional bullying, its anonymous nature and the rapid spread of harmful content make it particularly destructive, often leading to severe emotional and social consequences for victims. Perpetrators exploit digital platforms to harass others, while bystanders may unknowingly contribute by sharing or ignoring harmful content. Tackling this issue requires a unified approach involving educators, parents, policymakers, and technology companies. Implementing digital literacy programs, enforcing stronger legal measures, and leveraging advanced technology can help mitigate cyberbullying's impact. By fostering awareness and promoting responsible online behavior, society can create safer digital environments where students feel protected and supported.

REFERENCES

1. Myers CA, Cowie H. Bullying at university: The social and legal contexts of cyberbullying among university students. J Cross Cult Psychol. 2017;48(8):1172–82.

2. Cassidy W, Faucher C, Jackson M. Cyberbullying at university in international contexts. Routledge; 2018.

3. Sam DL, Bruce D, Agyemang CB, Amponsah B, Arkorful H. Cyberbullying victimization among high school and university students in Ghana. Deviant Behav. 2019;40(11):1305–21.

4. Kyriacou C, Zuin A. Cyberbullying bystanders and moral engagement: A psychosocial analysis for pastoral care. Pastor Care Educ. 2018;36(2):99–111.

5. Angwaomaodoko EA. Cyberbullying: Legal and Ethical Implications, Challenges and Opportunities for Policy Development. Int J Innov Sci Res Technol (IJISRT), 0 [1038124/ijisrt/IJISRT24APR108]. 2024;

6. Imam SK, Naz T. Cyberbullying: Legal Challenges and Societal Impacts in the Digital Age. Pakistan Soc Sci Rev. 2024;8(4):392–407.

7. Samara M, Nascimento BDS, Asam A El, Smith P, Hammuda S, Morsi H, et al. Practitioners' Perceptions, Attitudes, and Challenges around Bullying and Cyberbullying. Int J Emot Educ. 2020;12(2):8–25.

8. dataset-cybercrime-in-india [Internet]. Available from: https://www.kaggle.com/datasets/seanangelonathanael/dataset-cybercrime-in-india

9. Cunningham CE, Chen Y, Vaillancourt T, Rimas H, Deal K, Cunningham LJ, et al. Modeling the anti-cyberbullying

preferences of university students: Adaptive choice-based conjoint analysis. Aggress Behav. 2015;41(4):369–85.

CONFLICT OF INTEREST
The authors declare that there is no conflict of interest.

AUTHOR CONTRIBUTIONS
Conceptualization: Alok Kumar Ananad,Awadhesh Prasad.
Investigation: Alok Kumar Ananad, Awadhesh Prasad.
Methodology: Alok Kumar Ananad, Awadhesh Prasad.
Writing - original draft: Alok Kumar Ananad, Awadhesh Prasad.
Writing - review and editing: Alok Kumar Ananad, Awadhesh Prasad.