The Gendered Impact: Exploring Cyberbullying Effects on Academic Performance and Self-Efficacy Among University Students

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ABSTRACT

The aim of our research is to study the impact of cyberbullying on academic performance and self-efficacy of individuals. We also want to observe gender differences in response to cyberbullying. The research adopted a quantitative approach and gathered data from two hundred (N=200) participants, consisting of (n=92) males and (n=108) females selected from "The Islamia University of Bahawalpur". Purposive sampling technique was used to acquire all participants, and data was collected using different questionnaires. Three scales were used to determine the effects of cyberbullying on the academic performance and self-efficacy of university students. The names of the scales used are the Cyber Victim and Bullying Scale (CVBS), Academic Performance Scale (APS), and General Self-efficacy Scale (GSE). To analyze the data – demographic characteristics table, correlation, multiple regression, ANOVA, and independent sample t-test were performed using the Statistical Package for Social Sciences (SPSS). Ultimately, it was concluded that cyberbullying has a negative impact on academic performance and self-efficacy. It was also found that cyberbullying has a greater effect on the academic performance and self-efficacy of female university students than that of male university students.

Key words: Cyberbullying, academic performance, self-efficacy, University

1. Introduction

Cyberbullying has become pervasive in today's digital age. Its profound implications for the academic performance and psychological well-being of individuals, particularly within university settings, have prompted heightened attention to comprehensively explore this area of concern. Modern technology is like a double-edged sword; on one hand, it gives us connectivity, and on the other, it increases emotional stress (Walrave & Heirman, 2010). Cyberbullying is defined as aggressive online behavior within digital communication spaces that inflicts severe harm on its victims. Cyberbullying can be conducted through various social apps, such as Facebook, Instagram, Snapchat, Twitter, and online gaming apps. As many young internet users are students, cyberbullying can adversely affect their personalities and create concentration problems and psychological distress. Victims under great emotional stress are unable to concentrate on their studies, and thus their academic performance is adversely affected (Raskauskas, 2009). Unfortunately, proper attention is not given to this global problem by higher education, teachers, and parents. The depressive effect of cyberbullying prevents students from excelling in their studies (Mark & Ratliffe, 2011). Self-efficacy refers to an individual's belief in their ability to achieve goals by successfully overcoming various challenges. Heiman et al. (2014) reported that students exposed to cyberbullying have lower self-efficacy than students not exposed to cyberbullying.

2. Literature review

In today's era of digital evolution, cyberbullying has become a widespread issue, especially among university students. Understanding different types of cyberbullying is mandatory for comprehending its impact on academic performance and self-efficacy. Patchin and Hinduja (2012) provided an insightful overview of a variety of behaviors that could be considered cyberbullying, including denigration, harassment, cyberstalking, and impersonation, which established a foundation for understanding this phenomenon in depth.

Several studies have accentuated the rampant occurrence of cyberbullying among university students. Selkie et al. (2016) conducted a systematic review and quality assessment with empirical findings that provided credible evidence of the prevalence of cyberbullying among adolescents of middle and high school age. Similarly, Martín et al. (2021) carried out a bibliometric analysis, further highlighting the prevalence of cyberbullying among adolescents. It emphasized the need for interventions to stamp out this issue.

Many studies have examined how cyberbullying impacts the academic performance of university students. Egeberg et al. (2016) explored the negative effects of cyberbullying and cyber harassment on students' academic and scholastic dynamics. It was concluded that persistent exposure to online

harassment can lead to stress and anxiety, ultimately affecting students' ability to perform adeptly in school. Sourander et al. (2010) discussed the psychosocial risk factors associated with cyberbullying among adolescents, emphasizing its implications for academics, such as overall disengagement from learning.

Furthermore, cyberbullying also predominantly influences an individual's self-efficacy. Patchin and Hinduja (2010) shed light on the negative correlation between experiences of cyberbullying and adolescents' self-esteem. The findings of this study have implications for individuals' self-efficacy by indicating a moderate and statistically significant relationship between low self-esteem and the severity of cyberbullying. Additionally, Schultze-Krumbholz et al. (2018) conducted a latent class analysis, revealing that victims of cyberbullying tend to have lower self-esteem. This study shows how cyberbullying vastly impacts adolescents' well-being, including their self-efficacy beliefs.

Multiple factors can mediate or moderate the relationship between cyberbullying, academic performance, and self-efficacy among university students. Misha et al. (2012) discussed the interplay of personal characteristics and peer relationships as risk factors for individuals' increased vulnerability to cyberbullying. Ybarra et al. (2007) examined the overlap between internet harassment and school bullying through the lens of contextual factors, such as school climate and cultural norms.

Intervention and support strategies play a vital role in addressing the harmful effects of cyberbullying on university students. Özgür (2020) conducted a systematic review to examine a range of intervention approaches used to prevent cyberbullying. These interventions may include empathy training, awareness programs, digital applications, training of educators, etc. Hinduja and Patchin (2009) also authored a comprehensive guide on preventing and responding to cyberbullying, focusing on how school administrators, teachers, and parents can protect teenagers and children from the adverse effects of cyberbullying.

It is essential to understand the nuanced nature of cyberbullying and its impact on academic performance and self-efficacy among university students from cultural and contextual considerations. Kırcaburun and Griffiths (2018) investigated how dark personality traits manifest in individuals' online activities, specifically highlighting how variations in cultural norms, values, and societal structures shape individuals' attitudes toward their internet use and online behaviors. Wang et al. (2009) examined bullying among adolescents in the United States, which allowed the exploration of potential cultural and contextual influences on individuals' experiences of cyberbullying.

Many theocratic frameworks conceptualizing the relationship between cyberbullying, academic performance, and self-efficacy among university students have led to an improved understanding of the phenomenon. Modecki et al. (2014) employed a meta-analysis to discuss individual and contextual predictors of cyberbullying and its impact on adolescents' psychological well-being. Now future research directions should focus on addressing gaps in the existing literature and providing an ingenious and meticulous understanding of cyberbullying and its effect on academic performance and self-efficacy among university students, especially female students. Kowalski et al. (2012) discussed proactive measures that should be taken by everyone in authority to foster an inclusive and safer environment for all individuals in university settings. This would help foster a culture of respect, empathy, and resilience against cyberbullying-related issues.

3. Rationale of the Study

Our research attempts to provide further insight into the impacts of cyberbullying on people's academic performance and self-efficacy. Previous studies have demonstrated the detrimental consequences of traditional bullying on academic achievement; however, there is a lack of details regarding the connection between academic outcomes and cyberbullying. Additionally, little research has been done on how cyberbullying damages students' self-efficacy—a measure of their confidence in their ability to function well in a particular situation. As a result, the findings of this study could help educators and mental health specialists create networks of support and interventions against cyberbullying that are more tailored. By addressing measures to minimize cyberbullying that affects female students, this would help enhance well-being. As a result, we anticipate that our research will be useful to individuals working on related projects in the future.

4. Hypotheses

The following hypotheses were developed to guide this study:

1. People of all ages who use the internet are subjected to cyberbullying in one way or another.

2. People who are subjected to cyberbullying cannot perform well in academics and have a negative impact on self-efficacy.

3. The severity of cyberbullying is positively correlated with its negative effect on academic performance and self-efficacy.

4. Females are more subjected to cyberbullying than males.

5. Methodology

5.1 Participants

The participants selected for this research were university students. Two hundred (N=200) participants were taken as a sample from the university. Both male and female students participated in this study, including 92 men and 108 women.

5.2 Apparatus

We used the Cyber Victim and Bullying Scale CVBS (Horzum, 2010), the Academic Performance Scale APS (McGregory, 2015), and the General Self-efficacy Scale GSE (Schwarzer & Jerusalem, 1995).

5.3 Material

We obtained information through the questions in the questionnaires of the CVBS, APS, and GSE scales.

5.4 Procedure

Our research focused on exploring the impact of cyberbullying on the academic performance and self-efficacy of university students. Therefore, to measure these variables, the Cyber Victim and Bullying Scale, Academic Performance Scale, and General Self-efficacy Scale were selected. This study procured a population sample of 200 university students using purposive sampling to ensure the representation of both male and female participants. Participants were debriefed about the purpose of the study. Data was collected through Performa which was given to the students of various departments within the university. This Performa consisted of four parts: informed consent, cyberbullying scale, academic performance scale, and self-efficacy scale. After the participants provided their consent, they were properly guided and instructed to fill in the questionnaires of each scale. Participants completed the Performa at their convenience in places such as the university cafeteria during their spare time, which took approximately 20 to 25 min. Subsequently, data analysis was conducted using the Statistical Package for Social Science version 24.0.

5.5 Data Analysis

Table 1: Frequency Distribution and Descriptive Statistics of Demographic Variables (n=200)

Demographic Variables	Characteristics	F	%
Gender	Male	92	46.0
	Female	108	54.0
Age Group	13-18	12	6.0
	18-25	180	90.0
	25-35	8	4.0
Education	bachelor	144	72.0
	master	31	15.5
	phd	9	4.5
	others	16	8.0
Residents	rural	79	39.5
	urban	121	60.5
Socioeconomic Status	high	25	12.5
	middle	166	83.0
	low	9	4.5

Table 1 gives the frequency distribution and descriptive statistics of demographic variables included in the study. There were a total of 200 participants in the study. Around 46% were males and around 54% were female participants. The majority (90%) of participants were from the 18-25 years age group. Majority of the participants (72%) had BS (Hons) education followed by 16% with Masters education. Around 60% of the participants lived in urban areas. There were more participants from middle class (83%).

Table 2: Correlation among Cyber Bullying, Self-Efficacy, and Academic Performance (n=200)

Variables	*M*	*SD*	1	2	3
Cyber Bullying	25.34	11.12	-		
Self-Efficacy	27.98	5.99	-.43**	-	
Academic Performance	28.79	5.32	-.45**	.33**	-

**p<.01

Table 2 describes the correlation for testing a relationship among all the study variables. There is a statistically significant negative relationship of cyber bullying with both self-efficacy and academic performance. Those who receive cyber bullying show less self-efficacy and low academic performance. On the other hand, there was a significant positive relationship between self-efficacy and academic performance. The high self-efficacy led to high academic performance and vice versa.

Table 3: Multiple Linear Regression for Predicting Academic Performance (n=200)

R2	*F(df)*	*p*	Predictors	*β*	*SE*	*t*	*p*
.23	29.39	.000					
	(2,197)						
			Cyber Bullying	-.38	.03	-5.47	.000
			Self-Efficacy	.17	.06	2.45	.015

Outcome=Academic Performance; Predictors=Cyberbullying, Self-efficacy

Table 3 shows that multiple regression was run to predict academic performance from cyber bullying and self-efficacy. The overall regression model was significant and showed a significant model fit. Both cyber bullying and self-efficacy significantly predicted academic performance.

Table 4: Analysis of Variance for Education Differences in Cyber Bullying, Self-efficacy, and Academic Performance (N=200)

Education	Bachelors (n=144)	Masters (n=31)	PhD (n=9)	Others (n=16)	*F (3, 196)*	*p*	η 2 p
Variables	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*			
Cyber Bullying	25.52 (11.28)	23.90 (9.07)	24.22 (13.05)	27.18 (12.73)	.35	.78	.005
Self-Efficacy	28.18 (5.99)	26.48 (6.22)	29.55 (5.27)	28.25 (5.93)	.91	.43	.01
Academic Performance	28.50 (5.37)	29.61 (5.10)	27.77 (5.42)	30.43 (5.15)	1.00	.39	.01

Table 4 describes the results of ANOVA computed to find out education-based differences in cyber bullying, self-efficacy, and academic performance. No significant education-based differences were found in all three variables. It means that students of Bachelors are not different from students of other educational programs in cyber bullying, self-efficacy, and academic performance.

Table 5: Result of t-test for Gender Differences in Cyber Bullying, Self-Efficacy, and Academic Performance (n=200)

Gender	Male (n=92)		Female (n=108)					
Variables	*M*	*SD*	*M*	*SD*	*t*	*df*	*p*	Cohen's *d*
Cyber Bullying	23.26	9.02	27.12	12.40	-2.53	193.44	.012	.35
Self-Efficacy	29.21	5.84	26.93	5.94	2.72	198	.007	.38

Academic Performance	29.19	4.94	28.45	5.62	.98	198	.32	.13

Table 5 presents the results of an independent samples t-test used to determine gender differences in cyberbullying, self-efficacy, and academic performance. There were substantial gender disparities in cyberbullying and self-efficacy. Females experienced more cyberbullying and lower self-efficacy than males. On the other hand, there were no significant gender differences in academic performance.

6.Discussion

The predominant objective of this study was to explore the impact of cyberbullying on the academic performance and self-efficacy of university students and to examine the relationship between these factors. Our first hypothesis proposed that cyberbullying affects people of all ages who have access to digital spaces of communication. The findings of our study validated this hypothesis by proving that people from various age groups were subjected to cyberbullying. Our second hypothesis states that victims of cyberbullying are unable to succeed academically, which lowers their self-efficacy. We also postulated a positive relationship between the severity of cyberbullying and its detrimental effects on academic performance and self-efficacy. Our correlation results **($p<.01$) showed a statistically significant negative relationship of cyberbullying with both self-efficacy and academic performance. Victims of cyberbullying tend to have lower self-efficacy and lower academic performance. In contrast, there was a significant positive relationship between self-efficacy and academic performance. The regression model provided evidence for high self-efficacy leading to better academic performance and vice versa. Finally, we proposed the hypothesis that the effects of cyberbullying on academic achievement and self-efficacy vary significantly depending on gender. Our independent samples t-test results indicated that compared to male participants, female participants tended to show stronger effects of cyberbullying on their self-efficacy. According to Gönültaş's (2022) report, there is a higher likelihood of cyber victimization among women. However, there were no appreciable gender disparities in academic achievement.

7. Conclusion

To encapsulate, this study investigated the effects of cyberbullying on academic performance and self-efficacy of university students in Bahawalpur, Pakistan. While analyzing the findings, the study showed that cyberbullying has negative effects on self-efficacy, leading to decreased academic performance and self-worth among students. The study also examined gender variations in cyberbullying's effects. The findings revealed prominent gender differences, with female university students showing low levels of academic performance and self-efficacy because of the greater effect of cyberbullying than male university students. This study hopes to contribute to existing knowledge on the psychological and educational consequences of online harassment and bullying. As we navigate the digital age, educators and mental health professionals can utilize these findings to develop interventions and support strategies to combat the negative effects of cyberbullying on individuals' educational experiences and psychological well-being.

Appendix A

A.1. Informed Consent Form

Dear Participant,

We are doing research on the topic "The Gendered Impact: Exploring Cyberbullying Effects on Academic Performance and Self-Efficacy Among University Students". My group member is Muhammad Kashif. The effects we want to measure are cyberbullying, academic performance, and self-efficacy. When you enter this study, you only must solve three questionnaires. We estimate that the number of participants that will enroll in this study will be between 150-200.

There are no known risks in this study. People who participate in this study may have better understanding about their emotions toward cyberbullying, whether they are affected by cyberbullying or not. All information taken from the study will be coded to protect each subject's name. No names or other identifying information will be used when discussing or reporting data. Your responses are completely anonymous. Your decision to participate in this study is completely voluntary. If you decide to participate in this study, you may withdraw from your participation at any time without penalty. There is no cost for participating in this study.

Do you voluntarily agree to participate in this research program?

□ Yes

□ No

Gender:	1. Male	2. Female		
Age group:	1. 13-18	2. 18-25	3. 25-35	
Education:	1. Bachelor	2. Master	3. PhD	4. Others

Resident:	1. Rural	2. Urban	
Socio-economic Status	1. High	2. Middle	3. Low

Appendix B

B.1. Cyber Victim and Bullying Scale (CVBS)

Instructions:

Using the 5-point scale shown below to indicate how each of the following statements of CVBS scale apply to you.

	I AM EXPOSED TO						I EXPOSE SOMENONE				
	Every time	Often	Sometimes	Rarely	Never		Every time	Often	Sometimes	Rarely	Never
Sexual Cyber bullying in Cyberspace											
To make annoying sexual sounds by keeping phone number											
To record improper videos/photos without permission											
To send the improper photos/videos taken without permission or to widespread them via e-mails or copying on CDs and deliver them											
To blackmail improper videos/photos of victim											
To send victim SMS or e-mails including sexual content											
To force victim to watch films/photos having sexual content											
To spread sexual rumors via internet/telephone											
Embarrassing and Inserting Malicious Content in Cyberspace											
To force victim to leave the chat rooms or cyberspaces for games											
To send SMS, e-mails, or videos to the people in the name of victim											
To design a webpage in order to give harm to the victim											
To learn the e-mail address without permission and give harm via own e-mail											
To get victim's personal notebook and give damage to the personal files											
To send e-mails having viruses consciously											
To threat victim via internet or telephone											
To hinder to get e-mails by filling mailboxes											

Appendix C

C.1. Academic Performance Scale (APS)

Scoring Instruction: To score the scale, **"Strongly Agree"** is scored (5); **"Agree"** is scored (4); **"Neutral"** is scored (3); **"Disagree"** is scored (2); and **"Strongly Disagree"** is scored (1).

Questions	SA	A	N	D	SD
1. I made myself ready in all my subjects.					
2. I pay attention and listen during every discussion.					
3. I want to get good grades in every subject.					
4. I actively participate in every discussion.					
5. I start papers and projects as soon as they are assigned.					
6. I enjoy homework and activities because they help me improve my skills in every subject.					
7. I exert more effort when I do difficult assignments.					
8. Solving problems is a useful hobby for me.					

Appendix D

D.1. General Self-efficacy Scale (GSE)

Scoring:

	Not at all true	Hardly true	Moderately true	Exactly true
All questions	1	2	3	4

The total score is calculated by finding the sum of all items. For the GSE, the total score ranges between 10 and 40, with a higher score indicating more self-efficacy.

	Not at all true	Hardly true	Moderately True	Exactly true
1. I can always manage to solve difficult problems if I try hard enough	☐	☐	☐	☐
2. If someone opposes me, I can find the means and ways to get what I want.	☐	☐	☐	☐
3. It is easy for me to stick to my aims and accomplish my goals.	☐	☐	☐	☐
4. I am confident that I could deal efficiently with unexpected events.	☐	☐	☐	☐
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	☐	☐	☐	☐
6. I can solve most problems if I invest the necessary effort.	☐	☐	☐	☐
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	☐	☐	☐	☐
8. When I am confronted with a problem, I can usually find several solutions.	☐	☐	☐	☐
9. If I am in trouble, I can usually think of a solution	☐	☐	☐	☐
10. I can usually handle whatever comes my way.	☐	☐	☐	☐

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