Identifying Factors towards Cyberbullying

Manish Joshi[1], Dhirendra Pandey[2*]

[1]Department of IT, Babasaheb Bhimrao Ambedkar University, Lucknow
Email: edu.manishjoshi@gmail.com

[2*]Department of IT, Babasaheb Bhimrao Ambedkar University, Lucknow
Email: prof.dhiren@gmail.com

*Corresponding Author: Dhirendra Pandey

Email: prof.dhiren@gmail.com

Abstract:
The prevalence of cyberbullying is increasing, particularly among adolescents and young adults. Using existing studies on the topic, this article seeks to determine the factors that lead to the occurrence of cyberbullying. Using a variety of empirical investigations, theoretical frameworks, and conceptual models, this article identifies the primary contributors to cyberbullying. Individual, societal, and environmental factors can all have an effect on cyberbullying, as revealed by this study. Among the individual determinants are age, gender, self-esteem, and emotional management. Peer influence, social support, and social media use are social factors. Contextual factors, such as school culture and parental participation, play an important impact as well.

In addition, the paper analyzes the role of technology in cyberbullying, namely the impact of anonymity, online disinhibition, and easy internet access. The review also addresses the limitations of existing research, such as the absence of standard definitions and assessment techniques, as well as the need for additional research to determine the efficacy of preventative and intervention strategies. This analysis concludes by emphasizing the necessity for a holistic approach to cyberbullying that takes into account individual, societal, and environmental aspects. The conclusions of this research can aid policymakers, educators, and parents in the development of programs that effectively prevent, combat cyberbullying and identify cyberbullying.

Keyword: Cyberbullying, bullying, social media .

Introduction:

The internet has become an essential aspect of everyday life and holds significant importance in society, with over four billion people accessing it worldwide. The modern era is marked by the pervasiveness of technology, and the younger generation is especially involved in an internet-centered digital lifestyle. The spread of information and communication technologies (ICTs) has resulted in profound behavioral shifts among humans. Unfortunately, this quick technical development has not only resulted in benefits, but also a number of issues, including cyberbullying. The internet may be compared to a double-edged sword because it has transformed our daily lives while simultaneously creating chances for unpleasant behaviors such as cyberbullying, an electronic form of bullying[21].
Internet has become, with other technology, one of the most prominent communication routes used by university students globally. Younger Generation, including those enrolled in higher education,

exhibits a high level of technology consumption and serves as an early adopter of novel technologies for their daily activities. However, extensive exposure to technology may make children more vulnerable to developing a range of negative habits and distractions, such as exposure to false information, religious fanaticism, politics, obscenity, substance abuse, violence, and cyberbullying. A poll of internet users reveals that the percentage of 18- to 30-year-olds who are active online users is 95% [41]. The frequency with which adolescents utilize technology is a major indicator of their susceptibility to cyberbullying behavior.

Bullying refers to aggressive, purposeful, deliberate, undesired, unethical, inappropriate, immoral, unpleasant, and disrespectful behavior towards individuals or groups that involves an actual or perceived imbalance of power. This behavior is commonly characterized by its frequent and repetitive nature, and it can be enacted by an individual or a collective of individuals sharing similar beliefs or attitudes. Physical attack, verbal abuse, distributing falsified news, harsh words/comments, rumours, gossip, threats, and social isolation are examples of bullying behaviors.

Cyberbullying is described as "the use of information and communication technologies to facilitate deliberate, recurrent, and aggressive behavior by a person or group with the intent to damage or defame others". Cyberbullying is, in plain terms, a computerized version of social harassment [33]. Despite the distinctions between traditional and cyberbullying, individuals who experience either form of bullying often encounter similar adverse consequences, such as stress, despair, isolation, mental health problems, and sleep disruptions. In addition, both types of bullying require the desire to inflict injury or pain to the victim. Yet, the advent of internet technology has led to the rise of cyberbullying, which is regarded as more hazardous than traditional bullying due to the bully's ability to remain anonymous. It is simpler for cyberbullies to assault their victims without fear of being identified due to the anonymity given by information and communication technologies (ICTs). Unlike victims of conventional bullying, cyberbullying victims are frequently uninformed of the perpetrator's identity. Because to the pervasiveness of the internet and ICTs, cyberbullying can occur anywhere and at any time, making it a widespread and persistent problem. Given these circumstances, there is an urgent need to examine cyberbullying among university students so that effective prevention techniques can be developed. Existing research has primarily focused on adolescent populations, however cyberbullying can harm people of all ages and may even increase with age.

This study's objective is to examine the factors associated with cyberbullying behavior. This study aims to investigate the various elements that contribute to cyberbullying and their link to cyberbullying attitudes. This study aims to address this research gap by investigating the fundamental causes of cyberbullying behavior. The findings of this study are predicted to inform the development of effective anti-cyberbullying methods.
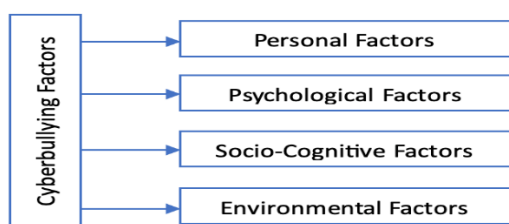

Figure 1: Cyberbullying Factors

Cyberbullying Forms

Cyberbullying is a pervasive and multifaceted topic. Specifically, university students engage in many forms of cyberbullying, such as flaming, trolling, denigration, masquerade, exclusion, outing, cyberstalking, harassment, and frapping. Flaming is the use of obscene language in online communication, whereas trolling is the use of negative communication to generate an argument or brawl [4]. Denigration is the act of spreading rumours to harm someone's reputation [40], whereas masquerade is the act of impersonating someone else to conceal one's true identity [41]. Exclusion is the removal of a user from an internet community , and outing is the public disclosure of a user's private information [22]. Cyberstalking is the sending of offensive text messages through internet contact [42], whereas text message harassment is the victimization of persons through the sending of disrespectful, rude, and offensive text messages [22]. Finally, frapping entails posting improper stuff to the social media accounts of another person while making it appear as though the actual account owner posted it [22]. Knowing these distinct forms of cyberbullying can help to find effective tactics to combat this issue.

Identification of Cyberbullying Factors
Personal Factors

An individual's conduct and sentiments regarding cyberbullying are substantially influenced by personal characteristics. These variables are unique to each individual and often result in distinct beliefs and behaviors related to cyberbullying. Past research has found three key personal elements that contribute to cyberbullying: demographic factors (gender race and age)[19], [27], [25], [30], [15] and cyberbullying awareness [4], [26].
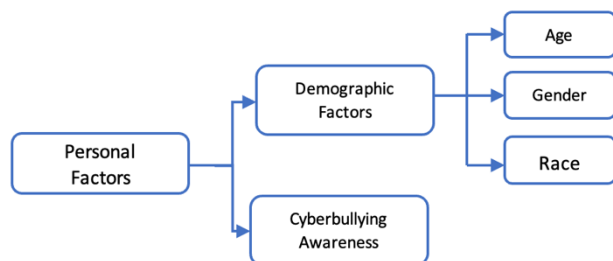

Figure 2: Personal Factors

Many research have studied the association between gender, race, age, and cyberbullying. Gender, age, and race are significant factors that influence the commission and experience of cyberbullying, resulting in detrimental outcomes for both the perpetrator and victim. Empirical research has revealed that there exist disparities between genders regarding the incidence of cyberbullying. Specifically, males tend to be more inclined to partake in this conduct than females [27], [3], [7], [5], [1]. Conversely, females are more likely to be subjected to cyberbullying than males and are less inclined to engage in such conduct themselves [27], [30], [7], [5], [1]. The results of this study indicate that there exist notable gender inequalities in the occurrence and commission of cyberbullying, as males exhibit a greater propensity to participate in this conduct while females are more prone to become victims of it.

In addition to demographic considerations, an individual's cyberbullying conduct is influenced by their cyberbullying knowledge and awareness. Individuals who have a greater awareness of cyberbullying and its effects on the victim are less inclined to participate in such conduct [12] than those who lack this knowledge[4], [6].

Figure 2 depicts a conceptual map of the human factors linked to cyberbullying. While tackling cyberbullying in a variety of contexts, such as colleges, schools, and workplaces, it is essential to examine these human elements.

Socio-Cognitive Factors

People have a tendency to adopt the behaviors they perceive in their environment and society, assuming that these activities are appropriate because everyone else is engaging in them. Socio-cognitive elements are formed as a result of the interactions between people and their upbringing. Many factors lead to the adoption of cyberbullying behavior, however socio-cognitive elements are frequently disregarded despite their importance.

Socio-cognitive aspects are the second category of traits that contribute to the understanding of cyberbullying, according to a comprehensive research study. These attributes comprise moral disengagement [14], degree of sorrow, and extent of remorse [8]. Moral disengagement is the process of persuading oneself that moral standards do not apply in a given circumstance. According to research, moral disengagement is a precursor to cyberbullying and has a substantial effect on its perpetration.
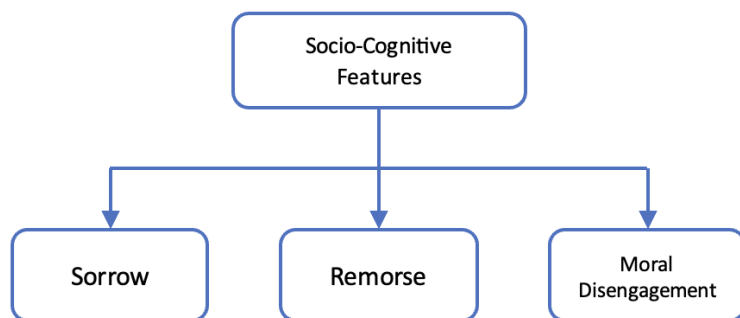

Figure 3: Socio-Cognitive Factors

According to studies, those with a high level of moral disengagement are more prone to participate in cyberbullying. The second socio-cognitive factor pertains to the degree of remorse and sorrow, which have been relatively under-researched but are pivotal to comprehending the underlying motives of cyberbullying. A comprehensive review of the literature indicates that remorse and sorrow exhibit a negative association with the perpetration of cyberbullying. Individuals experiencing elevated levels of remorse and sorrow are less inclined to engage in cyberbullying activities.

In order to comprehend and explain cyberbullying behavior, socio-cognitive aspects play a crucial role. Figure 3 depicts a conceptual map of socio-cognitive elements related to cyberbullying.

Prior research has demonstrated a connection between moral disengagement and cyberbullying [14]. In contrast, sentiments of guilt and grief had a detrimental effect on cyberbullying behavior [7]. Moral disengagement is a cognitive process that supports aggressive action, and persons who have normative attitudes about cyberbullying are more likely to engage in this behavior [37]. The absence of guilt and sorrow strengthens this process further. People who lack guilt and grief may be more prone to promote their aggressive or bad behavior through cyberbullying, since they may not completely comprehend or empathize with the suffering of cyberbullying victims [28]. Overall, these results imply that the presence or absence of specific emotions and cognitive processes can have a substantial impact on the likelihood of engaging in cyberbullying activity.

Psychological Factors and Cyberbullying Attitude.

The review of the literature on cyberbullying has found a number of psychological features that either precede or follow cyberbullying activity, or both. These characteristics include traits of personality [16], tension [23], [19], [24], [18], anxiety [23], [19], [24], [18], depression [23], [19], [24], [18], emotional maturity [14], [24], vengeance [27], solitude [4], [8], irritation [11], self-esteem [19], [30], [18], [20], aggression [30], [31], empathy [30], [14], antisocial conduct [19], insecurity, internalizing behavior [4], [6] and jealousy [26]. These psychological variables are crucial for explaining the phenomena of cyberbullying, according to the review's findings. Understanding these psychological aspects can contribute to a thorough knowledge of the complex nature of cyberbullying behavior, as evidenced by this review. As both antecedents and outcomes of cyberbullying activity, these psychological characteristics demonstrate a combination of positive and negative interactions. Conclusion: psychological aspects are the most significant and influential in understanding cyberbullying behavior. The literature review indicates that the previously described psychological traits are frequently connected with the onset of cyberbullying behavior. In addition, the review finds that modifying the psychological makeup of individuals can help prevent cyberbullying. Figure 4 depicts a graphic representation of the psychological characteristics associated with cyberbullying.

As per [10] and corroborated by [2], victims of cyberbullying often score high on aggression and antisocial conduct scales. Self-esteem and internalizing behavior are other factors that influence cyberbullying behavior. For example, [29] noted that internalizing behavior can contribute to cyberbullying. In certain instances, cyberbullying victims may become cyberbullies themselves, demonstrating that internalizing conduct might lead to this behavior.
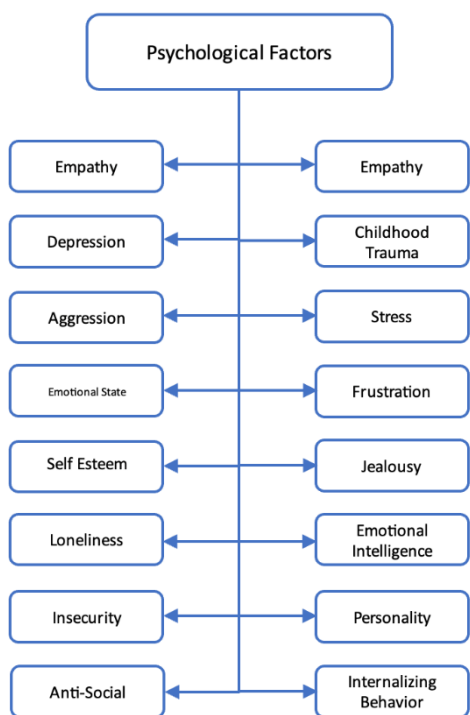

Figure 4: Psychological Factors

Self-esteem is another psychological factor that is associated with cyberbullying. Much like internalizing behavior, self-esteem can serve various purposes. Poor self-esteem can increase a

person's risk of becoming a cyberbullying victim and then their likelihood of becoming a cyberbully. Cyberbullying targets are more likely to be those with low self-esteem [36]. As a response, a considerable number of individuals may resort to becoming cyberbullies themselves in the future. Moreover, emotional factors have been identified as a significant determinant that influences the decision to engage in cyberbullying behavior [24].Those with mental issues such as depression, anxiety, and stress frequently engage in cyberbullying [23]. Another element that predisposes persons to engage in cyberbullying is a lack of empathy. Cyberbullying is most frequently perpetrated by individuals who lack comprehension [30]. Research indicate that cyberbullies desire retribution against their victims. Less commonly reported, yet crucial factors that contribute to cyberbullying include childhood trauma, solitude, emotional states of unhappiness and feelings of inadequacy, low levels of awareness, emotional distance, and mood swings.

Several research [15],[26], [17], [20], [36], and [13] have shown that personality is a significant role in cyberbullying perpetration. Personality qualities and emotional trauma have a direct effect on the perpetration of cyberbullying [18], with students with personality disorders more likely to engage in cyberbullying [18]. Most researches have focused on the influence of the Big Five Personality qualities on cyberbullying behavior. Yet, another significant personality construct is the Dark Triad, which comprises traits that are more strongly associated with negative actions such as cyberbullying. The Dark Triad refers to a combination of three personality traits: Machiavellianism, narcissism, and psychopathy. Machiavellianism is characterized by an unemotional and calculating demeanour, dishonesty, and manipulative behavior aimed at achieving personal goals. Narcissism is defined by an excessive sense of superiority, entitlement, and grandiosity. Psychopathy, on the other hand, is characterized by a lack of empathy, a tendency towards adrenaline rush, and state of fearlessness.
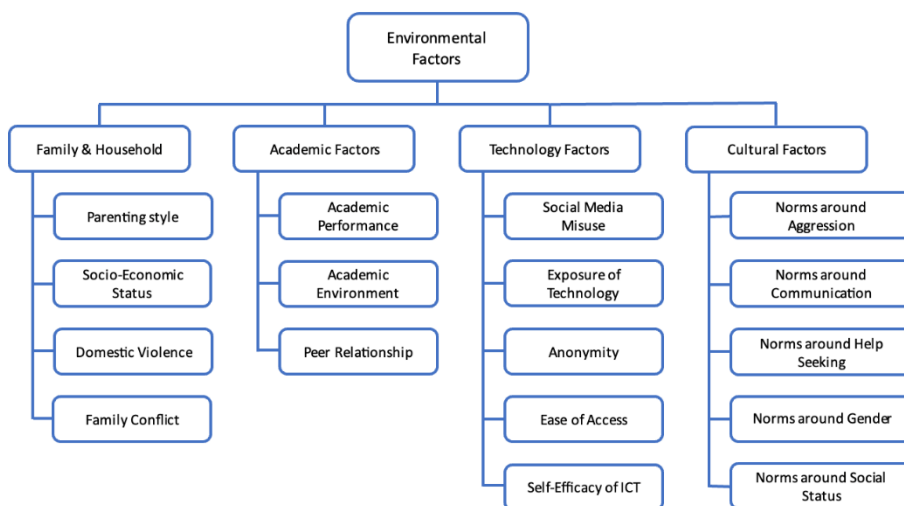
Environmental Factors

Figure 5: Environmental Factors

Environmental factors are extrinsic aspects of an individual's surroundings. This study identified four categories of environmental factors that increase cyberbullying risk. The family and household environment is the first group, followed by the academic and technical surroundings. Family-related characteristics, such as favoritism, closeness, conflicts, and values, significantly impact an individual's cyberbullying behavior, according to the study [8], [14], [17], [24], and [39]. In particular, family arguments were found to be positively associated with cyberbullying behavior, whereas family closeness, favoritism, parenting practices, and family values were found to be

adversely associated. Consequently, the family and household environment significantly influences a person's propensity to engage in cyberbullying. The academic and technological contexts also play a role, highlighting the necessity for a comprehensive strategy to combat cyberbullying among college students.

Considering the technical environment, research reveals that technology availability and ICT self-efficacy affect cyberbullying behavior. Due to adequate access to technology and ICT self-efficacy, cyberbullies can conceal their identity, resulting in increasing cyberbullying [25], [5]. Anonymity is another key factor that motivates individuals to engage in cyberbullying, as victims in the cyber environment are ignorant of the perpetrators. Anonymity has a beneficial effect on cyberbullying behavior, leading to an increase in cyberbullying [9].

In addition, research indicates a connection between sibling hostility and cyberbullying. There is a positive correlation between individuals who have witnessed domestic abuse and their tendency to participate in conventional forms of bullying. Similarly, those who have experienced sibling bullying are more prone to engaging in cyberbullying. Furthermore, various studies have established a connection between one's socioeconomic status, family composition, and cyberbullying. Some factors that can contribute to the occurrence of cyberbullying include the academic atmosphere. A few studies suggest that school or university environments are connected with cyberbullying, based on the scant research available.

According to research [32], Colleges that maintain a safe and reliable general environment and foster strong connections between faculty members and students are less prone to instances of cyberbullying. In addition, peer interactions can be a significant contributor to cyberbullying. People who lack friends or who feel lonely and unaccepted by peers are more prone to engage in cyberbullying [35] than those who have positive and strong peer interactions. The role of appearance is significant in the context of cyberbullying, as those who view cyberbullying as a means of establishing status or power are more prone to engaging in this behavior than those who do not equate it with a demonstration of dominance.

Family and household factors, including parenting practices, domestic violence among spouses and siblings, socioeconomic status, and family arrangement, are significant determinants of involvement in cyberbullying. Adolescents that engage in cyberbullying generally lack parental supervision, attachment, and affectionate interactions [38]. Additionally, students who receive more parental support are less likely to engage in cyberbullying [34]. Figure 5 is a conceptual map of the cyberbullying-related environmental elements mentioned in the research.

Cultural factors are a critical category of factors that influence the prevalence and impact of cyberbullying. Cultural factors refer to the broader social and cultural values and beliefs that shape attitudes towards cyberbullying.

In some cultures, aggression is seen as a positive trait that is necessary for success. This can create a culture that is more tolerant of aggressive behaviors, including cyberbullying. In cultures that value individualism and self-expression, online communication may be seen as an opportunity to assert dominance and control over others. This can contribute to a culture of cyberbullying where individuals feel empowered to use digital technology to harass or intimidate others. There is a stigma around mental health issues and seeking help. This can make it more challenging for victims of cyberbullying to seek support and can contribute to feelings of isolation and helplessness.

Cultural attitudes towards gender can also influence cyberbullying. For example, in cultures that value traditional gender roles, girls may be more likely to experience cyberbullying as a result of

gender-based stereotypes or expectations. Social status is highly valued and competition for social status can be intense. This can create a culture where cyberbullying is used as a way to gain social status or assert dominance over others.

Discussion

Cyberbullying's rise as a phenomena has prompted an increase in research on the subject. Researchers from many countries have conceptualized the phenomenon of cyberbullying and employed survey research designs to gather empirical evidence regarding different theoretical frameworks, like the theory of planned behavior. The study aims to investigate cyberbullying by evaluating empirical studies completed over the past five years and previously published. The review found that personal, behavioural, socio-cognitive and environmental factors are antecedents and effects of cyberbullying. The four criteria were categorized as either unfavorable or good. Negative variables are negatively related with the phenomena and discourage cyberbullying, whilst positive factors have the opposite effect.

The purpose of this study was to identify frequently outlined cyberbullying elements in academic literature. Based on the findings of this survey, "Emotional Issues (Depression, Anxiety, and Stress)" was reported as the most commonly occurring cyberbullying factor with a frequency of sixteen. Eleven times each, Self-Esteem and Aggression are the second most often mentioned factors. The frequency of "Aggression" is seven, while "Personality" and "Poor Relationships" each occurs seven times. The frequency of "Parenting Style" and "Academic Performance" is five. Each lack of compassion and anonymity, occurs four times. There are three mentions of vengeance, peer-to-peer interactions, technological immersion, and accessibility of internet.

In addition, the study reveals that several factors are associated with cyberbullying, such as cyberbullying consciousness, impulsive behaviour, attitudes of peers, excessive social media use, ethical disengagement, level of regret and remorse, emotional maturity, solitude, feelings of inadequacy, discontent, envy, abusive behaviour lack of empathy, adverse childhood experiences, social isolation, and personality factors. These factors are recorded with a frequency of one, demonstrating their significance in comprehending cyberbullying as a phenomenon.

Conclusion

By identifying the characteristics that contribute to cyberbullying, this study makes a substantial advance to our understanding of this behavior. In lieu of adopting a standard strategy that focuses on one or two aspects, this study provides a comprehensive assessment of the many factors that contribute to cyberbullying. Cyberbullying conduct can be predicted based on the mentioned criteria. Victims have reportedly attempted and committed suicide as a result of cyberbullying in the contemporary world. This study underlines the importance of comprehending and analyzing cyberbullying.

The literature on cyberbullying behavior prediction is broad and eclectic. Researchers, parents, educators, university management, IT specialists, psychologists, and students can all benefit from this study's conclusions. This study examines the elements that lead to cyberbullying behavior, as well as the interaction between these factors. The identification of these components and their relationship can provide a comprehensive knowledge of the phenomena of cyberbullying.

Understanding the various factors that contribute to cyberbullying can be helpful in detecting cyberbullying behavior. By identifying these factors, we can develop effective strategies for detecting and responding to cyberbullying. For example, Recognizing individual factors such as

psychological or behavioral issues can help us to identify individuals who may be more likely to engage in cyberbullying behavior. Identifying these individuals early can help to prevent cyberbullying before it occurs. Understanding the social and cultural context in which cyberbullying occurs can help us to detect and respond to cyberbullying behavior. For example, identifying schools or communities with high levels of bullying and aggression can help to target interventions and support for at-risk individuals, and comprehending the wider cultural values and beliefs that contribute to cyberbullying can facilitate the development of specific interventions aimed at preventing and addressing this phenomenon. Encouraging favourable cultural norms related to respect and empathy can foster a culture in which the occurrence of cyberbullying is less probable. Incorporating factors that contribute to cyberbullying into a dataset can improve cyberbullying detection. The factors include individual factors such as psychological or behavioral issues, environmental factors such as the social and cultural context, technological factors such as anonymity and distance, and cultural factors such as attitudes towards aggression, communication, help-seeking, gender, and social status. Incorporating these factors into a cyberbullying detection dataset can lead to more accurate and efficient detection and improved interventions and support for those affected by cyberbullying.

The researchers identified a total of 38 traits associated with cyberbullying, which were subsequently classified into four distinct classification: "Personal factors," "Socio-cognitive factors," " Environmental factors," and " Psychological factors." The use of concept maps to define these elements as positive or negative illustrates the relationship between cyberbullying factors and cyberbullying perpetration clearly. This categorization has the potential to aid researchers and policymakers in gaining a comprehensive understanding of cyberbullying as a phenomenon. Overall, this study emphasizes the significance of knowing the elements that contribute to cyberbullying behavior and provides a detailed overview of the many contributing components.

References:

[1]. Abdul Rashid MS, Mohamed S, Tengku Mohd Azman TA (2017) Predicting the intention to cyberbully and cyberbullying behaviour among the undergraduate students at the International Islamic University Malaysia. Int J Educ Psychol Couns 2:257–270

[2]. Antoniadou N, Kokkinos CM (2015) Cyber and school bullying: Same or different phenomena? Aggress Violent Behav 25:363–372. doi: 10.1016/j.avb.2015.09.013

[3]. Arafa A, Senosy S (2017) Pattern and correlates of cyberbullying victimization among Egyptian university students in Beni-Suef, Egypt. J Egypt Public Health Assoc 92:107–115. doi: 10.21608/EPX.2018.8948

[4]. Asanan ZZT, Hussain IA, Laidey NM (2017) A Study on Cyberbullying: Its Forms, Awareness and Moral Reasoning Among Youth. Int J Inf Commun Sci 2:54. doi: 10.11648/j.ijics.20170205.11

[5]. Balakrishnan V (2015) Cyberbullying among young adults in Malaysia: The roles of gender, age and Internet frequency. Comput Hum Behav 46:149–157. doi: 10.1016/j.chb.2015.01.021

[6]. Balakrishnan V (2017) Unraveling the underlying factors SCulPT-ing cyberbullying behaviours among Malaysian young adults. Comput Hum Behav 75:194–205. doi: 10.1016/j.chb.2017.04.062

[7]. Balakrishnan V (2018) Actions, emotional reactions and cyberbullying – From the lens of bullies, victims, bully-victims and bystanders among Malaysian young adults. Telemat Inform 35:1190–1200. doi: 10.1016/j.tele.2018.02.002

[8]. Balakrishnan V, Fernandez T (2018) Self-esteem, empathy and their impacts on cyberbullying among young adults. Telemat Inform 35:2028–2037. doi: 10.1016/j.tele.2018.07.006

[9]. Barlett CP (2015) Anonymously hurting others online: The effect of anonymity on cyberbullying frequency. Psychol Pop Media Cult 4:70–79. doi: 10.1037/a0034335

[10]. Beran T, Li Q (2007) The Relationship between Cyberbullying and School Bullying. J Stud Wellbeing 1:16–33. doi: 10.21913/JSW.v1i2.172

[11]. Cassidy W, Faucher C, Jackson M (2017) Adversity in University: Cyberbullying and Its Impacts on Students, Faculty and Administrators. Int J Environ Res Public Health 14:888. doi: 10.3390/ijerph14080888

[12]. Elipe P, Mora-Merchán JA, Ortega-Ruiz R, Casas JA (2015) Perceived emotional intelligence as a moderator variable between cybervictimization and its emotional impact. Front Psychol 6

[13]. Emirtekin E, Balta S, Kircaburun K, Griffiths MD (2020) Childhood Emotional Abuse and Cyberbullying Perpetration Among Adolescents: The Mediating Role of Trait Mindfulness. Int J Ment Health Addict 18:1548–1559. doi: 10.1007/s11469-019-0055-5

[14]. Fang J, Wang X, Yuan K-H, Wen Z, Yu X, Zhang G (2020) Callous-Unemotional traits and cyberbullying perpetration: The mediating role of moral disengagement and the moderating role of empathy. Personal Individ Differ 157:109829. doi: 10.1016/j.paid.2020.109829

[15]. Francisco SM, Veiga Simão AM, Ferreira PC, Martins MJ das D (2015) Cyberbullying: The hidden side of college students. Comput Hum Behav 43:167–182. doi: 10.1016/j.chb.2014.10.045

[16]. Ghazali AHA, Omar SZ, Ahmad A, Samah AA, Abdullah H, Ramli SA, Shaffril HAM (2016) Potential Personality Traits that Explain Cyberbullying among Youth in Malaysia. Int J Acad Res Bus Soc Sci 6:741–749

[17]. Jafarkarimi H, Saadatdoost R, Sim ATH, Mei JH (2017) Determinant factors of cyberbullying: An application of theory of planned behavior. J Theor Appl Inf Technol 95:6472–6482

[18]. Kircaburun K, Demetrovics Z, Király O, Griffiths MD (2020) Childhood Emotional Trauma and Cyberbullying Perpetration Among Emerging Adults: A Multiple Mediation Model of the Role of Problematic Social Media Use and Psychopathology. Int J Ment Health Addict 18:548–566. doi: 10.1007/s11469-018-9941-5

[19]. Kırcaburun K, Kokkinos CM, Demetrovics Z, Király O, Griffiths MD, Çolak TS (2019) Problematic Online Behaviors among Adolescents and Emerging Adults: Associations between Cyberbullying Perpetration, Problematic Social Media Use, and Psychosocial Factors. Int J Ment Health Addict 17:891–908. doi: 10.1007/s11469-018-9894-8

[20]. Kokkinos CM, Saripanidis I (2017) A lifestyle exposure perspective of victimization through Facebook among university students. Do individual differences matter? Comput Hum Behav 74:235–245. doi: 10.1016/j.chb.2017.04.036

[21]. Li Q (2006) Cyberbullying in Schools: A Research of Gender Differences. Sch Psychol Int 27:157–170. doi: 10.1177/0143034306064547

[22]. Mahlangu T, Tu C, Owolawi P (2018) A Review of Automated Detection Methods for Cyberbullying. In: 2018 International Conference on Intelligent and Innovative Computing Applications (ICONIC). pp 1–5

[23]. Martínez-Monteagudo MC, Delgado B, Díaz-Herrero Á, García-Fernández JM (2020) Relationship between suicidal thinking, anxiety, depression and stress in university students who are victims of cyberbullying. Psychiatry Res 286:112856. doi: 10.1016/j.psychres.2020.112856

[24]. Martínez-Monteagudo MC, Delgado B, García-Fernández JM, Ruíz-Esteban C (2020) Cyberbullying in the University Setting. Relationship With Emotional Problems and Adaptation to the University. Front Psychol 10

[25]. Musharraf S, Bauman S, Anis-ul-Haque M, Malik JA (2019) General and ICT Self-Efficacy in Different Participants Roles in Cyberbullying/Victimization Among Pakistani University Students. Front Psychol 10

[26]. Myers C-A, Cowie H (2017) Bullying at University: The Social and Legal Contexts of Cyberbullying Among University Students. J Cross-Cult Psychol 48:1172–1182. doi: 10.1177/0022022116684208

[27]. Myers C-A, Cowie H (2019) Cyberbullying across the Lifespan of Education: Issues and Interventions from School to University. Int J Environ Res Public Health 16:1217. doi: 10.3390/ijerph16071217

[28]. Perren S, Gutzwiller-Helfenfinger E (2012) Cyberbullying and traditional bullying in adolescence: Differential roles of moral disengagement, moral emotions, and moral values. Eur J Dev Psychol 9:195–209. doi: 10.1080/17405629.2011.643168

[29]. Reijntjes A, Kamphuis JH, Prinzie P, Telch MJ (2010) Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. Child Abuse Negl 34:244–252. doi: 10.1016/j.chiabu.2009.07.009

[30]. Schultze-Krumbholz A, Hess M, Pfetsch J, Scheithauer H (2018) Who is involved in cyberbullying? Latent class analysis of cyberbullying roles and their associations with aggression, self-esteem, and empathy. Cyberpsychology J Psychosoc Res Cyberspace 12. doi: 10.5817/CP2018-4-2

[31]. Song M, Zhu Z, Liu S, Fan H, Zhu T, Zhang L (2019) Effects of aggressive traits on cyberbullying: Mediated moderation or moderated mediation? Comput Hum Behav 97:167–178. doi: 10.1016/j.chb.2019.03.015

[32]. Sourander A, Brunstein Klomek A, Ikonen M, Lindroos J, Luntamo T, Koskelainen M, Ristkari T, Helenius H (2010) Psychosocial risk factors associated with cyberbullying among adolescents: a population-based study. Arch Gen Psychiatry 67:720–728. doi: 10.1001/archgenpsychiatry.2010.79

[33]. Strom PS, Strom RD (2006) Cyberbullying by Adolescents: A Preliminary Assessment. Educ Forum 70:21–36. doi: 10.1080/00131720508984869

[34]. Wang J, Iannotti RJ, Nansel TR (2009) School Bullying Among Adolescents in the United States: Physical, Verbal, Relational, and Cyber. J Adolesc Health 45:368–375. doi: 10.1016/j.jadohealth.2009.03.021

[35]. Warden D, MacKinnon S (2003) Prosocial children, bullies and victims: An investigation of their sociometric status, empathy and social problem-solving strategies. Br J Dev Psychol 21:367–385. doi: 10.1348/026151003322277757

[36]. Watts LK, Wagner J, Velasquez B, Behrens PI (2017) Cyberbullying in higher education: A literature review. Comput Hum Behav 69:268–274. doi: 10.1016/j.chb.2016.12.038

[37]. Williams KR, Guerra NG (2007) Prevalence and Predictors of Internet Bullying. J Adolesc Health 41:S14–S21. doi: 10.1016/j.jadohealth.2007.08.018

[38]. Ybarra ML, Diener-West M, Leaf PJ (2007) Examining the Overlap in Internet Harassment and School Bullying: Implications for School Intervention. J Adolesc Health 41:S42–S50. doi: 10.1016/j.jadohealth.2007.09.004

[39]. Yubero S, Navarro R, Elche M, Larrañaga E, Ovejero A (2017) Cyberbullying victimization in higher education: An exploratory analysis of its association with social and emotional factors among Spanish students. Comput Hum Behav 75:439–449. doi: 10.1016/j.chb.2017.05.037

[40]. Zainudin NM, Zainal KH, Hasbullah NA, Wahab NA, Ramli S (2016) A review on cyberbullying in Malaysia from digital forensic perspective. In: 2016 International Conference on Information and Communication Technology (ICICTM). pp 246–250

[41]. Zickuhr K Generations 2010. Pew Res. Cent. Internet Sci. Tech

[42]. (2016) 5 Differences between Cyber Bullying and Traditional Bullying. In: Online Sense. https://onlinesense.org/5-differences-cyber-bullying-traditional-bullying/.