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# **TAXONOMY OF CYBERBULLYING: AN EXPLORATION OF THE DIGITAL MENACE**

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## **ABSTRACT**

Cyberbullying, a digital menace that has grown in prevalence and impact, is a complex phenomenon that transcends age groups and geographical boundaries. The advent of digital media and the anonymity it provides have produced an environment where bullying can occur at any time, in any place. The COVID-19 pandemic has further intensified this issue, with increased online activity leading to a surge in cyberbullying incidents. This paper proposed a taxonomy of cyberbullying, exploring its various modes, types, platforms, impacts, and strategies for prevention and intervention. The study uncovers the high occurrence of cyberbullying across multiple digital platforms, including social media, text messaging, video games, and more. The paper also reveals demographic trends, indicating that older teenage girls and individuals from certain racial and socioeconomic groups are disproportionately targeted, often due to physical appearance. To combat this digital menace, this research proposed a range of strategies, including educational initiatives, digital citizenship programs, social skills training, conflict resolution, and increased parental involvement. This comprehensive analysis of cyberbullying provides a structured framework to understand its characteristics, classification, and the challenges it poses, while also shedding light on emerging trends. The paper concludes with implications for future research, education, and policy, underscoring the need for a multi-faceted approach to tackle this pervasive issue.

**Keywords:** Cyberbullying, Taxonomy, Digital Menace, Classification, embarrassment

## **1. INTRODUCTION**

Cyberbullying, concerning phenomena of the digital age, has rapidly emerged as a global issue with far-reaching implications for society. This form of bullying, carried out through digital devices such as smartphones, computers, and tablets, is not limited by physical boundaries or time constraints, thus giving it the potential to reach a victim anytime and anywhere [1]. Cyberbullying has emerged as a pervasive and impactful issue in recent years, affecting individuals across various age groups. With the rise of digital and electronic media, perpetrators can engage in bullying behavior

anonymously, unconstrained by time or place. The COVID-19 pandemic and associated lockdowns have further exacerbated cyberbullying incidents, as individuals spent increased time online [2]. Studies have revealed a high prevalence of cyberbullying through social media platforms, text messages, video games, and other online channels. Offensive name-calling, purposeful embarrassment, physical threats, stalking, sexual harassment, and sustained harassment are common forms of cyberbullying experienced by teens and young adults. Demographically, older teen girls are more likely to be targets, with physical appearance often

being a motive for bullying. Moreover, differences exist among racial and socioeconomic groups in the types of online attacks experienced. Stakeholders in the field have identified educational efforts, digital citizenship programs, social skills training, remediation of online conflicts, and parental engagement as key strategies to mitigate cyberbullying incidents. The prevalence of cyberbullying has grown concurrently with the ever-increasing integration of technology into our daily lives [1]. Its impact is especially significant among young people who are digitally active, with numerous studies indicating the adverse effects of cyberbullying on the psychological and emotional well-being of adolescents [2][3]. These effects, which include depression, anxiety, and even suicidal thoughts, highlight the severity of cyberbullying and underline the urgency for a comprehensive understanding and effective countermeasures. In addition, the nebulous nature of online spaces can offer a veil of anonymity for the perpetrators, further complicating efforts to address cyberbullying [4]. The emergence of new technologies and platforms continually transforms the landscape of cyberbullying, bringing about novel forms and methods of digital harassment.

Cyberbullying, an increasingly prevalent issue, particularly amongst younger demographics, has been significantly amplified with the surge in technology and social media usage. Current data unveils some concerning trends. For instance, a 2023 survey by Comparitech indicated a marked increase in reported bullying instances by parents, especially within the 14 to 18 age brackets, with nearly 60% acknowledging their children's victimization [5]. Cyberbullying transcends the boundaries of traditional in-person interactions and communication methods, with one-fifth of all reported instances occurring via social media according to Comparitech. Other digital platforms, such as text messages and video games, were implicated in 11% and 8% of cases, respectively. According to the report by Digital Cooperation [6], the COVID-19 pandemic, particularly enforced lockdowns, inadvertently fueled cyberbullying, with some studies indicating an up to a 70% increase in online toxicity levels on social media and video conferencing platforms, likely due to extended online engagement of children and teenagers. Parental responses to cyberbullying varied, with the majority opting for discussions around online safety, although less than half took further protective steps such as adjusting parental controls or implementing new technology usage rules. Only about 10% of parents resorted to completely denying their children's technology access in response to

cyberbullying. Offensive name-calling (31%), deliberate embarrassment (26%), physical threats (14%), stalking (11%), and sexual harassment (11%) emerged as the most common forms of cyberbullying.

Research from the Pew Research Center [7] also affirmed this issue's scope, revealing that almost half of U.S. teenagers aged 13 to 17 have encountered at least one of the six identified cyberbullying behaviors, with name-calling being the most frequently reported. Furthermore, demographic analysis revealed cyberbullying to disproportionately affect older teenage girls, with 54% of girls aged 15 to 17 reporting at least one cyberbullying incident, compared to 44% of their male counterparts and 41% of children aged 13 to 14 from both genders. Certain demographic groups were found to be more susceptible to specific forms of online harassment. For instance, white teenagers were more likely to be the target of false rumors compared to their black counterparts, while teenagers from lower-income households reported higher rates of online physical threats. Notably, older teenage girls were particularly prone to experiencing multiple forms of online harassment, with 32% reporting at least two types of online harassment, compared to 24% of teen boys. Teenagers aged 15 to 17 were also more likely than their younger counterparts (aged 13 to 14) to be victims of multiple forms of cyberbullying, further illustrating the complexity and variances in this growing concern. In terms of prevention and intervention strategies, the 2023 study identified educational efforts related to awareness of cyberbullying and its consequences, digital citizenship programming for students, social skills training, remediation for youth in online conflict, and parental engagement with the technology used by their children as key factors in mitigating instances of cyberbullying [7].

Cyberbullying, a product of the digital age, is marked by numerous defining characteristics, some of which include anonymity, constant presence, public visibility, and profound psychological impact on victims [7]. This form of bullying can manifest in direct targeting or through more covert methods such as rumor spreading. While it may be subjective to arrange these characteristics based on their severity—considering the varying degrees of individual impact—they are generally listed here, avoiding redundancy, in the order that often demonstrates the most harmful aspects. Predominantly, the psychological impact of cyberbullying may manifest in severe depression, anxiety, low self-esteem, and in extreme cases, suicidal thoughts, or actions, rivalling or even surpassing the emotional trauma inflicted by traditional bullying. This bullying method's incessant

presence, enabled by digital devices, permeates safe spaces such as homes, leaving the victim feeling tormented and trapped. The pervasiveness of cyberbullying transcends the traditional limitations of the physical environment, making victims a constant target irrespective of time and location. The aggressive and intentional nature of cyberbullying is designed to distress and harm the victim. It is characterized by repeated acts over time, establishing a pattern of harassment and abuse. A key component of this phenomenon is the perceived power imbalance between the bully and the victim, often leaving the victim feeling helpless. The threat of retaliation by the victim can further escalate the situation, possibly resulting in additional harm. Cyberbullying is often public and visible to a wider audience, exacerbating the victim's humiliation as a single post can be rapidly disseminated. The potential anonymity of cyberbullying adds an additional layer of complexity to this issue, as it hampers efforts to identify and stop bullying while reducing accountability. Furthermore, cyberbullying can take many forms, from offensive messages and rumor spreading to sharing inappropriate content or online exclusion, thereby increasing the difficulty of tackling it. The lasting effects of cyberbullying are perpetuated by the digital medium's inherent property to retain content, making it difficult to erase completely, thus potentially affecting the victim's prospects. The bystander effect is also prevalent in cyberbullying incidents, with many observers choosing inaction over intervention. In certain jurisdictions, depending on the severity and nature of the incident, cyberbullying may lead to legal repercussions, sometimes considered criminal offenses. The digital medium itself distinguishes cyberbullying from traditional forms. The lack of physical proximity between the bully and the victim, afforded by the digital platform, opens up new avenues for harassment, adding a unique dimension to the bullying paradigm.

This paper aims to delve into the multifaceted issue of cyberbullying, providing a comprehensive overview of its defining characteristics, and shedding light on its various forms. The goal is to aid in the understanding and awareness of cyberbullying, to spur dialogue and inspire strategies that can mitigate its prevalence and impact. The research also seeks to address the gaps in the existing literature, particularly in the area of cyberbullying classification, and in understanding the challenges in dealing with this digital menace. Ultimately, the study contributes to the ongoing global discourse on cyberbullying, propelling us towards the development of safer online environments.

The rest of the paper is organized as follows: Section 2 presents a literature review on cyberbullying, highlighting existing research and identifying gaps. Section 3 discusses recent trends and developments in cyberbullying. Section 4 explores the characteristics of cyberbullying. Section 5 presents a comprehensive taxonomy of cyberbullying. Section 6 delves into the classification of cyberbullying. Section 7 discusses the challenges and limitations in addressing cyberbullying. Section 8 presents open problems and recommendations for future research. Finally, Section 9 concludes the paper, summarizing the findings and their implications.

## **2. REVIEW OF PREVIOUS STUDIES**

Understanding the various dimensions and characteristics of cyberbullying is crucial for developing effective prevention and intervention strategies. In this literature review, we explore recent research papers that contribute to the taxonomy of cyberbullying, providing insights into its different facets and implications. Doane et al. [9] conducted a randomized controlled trial to evaluate the effectiveness of a theory of reasoned action-based video prevention program for college students. Their findings demonstrated that a brief cyberbullying video improved cyberbullying knowledge, behavior, and constructs related to cyberbullying perpetration. This study highlights the importance of considering normative influences and malice in the taxonomy of cyberbullying. Kritsotakis et al. [10] investigated the associations between bullying, cyberbullying, substance use, and sexual risk-taking in young adults. Their research revealed significant associations between involvement in bullying and cyberbullying with multiple health risk behaviors. This study emphasizes the need for multifaceted prevention interventions tailored to different bullying statuses and genders. Fluck [11] conducted a qualitative analysis to explore the motives behind violence in schools, including bullying. The findings suggested that future taxonomies of cyberbullying should include additional dimensions such as peer pressure and lack of self-control. This research highlights the importance of considering underlying motivations in understanding cyberbullying behaviors. Alvarez [12] examined the use of cybertools (electronic forms of communication) as mechanisms of power and control in teen dating relationships. The study discusses the implications of cybertools in perpetrating cyberbullying and provides insights into prevention and intervention methods for adults working with teens experiencing cyberbullying in dating relationships. Redmond et al. [13] developed a conceptual framework for educators to detect and mitigate cyberbullying. The

framework emphasizes the importance of understanding the epistemological and sociological aspects of cyberbullying. This study contributes to the taxonomy of cyberbullying by providing a comprehensive framework for educators to address this issue. García-Hermoso et al. [14] examined the association between bullying victimization, including cyberbullying, and physical fitness among children and adolescents. The study categorized bullying victimization into traditional bullying and cyberbullying and highlighted the need for interventions targeting both forms of bullying. This research contributes to the taxonomy of cyberbullying by considering its impact on physical health. Chen & Zhu [15] investigated the coping strategies of cyberbullying victims in China. The study compared the perceptions of victims and non-victims and identified coping strategies specific to different types of cyberbullying victimization. This research provides insights into the coping mechanisms employed by individuals experiencing cyberbullying, contributing to the taxonomy of cyberbullying responses. Alipan et al. [16] explored the perceptions of emerging adults regarding coping with cyberbullying. The study identified general problem-focused and emotion-focused coping strategies, as well as cyber-specific technological coping solutions.

Other extensive research on cyberbullying [4][17] has focused on its psychological impact, prevalence, and potential mitigating strategies. Recent literature has expanded the scope to consider the changing nature and mechanisms of cyberbullying. Tozzo et al. conducted a systematic review on family and educational strategies for cyberbullying prevention, highlighting the importance of digital instruments and technology-based practices [18]. Schwarze and Eimler emphasized the interlinkages between cyberbullying and cyberhate, suggesting an integrated approach to the study of cyber-aggression [19]. Ghazali et al. focused on the Malaysian youth perspective, identifying Internet usage frequency as a significant factor in cyberbullying [20]. The impact of cyberbullying on adolescent health has been extensively studied. Nixon reviewed multiple studies worldwide and provided insights into the detrimental effects of cyberbullying on health, emphasizing the need for further research [21]. Agustiniingsih and Pandin emphasized the importance of personal resources, emotional regulation, and social support in mitigating the impact on cyberbullying victims [22].

Defining and measuring cyberbullying accurately is crucial for effective intervention programs. Akbar et al. conducted a literature review on cyberbullying definitions and measurement in adolescents, stressing the

need for consistency in criteria and measurement methods [23]. Sultan et al. reviewed machine learning techniques for cyberbullying detection, highlighting the importance of technical means in addressing this issue [24]. Cross-cultural differences in cyberbullying behavior have also been explored. Bartlett et al. discussed the relatively new and descriptive nature of cyberbullying research, highlighting the need for theoretical advancements in this area [25]. Chibbaro drew parallels between cyberbullying and traditional bullying, emphasizing the harmful intent behind cyberbullying acts [25]. Overall, these studies contribute to our understanding of the taxonomy of cyberbullying by examining different platforms, its impact on health, and developing prevention and intervention strategies. Future research should continue to explore these areas and integrate new technological advancements [27].

The taxonomy of cyberbullying involves categorizing the different forms and platforms of cyberbullying, understanding its impact, and developing effective prevention and intervention strategies. While the existing literature provides a foundational understanding of the taxonomy of cyberbullying, it does not comprehensively cover all its facets. There are gaps in the literature, particularly in the classification of emerging forms of cyberbullying and the platforms used. This study aims to address these gaps by providing a more exhaustive taxonomy of cyberbullying. We will delve into the various forms and dimensions of cyberbullying, including those not extensively covered in previous research. Our goal is to contribute to the existing body of knowledge and provide a more comprehensive framework for understanding and addressing this pervasive digital menace.

### **3. CHALLENGES, RECENT TRENDS AND DEVELOPMENTS**

#### *3.1 Challenges and Limitations*

The task of dealing with cyberbullying presents several challenges and constraints, which will be discussed in this section. Data scarcity is a key issue stemming from the difficulty in accruing accurate cyberbullying data from social media platforms owing to privacy and ethical considerations. Consequently, this yields small datasets that are incapable of encapsulating the full complexity of cyberbullying scenarios. Another limitation is data bias, as accessible cyberbullying datasets tend to only embody overt instances of profanity and aggression, thereby neglecting more subtle forms of bullying such as exclusion, harassment, and

cyberstalking. These biases skew the model towards detecting only explicit instances of toxicity. Context dependence poses a further challenge, as the detection of cyberbullying often necessitates an understanding of the context, the relationships between users, and the social dynamics at play. Unfortunately, most datasets provide individual messages without their surrounding context, making the detection task significantly more challenging.

Platform dependence is yet another hurdle, with the language and features that are useful for detecting cyberbullying typically being platform specific. Consequently, models trained on one platform may not generalize well to other platforms, restricting their practical applicability. Definitional issues add to these challenges, given the ambiguity and disagreements prevalent in defining what exactly constitutes cyberbullying, which in turn complicates the operationalization of the concept of computational methods. An additional challenge arises from adversaries, as malicious actors may alter their behaviors to circumvent improved detection models, resulting in a challenging arm race that researchers and platforms struggle to keep pace with. There are also unresolved tensions between privacy concerns and the use of personal data for cyberbullying detection. An excessively intrusive monitoring system can spark ethical issues, and finding the right balance is an ongoing challenge. Finally, there is the risk of bias and unfairness, common to all AI systems. Cyberbullying detection models may reflect and amplify the societal biases present in the data, potentially targeting marginalized groups unfairly and making mistakes that disproportionately harm certain users. This issue necessitates careful oversight and mitigation measures.

### *3.2 Recent Trends and Developments*

Cyberbullying exhibits several defining characteristics including anonymity, constant presence, public visibility, and severe psychological impacts on victims [28]. It encompasses a range of behaviors, from direct targeting to indirect forms such as spreading rumors. The landscape of cyberbullying research is rapidly evolving with emerging trends and developments propelling the field towards greater sophistication and accuracy in detection and prevention. Recent trends and developments in the field of cyberbullying research include advanced models using deep learning, multi-platform, and cross-platform analysis, incorporating more context, focusing on different cyberbullying behaviors, addressing data challenges, data scarcity problems, and evaluating model limitations and

robustness. A promising advancement in the field is the increased application of neural networks, specifically Convolutional Neural Networks (CNNs) [29] and Recurrent Neural Networks (RNNs) [30], which include Long Short-Term Memory (LSTM) networks [31], to cyberbullying detection. The enhancement of these deep learning models has proven to yield better results than traditional machine learning models in several datasets. To navigate the wide and varied spectrum of social media platforms, researchers have begun to focus on multi-platform and cross-platform analyses [17] rather than concentrating solely on a single platform, such as Twitter or Facebook. The goal is to forge more robust models capable of generalizing across diverse platforms.

Recognizing that the roots of cyberbullying often run deeper than individual posts or messages, recent studies are emphasizing the importance of incorporating a broader context into their analyses. For instance, they are exploring interactions between users, integrating profile-level features, and analyzing images and metadata [32]. This holistic approach is designed to capture the intricate social dynamics underpinning cyberbullying. Moreover, the focus of cyberbullying detection is expanding beyond its mere presence towards identifying specific types of behaviors, such as aggression, harassment, hate speech, and toxicity [33]. This nuanced approach aims to create fine-grained classification systems [34] that offer a more detailed understanding of cyberbullying dynamics. However, the field still faces significant challenges, particularly in obtaining large volumes of cyberbullying data for research. Current efforts to address this include innovative strategies such as crowdsourcing [35], synthetic data generation [36], and the amalgamation of multiple datasets [37] to mitigate the data scarcity issue. Lastly, to refine and advance the field, critical analyses of the current state of cyberbullying detection systems are being conducted. These include evaluations of overreliance on profanity [38][39] detection, and the lack of generalization across different domains. Concurrently, researchers are proposing robust evaluation methodologies with the objective of progressing the field in a more rigorous and scientifically valid direction.

## **4. CYBERBULLYING CHARACTERISTICS, TAXONOMY AND CLASSIFICATION**

### *4.1 Cyberbullying Characteristics*

We tried to arrange the cyberbullying characteristics based on severity which can be subjective as different aspects of cyberbullying may have varying degrees of

impact depending on the individual and their circumstances. However, Table 1 illustrates the order that represents the most harmful aspects.

**Table 1. Characteristics of Cyberbullying**

Characteristics	Description
Psychological Impact	The effects of cyberbullying can be severe and include depression, anxiety, low self-esteem, and in extreme cases, suicidal thoughts or actions. The psychological harm from cyberbullying can be as serious, if not more so, than traditional bullying.
Impact on Victims	Cyberbullying can have a devastating impact on victims including anxiety, depression, loneliness, and even suicidal thoughts.
24x7 Presence	Cyberbullying can occur 24x7 and reach the victim even in places that are usually considered safe havens such as their homes. The victim can feel constantly tormented and unable to escape.
Pervasiveness	Traditional bullying is often limited to specific environments like schools or the playground, but cyberbullying can occur at anytime and anywhere, if the victim and perpetrator have access to digital devices. This means the victim can be targeted constantly, making it hard to escape from the bullying
Aggressive and Intentional	Cyberbullying is an aggressive and intentional behavior directed at a victim. The intent is to cause distress, harm, or hurt the victim
Repetitive	It is a repetitive behavior - multiple instances of cyberbullying acts are directed at the victim over a period of time. This causes a pattern of harassment and abuse.
Imbalance of Power	It involves an imbalance of power between the bully and the victim. The bully may perceive that they have more power than the victim.
Retaliation Risk	Victims of cyberbullying may feel compelled to retaliate, which can escalate the situation and may result in further harm.
Visibility/Public Nature	Cyberbullying acts are visible to others or peers. A single post or message can be shared and spread rapidly, increasing the harm and humiliation felt by the victim.
Anonymity	Cyberbullying can be anonymous, which makes it difficult to identify and stop the bully. Anonymity also reduces accountability and responsibility.
Variety of Forms	Cyberbullying can take many forms, including offensive messages, spreading rumors, posting hurtful or threatening messages on social media, sharing inappropriate or embarrassing images or videos, impersonating others online, or excluding individuals from online groups.
Permanent Record	Digital content can be difficult to fully erase, even after it's been deleted. This means that the effects of cyberbullying can be long-lasting and potentially impact a victim's future, such as when applying for jobs or college.
Bystander Effect	Many people can witness cyberbullying, but not everyone takes action to stop it or support the victim
Legal Consequences	Depending on the severity and nature of the incident, cyberbullying can have legal implications. Some countries and states have

specific laws on cyberbullying, and certain actions can be considered criminal offenses. Cyberbullying occurs through digital platforms. This distinguishes it from traditional forms of bullying, as it doesn't require physical proximity between the bully and the victim.

### 4.2 Cyberbullying Taxonomy

We proposed a comprehensive taxonomy of cyberbullying, providing structured framework to understand its various forms and dimensions. The taxonomy of cyberbullying can be categorized based on several dimensions, including the nature of the act, the platform used, the anonymity of the perpetrator, the frequency and duration of the bullying, and prevention and intervention. Cyberbullying, like traditional bullying, is a complex and multifaceted phenomenon. Understanding its various forms and dimensions requires a structured framework that considers the different aspects of this issue. Fig. 1 shows the proposed cyberbullying taxonomy framework.

**Table 2. Taxonomy of cyberbullying**

Dimensions	Items	Description
Nature of the Act	Verbal Cyberbullying	This involves the use of words to harm or intimidate, such as sending threatening messages, engaging in online arguments, or spreading rumors
	Visual Cyberbullying	This involves the use of images or videos to embarrass or harass, such as sharing explicit or manipulated photos or videos of the victim.
	Exclusionary Cyberbullying	This involves intentionally excluding someone from an online group or activity to isolate them socially.
Modes of Cyberbullying	Impersonation	This involves pretending to be someone else online to cause harm or damage their reputation.
	Direct Cyberbullying	This involves a direct interaction between the bully and the victim, such as sending threatening messages or emails.
Types of Cyberbullying	Indirect	This involves spreading rumors or harmful content about the victim to others, often without the victim's knowledge.
	Harassment	Repeatedly sending offensive and malicious messages
	Denigration	Spreading rumors or false information to damage a person's reputation
	Impersonation	Pretending to be someone else and sending or posting material to damage that person's reputation
	Outing	Sharing confidential information about a person without their consent.

	Cyberstalking	Repeatedly sending threats of harm, which can lead to the victim fearing for their safety
Platforms used for Cyberbullying	Social Media	Platforms like Facebook, Instagram, and Twitter are common places for cyberbullying
	Messaging Apps	Apps like WhatsApp, Snapchat, and Messenger can be used to send harmful messages directly to victims.
	Online Gaming	In-game chat features can be used to harass or threaten other players.
Impact of Cyberbullying	Email	Used to send threatening or harmful messages directly to the victim.
	Emotional	This can include feelings of sadness, loneliness, depression, and low self-esteem.
	Physical	Victims may experience symptoms such as headaches, sleep problems, and other stress-related health issues.
Frequency and Duration	Academic	Cyberbullying can lead to decreased academic performance and school participation.
	Single Incident	This involves a one-time act of bullying, which can still have a significant impact if the content is particularly harmful or if it is widely shared.
	Repeated Bullying	This involves ongoing bullying over a period of time, which can lead to severe psychological distress and feelings of helplessness.
Prevention and Intervention	Education	Schools and parents can educate children about the dangers of cyberbullying and promote positive online behavior.
	Policies and Laws:	Implementing and enforcing policies and laws can deter potential cyberbullies.
	Technology	Using technology to detect and prevent cyberbullying, such as machine learning algorithms to identify harmful content.

the nature of the content involved, and the relationship between the victim and the perpetrator [34]. This classification often relies on the specific definition of cyberbullying that researchers or practitioners utilize. Yet, there exists a widely accepted set of criteria that will be described here. The cornerstone of cyberbullying is the intention behind the behavior—it is rarely accidental, and the bully's purpose is typically to inflict harm or distress upon the victim. Moreover, repetition is an integral part of the bullying cycle.

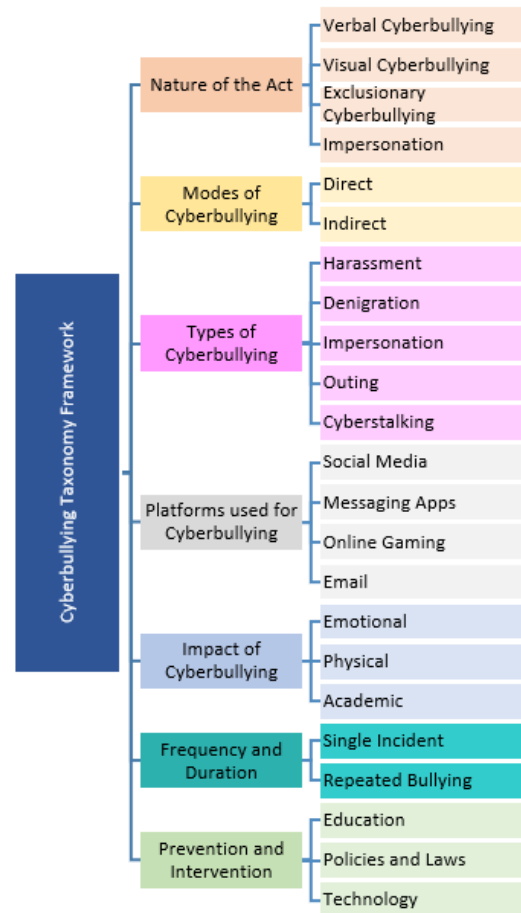


Fig. 1. Cyberbullying Taxonomy Framework

### 4.3 Cyberbullying Classification

Cyberbullying encompasses a variety of behaviors that aim to harm, intimidate, or harass individuals. While it can be difficult to create an exhaustive classification due to the ever-evolving nature of digital media and the methods employed by bullies, understanding the distinct types of cyberbullying can provide valuable insights for prevention, intervention, and education strategies. In this section, the criteria to classify cyberbullying will be proposed, followed by the deferent types of cyberbullying.

#### 4.3.1 Criteria to classify cyberbullying.

Cyberbullying can be systematically classified using varying criteria that encompass the medium used,

While cyberbullying usually comprises recurring actions, the rapid and viral spread of online content could mean that a singular act amplifies, leading to significant harm. The harm elicited by behavior, which could be psychological, emotional, or even physical, is another essential criterion in this categorization. Furthermore, a power imbalance between the victim and the bully, a familiar concept in traditional bullying, is also evident in the cyber realm. This power dynamic can originate from various factors, including popularity, physical prowess, possession of compromising information, or the anonymity facilitated by the Internet. The digital

platform employed for cyberbullying contributes to its classification and may include social media, SMS or instant messaging platforms, email, and online gaming platforms. Additionally, the nature of the content used in the bullying process, whether it is text, images, videos, or a combination, serves as another classification criterion. Lastly, the relationship between the victim and the perpetrator plays a critical role in categorizing cyberbullying. It can occur in various contexts, ranging from friendships and classmates to acquaintances, and can even involve anonymous individuals. Thus, the characterization of cyberbullying is multifaceted, considering the numerous aspects that collectively shape this complex phenomenon. Table 3 summarizes the commonly used criteria to classify cyberbullying.

**Table 3. Commonly used criteria to classify cyberbullying.**

Criteria	Description
Intent	The behavior is intentional, rather than accidental. The intent of the bully is to cause harm or distress to the victim.
Repetition	While cyberbullying typically involves repeated actions over time, the rapid and viral nature of online content could mean a single act multiplies, resulting in substantial harm.
Harm	The behavior causes psychological, emotional, or physical harm to the victim.
Power Imbalance	Cyberbullying involves a power imbalance between the victim and the bully. This power can stem from several sources, including popularity, physical strength, access to compromising information, or the anonymity provided by the internet.
Medium of Cyberbullying	The digital platform used for cyberbullying also plays a role in its classification. These can be social media, SMS or instant messaging platforms, email, and online gaming platforms.
Nature of the Content	The type of content used to bully - be it text, images, videos, or a combination of these - also helps in classifying cyberbullying.
Relationship between the Victim and the Bully	The nature of the relationship between the involved parties also plays a role in categorizing cyberbullying. It could occur between friends, classmates, acquaintances, or even between anonymous individuals.

#### 4.3.2. Type of Cyberbullying

Different types of cyberbullying such as harassment, cyberstalking, impersonation, denigration, and exclusion each display unique characteristics and hence necessitate distinctive intervention strategies[34]. Following the establishment of the classificatory criteria, Table 4 encompasses the proposed cyberbullying classification. These classifications and criteria offer a broad perspective on the complex phenomenon of cyberbullying. Understanding these categories is essential for addressing the issue effectively. While the

classification provided here is robust, the rapid evolution of digital media and the innovative methods adopted by bullies call for constant vigilance and updating of these classifications.

**Table 4. Cyberbullying Classification**

Type	Description
Threats	This involves the perpetrator making threats to cause physical, mental, or emotional harm to the victim.
Harassment	This is a sustained, constant form of cyberbullying involving persistent, offensive, and malicious messages intended to pester the victim.
Stalking and Cyberstalking	This involves tracking, spying, or constantly pursuing the victim online, often escalating to threats of physical harm.
Flaming	It refers to engaging in intense online arguments that include the use of offensive or profane language, often intended to provoke reactions.
Exclusion	Intentionally isolating a person from an online group or digital activity as a form of social bullying.
Outing	Sharing someone's secrets, embarrassing information, or images online without their consent.
Masquerading/ Impersonation	This involves the bully pretending to be the victim by stealing their online identity and causing harm or distress.
Denigration	This involves spreading harmful, false, or damaging information or rumors about the victim to damage their reputation or relationships.
Trolling	Deliberately inciting or provoking individuals into reactive behavior by posting inflammatory or offensive comments.

## 5. IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The implications of our study extend across various domains, underscoring the need for concerted efforts in addressing cyberbullying. These implications serve to inform strategies aimed at prevention, intervention, education, and policy development. Notably, the findings emphasize the necessity for a standardized, universally accepted definition of cyberbullying. This is a crucial step to streamline the development of legal statutes and social measures against such detrimental behaviors. Additionally, the ubiquitous and invasive nature of cyberbullying that we've identified underlines the paramount of incorporating technological considerations in policy making and crafting preventive strategies. Furthermore, our exploration of diverse cyberbullying forms accentuates the importance of tailoring interventions and awareness campaigns to be context specific. The severe psychological effects on victims, delineated in our study, illuminate the exigency of



effective mental health support systems to assist victims in their recovery.

Looking ahead, we propose several recommendations for future research in the realm of cyberbullying. First, our study provides a foundation for the characterization and classification of cyberbullying. However, it is crucial for future studies to continue to refine these classification methodologies. Second, future research should broaden its focus to include perpetrators of cyberbullying. Understanding their motivations and characteristics could lead to intelligent preventive strategies. Third, to determine the efficacy of various interventions, more rigorous evaluation studies are needed. Fourth, longitudinal studies should be conducted to capture the long-term impacts of cyberbullying and gauge the effectiveness of interventions over time. Fifth, the role of technology companies, especially those offering social media platforms, in mitigating cyberbullying and enforcing online safety standards deserves further exploration. Lastly, while our study provides a comprehensive overview of cyberbullying, future research could focus on examining specific contexts, such as schools, workplaces, or cultural communities, to better tailor interventions. With the implementation of these recommendations, future research can continue to improve our understanding of cyberbullying, its repercussions, and the most effective strategies to combat it.

## 6. CONCLUSION

This paper provided a comprehensive exploration of the digital menace known as cyberbullying. Through an in-depth analysis of its taxonomy, we have shed light on the various modes, types, platforms, impacts, and strategies for the prevention and intervention of cyberbullying. Our findings underscore the high prevalence of cyberbullying across multiple digital platforms and highlight the critical role of parents in addressing this issue. However, our study also reveals gaps in the existing literature, particularly in the classification of emerging forms of cyberbullying and the platforms used. As such, our paper not only provides a structured framework to understand the characteristics and challenges posed by cyberbullying but also highlights areas for future research. Considering our findings, we conclude that there is a pressing need for continued research, education, and policy development to effectively address and mitigate the impacts of cyberbullying as digital media continues to evolve.

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