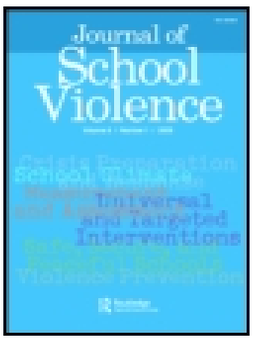

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Cyberbullying victimization and perpetration among university students in Bangladesh: Prevalence, impact and help-seeking practices

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ABSTRACT

While digital technologies provide a robust platform for university students to contact peers, establish virtual social ties, and bring a new learning mode, they also facilitate cyberbullying perpetration. The present study explores the extent and nature of cyberbullying victimization and perpetration among university students in Bangladesh. It also examines the impact of victimization and the help-seeking practices of self-identified victims of cyberbullying. The study conducted an online survey with 552 (315 male, 237 female) Bangladeshi university students aged 18–31 years from all academic levels (undergraduate, graduate, and post-graduate). The result revealed that cyberbullying is prevalent among university students with substantial negative impacts upon the victims, including anger, fear of attending courses, stress, humiliation, and self-guilt. However, the independent sample *t*-test revealed no statistically significant gender differences regarding cyberbullying victimization. Furthermore, it showed that victims of cyberbullying mainly seek help from family and friends and barely report it to the police. Finally, this study discusses implications and specific recommendations to support the victims and prevent cyberbullying in universities.

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Cyberbullying victimization; perpetration; help-seeking practices; university students; victims; impact

Introduction

Over the years, the rapid spread of the internet and the exponential growth of social networking sites (SNS) have provided a robust platform for youths to communicate with peers, establish virtual-social ties, and bring a new chance for learning. At the same time, it also raises concerns among scientists, academics and practitioners about cyberspace's potential to be used as a tool to extend traditional bullying into the virtual world (Musharraf & Haque, 2018; Yubero et al., 2017). Cyberbullying is an aggressive, repetitive or hostile intentional behavior by individuals or groups that inflict harm, abuse or discomfort to others through digital technologies (Sticca & Perren, 2013; Tokunaga, 2010; Völlink et al., 2013). It occurs in various forms: sending harassing, humiliating or derogatory or/and mean messages; spreading rumors on social networking sites; sharing offensive and/or embarrassing information, images, or videos on the internet; eliminating someone from the group chat intentionally; sending nude or private pictures to someone without consent; sending a malicious link to someone; making fake online identity to harass someone; hacking someone's account information and use it under the false pretense; and making unwanted or prank phone calls (Li, 2007; Musharraf & Haque, 2018; Smith et al., 2008). Cyberbullying is more detrimental than traditional bullying, with long-lasting effects due to its distinct features (Sam et al., 2019; Slonje et al., 2013; Yubero et al., 2017). For

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instance, identifying the perpetrators and holding them accountable is not as easy as with the traditional bully. Perpetrators use fake IDs, names, and addresses to bully someone through digital tools and technologies (social networking sites, cell phones, e-mail, etc.) and sometimes use virtual private networks (VPN) to keep their identity and location hidden from others. In addition, as cyberbullying occurs through digital tools and technologies, it can reach large audiences swiftly, which is more damaging than face-to-face incidences. Furthermore, it is a never-ending type of humiliation that creates a sense of helplessness among the victims (Meech, 2007).

A substantial number of studies have investigated cyberbullying among high school and college students. However, there is a scarcity of research exploring cyberbullying victimization and perpetration among university students and victims' help-seeking practices in response to victimization (Wozencroft et al., 2015). Furthermore, to the best of the author's knowledge, no empirical study has been published to date on the prevalence and impacts of cyberbullying victimization and help-seeking practices among university students in Bangladesh. Therefore, the present study will address these gaps by investigating the nature and extent of cyberbullying among university students.

Literature review

Prevalence of cyberbullying victimization

The majority of the research regarding cyberbullying has been conducted among adolescents, while a growing number of international studies have sought to measure the pervasiveness of cyberbullying among university students (Watts et al., 2017). For instance, in the United States, a survey (Zalaquette & Chatters, 2014) of 604 university students found that 19% had experienced cyberbullying. Similar percentages were found in earlier US studies (Finn, 2004; Hoff & Mitchell, 2009; MacDonald & Roberts-Pittman, 2010; Pinchot & Paullet, 2013). A slightly higher rate of cyberbullying prevalence (24.1%) was found in a study by Faucher et al. (2014) conducted among 1925 students in a Canadian university. Unlike US and Canada, a higher rate of cyberbullying prevalence (54% and 59.8%, respectively) was found among Spanish and Turkish university students (Elipe et al., 2015; Turan et al., 2011). The prevalence rate of cyberbullying victimization among university students also varies in Asian countries. For example, a study by Khine et al. (2020) has shown that 51.1% of females and 40.8% of male university students experienced cyberbullying in the last 12 months in Myanmar. However, 25% of university students identified themselves as cyberbullying victims among 508 participants in the study conducted by Musharraf and Haque (2018) in Pakistan. More than twenty percent (20.7%) of Saudi Arabian university students experienced cyberbullying, as found in a study by Qudah et al. (2019).

Studies regarding cyberbullying among university students showed contrasting results in gender perspectives. For example, Zalaquette and Chatters (2014) study found that female university students experienced three times more cyberbullying than male students (female 15.5% and male 3.6%). A study by Khine et al. (2020) has also shown that female university students experienced more cyberbullying than male students (51.1% and 40.8%). On the other hand, some studies (Akbulut & Eristi, 2011; Faucher et al., 2014) found that male students are more likely to be cyberbullied than female students. However, MacDonald and Roberts-Pittman's (2010) study found almost no difference in cyberbullying rate between female and male university students (female 22% and male 21.9%).

The above demonstrates diverse prevalence and gender differences in studies around the world. Thus, it is important to explore why these differences occur. It might be that variations of the definitions in studies differ. For instance, most studies used the term' cyberbullying'; however, some employed other terms, including cyber-harassment and cyberstalking (Faucher et al., 2014). Another aspect to consider is the age span used in studies. The studies showed that younger college students or undergraduate students are more likely to disclose being cyberbullied than older or graduate students. For instance, Zalaquette and Chatters (2014) found that university students aged between 20 to 25 experienced more cyberbullying than other age groups (26 to 29 years and 30 and above). Finally, how research is conducted needs to be considered as various methods and measures of cyberbullying are

used (Faucher et al., 2014; Yubero et al., 2017). For instance, different scales of measuring cyberbullying victimization and perpetration are used in different studies (e.g., Akbulut & Eristi, 2011; Doane et al., 2013).

A detailed literature review demonstrates the scarcity of empirical research on cyberbullying in Bangladesh; to the authors' best knowledge, there is no published empirical study on cyberbullying among university students. However, a small number of peer-reviewed research demonstrated cyberbullying prevalence among high school (10th grade) and college (11th and 12th grade) students in Bangladesh. For instance, a study conducted by Mallik and Radwan (2020) revealed that about one-third (31.9%; 37.36% were boys and 21.28% were girls) of school and college-going adolescents (aged between 14 to 17 years) experienced cyberbullying. Additionally, a study by Sarker and Shahid (2018) on high school students showed that 43% of respondents reported having experienced cyberbullying both in and outside school. However, this study did not reflect the extent of cyberbullying in education institutions in Bangladesh, as it was conducted with very few respondents (21), and the methodology is unclear. Therefore it is important to explore the nature and extent of cyberbullying victimization and perpetration among university students in Bangladesh.

The emotional and behavioral impact of cyberbullying victimization

Empirical evidence indicates that cyberbullying victimization adversely affects psychological well-being. For example, several studies conclude that cyberbullying victims experience higher levels of depression, lower academic performance, psychosocial and emotional difficulties, and lower self-esteem (Akbulut & Eristi, 2011; Bauman & Del Rio, 2006; Elipe et al., 2015; Fitzpatrick et al., 2007; Kim et al., 2011). A study by Smith and Yoon (2013) found the various psychosocial consequences of cyberbullying victimization among college students (13.2% of students suffered depression, 16.5% expressed social withdrawal, and 5.3% faced anger management). In addition, in a sample of Portuguese students, Teixeira et al. (2010) found a positive relationship between cyberbullying victimization (using mobile phones), depression, and anxiety.

Data from a study carried out by Musharraf and Haque (2018) shows that university students who experienced cyberbullying victimization reported lower mental well-being than the students who did not. Similarly, Zalaquette and Chatters (2014) study showed that the emotional impact of cyberbullying was higher for undergraduate students than for high school students. In addition, Kanwal and Jami (2019) carried out a study among Pakistani university students that reported more social isolation, family surveillance, and depression among cyberbullying victims. As technology is ubiquitous at universities for studies and administration, it is crucial that further research is conducted to determine the prevalence of cyberbullying victimization in order to develop strategies to minimize the impacts of cyberbullying.

Help-seeking practice and cyberbullying victimization

Coping strategies contributed to mitigating the adverse consequences of cyberbullying (Völlink et al., 2013). School students cope with cyberbullying by using different techniques like blocking and ignoring the perpetrators, discussing it with friends, and telling adult people (Cowie, 2013; Tokunaga, 2010). Notwithstanding, very few students use coping strategies, especially seeking help from other people (Tokunaga, 2010).

Help-seeking implies the behavior of actively requesting support from other people (Rickwood et al., 2005). Help-seeking is considered an effective coping strategy that can lessen distressing psychological symptoms and positively impact the whole life experience (Rickwood et al., 2005). However, research revealed that school students were reluctant to seek help from a counselor or teacher (Cowie, 2013) or an adult person (Li, 2006; Slonje & Smith, 2008). Similarly, university students express similar help-seeking behavior. For instance, the national union of students (NUS) survey (National Union of Students, 2008) stated that 70% of students did not report cyberbullying to others. In contrast, many students did not understand from whom they should seek help. In addition, 62% of students informed that university authorities delivered insufficient assistance when instances

were reported. Some studies also revealed that older students were less likely to report help-seeking behavior than younger students (Dowling & Carey, 2013; Hunter et al., 2004). This is because older students think they are competent enough to solve cyberbullying (deLara, 2012).

This literature review illustrates that cyberbullying prevalence varies among university students worldwide. There is limited literature on the south Asian perspective, and as far as our understanding, no empirical study has been published from the Bangladeshi perspective. Bangladesh has nearly 4.0 million university students in 154 universities (University Grants Commission, 2018), and it witnessed rapid growth and ubiquitous use of digital communication and technologies (Center for Research and Information, 2016) in the last few years. For instance, internet users now total 121.87 million, and mobile phone users are 180.78 million (Bangladesh Telecommunication Regulatory Commission, 2022). Therefore, it is important to investigate the prevalence and forms of cyberbullying victimization and perpetration among university students. It is also essential to examine the impacts of cyberbullying and help-seeking practices of self-identified victims due to the long-lasting impacts of victimization.

Method

This study used a quantitative research approach. This paper presents the prevalence, forms, and impacts of cyberbullying victimization and perpetration among university students and shows the help-seeking practices of self-identified victims of cyberbullying. It is based on an online survey conducted among university students in Bangladesh aged between 18 to 31 years.

Research AIM

The study's main objective was to explore the nature, prevalence, and impacts of cyberbullying among Bangladeshi university students and the help-seeking practices of the self-identified victims of cyberbullying. More specifically, the online survey sought to address the following research questions.

(1) What is the prevalence of cyberbullying victimization and perpetration among Bangladeshi university students?
(2) What are the impacts of cyberbullying among the self-identified victims?
(3) What are the help-seeking practices among the self-identified victims of cyberbullying?

Recruitment and participants

The survey received ethics approval from the university ethics committee in November 2020 before recruiting participants. Researchers maintained strict data management procedures due to the sensitive nature of the research. In addition, data was de-identified through rigorous coding to maintain the privacy of the respondents. The researchers created a Google doc link to share the questionnaire with the targeted people. The participants were recruited by posting the Google doc link on the Facebook page of fifteen universities (five public and five private universities and five university colleges) with the help of respective admins and authorities. The link was also circulated among other faculty members of different universities using the personal connections of 1st and 2nd authors to share this link in the particular student's group. In addition, as 1st and 2nd authors are Bangladeshi university faculty members, they also shared this link on their Facebook profiles and invited the students to participate. The survey material mentioned the survey objective and acknowledged that the participants asked about internet behavior, the nature, and the impacts of cyberbullying. It also informed the participants that they would be asked about the action taken in response to cyber victimization and factors affecting their help-seeking behavior.

Interested participants read a description at the beginning section of the survey. After that, they filled in the consent statement mentioning that "Given the description, I agree to continue the survey" and then filled in the questionnaire. The questionnaire consisted of demographic information and four sections,

Table 1. Demographic characteristics of the respondents.

		Male%	(N = 315)	Female%	(N =237)	Overall%	(N = 552)
Age							
	18–19	5.71	18	11.81	28	8.30	46
	20–23	59.68	188	73.84	175	65.80	363
	24–27	32.38	102	13.50	32	24.30	134
	28–31	2.22	7	0.84	2	1.60	9
Religion							
	Islam	89.52	282	89.45	212	89.50	494
	Hinduism	9.84	31	10.13	24	10.00	55
	Christian	0.63	2	0	0	.40	2
	Buddhism	0	0	0.42	1	.20	1
Faculty							
	Arts	11.11	35	12.66	30	11.80	65
	Social Sciences	25.08	79	34.18	81	29.00	160
	Science	21.90	69	21.10	50	21.60	119
	Business Studies	14.29	45	13.92	33	14.10	78
	Engineering and Technology	5.08	16	3.80	9	4.50	25
	Law	0.32	1	0.84	2	.50	3
	Pharmacy	0	0	0	0	0	0
	Biological Science	7.61	24	1.69	4	5.10	28
	Education	0.32	1	0.42	1	.40	2
	Medicine	0	0	1.27	3	.50	3
	Fine Art	0	0	0.84	2	.40	2
	Earth and Environment	13.65	43	9.28	22	11.8	65
	Public Health	0.63	2	0	0	.40	2
Academic Year							
	First Year	21.27	67	27.00	64	23.70	131
	Second Year	14.92	47	19.83	47	17.00	94
	Third Year	13.02	41	16.88	40	14.70	81
	Fourth year	10.48	33	10.13	24	10.30	57
	Masters	59.68	118	25.31	60	32.20	178
	MPhil	2.22	7	0.84	2	1.60	9
	PhD	0.63	2	0	0	0.36	2

including internet and social media use, cyberbullying victimization and perpetration scale, impacts of cyberbullying, and help-seeking practices, and was open for 30 days from 1 November 2020 to 30 November 2020. The questionnaire took 15 to 20 minutes to fill. The target population was Bangladeshi university students aged 18 to 31 years old. A total of 567 participants filled in the questionnaire through the link provided, and 552 individual responses were considered for analysis; the rest of the responses were excluded due to incompleteness. The final sample (Table 1) comprised 315 (57.06%) men and 237 (42.93%) women. About 90% of respondents were Muslim, 10% professed Hinduism, and the remaining participants were Christian (.4%) and Buddhist (.2%). Regarding their academic year, 23.70% were in year 1, 17.00% were in year 2, 14.70% were in year 3, 10.30% were in year 4, 32.20% were in Masters, 1.60% were in MPhil, and 0.36% in PhD. The highest number of respondents (40.80%) studied in the Arts and Social Sciences faculty, 38.6% studied in the Science faculty, about 15% in the Business faculty, and 4.5% in the Engineering faculty.

Measures

We selected the Doane et al. (2013) scale of cyberbullying victimization and perpetration because it covers different forms and dimensions of cyberbullying. Besides this scale, we also designed some questions for assessing the respondents' internet behavior, determining the impacts of cyberbullying victimization and help-seeking practices among self-identified victims.

Internet and social media use

Four questions relating to internet use were asked of the respondents; "How many years have you been using the internet?," "How many hours have you spent on the internet in a day?," "What are the purposes of internet use"? and "What type of social media you are using?"

Cyberbullying victimization and perpetration scale

In the absence of a cyberbullying victimization and perpetration scale from the South Asian perspective, the study used Doane et al.'s (2013) scale to explore cyberbullying among university students. Doane et al.'s victimization and perpetration scales were 21 and 20 items in four categories (Public Humiliation, Malice, Unwanted Contact and Deception). We modified these scales by adding two items to the original victimization and perpetration scales. The added two items to the victimization and perpetration scale are 'Has someone intentionally excluded you from the public group/chat group? (in perpetration scale: "Have you specifically and intentionally excluded someone from a public group/chat group?") ' and "Has someone intentionally blocked you on instant messaging programs?" (in perpetration scale: "Have you deliberately blocked someone from instant messaging programs?"). This modification was required to consider the south Asian context of the research.

Respondents answered the questions with "*never*" = 1, "*rarely*" = 2, "*sometimes*" = 3, "*often*" = 4, and "*always*" = 5. The lowest obtainable score on the victimization scale was 23, and the highest was 115, whereas the lowest and highest obtainable scores on the perpetration scale were 22 and 110, respectively. In this study, the alpha value of cyberbullying victimization and perpetration scale were .91 and .87, respectively, whereas Doane et al.'s original scales were .87 and .91, respectively.

Nature and impacts of cyberbullying

All respondents were asked two dichotomous questions to explore their cyberbullying experiences in the last 12 months. Respondents answered these questions "yes" or "no." In addition, two questions relating to the behavioral and emotional impacts of victimization were asked of respondents who recognized themselves as victims of cyberbullying. For behavioral impacts, everyone was asked – "What type of behavioral impact have you faced?." The options were: uncomfortable on campus, scared to come to the university campus, not concentrating on studying, confused about sharing something on social media, and overreacting to some normal situations. Similarly, for emotional impact, everyone was asked – 'What type of emotional impact have you faced? The options were: feeling angry, anxious, lost everything, humiliated, ashamed, self-guilty, and confidence lessened.

Help-seeking practices

Respondents who identified themselves as victims of cyberbullying were asked about their help-seeking practices in response to victimization. Respondents were asked, "Did you seek any help from someone after becoming a victim of cyberbullying?" and if any respondents replied with "yes," then another question was asked: "From whom did you seek help."

Data analysis

Firstly, the descriptive statistics about cyberbullying victimization and perpetration were analyzed to identify the averages of all items and forms. Secondly, an independent sample *t*-test was used to explore mean differences in cyberbullying victimization and perpetration between male and female students. Thirdly, a one-way analysis of variance (ANOVA) was conducted to explore the effect of "year of internet use" and "hours spent on the internet in a day" on cyberbullying victimization and perpetration. Fourthly, a Pearson product-moment correlation was performed between cyberbullying victimization and perpetration. Finally, frequency distribution was carried out to identify the percentage of emotional and behavioral impacts as well as help-seeking behavior of the respondents. We also used Cohen's *d* to calculate the effect size. Furthermore, we checked the assumptions prior to the conducting *t*-test and ANOVA. The Kolmogorov–Smirnov test was significant for cyberbullying

victimization ($Z = .14$, $p < .001$), and perpetration ($Z = .19$, $p < .001$). The skewness and kurtosis for cyberbullying victimization (skewness = 1.28, SE =.10 and kurtosis = 1.91, SE = .21) and cyberbullying perpetration (skewness = 1.92, SE = .10 and kurtosis = 5.12, SE = .21) indicating the score distribution was normal. Hair et al. (2010) and Byrne (2010) argue that it could be considered normal if the value of skewness is between −2 to +2 and Kurtosis is between −7 to +7. In addition, internal consistency coefficients or Cronbach Alpha was checked to identify the reliability of the scale. All the analyses mentioned above were computed using the SPSS-20 version. For the statistical tests, the significance level was set at $p < .05$.

Results

Prevalence and nature of cyber victimization

The results show (Table 2) that *deception* is the most commonly reported form of cyberbullying experienced by university students, including receiving false status electronically ($M = 2.23$); receiving a deceptive identity (someone professed to be someone else) while talking electronically ($M = 1.79$). *Exclusion* is also a common type of victimization, including facing exclusion from the public group ($M = 1.73$) and being blocked in the instant messaging group ($M = 1.73$). On the other hand, the least commonly reported forms of cyberbullying victimization were *public humiliation*, including someone posting an indecent picture of them electronically ($M = 1.06$); knowing that the answer of the electronic/online survey that was supposed to remain private was sent to someone else ($M = 1.16$);

Table 2. Descriptive statistics of cyberbullying victimization.

	Male		Female		Total	
Cyberbullying Victimization	*M*	*SD*	*M*	*SD*	*M*	*SD*
Public Humiliation						
Did someone disseminate information electronically while imitating to be you?	1.31	.70	1.34	.73	1.32	.71
Did someone negatively alter an image of you and post it electronically?	1.23	.58	1.20	.63	1.22	.60
Did someone write mean messages about you publicly electrically?	1.29	.68	1.31	.73	1.30	.70
Did someone log into your social networking site account and change your information?	1.30	.60	1.34	.72	1.31	.66
Did someone post an indecent photo of you by electronic means?	1.06	.31	1.06	.41	1.06	.36
Did someone print out an electronic conversation you had and then present it to others?	1.34	.71	1.30	.74	1.33	.72
Did you complete an online survey that was supposed to remain private, but the answers were sent to someone else?	1.17	.51	1.15	.51	1.16	.51
Did someone log into your electronic account and pretend to be you?	1.34	.67	1.40	.76	1.36	.71
Did someone post a humiliating photo of you electronically where other people could see it?	1.26	.66	1.12	.45	1.20	.58
Malice						
Did someone call you mean names electronically?	1.81	.93	1.58	.86	1.71	.91
Did someone been mean to you electronically?	1.43	.75	1.36	.73	1.40	.74
Did someone curse at you electronically?	1.57	.89	1.48	.79	1.53	.85
Did someone make fun of you electronically?	2.16	1.10	1.83	1.00	2.02	1.07
Did someone tease you electronically?	1.53	.83	1.89	1.08	1.69	.96
Unwanted contact						
Did you receive a nude or semi nude photo that you did not want from someone you were talking to electronically?	1.50	.81	1.48	.87	1.49	.83
Did you receive a pornographic picture that you did not want from someone electronically that was not spammed?	1.65	.90	1.57	.88	1.62	.89
Did you receive an unsolicited sexual message from someone electronically?	1.46	.83	1.71	.94	1.57	.88
Did you receive an aggressive picture by electronic means that was not spammed?	1.61	.91	1.62	.93	1.62	.92
Deception						
Did someone pretend to be someone else while talking to you electronically?	1.84	.84	1.73	.93	1.79	.88
Did someone lie about themselves to you electronically?	2.26	1.04	2.18	1.05	2.23	1.04
Did you share personal information with someone electronically and then later found the person was not who you thought it was?	1.53	.86	1.30	.68	1.43	.80
Exclusion						
Did someone intentionally and specifically exclude you from the public group/chat group?	1.83	.93	1.59	.82	1.73	.89
Did someone intentionally block you on instant messaging programs?	1.85	.97	1.57	.84	1.73	.93

Note. $N = 552$

and someone posting embarrassing pictures electronically (M = 1.20). Other common forms of victimization reported were *malice* and *unwanted contact*, including being mocked by someone electronically (M = 2.02), receiving a repeated call by mean names electronically (M = 1.71), being teased electronically (M = 1.69), or receiving unwanted and pornographic picture that was not spam (M = 1.62).

Prevalence of cyberbullying perpetration

The most commonly reported forms of cyberbullying perpetration (Table 3) were *exclusion*, including specifically and intentionally excluding someone from a public group or chat group (M = 1.42) and intentionally blocking someone from instant messaging programs (M = 1.65). Both males and females experienced less perpetration by *public humiliation*, including posting a disconcerting picture of someone electronically where other people could see it (M = 1.09), posting a picture of someone electronically that they did not want others to see (M = 1.13), and posting a picture electronically of someone doing something illegal (M = 1.11).

Table 3. Descriptive statistics of cyberbullying perpetration.

	Male		Female		Total	
Cyberbullying Perpetration	*M*	*SD*	*M*	*SD*	*M*	*SD*
Unwanted contact						
Did you send an unsolicited adult photo to someone electronically?	1.24	.57	1.13	.44	1.19	.52
Did you attempt to meet up with someone physically that you talked to electronically who did not want to meet you in person?	1.47	.85	1.21	.59	1.36	.76
Did you send an unwanted sexual message to someone electronically?	1.15	.48	1.08	.38	1.12	.44
Did you send an unwanted nude or partially nude picture to someone electronically?	1.21	.52	1.07	.33	1.15	.45
Did you try to get information from someone you talked to electronically that they did not want to give?	1.41	.72	1.16	.46	1.30	.63
Did you send a message by electronic means to a stranger inviting sex?	1.09	.36	1.04	.21	1.07	.31
Did you ask an unfamiliar person by electronic means about what they are dressed in?	1.30	.66	1.14	.46	1.23	.59
Did you send a message to a person electronically that claimed you would try to find out where they live?	1.49	.79	1.19	.56	1.36	.72
Malice						
Did you send a rude message to someone electronically?	1.45	.77	1.24	.62	1.36	.71
Did you tease someone electronically?	1.17	.50	1.04	.19	1.11	.40
Did you mean to someone electronically?	1.25	.60	1.15	.48	1.21	.55
Did you call someone mean names electronically?	1.46	.79	1.30	.66	1.39	.74
Did you make fun of someone electronically?	1.95	1.04	1.56	.88	1.78	.99
Did you curse at someone electronically?	1.29	.70	1.22	.58	1.26	.65
Deception						
Did you pretend to be someone else while talking to someone electronically?	1.40	.68	1.24	.56	1.33	.63
Did someone share personal information with you electronically when you professed to be someone else?	1.21	.58	1.11	.39	1.17	.51
Did you lie about yourself to someone electronically?	1.56	.80	1.44	.71	1.51	.76
Public Humiliation						
Did you post a humiliating photo of someone by electronic means where other people could see it?	1.14	.45	1.03	.21	1.09	.37
Did you post a photo of someone electronically that they did not want others to see?	1.17	.48	1.06	.29	1.13	.41
Did you post a photo electronically of someone doing something illegal?	1.15	.43	1.06	.35	1.11	.40
Exclusion						
Did you specifically and intentionally exclude someone from a public group/chat group?	1.48	.83	1.33	.66	1.42	.77
Did you intentionally block someone from instant messaging programs?	1.61	.88	1.71	1.02	1.65	.94

Note. N = 552

Gendered nature of cyberbullying victimization and perpetration

The results (Table 4) reveal almost no statistically significant differences in cyberbullying victimization between males (M = 35.36) and females (M = 34. 10). In contrast, there are slight statistically significant differences in cyberbullying perpetration between males (M = 29.65) and females (M = 26. 53). In this case, more males are perpetrators of cyberbullying compared to females.

Table 4. Mean, SD and independent sample t-test of cyberbullying victimization and cyberbullying perpetration according to gender.

	Male		Female				
Measure	*M*	*SD*	*M*	*SD*	*t*	*p*	Cohen's *d*
Cyberbullying Victimization	35.36	10.56	34.10	11.43	−1.34 †	.18	0.11
Cyberbullying Perpetration	29.65	8.09	26.53	5.45	−5.40***	.000	0.46

Note. †$p < .18$. ***$p < .001$.

Cyberbullying victimization and perpetration according to a year of internet use and hours spent for internet use in a day

The results (Tables 5 and 6) demonstrate that both cyberbullying victimization and perpetration gradually increased when the respondent's years of internet use were also increased except for more than 15 years of internet use. ANOVA indicated a significant difference in both cyberbullying victimization and perpetration regarding years of internet use. The mean score (Table 6) shows that cyberbullying victimization gradually increased when the respondent's hours of internet use in a single day were also increased. So, the chance of being victims was greater for those who browsed the internet for more than 12 hours. However, the possibility of being a perpetrator was also more significant when participants were using the internet for more than 12 hours in a single day than any other duration of time. ANOVAs indicated a significant difference in cyberbullying victimization and cyberbullying perpetration based on the different amount of time spent browsing the internet.

The result in Table 7 shows that cyberbullying victimization was significantly related to cyberbullying perpetration. Furthermore, results indicate that being a perpetrator and being a victim were positively correlated. So, the increase and decrease of cyberbullying victimization depend on the increased or decreased cyberbullying perpetration.

Impact of cyberbullying

The results (Table 8) point to an intense emotional and behavioral impact of cyberbullying on the victim. Nearly one-fourth of the participants (N = 182) reported feeling stressed or anxious after being victims, and 21.20% (N = 157) reported that they felt angry after victimization. Respondents also reported that due to their victimization, they felt humiliated (N = 100), less confident (N = 92), felt ashamed of themselves (N = 81), and felt self-guilt (N = 77). Only 7.10% (N = 53) of participants stated that they felt like they lost everything after being victimized.

However, nearly one-third of the participants (N = 190) stated that after victimization, they could not concentrate on their studies, and 30.10% (N = 180) agreed that they felt uneasy to share something on social media. Respectively, 16.20% (N = 97) and 12.20% (N = 73) respondents agreed that they overreacted to some normal situations after victimization and felt uncomfortable on their campus. Approximately 10% of respondents reported that they felt scared to come to the university campus after being victimized.

Table 5. Mean, standard deviation, and one-way analyses of variance of cyberbullying victimization and cyberbullying perpetration according to year of internet using.

Measures	Less than 1 year		1–3		3–6		6–9		9–12		12–15		More than 15 year			η^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	
CV	28.20	6.61	30.49	8.63	34.45	10.36	36.49	11.42	37.97	11.96	41.50	14.60	31.60	9.02	6.27***	0.06
CP	25.30	5.99	26.63	6.40	27.84	6.92	28.94	7.37	30.53	7.61	31.29	8.97	27.60	12.52	3.25**	0.03

Note. CV = cyberbullying victimization; CP = cyberbullying perpetration. ***$p < .001$. **$p < .01$.

Table 6. Mean, standard deviation, and one-way analyses of variance of cyberbullying victimization and cyberbullying perpetration according to hours of the internet using in a day.

	Less than 1 hour		1–3		3–6		6–9		9–12		More than 12 Hours			η^2
Measures	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	
CV	30.88	10.68	31.81	8.41	35.75	11.51	35.49	11.78	37.83	11.45	41.50	12.22	4.93***	0.04
CP	28.25	6.54	27.70	6.87	27.99	6.66	28.69	7.62	29.48	7.77	33.79	12.82	2.23*	0.02

Note. CV = cyberbullying victimization; CP = cyberbullying perpetration. ***$p < .001$. *$p < 0.05$.

Table 7. Descriptive statistics and correlations between cyberbullying victimization and cyberbullying perpetration.

Variables	*N*	*M*	*SD*	1	2
(1) Cyberbullying Victimization	552	34.82	10.95	–	.62**
(2) Cyberbullying Perpetration	552	28.31	7.24	.62**	–

Note. $N = 552$ ** $p < .01$.

Table 8. Emotional and behavioral impact of the respondents.

Impact	*N*	%
Emotional impact		
I felt angry	157	21.20
I felt stressed/anxious	182	24.50
I felt that I had lost everything	53	7.10
I felt humiliated	100	13.50
I felt ashamed of myself	81	10.90
I felt self-guilty	77	10.40
I felt confidence less	92	12.40
Behavioral Impact		
I felt incredibly uncomfortable on campus	73	12.20
I felt scared to come university campus	58	9.70
I did not concentrate on study for the time being	190	31.80
I felt confused about sharing something on social media	180	30.10
I tended to overreact to some normal situations	97	16.20

Table 9. Help-seeking behavior of the respondents.

Help-seeking	*N*	%
Family members	82	24.20
Friends	177	52.20
Department/ University	22	6.50
Police	28	8.30
Voluntary organization	8	2.40
Other	22	6.50

Help-seeking practices of cyberbullying victims

In this study, participants (Table 9) reported that they took help from either one source or more than one source at a time. Table 9 shows that after becoming a cyber victim, more than 50% of respondents sought help from their friends. Additionally, 24.20% ($N = 82$) sought help from their family members. Nearly 9% of respondents reported that they went to the police to seek help. Respectively, 6.50 ($N = 22$) participants sought help from their department or university and others (e. g., self, faith, none). Results also show that the least number of respondents (2.40%; $N = 8$) sought help from volunteer organizations.

Discussion

The present study found that 13.60% of university students experienced at least one type of cyberbullying victimization in the past twelve months. This result is a unique contribution to the existing literature by assessing the nature, extent, and impacts of cyberbullying victimization and perpetration among university students in Bangladesh. However, the prevalence rate of cyberbullying victimization was lower than that indicated by Mallik and Radwan (2020), where 32% of adolescents experienced cyberbullying among 276 adolescents in Dhaka city in Bangladesh. This result is also consistent with the findings of international studies among university students: the prevalence rate is between 10% and 15% (Finn, 2004), or 14% of American university students (Zalaquette & Chatters, 2014).

The results of the study show that 2.40% of students engaged in cyberbullying perpetration in the last 12 months. The existing literature supports this finding. For instance, Almeida et al. (2012) have shown that 2.30% of students were involved in cyberbullying as perpetrators. However, the findings of this study diverge from other studies. To demonstrate, Crosslin and Crosslin (2014) reported that 16% of students at Texas University practice cyberbullying via text message, e-mail, and social networking sites during their course.

Descriptive statistics revealed that deception was the most commonly reported form of cyberbullying, whereas public humiliation was the least. In terms of deception, most students suffer victimization by receiving false statuses and deceptive identities on the internet. In case of exclusion, being blocked in the instant messaging group and excluding from the public group are common forms of victimization. Receiving an embarrassing and nude picture on the internet is a common means of public humiliation. This finding is consistent with Ndiege et al.'s (2020) study where deception was the primary form of cyberbullying victimization, including 75.8% of Kenyan university students experienced cyberbullying by receiving false status.

The study found that exclusion was the uppermost form contributing to cyberbullying perpetration, while public humiliation was the least important factor behind the perpetration. Notably, findings suggest that intentionally blocking someone from instant messaging programs and excluding from a public or chat group were the common ways of exclusion. However, posting a picture for illegal purposes and posting an embarrassing picture of someone online was a common form of public humiliation. This is partially supported by the previous study of Ndiege et al. (2020), where malice was the most common form of perpetration, and public humiliation was the least prevalent for perpetration. In addition, Akbulut and Eristi's (2011) study findings concur with this study's results. They presented that blocking in instant messaging, inappropriate chat, and excluding people from the groups were the most common form of cyberbullying perpetration among university students in Turkey.

Notably, the study did not find significant gender differences in cyberbullying victimization between males and females. This result is also in line with earlier research that reported no or very little significant gender differences in cyberbullying victimization among university students (Akbulut & Eristi, 2011; Faucher et al., 2014; Musharraf & Haque, 2018; Qudah et al., 2019; Sam et al., 2019; Yubero et al., 2017).

Significant gender differences were found in terms of cyberbullying perpetration between male and female perpetrators. This result is consistent with the study by Barlett and Coyne (2014) and Doane et al. (2013). This study found that males were more likely to be the victims of cyberbullying than their counterparts. This finding is consistent with existing literature (Hoff & Mitchell, 2009; Mallik & Radwan, 2020). Finally, this study also revealed that males committed more cyberbullying than female students which is consistent with other existing literature (Bauman & Baldasare, 2015; Coelho et al., 2016).

The study revealed a severe negative impact of cyberbullying on victims. For example, one-fourth of respondents reported that they felt anxious or stressed after victimization, whereas less than 10% of students thought they lost everything. One-third of the participants expressed that after being a victim, they were less attentive to their study, and they felt confused with regard to interacting on social media.

Furthermore, more than 10% of students agreed that they felt scared to come to the university campus after becoming victims. Existing literature supports these findings (Akbulut & Eristi, 2011; Elipe et al., 2015; Zalaquette & Chatters, 2014).

The findings of this study show that 52.20% of the victimized students sought help from their friends. However, besides friends, results also revealed that victims/ students were reluctant to seek help from others such as family members, university authorities or departments, police, volunteer organizations, and other media. These findings align with the previous studies of the National Union of Students (a UK based confederation of student union) survey (National Union of Students, 2008), which stated that 70% of the university students did not report the cyberbullying to others, and many students did not recognize from whom they could seek help. Similarly, Khine et al. (2020) documented that 50% of the victimized students informed others about their events, whereas the rest of the university students did not disclose their negative experiences to others.

The findings show that cyberbullying victimization has a strong relationship with increasing hours of internet use. The victimization possibilities are higher for those who spend more time on the internet. This result is consistent with the cyberbullying literature documenting smartphone addiction as significantly contributing to cyberbullying behavior among university students (Qudah et al., 2019). Additionally, this result is also in line with the previous studies of Cicioğlu (2014), Navarro et al. (2013), and Türkoğlu (2013), which demonstrate that cyberbullying victimization is significantly linked to time spent on the internet. This is also supported by the study of Ndiege et al. (2020), where they documented the probability of being perpetrators among those students who spent more than 5 hours in a single day online than those who spent 1–2 hours.

Limitations and future directions

We acknowledge certain drawbacks in the present study. First, the study used a quantitative approach that limits the researchers to understand only the nature, prevalence and impact of cyberbullying, not an in-depth understanding of the life experiences of the victim. Second, although the instruments we administered in this study contain good reliability, the use of self-report measures to explore the prevalence, impacts, and help-seeking practices of cyberbullying victimization and perpetration may have affected the findings. Third, we focused on cyberbullying victimization and perpetration and impacts along with the help-seeking behavior of the respondents. Still, we have not considered the other variables associated with cyberbullying: personality, self-esteem, loneliness, emotional intelligence, etc. Fourth, we collected data through convenience sampling online, but if we were able to collect data offline mainly by interviews with the respondents, our results would be more generalizable. Finally, we considered only university students in Bangladesh whose age range was 18–31 years in this study. Therefore, this study bounds the generalizability of findings to different age groups. Thus, further studies in this area, among other age groups, can address the knowledge gap. Future studies would add more sophisticated findings to overcome the limitations mentioned above.

Implications

The findings of this study will assist policymakers and university administrators in initiating and implementing policies to mitigate the adverse effects of cyberbullying. This study also seeks to emphasize the development of appropriate intervention techniques to address cyberbullying adequately. In this regard, the university authorities should focus on increasing awareness by arranging campaigns, seminars, and workshops to enhance the awareness of nature and the consequences of this new type of violence. Similarly, universities should establish and enforce anti-cyberbullying policies that encourage the students to report the incidents to the concerned body/committee of universities. In addition, there have been specific directions (writ petition no 5916 of 2008) from the Supreme court of Bangladesh (High court division) to form a "complaint committee or sexual harassment prevention committee" in every educational institution, including universities (Abdullah, 2019). However, 40% of

universities have yet to form these committees, and there have been no specific guidelines for preventing cyberbullying in university settings. Therefore, the study suggests that developing and implementing policies on cyberbullying will help the university authorities understand the gravity of the problem and initiate prevention activities. Furthermore, anti-cyberbullying protocols and reporting processes would enable victims to more likely report their victimization and ensure their rights have been considered.

Conclusion

This study explores the prevalence and impacts of cyberbullying victimization and perpetration among university students in Bangladesh. The findings contribute to the knowledge of cyberbullying, its emotional and behavioral effects, and help-seeking behavior among cyberbullying victims. Overall, the results of this study indicate that about 13% of university students experienced cyberbullying in the last 12 months. Male students were more likely to be cyberbullied and engage in perpetration than female students. Findings also provide evidence that more extended internet use increased the chance of becoming a victim of cyberbullying. Despite its negative impacts, victims are pretty reluctant to disclose victimization to authorities or report incidents to the police; instead, they seek help from friends and family members. Due to the detrimental impacts and ubiquitous use of the internet at universities, this area of knowledge requires further study. Finally, this study provides recommendations for university authorities to establish and implement intervention efforts toward facing this ever-growing phenomenon. It may also help policymakers develop strategies and actions to prevent cyberbullying and establish effective victims' services.

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Data availability statement

The data are available from the corresponding author upon reasonable request.

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