

Cyberbullying in Different Participant Roles: Exploring Differences in Psychopathology and Well-being in University Students

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Abstract

Background: It has been recognized that cyberbullying is a serious psychosocial issue. For prevention and intervention efforts, it is essential to know the epidemiology, regional nature, and the psychological impacts of cyberbullying on young students.

Objectives: The present study was conducted to examine the prevalence of cyberbullying in university students by classifying among the three participant roles of involvement in cyberbullying: "cyber victims", "cyber bullies", and "cyber bully/victims" in comparison to fourth group of students who were not involved in any of the three participant roles of cyberbullying. In addition, the impact of cyberbullying involvement on mental health and well-being was investigated.

Study design, settings and duration: The cross-sectional survey was conducted at various universities of Rawalpindi and Islamabad in 2016.

Subjects and Methods: A sample of 508 (348 females and 160 males) participants were chosen from different universities. An anonymous survey was conducted using cyberbullying and cyber victimization scales, the Depression Anxiety and Stress Scales, and the Warwick-Edinburgh Mental Well-being Scale.

Results: Findings revealed 67% of university students were involved in cyberbullying of whom self-reported cyber victims were 25%, 4% were cyber bullies and 39% reported themselves in a dual role of cyber bully-victims. Females were more likely reported themselves as cyber victims in comparison to males while more males reported themselves to be involved as cyber bullies and cyber bully/victims than females. Prevalence of psychopathology was found to be higher in cyber bullies followed by cyber bully/victims and cyber victims than not involved in cyberbullying while, lowest mental well-being was found in cyber victims followed by cyber bully/victims and cyber bullies in comparison to not involved students.

Conclusion: Prevalence rate of cyberbullying is high among university students and those involved in cyberbullying have a higher level of psychopathology and poor well-being in comparison to those not involved.

Key words: Cyberbullying, prevalence, psychopathology, well-being, university students.

Introduction

Bullying is generally considered as a subset of aggression, distinguished by the criteria of

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repetition, and imbalance of power. It is a complex phenomenon in which an individual or group repeatedly abuses, humiliates or socially excludes a relatively powerless or weaker person.¹ The phenomenon of bullying has received considerable attention in the workplace and school setting. A growing body of research exists on this issue both in Pakistan,² and in many other countries.³ However, studies concerning bullying at the university level are still scarce. Research in the context of school bullying demonstrated the negative impacts of bullying on mental health and well-being of both victims and perpetrators.

Due to the proliferation, expansion, and dissemination of Internet and digital communication tools, the offline or face to face bullying has now

extended to the virtual world. The Internet and social media tools providing an attractive platform to youth to communicate with their peers, to establish social ties, and bringing new opportunities for learning. Hence, these also raised concerns about the ethical use of technology and exposed students to counterproductive and unsafe interactions that set their mental health and well-being at high risk. Cyberbullying is generally defined as “an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself.”⁴ It is also described as “any behavior performed through electronic media by individuals or groups of individuals that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others.”⁵

Cyberbullying may occur in different forms, such as, sending abusive, offensive or derogatory messages, dissemination of hateful rumors online, posting embarrassing or sensitive information, photos, or videos of someone on the Internet, tricks the victim into disclosing personal, secret or embarrassing information and then share it publicly with others, creating fake online identity to harass someone, breaking into someone’s account and then communicating with others pretending to be that user. Similar to the offline bullying, cyberbullying could be observed easily by repeated harassment, degrading posts and nasty messages. However, empirical evidence supports that negative mental health effects of cyberbullying on victims were significantly higher than those of offline bullying.⁶ This is because of the few distinct features of cyberbullying that make it more harassing. For instance, perpetrator can maintain anonymity; an act of cyberbullying can readily be shared with wider audience; and it is very difficult to escape from cyberbullying as there is no geographical boundary and perpetrator can send obnoxious and mean messages to victim’s mobile, email and social media accounts, wherever he can access the victim, 24 hours, 7 days a week.

Cyberbullying is gaining attention worldwide and studies on this phenomenon have been increased noticeably in recent years.⁷ Research has indicated that cyberbullying is linked with a wide range of mental health issues e.g., anxiety, depressive symptoms, emotional distress, substance use, and to more serious consequences such as suicidal ideation and suicidal attempts.⁸ For instance, a recent case of Pakistani university student, Nail Rind, who committed suicide in response to being cyber-harassed and blackmailed by her Facebook friend.⁹ Several media reports

have shown that cyberbullying is increasing in Pakistan.^{10,11} Moreover, Prevention of Electronic Crimes Bill has been passed by the National Assembly of Pakistan on April 13, 2016, to address this harmful phenomenon. However, generally, there is scarcity of empirical research to investigate this issue in Pakistan and particularly in institutions of higher education.¹²

A review of studies¹³ showed that cyberbullying increases with age. This might be because college and university students use the Internet and social media more frequently in comparison to students in school. The different prevalence rate of cyberbullying in university students has been reported in different studies. Most of the studies have examined the prevalence of victimization, while a limited data is available on perpetration and the combined bully/victim roles.

Findings of a study¹⁴ conducted on university students in Turkey revealed that 60% of the sample had been cyber victimized, and 20.7% had reported themselves as aggressors over the Internet. Another study¹⁵ conducted in Canada surveyed 1733 students and found that 24.1% of college students had experienced some cyberbullying behavior over the past year. To date, no research has been conducted in Pakistan to investigate the prevalence of cyberbullying in a university settings.

Prevalence rate varies in different studies even within the same region. For instance, a study¹⁶ conducted in the USA on a sample of 351 students and results showed 56% of them were victims of cyberbullying, while findings of another study in the USA,¹⁷ showed prevalence rate of 19% for victims. The prevalence rate for perpetration was not reported in both of these studies. Different prevalence may be due to the variations in measurement of a construct, the time frame for reporting involvement in cyberbullying, sample size and methodologies utilized in different studies.

Research on cyberbullying in university students; suggest that, inconsistent findings have been emerged concerning gender differences. Few studies reported significant gender differences and the higher victimization of female, while, findings of few other studies revealed no gender differences. Thus, these inconsistent findings and the availability of limited research on university students suggest a need for further research to investigate the prevalence of cyberbullying in different participant roles in university students.¹⁷

Researchers¹⁸ state that cyberbullying can have a more emotional impact for undergraduate students in comparison to high school students. There is limited research on university students

regarding impact of cyberbullying involvement in different participant roles and its impact on psychopathology and well-being of university students. A study¹⁹ conducted on college students reported the multiple psychosocial impacts of cyber victimization including 13.2% depression, 16.5% social withdrawal and 5.3% rise in issues related to anger management. Another study²⁰ conducted on college students revealed that, those who experience cyberbullying also experience depression and anxiety and 10.1% of victims has suicidal thoughts, while, no gender differences were found in this study.

In another study,²¹ researchers investigated the consequences of college cyber bullies and cyberbullies/ victims. Findings of the study revealed that cyber bullies and cyber bullies/victims scored significantly higher on interpersonal sensitivity, depression, hostility, phobic anxiety, and psychoticism than the control group. Cyberbully/victims group was involved in more violent crimes than students who only cyberbullied others. The score on proactive and total aggression was also higher of cyberbullies.

Researchers²² considered that the introduction of participant roles was an important methodological step in the area of bullying research and it is suggested that construct of bullying should be taken as a continuum ranging between "bully" and "victim". This research was therefore conducted to bridge the gap by specifically investigating the prevalence of cyberbullying in university students in different participant roles "bully", "victim", "bully/victim" (mixed group, student who is "bully" and "victim" at the same time) and "not involved" (student who is not involved, neither as "victim" nor as "bully" or "bully/victim"). Another, goal of the present study is to explore the differences in psychopathology and well-being of students in different participant roles in comparison to those not involved in cyberbullying.

Core objectives of the study were (1) to estimate the prevalence of cyber bullying and cyber victimization, and (2) to determine the role of bullying in victimization on mental health and well-being of university students. To estimate prevalence, subjects were classified into four groups (a) Cyber Bully, (b) Cyber Victim, (c) Cyber Bully/Victim, and (d) Not-Involved.

Subjects and Methods

A sample of 508 participants, 348 (68.5%) females and 160 (31.4%) males, completed this study. The age range was 18 to 25 years (mean \pm SD = 20.53 \pm 1.77 years). The participants were

enrolled in undergraduate programmes in various public and private universities of Islamabad and Rawalpindi and recruited through convenience sampling technique.

The survey was cross-sectional and comprised of a demographic sheet, informed consent and following measures.

The scales were constructed in the present study to assess cyberbullying and cyber victimization in Pakistani university students. We were initially guided by a study²³ for the design of scale and generating items. The final version of the scales comprised of 40 Likert type items. Response options ranging from 0 to 4, where 0 "Never", 1 "Once or twice", 2 "Once a month", 3 "Once a week", 4 "More times a week." Students were asked to report their cyberbullying and victimization in the past year. The scales were pre-tested on 50 students to assess its appropriateness for the present study.

The Depression Anxiety Stress Scales 21 (DASS-21) is a short version of DASS.²⁴ The DASS-21 is composed of three subscales to assess depression, anxiety and stress. Each subscale comprised of seven items and scored on a 4-point scale ranging from "did not apply to me at all" (0) to "applied to me very much" (4). A higher score indicates a higher level of depression, anxiety, and stress. Cronbach's alpha's reliabilities for depression, anxiety, and stress scales were reported in previous studies as .88, .82 and .90 respectively.

Mental Wellbeing was assessed by The Warwick- Edinburgh Mental Well-being Scale.²⁵ This is a uni-dimensional scale that has been developed to assess well-being in general population. It is composed of 14 positively worded items and requires a response using 5-point Likert scale ranging from (1) "none of the time" to (2) "rarely", (3) "some of the time", (4) "often" and (5) "all of the time". The scale provides a minimum score of 14 and a maximum score of 70 and the higher score indicates the higher level of positive mental well-being. Reported Cronbach alpha reliability was .70 for this scale in previous studies.

Initially, permission was sought to conduct the present research from the ethical review board committee of National Institute of Psychology to adhere legal requirements. Following this, approval was taken from concerned authorities of different universities to collect data from students. A self-report, anonymous survey was administered to the participants during their regular class timing by the researcher (S.M). Prior to completing the survey, participants were informed about the purpose of

research, ensured anonymity of responses, and encouraged to provide genuine responses.

Results

The preliminary analysis included estimation of Cronbach Alpha reliability coefficient to confirm the suitability of instruments. Results presented in Table-1, shows that the instruments have good internal consistency for all study variables. The reliability coefficients ranged $\alpha = 0.79$ to $\alpha = 0.83$ for DASS. The well-being scale showed a very excellent reliability with $\alpha = 0.93$. Cyberbullying and cyber victimization scales also appeared to show good reliability with $\alpha = 0.83$ for cyber victimization and $\alpha = 0.85$ for cyber bullying. Other the alpha reliability, descriptive statistics i.e., means and standard deviations are presented in Table-1.

Table 1: Cronbach's Alpha and descriptive (mean and standard deviations) of the study variables.

	Items	Alpha	M	SD
Age	-	-	20.54	1.84
Cyber victimization	20	0.83	8.94	7.92
Cyberbullying	20	0.85	2.80	5.30
Depression	7	0.83	14.32	9.55
Anxiety	7	0.79	15.48	8.87
Stress	7	0.82	16.47	9.17
Well being	14	0.93	45.84	12.22

Before estimating means and standard deviations, the computed score of depression, anxiety, Stress were multiplied by two as instructed in the scoring procedure of the scale. The resulting scores are then used to determine pathology among respondents by using the cutoff score for depression, anxiety, and stress. Though, pathology can be assessed at various levels from mild to extremely severe, yet, for the present study we used only one cutoff score dividing the sample into two groups for each pathology variable. The cutoff was used for pathology variables dividing them into two groups i.e., normal versus with pathology including. The group with pathology was consisted all levels from mild to extremely severe. An important point to be noticed from the descriptive table is the average score on cyber victimization versus cyber bullying. Though, both the variables have a potential range from 20 to 80, a clear difference can be noticed on average with victimization to be reported approximately 4-times higher than bullying.

Prevalence of cyberbullying was estimated by considering the criteria of behaviors participation and repetition. Thus, Cyber victims have been identified with scores equal or higher than 2 (once a month) in any of the items of cyber victimization and with scores equal or lower than 1 (once or twice) in all of the items of bullying. In addition, Cyber bullies

are those participants with scores equal or higher than 2 (once a month) in any of the items of cyber bullying and equal or lower that 1 (once or twice) in all of the items of cyber victimization. Cyberbully/victim identified those subjects with a score in any of the items of both cyber bullying and cyber victimization with a score equal or higher than 2 (once a month).

Figure-1 shows the distribution of cyberbullying participant roles. Results showed that the majority of students approximately 67% are involved in one or the other participant role of cyberbullying in comparison of only 33% only who are not involved. Among those, who are involved approximately 25% reported themselves as a victim in comparison to approximately 4% only who reported themselves as a bully in the cyber world. A larger number of university students approximately 39% reported themselves in a dual role called as bully-victim.

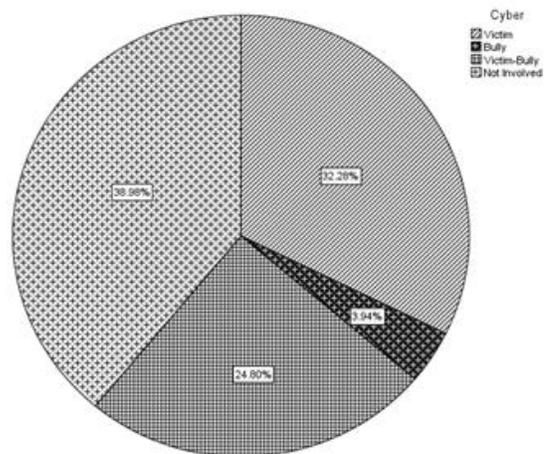


Figure 1: Pie Chart showing prevalence of cyber bullying participant role in university students. (N= 508)

To test our assumption regarding gender-wise prevalence, chi-square statistics were applied in the cross-tab. The results showed significant differences in the prevalence of cyber bullying participant role across gender. It is evident from Table-2 that a higher percentage of females 34.8% reported themselves as victim compare to their male counter parts among whom only 26.4% reported themselves as the victim. Contrary to that, a lower percentage of females reported themselves as bully 3.2% compared to 5.7% reporting of male students. Prevalence of females was also low on the dual role of bully/victim i.e., 19.3% compared to male reporting i.e., 37.1%. These results are further elaborated in figure 2 using a bar graph.

Table 2: Gender-wise prevalence of cyber bullying participant role in university students. (N= 508)

	Male		Female		Chi Sq
	f	%	f	%	
Victim	42	26.4	121	34.8	22.12**
Bully	9	5.7	11	3.2	
Victim-bully	59	37.1	67	19.3	
Not involved	49	30.8	149	42.8	

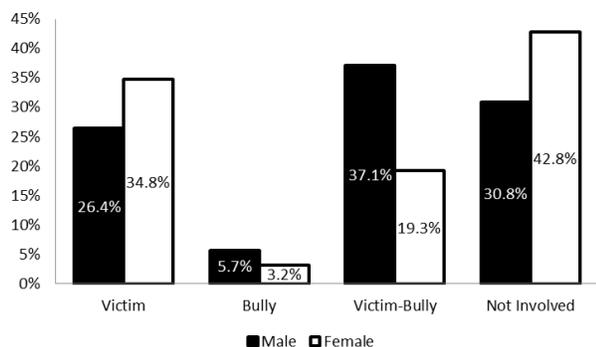


Figure 2: Bar graph showing prevalence of cyberbullying participant role across gender in university students. (N= 508)

To address the second objective of the study, a 2x4 design was used with each pathology variables in two groups versus four groups of cyberbullying participant role. The chi-square statistics showed significant differences in the prevalence of pathology across cyberbullying participant roles. Results presented in Table-3 showed that highest prevalence of stress was reported in the victim-bully group (82%) followed by bully group (70%) and victim group (62.2%) whereas the lowest prevalence of stress was reported in not-involved group (46.5%). Similarly, the prevalence of anxiety appeared to be highest among both bully and bully-victim group (90%, and 90.5% respectively) followed by victim group (84.1%) whereas not involved group showed the lowest prevalence of anxiety (49%). The same pattern was evidenced in the prevalence of depression with bully group reporting highest prevalence (80%) followed by victim-bully (75.4%) and closely chased by victim group (73.8%) yet the not involved group again showed the lowest prevalence of depression (30.3%). These results are further elaborated in Figure-3 using bar graphs. Finally, differences in well-being were estimated across cyber bullying participant roles using ANOVA.

Table 3: Prevalence of stress, anxiety, and depression across cyber bullying participant role. (N=508)

Variables	Groups	Victim		Bully		Victim-Bully		Not Involved		X ²
		f	%	f	%	f	%	f	%	
Stress	Not stressed	62	37.8	6	30.0	44	34.9	106	53.5	15.51**
	Stressed	102	62.2	14	70.0	82	65.1	92	46.5	
Anxiety	Not anxious	26	15.9	2	10.0	12	9.5	101	51.0	89.01**
	Anxious	138	84.1	18	90.0	114	90.5	97	49.0	
Depression	Not depressed	43	26.2	4	20.0	31	24.6	138	69.7	98.36**
	Depressed	121	73.8	16	80.0	95	75.4	60	30.3	

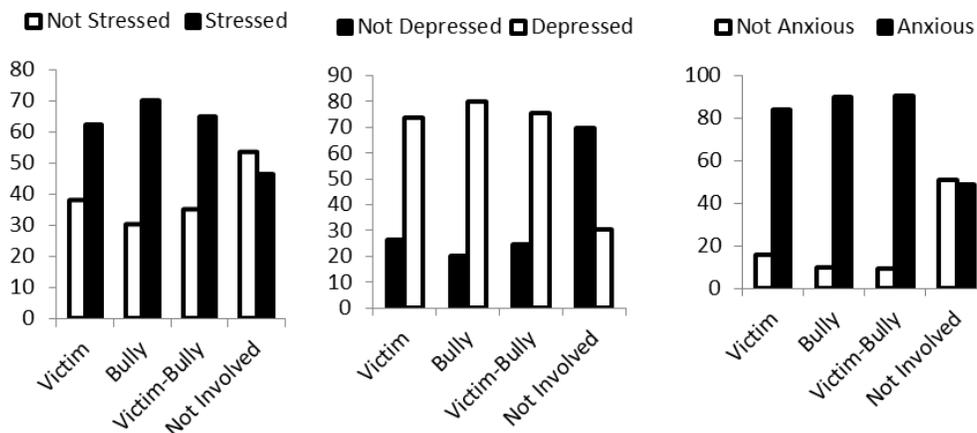


Figure 3: Bar graphs showing prevalence of stress, anxiety, and depression across cyberbullying participant role. (N=508)

The results showed significant mean differences ($F(df) = 2.84 (3,497), p < .05$). A review of mean well-being across four groups of cyber bullying participant role suggested the highest well-being of not involved group ($M = 47.80$) followed by bully group ($M = 45.22$), and victim/bully ($M = 44.75$) whereas lowest well-being was reported among victim group ($M = 44.36$). The post hoc analysis with Bonferroni correction for control over type-1 error showed that significant mean difference of well-being ($p < .05$) is evidenced only between victim versus not involved with victim reporting 3.44 unit low well-being compare to not involved.

Discussion

Evidence shows that cyberbullying has become a major public health concern in adolescents and college students. However, there is a need to investigate the impact of cyberbullying involvement in older populations. The present research extends previous literature by investigating the university students' involvement in cyberbullying in different participant roles with the core objective to explore the differences in psychopathology and mental well-being across groups, which emerged on the basis of cyberbullying involvement.

Results revealed few important findings that warrant further discussion. First, a large proportion of university students' found to be involved in cyberbullying. The prevalence rate of cyber victimization in this sample was 25% out of 508 participants, within the period of past 12 months. 4% of the sample self-identified themselves as cyber bullies. This prevalence rate is comparable to the 27.4% of cyber victimization and 8% of cyber perpetration found in a study²⁶ that was conducted on university students in Portugal. Whereas, the prevalence rate of involvement in cyberbullying varies significantly across studies due to the absence of standardized definition, reference of different time period in measurement and different age ranges of the sample.

Additionally, findings of the present study revealed that a greater proportion, approximately 39% of the sample met the dual-criteria of a cyberbully/victim. These findings are in contrast to, previous research on university students, from Turkey²⁷ and the USA,²¹ in which relatively low frequency, ranging 2.5% to 17.7% have been found in the role of cyber bully/victim. This might be because cyber space offers more opportunities to the perpetrator to remain anonymous and with less fear of being caught. Thus, it might be assumed that students who become victim of cyberbullying find easy to retaliate and to seek revenge in cyberspace. In addition, though, legislation has been passed on April 13, 2016, in Pakistan to deal with cyberbullying, but mechanisms for implementation

are missing. This might be another possible explanation for this higher rate of prevalence in the group of cyber bully/victims. Overall, the findings of the present study concerning prevalence support the view that cyberbullying is a significant problem in university students.¹⁵

Second, findings indicated significant gender differences concerning the involvement of cyberbullying in different participant roles. Females were more likely to be cyber victims than the males while, males were more likely to be cyber bullies and cyber bully/victims than females. These findings are in contrast to previous research,²¹ which found no significant gender differences. However, consistent with previous studies,^{15,18} in which female were outnumbered than male for cyber victimization.

Third, significant differences were found in the prevalence of psychopathology across different participant roles in cyberbullying. Cyber bully/victims were more likely reported themselves as stressed and anxious followed by cyber bullies and cyber victims in comparison to not involved. Whereas, the highest prevalence of depression was found in cyber bullies followed by cyber bully/victims and cyber victims than not involved. These findings indicate that not only cyber victims but cyber bully/victims and cyber bullies also exhibits pathological symptoms, even slightly more than victims. These findings are in line with existing research²¹ on college students that revealed, cyber bullies and cyberbully/victims scored significantly higher than the control group did on depression, phobic anxiety, hostility, interpersonal sensitivity and psychoticism.

Another, issue, worth noticing is the difference in well-being across cyberbullying participant roles. Lowest mental well-being was reported by cyber victim group followed by cyber victim/bully and cyber bully group in comparison to not involved. This is congruent with the previous study²⁸ that showed victimization is negatively associated with well-being.

It is hoped that findings of the present study will contribute to research and practice in helping educational counselors, mental health professionals and policy makers to become aware of the prevalence and psychological impacts of cyberbullying in university students.

Further research can extend this line of inquiry to fully understand this phenomenon in this fast-paced technological era where most of the youth use the Internet and social networking tools for communication and learning purposes on daily basis. Additionally, it would be valuable to investigate how students appraise their experience of cyberbullying and what type of strategies they use to cope with cyberbullying in Pakistani culture.

Moreover, prevention and intervention efforts are extremely important to deal with this

issue. Students should be taught safe use of the Internet and modern communication technologies. The administration should arrange seminars, and workshops in universities to spread awareness about the nature and consequences of this new type of violence that is occurring in cyber space. Universities should device anti-cyberbullying policies after considering social and cultural factors that influence cyberbullying. In addition, students should provide trainings to learn better ways to report cyberbullying and how they can seek psychological services to deal with its negative impacts.¹² Moreover, anger management and empathy training can be helpful to control the growth of all kind of incivilities as well as bullying and cyberbullying on campuses.

Conflict of interest: None declared.

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