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# Cyberbullying and its Impact on Mental Health among Female University Students in Sindh, Pakistan: A Case Study

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## Abstract

This case study aimed to investigate the prevalence and impact of cyberbullying on the mental health of female university students in Sindh, Pakistan. The study used Social Dominance Theory (SDT) and Routine Activities Theory (RAT) to interpret the psychological consequences of cyberbullying, emphasizing the need for targeted interventions. The assessment of cyberbullying was conducted through a self-administered survey questionnaire comprising 20 items. The internal consistency of all items within the scale exhibited robust reliability (Cronbach's alpha = 0.859). A total of one hundred and eighty-two (182) female students actively participated in the research, engaging with the survey deployed on the Google Forms platform from April 12<sup>th</sup>, 2023, to September 27<sup>th</sup>, 2023. Of the participating individuals, 40.6% (74 respondents) indicated they had not encountered cyberbullying in recent months. In contrast, 59.34% (108 participants) reported experiencing cyberbullying incidents. The responses of the latter group were meticulously employed for the conclusive statistical analyses of this study. The outcomes significantly underscore an alarming escalation in the prevalence of cyberbullying within the female student population of Pakistan. Moreover, a noteworthy revelation emerged, wherein 47.2% of the respondents disclosed that they had opted for no action in response to the cyberbullying episodes they had encountered. In contrast, 17.6% acknowledged resorting to confiding in their parents after being subjected to online harassment. These outcomes emphasize the critical necessity for targeted interventions to mitigate the far-reaching implications of cyberbullying and its detrimental psychological repercussions on female students. The findings point to the pressing requirement for educational institutions and policymakers to address the rising tide of cyber victimization in Pakistan.

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**Keywords:** cyberbullying, female students, mental health, online harassment, Pakistan

## Introduction

Although, cyber bullying has become a major concern all over the globe, it has received insufficient attention in developing countries, such as Pakistan. This veneering phenomenon possess the capacity to inflict concrete changes on physical as well as psychological well-being of the affected individuals. The study aimed to determine the consequences of cyber bullying on the psychological health of female students studying in various universities in Sindh, Pakistan. The Internet has become an absolute part of people's life across the globe and it has also been incepted as a contemporary medium through which people have access to information, education in a virtual form, and knowledge updates and streams (UNICEF, [2023](#)).

In addition to constructive and informative purposes, it has been observed that negative and provocative intentions, such as harassment, threat, fraud, theft, and bullying have also been spreading via the Internet (Bozyigit et al., [2021](#)). These criminal acts perpetrated through computing devices are collectively referred to as cybercrimes. Among these, cyberbullying, phishing, identity theft, hacking, spreading hatred, and fomenting terrorism also exist (Macaulay et al., [2022](#)). The current study aimed to unveil how social media plays a gigantic role to mediate the learning behavior of university students in the contemporary society in its contribution towards sustainable education. The increasing and dynamic use of technology has created anxiety on the ethical approaches towards the usage of these technologies and their effects on students' psychological well-being (Abbasi et al., [2018](#)). Due to the continuously changing effects of cyberbullying on its victims, suitable approaches to handle the problem are invaluable (Abbasi et al., [2018](#)). There are eight types of cyberbullying with which people can be comfortable including flaming, provocation, denigration, impersonation, outing, trickery, exclusion, and cyber stalking as described by Stacey ([2009](#)).

## Research Objectives

Keeping the above mentioned context in view, this study's research objectives are as follows:

1. To assess the prevalence and nature of incidents associated with cyberbullying among female students enrolled in various academic institutions in Sindh, Pakistan.
2. To investigate the impact of cyberbullying on the mental health and well-being of female university students in the study's sample.
3. To explore the strategies employed by female students in responding to cyberbullying and mitigating its effects on their mental health.

### **Research Questions**

The research questions guiding this study are as follows:

1. What is the extent and character of cyberbullying incidents experienced by female university students within diverse academic institutions in Sindh, Pakistan?
2. How does cyberbullying affect the mental health and well-being of female students studying in these institutions?
3. What coping mechanisms do female students employ to address and counteract the adverse impact of cyberbullying on their mental health and psychological state?

### **Literature Review**

Bullying is an aggressive and purposeful act involving repeated or habitual deployment of force to inflict physical or emotional harm on the targeted individuals (Guo & Xia, [2023](#)). This act often seizes upon situations where the victims are physically younger, weaker, outnumbered, or unable to defend themselves (Zhao et al., [2023](#)). The characteristics of a bullying behaviour commonly include a proclivity for aggression, limited control over aggressive impulses, and a higher tolerance for such actions (Evangelio et al., [2022](#)). Bullying features power dynamics in certain settings, particularly hierarchical institutions, such as schools, colleges, and universities. The long-term consequences of bullying may lead towards significant psychological distress, necessitating additional support to counteract its adverse effects (Evangelio et al., [2022](#)). Bullied individuals are likelier to exhibit poor academic performance, high absenteeism, low self-esteem, and significant mental health concerns than their non-bullied counterparts (Shin et al., [2021](#)). Victims often become anxious, socially isolated, and insecure (Barlett et al., [2021](#)).

Pertaining to digital platforms, cyberbullying can be defined as using online resources, such as electronic and social media, to subject individuals to intimidation, threats, and harassment through messages, audio, videos, and other unlawful means (Lim et al., [2023](#); Rajbhandari & Rana, [2022](#)). The victims of cyberbullying frequently suffer in silence, as this form of harassment can be relentless and anonymous, potentially giving rise to mental health complications including depression, anxiety, aggression, and feelings of inferiority (Misra et al., [2023](#)). Over time, these issues may exacerbate, culminating in self-harm or even the gravest outcomes, that is, suicide. Experts have defined bullying as a deliberate, recurring exposure to hostile actions perpetrated by individuals or groups perceived as more powerful than the victim (Camacho et al., [2023](#); Englander et al., [2017](#)). Alongside conventional aspects, such as harm, intentionality, repetition, and power imbalance, bullying also involves the aggressor's enjoyment and a sense of oppression experienced by the victim (Craig, [1998](#); Harris & Petrie, [2002](#)). Cyberbullying primarily targets the youth, particularly women, underscoring its gender-specific nature (Olumide et al., [2016](#)). This gendered nature can inflict lasting misery and leave indelible negative imprints on victims' psyches, with potential ramifications extending to suicide (Guo & Xia, [2023](#)).

Moreover, online cyberbullying and harassment of women exert profound harm which is often overlooked and trivialized (Bottino et al., [2015](#)). This harassment, encompassing threats of rape, doctored images depicting violence, and technological attacks, impedes women's autonomy, identity, and well-being. However, societal norms and law enforcement frequently minimize women's experiences as mere teasing that they should anticipate and endure within the unregulated standards of the online sphere (Doumas & Midgett, [2023](#)).

Various avenues facilitate cyberbullying including transmitting messages, audio, and videos as well as the utilization of illegal tactics for intimidation (Evangelio et al., [2022](#)). This abuse unfolds through abusive messages or emails intended to coerce, intimidate, and threaten the victims. Characterized by abuse and stalking through electronic communication, cyberbullying exposes individuals to threats and intimidation (Hayashi & Tahmasbi, [2021](#)). According to the National Crime Prevention Council of America, cyberbullying involves torment, threats, humiliation, embarrassment, or targeting of children, preteens, or teens by their peers

using digital technologies, interactive platforms, or mobile phones (National Crime Prevention Council, [2023](#)). Despite varying definitions, cyberbullying's severe impacts on education, freedom, and mental health remain consistent. In Pakistan, like elsewhere, cyberbullying takes its toll. The Prevention of Electronic Crimes Act 2016 (PECA) was enacted. However, complexities and obstacles including FIR registration, hinder its full implementation (Dad & Khan, [2017](#)). The tragic case of Sindh University student Naila Rind underscores the consequences of cyberbullying. Her suicide took place due following the exploitation and blackmail by a faculty member after they exchanged intimate photos. This incident emphasizes the urgency of addressing online intimidation and harassment (Dad & Khan, [2017](#)).

In prior research, direct links of cyberbullying with poor mental health have been established with women, in particular, acting as the most vulnerable (Guo & Xia, [2023](#)). Thus, the Pakistani women who have been the victims of cyber bullying face high psychological repercussions in particular if the broader society disapproves of such discussions (Magsi et al., [2017](#)). The negative experiences associated with cyberbullying include – anxiety, depression, and even depressive symptoms, such as suicidal beliefs. The current study strived to discuss how gender and cultural factors influence or relate to these results. On the one hand, the digital environment has its potential, on the other hand, it is space that allows toxic actions and behavior towards them, especially women. Furthermore, the incidents of harassment depict the dangers faced by girls while using social networks for communication and interaction with their friends and acquaintances. Special types of cyberbullying include text messages, telephone calls, social networking sites, such as Facebook, Twitter (X), WhatsApp, and Instagram. Undoubtedly, cyberbullying enjoys no bounds of gender with the latter participating pulled by the cloak of anonymity (Rafi, [2020](#)). Bullying has become more common in various physical spaces, taking advantage of the cheap accessibility of the Internet and other forms of digital communication; student's emotional and mental health is, therefore in danger (Musharraf, & Anis-ul-Haque, [2018](#)). University stakeholders should introduce and promote sensitization programs and create committees to fight cyber-stalking in order to safeguard young women (Magsi et al., [2017](#)). Theoretical framework of this study drew upon two distinct frameworks: two theories are explanatory:

The Social Dominance Theory (SDT) by Islam (2014) and the Routine Activities Theory (RAT) by Leukfeldt and Yar (2016), Navarro and Jasinski (2011). The SDT, developed to explain hierarchy and power-related aspects, provides information regarding victimization. In this framework, it has been argued that cyberbullying makes the victim feel hurt, scared or helpless and, thus becomes a victim of harassment, while the bully is the harasser who assumes a dominant position (Navarro & Jasinski, 2011). Since face-to-face identification of a victim is not possible in most instances, cyberbullies could increase the amount of aggression as well as malevolence to make their point of forcefully subjugating the victim. The RAT emphasizes the prerequisites for victimization: where a motivated perpetrator is supported by an identifiable target and where there are no protective factors present, such as monitoring of authority figures (Leukfeldt & Yar, 2016). Although, used for the analysis of cyber aggression, this framework has proven useful for the study of cyber victimization. It has covered topics, such as why people indulge in cyberstalking and has even touched on the impact of parents. The SDT helps to understand how power relations in society are reflected in the use of aggressive actions with the use of IT technologies through the defeat of the victim by the initiator of the use of cyberbullying. This dynamic is well seen with reference to online environments where due to the fake cloak of anonymity provided by the Internet the bully feels powerful and secure in his/her actions as revealed by Navarro and Jasinski (2011). On the other hand, RAT explains factors that increase the likelihood of cyberbullying, such as a motivated offender, a suitable victim, and unavailable or ineffective protections in cyberspace (Leukfeldt & Yar, 2016).

### **Methodology**

The sample of the current study comprised female university students, aged between 21 and 30 years, from various universities in Sindh, Pakistan. Female students were chosen because in societies, such as those in Pakistan, women remain more vulnerable to cyberbullying than their male counterparts (Rafi, 2020). A self-administered questionnaire was distributed online using Google Forms. Future research may also examine if these trends follow male students or students in other regions of Pakistan since the current study is geographically and gender sensitive. This study utilized survey research method to examine cyberbullying among female students in Sindh, Pakistan. Moreover, it also evaluated their perceptions,

beliefs, actions, and attributes with regard to this phenomenon. These included data on the cases of online harassment that occurred through electronic mediums in the past few months and the data was retrieved using self-administered questionnaires. Consequently, a scale to assess cyberbullying consisted of 20 separate items, which was carefully constructed for this study, is presented below. Examples of assessments in this scale included questions, such as “Did you experience cyberbullying in the last few months?” “The percentage of the time threat through mobile text messages to commit physical is:”, “The extent of purposefully omitting the participant from online group is:”, “How often have you come across something that made you feel annoyed when browsing through your feed on Facebook?” “Being mocked in a WhatsApp group or a chat room”, and “What measures have you taken in the wake of cyber-victimization?” as well as “What survival techniques have you used?” amongst others. The test-retest reliability of the total score of the new scale was perfectly acceptable at .859, while the internal consistency was also acceptable on all the items within the scale. This outcome underscores the reliability and coherence of the scale's components, demonstrating that the items measure the intended construct effectively.

**Table 1***Reliability Statistics*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Items
.859	.871	20

**Table 2***Reliability Statistics: Cronbach's Alpha if Item Deleted*

Scale Item	Cronbach's Alpha if Item Deleted
How frequently have you received threatening mobile phone text messages from others including threats of physical harm?	.860
How often have you been intentionally excluded from online groups or activities?	.871



Scale Item	Cronbach's Alpha if Item Deleted
How frequently have you encountered hurtful remarks, such as name-calling or ridicule, in text messages or online interactions?	.854
How often have you received distressing emails from individuals you are familiar with?	.853
How frequently have you received unsettling emails from unfamiliar sources (not classified as spam)?	.854
How often have you received instant messages that elicited feelings of distress?	.846
How frequently have you encountered posts on your Facebook account that caused you emotional disturbance?	.852
How often have you been subjected to mockery or teasing in WhatsApp groups or chat rooms?	.866
How often have you received texts or online communications that made you fear safety?	.839
How frequently have others spread false information about you in text messages or online to make others dislike you?	.848
How often have others stated online that their approval of you depends on your compliance with their demands?	.851
How frequently have others attempted to influence your social standing negatively by sending mean texts or posting hurtful content about you?	.846
How often have you received messages threatening physical harm if you did not comply with specific demands?	.857
How often have you engaged in online conflicts or disputes?	.857
How frequently have you been belittled online through the circulation of malicious gossip, rumors, or hurtful content?	.845
How often have others impersonated you online, sharing content that tarnishes your reputation or disrupts your relationships?	.852

Scale Item	Cronbach's Alpha if Item Deleted
How often have your secrets or images been shared online without your consent?	.847
How often have you needed adult intervention to address negative online experiences (e.g., offensive images, name-calling, threats)?	.854
How frequently have you encountered content posted about you on other websites that distressed you?	.848
How often have you confided in someone about being a victim of bullying through email?	.854

### Results and Discussion

One hundred and eighty-two (182) female students participated in this study, with their responses collected through an online questionnaire administered via Google Forms from December 14<sup>th</sup>, 2020, to February 7<sup>th</sup>, 2021. Among the participants, 74 (40.6%) reported no cyberbullying encounters in the past few months, while 108 (59.34%) indicated experiencing cyberbullying incidents. These responses from the latter group formed the basis for the final statistical analyses. The findings revealed a concerning trend, indicating a rising prevalence of cyberbullying among female students in Pakistan. Notably, 75% of respondents who reported being bullied hailed from urban areas of Sindh, while 13% were from rural backgrounds. This distribution is presented in Table 3.

**Table 3**  
*Urban and Rural Population Traits*

	Frequency	Percent	Cumulative Percent
Urban	81	75.0	75.0
Rural	14	13.0	88.0
Not Sure	8	7.4	95.4
Prefer not to say	5	4.6	100.0
Total	108	100.0	

Regarding the educational attainment, the survey revealed that 47.2% of the respondents had completed their education up to the matriculation level. On the other hand, 27.8% of the participants held Master's degrees, as depicted in Table 4 below.

**Table 4**  
*Education Level*

	Frequency	Percent	Cumulative Percent
Matric	51	47.2	47.2
Intermediate	19	17.6	64.8
Bachelor's Degree	3	2.8	67.6
Master's Degree	30	27.8	95.4
M.S. or M.Phil.	5	4.6	100.0
Total	108	100.0	

Data illustrates that most respondents (75%) reported their marital status to be unmarried, as depicted in Table 5 below.

**Table 5**  
*How Would You Like to Describe Your Marital Status?*

	Frequency	Percent	Cumulative Percent
Unmarried	81	75.0	75.7
Married	15	13.9	89.7
Divorced	1	.9	90.7
Widowed	10	9.3	100.0
Total	107	99.1	

When addressing how respondents experienced cyberbullying, a noteworthy majority (38%) indicated that they encountered it through mobile phone text messages. Furthermore, 27.8% stated that they received intimidating mobile phone calls, while 25% reported encountering cyberbullying on social networking platforms, such as Facebook and Instagram.

**Table 6**  
*Which One of the Given Online Sources was Used to Bully You? (Check All that has Happened to You.)*

	Frequency	Percent	Cumulative Percent
Mobile phone text message	41	38.0	38.0
mobile phone call	30	27.8	65.7
Social media messages via social networking sites (i.e., Facebook, Instagram)	27	25.0	90.7

	Frequency	Percent	Cumulative Percent
Shared or said something about you via WhatsApp or in the WhatsApp group	9	8.3	99.1
Online video clips of you	1	.9	100.0
Total	108	100.0	

When prompted with the question, "What action did you take in response to cyber victimization?", a significant portion of the respondents (47.2%) indicated that they chose not to address the bullying in any manner. Conversely, 17.6% reported confiding in their parents after experiencing cyberbullying, as depicted in Table 7 below.

**Table 7**

*What Has Been Your Response to Cyber Victimization?*

	Frequency	Percent	Cumulative Percent
Did nothing	51	47.2	47.2
Talked to my teachers	19	17.6	64.8
Talked to my friends	3	2.8	67.6
Talked to my parents	30	27.8	95.4
Bullied him/her back	5	4.6	100.0
Total	108	100.0	

Bullying, a deeply entrenched and pervasive societal issue, has historical origins that span from traditional schoolyard settings to modern boardrooms (Campbell, [2005](#); Craig, [1998](#)). Its implications reverberate across cultures and generations, characterized by the abusive treatment of individuals through force or coercion. Within this context, bullying is marked by repeated aggressive behaviors, intentionally causing harm to the victim without any provocation (Camacho et al., [2023](#); Kaltiala-Heino et al., [2000](#)). These behaviors may manifest physically, involving actions, such as hitting, punching, and spitting, or using language to browbeat victims, encompassing verbal assault, teasing, ridiculing, sarcasm, and scapegoating (Forero et al., [1999](#)). This phenomenon operates within a power dynamic that involves at least two individuals: the aggressor and the victim. However, the sphere of influence extends to a broader audience, comprised of bystanders who often remain passive observers. These bystanders, frequently fellow students who witness the bullying event, may

hesitate to intervene due to their feelings of powerlessness and fear of retribution, leading to collective helplessness (Harris & Petrie, [2002](#)).

Findings reported that 47.2% of respondents chose not to take any action when confronted with cyberbullying. This inaction may be reflective of cultural stigmas surrounding victimhood in Pakistan, where reporting harassment, especially by women, may lead towards further victimization or social alienation (Misra et al., [2023](#)). In addition, the research showed a significant difference between students from urban and rural areas; all the urban students reported being cyberbullied. This difference might be explained by higher levels of internet usage and especially social networks in the urban environment. However, it could also be explained by cultural differences in terms of reporting and addressing such cases. In the present world, a new aspect has been added to bullying which utilizes extensive advance technology. Cyberbullying utilizes emails, text messages, chat rooms, and mobile phones, as well as cameras and websites to unleash pain. Furthermore, activities associated with cyberbullying include the acts of sending abusive messages, using derogatory telephone calls, and humiliating the victims on social networking sites.

The flexibility of internet and possibility to hide behind the screen has only increased the scale and number of cyberbullying episodes and with it a paradigm of aggression and victimization has been shifted. The results amplify the increasing trend of cyberbullying, particularly on female students in Pakistan. The study established that more than a third of the respondents (47.2%) exhibited a passive attitude towards cyber-victimization and did nothing. On the other hand, only 17.6% of the respondents ran to their parents to share their feelings after experiencing an incident of cyberbullying.

Pakistani cyberbullying has an adverse impact on Pakistani societies. Young women stand out as a vulnerable subject for the notoriously concealed, however, far from innocuous forms of online aggression. The current study contributed to a concern cutting across gender and showed a high proportion of actual cyberbullying experiences. Surprisingly, diverse aspects have been identified to act as antecedents to cyberbullying among the participants. These include appearance, performance, gender, and status. As a matter of fact, it was determined that social media naivety is one of the major reasons of cyberbullying which may have an alarming impact on the relationship between technology and human behavior. The participants'

ideas on the effective countermeasures against cyberbullying are interesting. Practices, such as informing the right authorities, muting or “reporting to blocks”, the aggressors, and seeking help from friends and relatives are real-world weapons in addressing and preventing online aggression.

The study underscores the importance of parents, schools, and governments working together to create a safe environment for young people. Therefore, in consideration of the impact of the study, recommending the adaption of cyberbullying prevention programs that may suit the youth community are crucial. Such programs should provide tactics in fighting cyberbullying and cultivating a rich sense of digital citizenship and understanding. Thus, civilized demand for stronger measures within and beyond our universities is a clarion call to change in the sense that collective action needs to be elicited in order to help contain the growing menace of cyberbullying. For this reason, public speaking, especially awareness campaigns serve as a crucial key to uniting people, communities, and authorities in order to fight this problem together. The findings suggest that more stringent laws and sound legislation are fundamental to begin setting standards in order to prevent cyberbullying and protect people from its traumatic experiences. The findings are also in conformity with SDO, especially with regard to how young people violently subordinate the other users, especially female targets, through the guise of anonymity on the Internet.

The non-action on behalf of almost half of the respondents show that the dominant power relation necessary for cyberbullying still hinders reporting on instances of bullying, hence supporting the dominance structures as argued by SDT. Similarly, RAT may also account for the high prevalence of cyberbullying. This is because Pakistan’s emerging digital environment is filled with risk variables: initial absence of proper protective measures and a subsequent failure to effectively enforce these protective actions. The results presented indicate a necessity to better protect people online and develop culturally appropriate approaches. Additionally, a need for more research is also emphasized; the sensing that the analysis of cyberbullying’s many-sided phenomena requires constant development to promote a comprehensive understanding of the phenomenon. All in all, this study is an important reminder of the continued necessity to tackle the problem of cyberbullying as a multifaceted notion.

The ideas behind and the strategies of how to combat this modern scourge require the collective participation of researchers, policymakers, educators, parents, and broader society. Given that the conventional and virtual realities are rapidly merging and it is essential to cultivate a safe and appropriate online environment in order to raise kind users of the World Wide Web. With factual data, policies in place, and everyone coming forward with such an advocacy, the negative effects of cyberbullying can be controlled. Leave alone the proper hornet's nest come when the community members stand tough, with resilience, empathy, and confidence in embracing the digital space.

### **Limitations**

The current study aimed to examine cyberbullying among female students in diverse academic institutions throughout Sindh, Pakistan. The study has some generalizable limitations that should be taken into consideration while interpreting the above findings. To begin with, the sampling technique poses a limitation since it only comprised female students within Sindh province. It reduces the generalization of the findings to the diverse population density in the Pakistani population. Additionally, the utilization of self-administered response increases the likelihood of biases brought by social desirability or under-reporting of participants. This is because they may not be willing to reveal unpleasant experiences or experience retaliation.

The data collection period from March 12<sup>th</sup> 2023 to July 27<sup>th</sup> 2023 shows that the number of observations could be significantly influenced by cyclical fluctuations and may not reflect long-term trends. The experience of cyberbullying can be one time and, therefore data collected for a longer duration would give a better understanding of the issue. Collecting surveys/data via the Google Forms platform may influence the response from participants who are more compatible with the online platform. Hence, it may delete out those who are not commonly computer literate or even have limited internet connection. However, at 182 female students, the response rate threatens the study's validity due to the fact that most of the participants did not respond.

The current study has its drawbacks, however, it is confined to the experiences of only female university students in Sindh, Pakistan. The generalization of findings is restricted due to the restrictions based on male

students and other parts of Pakistan. Furthermore, the use of self-administered questionnaire limits the validity of findings due to underestimation, since victimization is culturally sensitive. For that reason, future research should focus on having a larger sample size and investigate these factors in other contexts. Nevertheless, the findings are restricted by the cross-sectional survey design which eliminates causal temporal analysis and the depiction of the evolution of cyberbullying. The study also lacks cultural and contextual considerations of factors which may cause cyberbullying for Pakistani students and culture of Sindh may vary to some extent. Although, the results suggest that different forms of cyberbullying require different approaches, it lacks the recommendations for efficient approaches to lessen cyberbullying in Pakistan.

### **Conclusion and Recommendations**

The outcomes of the current research recommended that educational establishments might develop segments on cyberbullying awareness and conduct consultations as introductory activities for students. Such programs could be workshops on safety online, the consequences that a child might face because of bullying in cyberspace, and how they can report cases. The universities may also report cyber harassment offline on anonymous basis. These programs would help to create contextual digital responsibility and also create necessary capacities for combating cyberviolence. The findings inferred more recommendations which have been described as follows:

#### ***Educational Awareness Campaigns***

There is a need for schools and other learning institutions to pioneer the conduct of campaigns in order to create awareness on the effects of cyberbullying for both learners and teachers. Such activities could include lectures and discussions, aimed at raising awareness of the participants on the safe internet use, appropriate online conduct, as well as the identification of cyberbullying and appropriate action.

#### ***Parental Involvement***

Parents should engage their children in talking about matters concerning the Internet. Parents would also be able to guide navigating online interactions safely since an open line of communication would be created to address all the concerns.



### ***Incorporate Cyberbullying Prevention Programs***

It is, therefore important that schools and colleges should introduce their own functional and effective cyberbullying prevention program which would become the part of curriculum. Such programs should capture positive interpersonal skills among the users of social media which include empathy, critical thinking skills, and conflict solutions skills.

### ***Effective Reporting Mechanisms***

There is a need for the improvement of technological designs in the social media networks, digital platforms, and other online communication channels to include easy to use report button for cases of cyberbullying. The management of reports can reduce such incidents and encourage victims to report since rapid action would prevent perpetrators from escalating their threats.

### ***Legal Frameworks and Enforcement***

The governments should ensure that laws are passed against cyberbullying as well as ensure that among those laws are provisions that guarantee compensation for those who were bullied in cyberspace.

In particular, legal enforcement of the rights of a victim against the perpetrators of cyberbullying may act as a deterrent against such behaviour since the aggressor would know that his conduct is unlawful and may not be condoned. This study focused on cyberbullying given that the current world is dominated by the Internet where cases of bullying are on the rise. Concerning the perpetual expansion of the issue in Pakistan, this research explored the growing phenomenon of cyberbullying among female university students and the necessity of timely intervention with regard to the various effects it creates. Furthermore, the outcomes provided insights regarding the anatomy of cyberbullying, such as the fact that mobile text messages, mobile phone calls, and social networking sites are dominant mediums. The seemingly predisposing factor of gender and the place and manner of reporting or reaction of victims offer a rich insight into the hurdles experienced by young people when engaging with the cybersphere. Furthermore, it also unveils the efforts of parents, schools, and governments in preventing cyberbullying cases. The recommendations highlighted the need to define a complex approach including educational, informational, preventive, and legal measures to ensure safety and support of people using the Internet. In the future, everybody has to know that cyberbullying is the

problem of each one of us. The only way to create necessary conditions for the development of digital environment in which people may effectively work, communicate, and learn without being harassed and become victims of violence is to make targeted efforts. Through positive socialization, cyberbullying can be eradicated and the World Web could be made a safer place for everyone.

### **Conflict of Interest**

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

### **Data Availability Statement**

The data associated with this study will be provided by the corresponding author upon request.

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