Hate speech in social media: personal experiences and perceptions of university students in Bangladesh

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Abstract

Purpose – Social media (SM) is a new communication tool that substantially contribute to facilitating online hate speech (OHS). In emphasis of the question "what role can SM play in an individual's life?", this study aims to understand Bangladeshi university students' personal experiences and opinions of OHSs related to SM.

Design/methodology/approach – The authors used an online survey method to collect data and retrieved responses from 410 students. Mann–Whitney U test, Kruskal–Wallis test and Spearman's rank correlation analysis were used to test the hypotheses.

Findings – This study found that hate speech is a familiar term among students. Students' political views or opinions, religion and gender have become the most targeted instruments for OHSs. Comparing students' use of SM, the authors found that Facebook was the most used SM site to spread hate speech in Bangladesh. In terms of personal experiences, the findings indicated that 45.6% of students became victims of OHSs at least once or more times, and the majority of students tended to simply avoid OHSs. Another significant finding was that OHS has real-life effects on the students, resulting in various personal and psychological distress.

Originality/value – Although some research has been conducted on hate speech at the local level, to the best of the authors' knowledge, no study has focused on the student community. To the best of the authors' knowledge, this study is the first attempt in Bangladesh to focus on OHSs from a student's personal viewpoint.

Keywords Hate speech, Social media, University students, Hate crime, Online hate speech, Bangladesh

Paper type Research paper

Introduction

Hate speech on social media (SM) has become an increasing concern worldwide, particularly in the last decade. Like all other countries of the world, Bangladesh has witnessed several incidents of hate crimes based on online hate speech (OHS), such as the synchronized attack on Hindu communities, attacks on the Buddhist community and murder of secular bloggers.

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A noticeable number of people frequently suffer from online hate crimes because of their race, religion, sexuality, ethnicity, political identity, etc. Social turmoil and less online accountability have greatly exacerbated OHS in Bangladesh. Though the government has taken many initiatives and implemented the ICT act to prevent OHS, these laws also faced a great deal of backlash, as it was proven to be futile in preventing OHS.

Over the years, Bangladesh has faced numerous fatal incidents because OHS resurfaced through different SM platforms. On October 13, 2021, a Facebook video went viral by showing that the Holy Quran of Muslims was desecrated during Durga Puja (religious festival of Hindus) in Cumilla. This post triggered communal violence that resulted around seven people dead, more than hundreds injured and vandalism on numbers of Hindu temples during their religious festival (Guardian, 2021; Daily Star, 2021). A similar incident happened during 2012 in Ramu, Cox's Bazar, which was another brutal incident on religious minorities. This hate crime was triggered by a Facebook post on defaming the Holy Quran of Muslims, which was posted from a fake account (Ali, 2020; Daily Star, 2020). The households and temples of the Buddhist and Hindu people were torched and vandalized by religious fanatics including some temples that were more than 250 years old recognized as religious and cultural heritage (Reliefweb, 2012; Dhaka Tribune, 2018; Daily Star, 2020). Synchronized attacks on Hindu community in Pabna (Daily Star, 2013), Cumilla (Dhaka Tribune, 2020), Nasirnagar (Daily Sun, 2016) and Rangpur where one person was left dead (Daily Star, 2017) are all notable incidents where SM-driven hate speech resulted in fatal crimes.

Researchers have widely accepted and analyzed the relationship between SM and hate speech (Ring, 2013; Guiora and Park, 2017; Mathew *et al.*, 2019). Grounded by personal experiences, this paper seeks to find Bangladeshi students' insights into OHSs. Compared to other relevant research papers, to the best of the authors' knowledge, this study is one of the first in Bangladesh to focus on OHSs from a student's personal point of view.

Literature review

Internet and social media usage in Bangladesh

In Bangladesh, between January 2020 and January 2021, around nine million new SM users were added to the country's total sum as SM users cover 27.2% of the total population (DataPortal, 2021). Compared to other SM sites, Facebook users are dramatically in large numbers making, it the most used social networking site in Bangladesh. As of September 2021, around 84.03% of SM users are Facebook users where only 9.6% are YouTube, 3.21% Twitter and the other 2.58% use Pinterest, LinkedIn and Instagram (StatCounter, 2021). The gradual records of data easily suggest that SM are here to stay and flourish in this country as the users are welcoming this foreign software as a part of their daily life. These virtual genies are making it all possible from day to night. But the bigger scene is left unseen when these SM tools somewhat make their users addicted to these platforms without even realizing the consequences. In recent years, studies found that the young generation is becoming more and more addicted to SM that are causing mental breakdown, depression, sleep deprivation, lack of physical activities, anxiety and numbers of other psychological distress (Kuss and Griffiths, 2011; Eraslan-Capan, 2015; Al Mamun and Griffiths, 2019; Bhutkar *et al.*, 2021).

Online hate speech in social media

The prevalence of fastest growing SM has mixed history with human society. From "White-supremacist" to "Black lives matter" and from small talk to igniting political uprising, SM is playing an integral part in human lives. It has a great contribution to uprising social movement (Pang and Goh, 2016), political insurgence (Eltantaway and Wiest, 2011),

economic movement (DeLuca *et al.*, 2012), labor campaign (Wood and Pasquier, 2018) and collective actions against certain power (Tye *et al.*, 2018). As SM grew bigger, the amplitudes of SM diverge in a different perspective as it has become one of the biggest concerns in terms of its contribution to OHS. Using SM to spread hate thoughts, fake news and hate speech, online hate crime is relatively new with great impacts since the world is already facing the assignment of its corrosiveness. Costello *et al.* (2017) found that using social networking sites and online exposure to hate materials increase the chance of being the target of hate speech. The study of Hawdon *et al.* (2017) on young people from four different countries suggests that exposure to hate content in SM is a common case for youth, and it increases with age. Pacheco and Melhuish's (2018) study on New Zealanders revealed that one out of ten adults was targeted personally by OHS and three out of ten encountered hateful content online at least once a year. Their findings indicate that ethnic minority, nonheterosexual and disabled people are more likely to be the target of OHS, and online hate differs with age. A study in Portugal found that participants believe SM aids in spreading hate speech and somewhat normalizes it by most common practices such as comments, messaging, group invitation and sexting. (Santos *et al.*, 2020). Their study also found that students are more often targeted by older men, and offenders tend to be more aggressive because SM helps to protect anonymity. Usage of particular SM sites, spending more time online, online interactions, espousing political views online increase the chances of exposure to online hate (Costello *et al.*, 2020).

Hate speech in social media: Bangladesh scenario

Bangladesh has witnessed several fatal attacks on religious minorities and different individuals that were triggered by SM. Facebook has been used for spreading propaganda and religious hate speech that resulted in mayhem including deaths and vandalism (Ali, 2020). SM has proved to be an effective tool to spread extremist speeches and fake doctrine to trigger people into radicalized thoughts (Tanvir *et al.*, 2021). Though different studies in Bangladesh focused on the importance of detecting hate speech in SM (Hussain *et al.*, 2018; Ishmam and Sharmin, 2019; Das *et al.*, 2021; Romim *et al.*, 2021), contemporary rumors (Al-Zaman *et al.*, 2020), violence centering SM (Naher and Minar, 2018; Ali, 2020) and SM addictions (Al Mamun and Griffiths, 2019; Hassan *et al.*, 2020), this study concentrates the attention to users' understanding of OHS to find out the real situation of OHS in Bangladesh from individuals' perspectives.

Objectives

The key objective of the present study is to investigate university students' perceptions of how they come to know about hate speech and their overall experience and opinion on SM-related hate speech. The subsidiary objectives include, but are not limited:

- to study students' overall SM use and their familiarity with hate speech;
- to ascertain their perceptions of why hate speech spread on SM;
- to investigate their experiences of hate speech and its effects in their life;
- to identify the target groups of OHS based on their opinion; and
- to explore their courses of action against OHS.

Furthermore, this study examined the influence of students' demographic characteristics and self-reported duration of SM use on their perceptions of why hate speech spreads on SM. The relationship between students' spending time on SM and being the target of OHS was also analyzed to determine the real situation of OHS.

Methodology

A questionnaire-based online survey was used to collect data from students from different public and private universities in Bangladesh. Google Forms was used to build the questionnaire. Data were collected by sending the link to the questionnaire to the students mainly through messenger and posting it on the walls of major Facebook groups of university students. The authors targeted Facebook to distribute the questionnaire as it is one of the most widely used SM sites in Bangladesh (SatCounter, 2021).

To measure students' agreement with the perceptions of why hate speech spreads on SM, they were asked to rate each item on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A random sampling method was used to collect the data. The data collection process took nearly three months (from April to June 2021). During this time, 410 responses were collected and analyzed using international business machine statistical package for social sciences (SPSS) version 20. To obtain descriptive measures, the authors performed frequency counts, percentages, means and standard deviations.

To examine the influences of students' demographic characteristics and self-reported duration of SM use on their perceptions of why hate speech spreads on SM, we performed separate Mann–Whitney and Kruskal–Wallis nonparametric tests. The following null hypotheses were tested.

H1. There are no significant differences between students' perceptions on why hate speech spreads on SM in terms of their demographic characteristics, i.e. university type, gender, age, education level and religion.

H2. There are no significant differences between students' self-reported duration of SM use and their perceptions of why hate speech spreads on SM.

H3. There are no significant differences between students' frequency of being a target of OHS in terms of their demographic characteristics, that is, university type, gender, age, education level and religion.

Furthermore, to inspect the relationship between students' perceptions on why hate speech spreads on SM and their frequency of being a target of OHS; and students' self-reported duration of SM use and their frequency of being a target of OHS, Spearman's rho was used for measuring the correlation coefficient. It is a nonparametric test used to measure the relationship of ranked-ordered variables. In this measure, the value +1 denotes a perfect positive correlation where the value −1 means a perfect negative correlation. The following null hypotheses were tested:

H4. There are no significant relationships between students' perceptions on why hate speech spreads on SM and their frequency of being a target of OHS.

H5. There are no significant relationships between students' self-reported duration of SM use and their frequency of being targets of OHS.

A conceptual model has been developed to show the relationships between variables mentioned in the above hypotheses (Figure 1).

Major findings

A total of 410 students from different public and private universities in Bangladesh participated in this survey. Although there are 50 public and 107 private universities in Bangladesh (UGC, 2021), responses for this study were collected from the students of some top-ranked universities considering their teaching-learning quality and infrastructural facilities. Among them, we obtained the highest number of responses from the University of Dhaka (107, 26.1%) (Table 1).

Demographic information

Information about students' university type, gender, age, education level and religion was collected through the survey (Table 2). In the survey, the majority of the students participated from public universities (313, 76.3%); a nearly equal number of male (207, 50.5%) and female (203, 49.5%) students responded; most of the students were in 21–23 years age group (225, 54.9%); undergraduate-level students (313, 76.3%) had greater participation; and the highest number of students were Muslim (381, 92.9%). The "Religion" demography shows a huge difference among the number of participants. The possible reason for this can be that Bangladesh has the fifth largest Muslim population in the world, and the religion-based population ratio in this country is Muslim 89.1%, Hinduism 10.0% and the remaining 0.9% are some other religions including Christians and Buddhists (IES, 2021).

Students' overall social media use and their familiarity with hate speech

The majority of the students had been using SM for more than five years (272, 66.3%) (Figure 2), and almost all of them had a Facebook account (409, 99.8%), followed by a WhatsApp account (365, 89%) (Table 3).

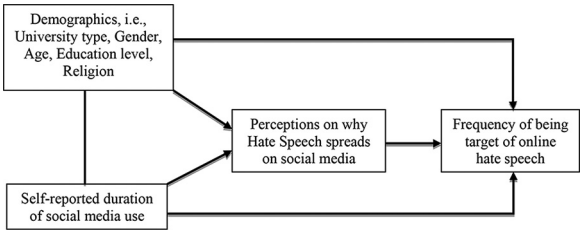

Figure 1. Conceptual model for students' perceptions on why hate speech (HS) spreads in SM and frequency of being target of OHS

University type	University name	Frequency	(%)
Public	University of Dhaka	107	26.1
	Noakhali S&T University	71	17.3
	University of Rajshahi	23	5.6
	Bangladesh University of Engineering and Technology	17	4.1
	Hajee Mohammad Danesh S&T University	16	3.9
	Jagannath University	15	3.7
	Shahjalal University of S&T	11	2.7
	Jahangirnagar University	7	1.7
	Bangladesh University of Professionals	4	1.0
	Khulna University	3	0.7
	Chittagong University	3	0.7
Private	East West University	30	7.3
	Bangladesh Army University of S&T	15	3.7
	North-South University	11	2.7
	Daffodil International University	7	1.7
	Ahsanullah University of S&T	6	1.5
	University of Asia Pacific	5	1.2
	BRAC University	4	1.0
Others	Other universities	55	13.5
Total		410	100.0

Note: S&T: Science and Technology

Table 1. Participating students from different universities ($N = 410$)

Table 2.
Demographic data of the students ($N = 410$)

Demographics	Category	Frequency	(%)
University type	Public	313	76.3
	Private	97	23.7
Gender	Male	207	50.5
	Female	203	49.5
Age group	18–20 years	37	9.0
	21–23 years	225	54.9
	24–26 years	127	31.0
	27 years or more	21	5.1
Education level	Undergraduate	313	76.3
	Postgraduate	97	23.7
Religion	Muslim	381	92.9
	Hindu	24	5.9
	Christian	2	0.5
	Buddhist	3	0.7

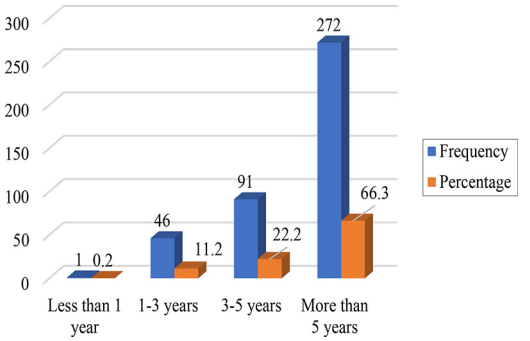

Figure 2.
Duration of SM use ($N = 410$)

Table 3.
SM sites used by the students ($N = 410$)

SM site	Yes	(%)	No	(%)	Total	Total %
Facebook	409	99.8	1	0.2	410	100
Instagram	286	69.8	124	30.2	410	100
YouTube	319	77.8	91	22.2	410	100
Twitter	138	33.7	272	66.3	410	100
LinkedIn	185	45.1	225	54.9	410	100
Tik-Tok	42	10.2	368	89.8	410	100
Skype	97	23.7	313	76.3	410	100
WhatsApp	365	89.0	45	11.0	410	100
Viber	62	15.1	348	84.9	410	100
Others	82	20.0	328	80.0	410	100

To understand students' purpose for using SM, responses were collected on a five-point Likert scale ranging from 1 – "Never" to 5 – "Always". According to Table 4, most students used SM to connect with friends and family (weighted mean (WM) 4.43 rank 1), current information and news (EM 4.43 rank 2) and for passing time (WM 4.20 rank 3).

Purpose of using SM	1	2	3	4	5	WM	Rank
To connect with f&f	1 (0.2%)	7 (1.7%)	74 (18.0%)	126 (30.7%)	202 (49.3%)	4.43	1
For current info and news	1 (0.2%)	13 (3.2%)	64 (15.6%)	131 (32.0%)	201 (49.0%)	4.43	2
For passing time	7 (1.7%)	26 (6.3%)	101 (24.6%)	127 (31.0%)	149 (36.3%)	4.20	3
For academic purposes	10 (2.4%)	26 (6.3%)	102 (24.9%)	120 (29.3%)	152 (37.1%)	4.20	4
For entertainment	17 (4.1%)	25 (6.1%)	103 (25.1%)	133 (32.4%)	132 (32.2%)	4.13	5
To support online business	83 (20.2%)	81 (19.8%)	101 (24.6%)	75 (18.3%)	70 (17.1%)	3.56	6
For writing post/blog/diary	46 (11.2%)	101 (24.6%)	165 (40.2%)	63 (15.4%)	35 (8.5%)	3.26	7
For making new friends	54 (13.2%)	124 (30.2%)	140 (34.1%)	57 (13.9%)	35 (8.5%)	3.20	8

Notes: 1 = never; 2 = rarely; 3 = sometimes; 4 = frequently; 5 = very frequently; WM was calculated using SPSS version 20 (weight cases, then weight cases by the selected file and then analyze each item individually); f&f = friends and family

Table 4.
Purpose of using SM ($N = 410$)

As shown in Figure 3, 180 students were familiar with the concept "Hate Speech" and 84 of them had good knowledge about it. However, 43 students had never heard of this term before.

Spread of hate speech on social media (sources and reasons)

Figure 4 illustrates the students' opinions about the sources from which OHS spreads. Most of the students opined that hate speech spreads most from fake profiles (288, 70.2%), whereas 282 (68.8%) students thought that the source was the comment sections.

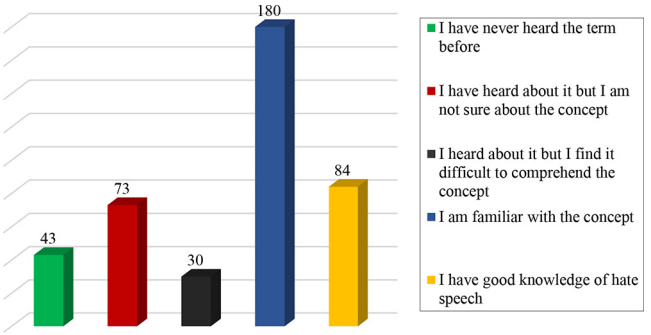

Figure 3.
Students' familiarity with "hate speech" ($N = 410$)

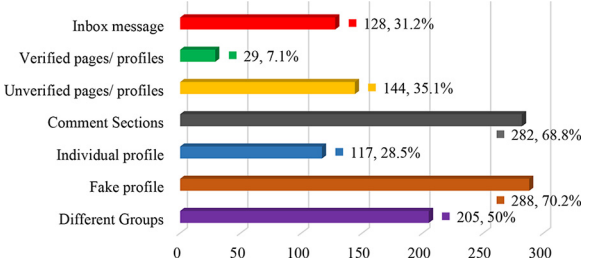

Figure 4.
Sources of spreading OHS ($N = 410$)

Students were asked to rate their agreement with statements that might reflect their perceptions of why SM helps in spreading hate speech on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). As shown in Table 5, most of the students think that SM spreads hate speech because "it is easy to viral a content in SM," followed by "it is easy to target the victim on SM." Both statements had the highest mean values of 3.72 and 3.69. In fact, all students agreed with all statements as their ratings were more than the average mean of 3.

Personal experiences of online hate speech and its effects

Students were asked whether they became targets or victims of the OHS. Most of them (223, 54.4%) had never been victims of OHS. The rests (187, 45.6%) became victims either once or more than once in their lives. Among these 187 students, 45 (11%) became victims once, 106 (25.9%) became victims a few times (two—three), 11 (2.7%) became victims a few times more (four—five) and the remaining 25 (6.1%) became victims of OHSs many times (more than five) (Table 6).

Table 7 shows the SM sites used to harass the students. Among the 187 students, majority were harassed on Facebook (178, 95.2%) and YouTube (24, 12.8%). Table 8 shows that most of the students were targeted for their political views (59, 31.6%), religion (56, 29.9%), gender (56, 29.9%) and physical appearance (48, 25.7%). After being harassed, most students suffered from psychological distress (87, 46.5%), low self-esteem (67, 35.8%) and felt isolated (57, 30.5%) (Table 9).

Target group of online hate speech

Students (410) were asked to mention the groups of people who were more harassed or targeted by OHS. According to the findings, women (285, 69.5%), public figures/celebrities (267, 65.1%) and religious minorities (240, 58.5%) were the most vulnerable groups to be targeted by OHSs (Table 10).

Table 5.
Perceptions on why hate speech spread on SM ($N = 410$)

Statements	Mean	Std. deviation
SM is easy to use	3.65	1.422
It is easy to share news on SM	3.67	1.387
It is easy to target the victim on SM	3.69	1.339
It is easy to hide the identity of fraud in SM	3.60	1.286
It is easy to reach a large audience on SM	3.67	1.342
It is easy to viral content on SM	3.72	1.411
It is easy to gain trust on SM	3.20	1.147

Table 6.
Frequency of being target of OHS SM ($N = 410$)

Target frequency	Male	(%)	Female	(%)	Total	Total %
Never	113	27.6	110	26.8	223	54.4
Once	20	4.9	25	6.1	45	11.0
Few times (2–3)	54	13.2	52	12.7	106	25.9
A few times more (4–5)	5	1.2	6	1.5	11	2.7
Many times (more than 5)	15	3.7	10	2.4	25	6.1
Total	207	50.5	203	49.5	410	100.0

Steps taken in response to online hate speech

Students were asked to mention whether they had taken any step/s in response to an OHS (either being a victim or out of social responsibility). As shown in Table 11, most of the students replied: "I simply avoided the post" (226, 55.1%), followed by "I blocked/unfriended the account or page" (213, 52.0%) and "I unfollowed/unsubscribed the account or page" (206, 50.2%), which spread hate speech.

SM sites used for harassment	Yes	(%)	No	(%)	Total	Total %
Facebook	178	95.2	9	4.8	187	100
Instagram	15	8.0	172	92.0	187	100
YouTube	24	12.8	163	87.2	187	100
Twitter	9	4.8	178	95.2	187	100
Tik-Tok	14	7.5	173	92.5	187	100
Skype	2	1.1	185	98.9	187	100
WhatsApp	11	5.9	176	94.1	187	100
Viber	1	0.5	186	99.5	187	100
Others	5	2.7	182	97.3	187	100

Table 7. SM sites used for harassment ($N = 187$)

Reasons for being targeted	Yes	(%)	No	(%)	Total	Total %
Religion	56	29.9	131	70.1	187	100
Gender	56	29.9	131	70.1	187	100
Sexual orientation	33	17.6	154	82.4	187	100
Ethnicity	16	8.6	171	91.4	187	100
Skin color	24	12.8	163	87.2	187	100
Nationality	23	12.3	164	87.7	187	100
Physical disability	11	5.9	176	94.1	187	100
Political view	59	31.6	128	68.4	187	100
Appearance	48	25.7	139	74.3	187	100
For different/personal opinion	22	11.8	165	88.2	187	100
Age	4	2.1	183	97.9	187	100
For supporting specific group	2	1.1	185	98.9	187	100
Not interested to share	2	1.1	185	98.9	187	100
Others	4	2.1	183	97.9	187	100

Table 8. Reasons for being targeted by OHS ($N = 187$)

After-harassment effects	Yes	(%)	No	(%)	Total	Total %
Psychological distress	87	46.5	100	53.5	187	100
Felt isolated	57	30.5	130	69.5	187	100
Physical violence	13	7.0	174	93.0	187	100
Low self-esteem	67	35.8	120	64.2	187	100
Fear of using SM again	43	23.0	144	77.0	187	100
Felt threatened	37	19.8	150	80.2	187	100
Locked my profile	45	24.1	142	75.9	187	100
Deactivated my account	38	20.3	149	79.7	187	100
Took action against it	3	1.6	184	98.4	187	100
Did not affect	10	5.3	177	94.7	187	100
Not interested to share	1	0.5	186	99.5	187	100

Table 9. Effects of being harassed by OHS ($N = 187$)

Table 10.
Group of people targeted/harassed by OHS ($N = 410$)

Group of people	Yes	(%)	No	(%)	Total	Total %
Religious minorities	240	58.5	170	41.5	410	100
Ethnic minorities	110	26.8	300	73.2	410	100
Women	285	69.5	125	30.5	410	100
Disabled people	57	13.9	353	86.1	410	100
Poor people	54	13.2	356	86.8	410	100
Politicians	145	35.4	265	64.6	410	100
Public figures/celebrities	267	65.1	143	34.9	410	100
Refugees	49	12.0	361	88.0	410	100
Different ideology holder	2	0.5	408	99.5	410	100
Can be anyone	3	0.7	407	99.3	410	100
Specific target people	2	0.5	408	99.5	410	100
Not sure	2	0.5	408	99.5	410	100

Table 11.
Steps were taken in response to OHS ($N = 410$)

Steps taken in response to hate speech	Yes	(%)	No	(%)	Total	Total %
I simply avoided the post	226	55.1	184	44.9	410	100
I unfollowed/unsubscribed the account or page	206	50.2	204	49.8	410	100
I blocked/ unfriended the account or page	213	52.0	197	48.0	410	100
I snoozed the account for some days	29	7.1	381	92.9	410	100
I reported the account or page from my SM profile	187	45.6	223	54.4	410	100
I reported it to the local authority	34	8.3	376	91.7	410	100
I shared it with my friends so that they can report it	120	29.3	290	70.7	410	100
I posted about it on my SM timeline	42	10.2	368	89.8	410	100
I encouraged victim/s to report hate speech	52	12.7	358	87.3	410	100
I posted positive message on SM against it	65	15.9	345	84.1	410	100
Others	3	0.7	407	99.3	410	100

Hypotheses testing

Mann–Whitney U tests were conducted to examine the differences in students' perceptions of why hate speech spreads on SM in terms of their university type, gender and education level. On the other hand, Kruskal–Wallis tests were conducted to see the differences based on their age groups, religion and duration of SM use.

The Mann–Whitney U test results showed that there is no significant difference between public and private university students' perceptions on why hate speech spreads in SM, except in one case, i.e. "It is easy to hide the identity of fraud in SM" (public, mean rank = 212.26; private, mean rank = 183.68), U = 13064.000, W = 17817.000, Z= −2.155, $p = 0.031$. The mean ranks of public university students were higher than the private university students, meaning that public university students were more in agreement with the given statements than private university students.

Similarly, the Mann–Whitney U test results in Table 12 found no significant differences between male and female students' perceptions on why hate speech spreads in SM, except in three cases, i.e. "It is easy to hide the identity of fraud in SM," "It easy to reach a large audience in SM" and "It is easy to viral a content in SM." In these cases, the mean ranks of female students were higher than the male ones suggesting that the female students are more in agreement with the reasons than the male groups.

Again, the Mann–Whitney U test result found no significant differences between undergraduate and graduate students' perceptions on why hate speech spreads in SM. Kruskal–Wallis tests were conducted to see the differences based on the student's age groups, religion and duration of SM use. The test results found no significant differences among students in case of their age groups and religious identity concerning their perceptions on why hate speech spreads in SM.

The results of the statistical tests performed above indicate that there were no significant differences among students' perceptions of why hate speech spreads on SM in terms of their demographic variables, that is, university type, gender, education level, age group and religion, except in very few cases. Thus, the null hypothesis *H1* is accepted for most demographic characteristics and perceptions.

The results of the Kruskal–Wallis tests showed in Table 13 found that there are significant differences among students' perceptions on why hate speech spreads in SM in terms of their duration of using SM, except in one case, i.e. "It is easy to gain trust on social media." Mean rank of the "3–5 years" age group was higher than the other groups suggesting that the students using SM for three—five years are more in agreement with the reasons why hate speech spreads in SM than the other three groups of students. However, the null hypothesis *H2* is rejected for six out of seven reasons but accepted for only one reason.

Similarly, to test the third hypothesis, Mann–Whitney U tests were conducted to examine the differences in students' frequency of being targets of OHS in terms of university type, gender and education level. On the other hand, Kruskal–Wallis tests were conducted to see

Reasons	Mann–Whitney U	Wilcoxon Z W		Asymp. Sig. (two-tailed)
SM is easy to use	19689.000	41217.000	−1.159	0.246
It is easy to share news on SM	19859.500	41387.500	−1.014	0.311
It is easy to target the victim on SM	19386.000	40914.000	−1.417	0.157
It is easy to hide the identity of fraud in SM	18092.000	39620.000	−2.526	0.012*
It easy to reach a large audience in SM	18105.000	39633.000	−2.545	0.011*
It is easy to viral a content in SM	17675.500	39203.500	−2.917	0.004**
It is easy to gain trust on SM	19463.000	40991.000	−1.337	0.181

Notes: Significant at *$p \leq 0.05$; and **$p \leq 0.01$

Table 12. Differences in students' perceptions on why HS spreads in SM by gender (Mann–Whitney U test)

Reasons	Chi-Square	Df	Asymp. sig.
SM is easy to use	11.880	3	0.008**
It is easy to share news on SM	11.725	3	0.008**
It is easy to target the victim on SM	16.976	3	0.001***
It is easy to hide the identity of fraud in SM	16.258	3	0.001***
It is easy to reach a large audience in SM	9.834	3	0.020*
It is easy to viral content on SM	10.870	3	0.012*
It is easy to gain trust on SM	2.142	3	0.543

Notes: Significant at *$p \leq 0.05$; **$p \leq 0.01$, and ***$p \leq 0.001$

Table 13. Differences in students' perceptions on why HS spreads in SM by the duration of SM use (Kruskal–Wallis test)

the differences based on their age groups and religion. The test results found no significant differences in students' duration of being the target of OHS in terms of university type, gender, education level and religion. Significant differences were found in the case of their age groups (18–20 years, mean rank = 233.11; 21–23 years, mean rank = 203.29; 24–26 years, mean rank = 192.81 and 27 years or more, mean rank = 257.29), chi-square = 9.208, df = 3 and asymp. sig. = 0.027. The mean rank of "27 years or more" age group was higher than other groups, meaning that students of this age group were targeted by OHS more than the students of other age groups. However, the null hypothesis *H3* is accepted for students' university type, gender, education level and religion but rejected for their age groups.

Table 14 shows the correlation matrix to illustrate the relationship between students' perceptions of why hate speech spreads on SM and their frequency of being targets of OHS. The results show that there are positive and negative correlations among students' perceptions and frequency of being the target of OHS, but none of them denotes a significant correlation. Thus, the null hypothesis *H4* is accepted to conclude that there are no significant relationships between students' perceptions of why hate speech spreads on SM and their frequency of being targets of OHSs.

Similarly, Table 15 shows the correlation matrix to show the relationship between students' self-reported duration of SM use and their frequency of being target of OHS. The results present that there exists a positive correlation between students' self-reported duration of SM use and their frequency of being target of OHS, but none of them denotes a significant correlation. Thus, the null hypothesis *H5* is accepted to conclude that there are no significant relationships between students' self-reported duration of SM use and their frequency of being target of OHS.

Discussions

A total of 410 students from different public and private universities in Bangladesh responded to the study regarding their personal experiences and perceptions of OHSs. The findings reported that the majority of the students used SM for five or more years with the purpose of connecting with their friends and family, accessing current information and news and passing their leisure time. Facebook has been found to be the most used SM platform, and most students are familiar with hate speech. Different fake profiles and comment sections on SM are responsible for spreading these kinds of hate speech.

Among the students, 45.6% personally experienced hate speech at least once or more. It is a matter of concern that students who had experienced hate speech were harassed mostly on Facebook (95.2%). This finding is logical as Facebook is the most widely used SM platform among public and private university students in Bangladesh (Kumar *et al.*, 2019). In most cases, students suffer from online harassment because of their different political views, religions and gender. Additionally, they mentioned that women, public figures and religious minorities are the most frequent target groups of OHSs. This finding is in line with that of Pacheco and Melhuish (2018) who found that religion and political views were the two frequent reasons for New Zealand's young adults to personally be targeted by the OHS. Furthermore, this finding strongly supports the present scenario in Bangladesh, where hate crimes and real-life violence occur based on SM posts (Naher and Minar, 2018).

Regarding their courses of action against hate speech, the largest number of students did not take any steps when they encountered them. The possible reasons for this could be their fear of being targeted by the culprit if they take any action. This study revealed significant observations based on the hypotheses formulated earlier. It was found that there were no significant differences among students' perceptions of why hate speech spreads on SM in terms of their demographic characteristics, except in very few cases. In contrast, significant

Table 14. Cross correlation between students' perceptions on why hate speech spreads on SM and frequency of being target of OHS (Spearman's rank correlation analysis)

Perceptions on why hate speech spreads on SM and frequency of being target of OHS	1	2	3	4	5	6	7	8
Spearman's rho								
1. SM is easy to use								
Correlation coefficient	1.000	0.833**	0.730**	0.668**	0.740**	0.732**	0.378**	0.023
sig. (two-tailed)	–	0.000	0.000	0.000	0.000	0.000	0.000	0.635
2. It is easy to share news on SM								
Correlation coefficient	0.833**	1.000	0.726**	0.660**	0.733**	0.771**	0.370**	−0.030
sig. (two-tailed)	0.000	–	0.000	0.000	0.000	0.000	0.000	0.538
3. It is easy to target the victim on SM								
Correlation coefficient	0.730**	0.726**	1.000	0.724**	0.729**	0.754**	0.427**	0.044
sig. (two-tailed)	0.000	0.000	–	0.000	0.000	0.000	0.000	0.379
4. It is easy to hide the identity of fraud in SM								
Correlation coefficient	0.668**	0.660**	0.724**	1.000	0.705**	0.699**	0.454**	0.011
sig. (two-tailed)	0.000	0.000	0.000	–	0.000	0.000	0.000	0.829
5. It easy to reach a large audience in SM								
Correlation coefficient	0.740**	0.733**	0.729**	0.705**	1.000	0.807**	0.453**	−0.012
sig. (two-tailed)	0.000	0.000	0.000	0.000	–	0.000	0.000	0.803
6. It is easy to viral a content in SM								
Correlation coefficient	0.732**	0.771**	0.754**	0.699**	0.807**	1.000	0.430**	0.010
sig. (two-tailed)	0.000	0.000	0.000	0.000	0.000	–	0.000	0.843
7. It is easy to gain trust on SM								
Correlation coefficient	0.378**	0.370**	0.427**	0.454**	0.453**	0.430**	1.000	−0.033
sig. (two-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	–	0.509
8. Frequency of being target of OHS								
Correlation coefficient	0.023	−0.030	0.044	0.011	−0.012	0.010	−0.033	1.000
sig. (two-tailed)	0.635	0.538	0.379	0.829	0.803	0.843	0.509	–

Notes: Significant at *$p \leq 0.05$; and **$p \leq 0.01$ two-tailed

differences were found among the students' perceptions of why hate speech spreads on SM in terms of their duration of using SM, except in one case. In addition, this study found no significant differences in students' frequency of being the target of OHSs in terms of their demographic characteristics, except for their age groups. This finding clearly indicates that students, as well as people of all ages, might be affected by OHS any time.

The findings of the current study also revealed that there are no significant relationships between students' perceptions of why hate speech spreads on SM and their frequency of being the target of OHS nor between students' self-reported duration of SM use and their frequency of being the target of OHS. These results suggest that the frequency of being the target of hate speech does not affect students' perceptions, and similarly, the duration of SM use has no impact on students' frequency of being a target of OHS.

Recommendations, implication and conclusion

This study seeks to determine the actual reality of students' thoughts, reactions and opinions on OHS. The authors' recommendations include, but are not limited to, the relationship between online addiction and hate speech, media literacy to combat hate speech and the actual scenario of SM in terms of cyberhate. This study mainly focused only on the personal experiences of student community; future research can emphasize on certain groups, e.g. religious and ethnic minorities, gender, politicians and/or celebrities to find insights on OHS in terms of their objectives and influence on specific people. Research on religious minorities and ethnic society can bring out significant results as it is already proven that they are a major target group of OHS. Additional focus of this paper on user's preliminary thoughts about the possible solutions to minimize OHS can help further studies to inspect on a broader scale and search for a solution, like it is found that organized counter speech may be used as one of the powerful solutions against online hate (Garland *et al.*, 2020).

The design of the questionnaire for this study was limited to a certain age group (18–28), which indicates that the sample was restricted in terms of age. Future studies can expand the age group to find better insights since a great number of teenagers (14–18) are SM users in Bangladesh. The survey of this study was conducted entirely online due to the COVID-19 lockdown; therefore, the variance of the response was partial as some of the university responses were greater than others. Despite these facts, this study holds important values and insights on OHS, as to the bet of the authors' knowledge, it is the first study in Bangladesh that focused on OHS from students' perspectives. Although the sample size was small ($N = 410$) compared to the total number of students from the participating universities, the random sampling used in this study can generalize the actual situation of students' experience and exposure to OHS.

However, this study can surely contribute to the existing knowledge areas on this topic. The crucial value of this study lies in helping people to become aware or have knowledge on

Table 15.
Cross correlation between self-reported duration of SM use and frequency of being target of OHS (Spearman's rank correlation analysis)

Duration of SM use and frequency of being target of OHS	Duration of SM use	frequency of being target of OHS
Spearman's rho		
Duration of SM use		
Correlation coefficient	1.000	0.092
sig. (2-tailed)	–	0.063
Frequency of being target of OHS		
Correlation coefficient	0.092	1.000
sig. (2-tailed)	0.063	–

hate speech as SM users. This study can help the policymakers in Bangladesh in terms of analyzing user's viewpoints on hate speech and take necessary actions against OHS. Though the relationship between users and SM has been much analyzed, the contribution of SM in spreading hate speech opens the dark purpose of online world, which is shown by this research and can contribute to the existing knowledge areas of OHS significantly. The findings of the present study will open doors for the researchers to carry out additional research. Studies can also be carried out to investigate how the Bangladesh's digital security act contributes to combating OHS.

References

Al Mamun, M.A. and Griffiths, M.D. (2019), "The association between Facebook addiction and depression: a pilot survey study among Bangladeshi students", *Psychiatry Research*, Vol. 271, pp. 628-633.

Ali, M.S. (2020), "Uses of Facebook to accelerate violence and its impact in Bangladesh", *Global Media Journal*, Vol. 18 No. 36, pp. 1F-5F.

Al-Zaman, M., Sultana, M., Sultana Ahona, K.T., Sife, S.A., Akbar, M. and Sarkar, N. (2020), "Social media rumors in Bangladesh", *Journal of Information Science Theory and Practice*, Vol. 8 No. 3, pp. 77-90.

Bhutkar, G., Raghvani, V. and Juikar, S. (2021), "User survey about exposure of hate speech among Instagram users in India", *International Journal of Computer Applications*, Vol. 975, p. 8887.

Costello, M., Hawdon, J. and Ratliff, T.N. (2017), "Confronting online extremism: the effect of self-help, collective efficacy, and guardianship on being a target for hate speech", *Social Science Computer Review*, Vol. 35 No. 5, pp. 587-605.

Costello, M., Barrett-Fox, R., Bernatzky, C., Hawdon, J. and Mendes, K. (2020), "Predictors of viewing online extremism among America's youth", *Youth and Society*, Vol. 52 No. 5, pp. 710-727.

Daily Star (2013), "Hindus attacked in Pabna", available at: https://www.thedailystar.net/news/hindus-attacked-in-pabna (accessed 8 August 2021).

Daily Star (2017), "Mayhem over Facebook post", available at: https://www.thedailystar.net/frontpage/mayhem-over-facebook-post-1489402 (accessed 8 August 2021).

Daily Star (2020), "Eight years of Ramu attack: Buddhists still wait for justice", available at: https://www.thedailystar.net/backpage/news/eight-years-ramu-attack-buddhists-still-wait-justice-1969173 (accessed 8 August 2021).

Daily Star (2021), "Communal attacks during Durga puja: HC asks for judicial probes in 6 districts", available at: https://www.thedailystar.net/news/bangladesh/crime-justice/news/communal-attacks-during-durga-puja-hc-asks-judicial-probes-6-districts-2208451 (accessed 14 February 2022).

Daily Sun (2016), "B'baria temples attacked over Facebook post", available at: https://www.daily-sun.com/post/179704/Bbaria-temples-attacked-over-Facebook-post (accessed 9 August 2021).

Das, A.K., Al Asif, A., Paul, A. and Hossain, M.N. (2021), "Bangla hate speech detection on social media using attention-based recurrent neural network", *Journal of Intelligent Systems*, Vol. 30 No. 1, pp. 578-591.

DataPortal (2021), "Digital 2021: Bangladesh", available at: https://datareportal.com/reports/digital-2021-bangladesh?rq=bangladesh (accessed 9 August 2021).

DeLuca, K.M., Lawson, S. and Sun, Y. (2012), "Occupy wall street on the public screens of social media: the many framings of the birth of a protest movement", *Communication, Culture and Critique*, Vol. 5 No. 4, pp. 483-509.

Dhaka Tribune (2018), "Six years of Ramu attack: no justice for the victims", available at: https://www.dhakatribune.com/bangladesh/nation/2018/09/30/seven-years-of-ramu-attack-no-justice-for-the-victims (accessed 8 August 2021).

Dhaka Tribune (2020), "Hindu households vandalized, torched in Comilla", available at: https://www.dhakatribune.com/bangladesh/nation/2020/11/01/hindu-households-vandalized-torched-for-showing-support-to-france (accessed 10 August 2021).

Eltantaway, N. and Wiest, J.B. (2011), "The Arab spring social media in the Egyptian revolution: reconsidering resource mobilization theory", *International Journal of Communication*, Vol. 5, pp. 1207-1224.

Eraslan-Capan, B. (2015), "Interpersonal sensitivity and problematic Facebook use in Turkish university students", *The Anthropologist*, Vol. 21 No. 3, pp. 395-403.

Garland, J., Ghazi-Zahedi, K., Young, J.G., Hébert-Dufresne, L. and Galesic, M. (2020), "Countering hate on social media: large scale classification of hate and counter speech", *arXiv Preprint arXiv*, :*2006.01974*.

Guardian (2021), "Seven dead after violence erupts during Hindu festival in Bangladesh", available at: https://www.theguardian.com/world/2021/oct/16/four-die-after-violence-erupts-at-hindu-festival-in-bangladesh (accessed 14 February 2022).

Guiora, A. and Park, E.A. (2017), "Hate speech on social media", *Philosophia*, Vol. 45 No. 3, pp. 957-971.

Hassan, T., Alam, M.M., Wahab, A. and Hawlader, M.D. (2020), "Prevalence and associated factors of internet addiction among young adults in Bangladesh", *Journal of the Egyptian Public Health Association*, Vol. 95 No. 1, pp. 1-8.

Hawdon, J., Oksanen, A. and Räsänen, P. (2017), "Exposure to online hate in four nations: a cross-national consideration", *Deviant Behavior*, Vol. 38 No. 3, pp. 254-266.

Hussain, M.G., Al Mahmud, T. and Akthar, W. (2018), "An approach to detect abusive Bangla text", *in 2018 International Conference on Innovation in Engineering and Technology (ICIET)*, IEEE, pp. 1-5.

IES (2021), "The cultural atlas", available at: https://culturalatlas.sbs.com.au/bangladeshi-culture/bangladeshi-culture-religion#bangladeshi-culture-religion (accessed 10 August 2020).

Ishmam, A.M. and Sharmin, S. (2019), "Hateful speech detection in public Facebook pages for the Bengali language", *in 2019 18th IEEE International Conference On Machine Learning And Applications (ICMLA)*, IEEE, pp. 555-560.

Kumar, B., Banik, P. and Islam, M.A. (2019), "Social network, Facebook use and loneliness: a comparative analysis between public and private university students in Bangladesh", *International Journal of Psychological and Brain Sciences*, Vol. 4 No. 2, p. 20.

Kuss, D.J. and Griffiths, M.D. (2011), "Online social networking and addiction – a review of the psychological literature", *International Journal of Environmental Research and Public Health*, Vol. 8 No. 9, pp. 3528-3552.

Mathew, B., Dutt, R., Goyal, P. and Mukherjee, A. (2019), "Spread of hate speech in online social media", *in Proceedings of the 10th ACM conference on web science*, pp. 173-182.

Naher, J. and Minar, M.R. (2018), "Impact of social media posts in real life violence: a case study in Bangladesh", *arXiv Preprint arXiv*, :*1812.08660*.

Pacheco, E. and Melhuish, N. (2018), "Online hate speech: a survey on personal experiences and exposure among adult New Zealanders", available at: SSRN3272148.

Pang, N. and Goh, D.P.C. (2016), "Are well here for the same purposes? Social media and individualized collective action", *Online Information Review*, Vol. 40 No. 4, pp. 544-559.

Reliefweb (2012), "24 Buddhist and Hindu temples burnt in Bangladesh – India and UN urged to intervene", available at: https://reliefweb.int/report/bangladesh/24-buddhist-and-hindu-temples-burnt-bangladesh-india-and-un-urged-intervene (accessed 8 August 2021).

Ring, C.E. (2013), "Hate speech in social media: an exploration of the problem and its proposed solutions", doctoral dissertation, University of Colorado, Boulder.

Romim, N., Ahmed, M., Talukder, H. and Islam, M.S. (2021), "Hate speech detection in the Bengali language: a dataset and its baseline evaluation", in *Proceedings of International Joint Conference on Advances in Computational Intelligence*, Springer, Singapore, pp. 457-468.

Santos, S., Amaral, I. and Simões, R.B. (2020), "Hate speech in social media: perceptions and attitudes of higher education students in Portugal", *in Proceedings of INTED 2020 Conference 2nd-4th March 2020*, IATED, pp. 5681-5686.

StatCounter (2021), "Social media stats Bangladesh – September 2021", available at: https://gs.statcounter.com/social-media-stats/all/bangladesh (accessed 10 August 2021).

Tanvir, S., Matiur, M. and Hossain, F. (2021), "Role of social media in spreading violent extremism in Bangladesh", available at: SSRN3908734.

Tye, M., Leong, C.F., Tan, B. and Khoo, Y.H. (2018), "Social media for empowerment in social movements: the case of Malaysia's grassroots activism", *Communications of the Association for Information Systems*, Vol. 42 No. 1, pp. 408-430.

University Grants Commission (2021), "List of universities", available at: www.ugc-universities.gov.bd (accessed 15 August 2021).

Wood, A. and Pasquier, V. (2018), "The power of social media as a labor campaigning tool: lessons from our Walmart and the fight for 15.ETUI policy brief: European economic, employment and social policy", available at: www.etui.org/Publications2/Policy-Briefs/European-Economic-Employment-and-Social-Policy/The-power-of-social-media-as-a-labour-campaigning-tool-lessons-from-OUR-Walmart-and-the-Fight-for-15#

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