

Cyber Bullying and Its Relation to Suicidal Ideation in Young Adults

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ABSTRACT

Cyberbullying has been linked to Suicidal Ideation in many studies (Hinduja & Patchin, 2010^[1]; Brailovskaia et al., 2018^[2]; Peng et al., 2019^[3]), however, not many research papers are found studying University students in India. In this cross-sectional study, 212 university students between the age range of 18 to 30 years old were studied for their experience with Cyberbullying, as both victims and offenders, and its connection to their level of Suicidal Ideation. The study measured age and gender as covariates and demographic factors such as religion, educational qualification and relationship status. A positive correlation was found between Cyberbullying and Suicidal Ideation, and a gender difference was noted in the scores for Suicidal Ideation.

Keywords: *Cyber Psychology, Suicidal Ideation, Cyberbullying, demographic variables and College students*

Cyber bullying is a form of bullying that uses technological devices to target and harm the victim psychologically, emotionally and behaviorally. Cyberbullying is defined as ‘wilful and repeated harm inflicted through the use of computers, cell phones and other electronic devices’ (Patchin and Hinduja, 2006^[4]; Hinduja & Patchin, 2010^[5]). It is a serious attack on an individual’s social, psychological, emotional, physical and behavioural stability and can lead to the person suffering in each of these factors. Cyber bullying is very similar to traditional bullying, but it uses a digital channel to victimise the targeted recipient. Ways someone can harm a victim through cyberbullying includes though insults, threats and offensive text messages and emails, exchange and spread of private content, spreading rumours, etc. (Martínez-Monteagudo, Delgado, Díaz-Herrero & García-Fernández, 2020)^[6]. Cyberbullying and traditional bullying have very similar features and factors which can be divided into two types -verbal and relational aggressive behaviour; but the key difference is recognized in the physical characteristic. For example- traditional bullying occurs using a set location, time and might include physical abuse. However, both cause negative psychological and psychosocial outcomes. (Waasdorp & Bradshaw, 2015).^[7]

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According to a recent global survey by Microsoft, India ranks 3rd with the most cyber bullying rate in which almost 53% of youth in India have experienced cyber bullying. (Sathyanarayana Rao, Bansal & Chandran, 2021)^[8] The purpose of cyber bully is to emotionally and psychologically target the cyber victim in a way that does not require direct face-to-face communication and contact. The need for anonymity is usually found in the cyber bully as the perpetrator would feel less remorse to bully the victim (Peebles, 2014)^[9] and bad experiences and lack of parental alienation are also factors in the cyber victims. (Mitchell, Ybarra & Finkelhor, 2007).^[10]

Cyber bullying has a major effect on the psychology of university students including low self-esteem, anger, helplessness, sleep disorders and concentration problems that affect their academic performance (Faucher, Jackson & Cassidy, 2014^[11]; Jenaro et al., 2017^[12]; Schenk and Fremouw, 2012^[13]) and even includes suicidal ideation, delinquency and psychological distress (Kim, Kimber, Boyle & Georgiades, 2018)^[14] and depression (Martínez-Monteagudo, Delgado, Díaz-Herrero & García-Fernández, 2020)^[15].

Objective

1. To study cyber bullying and its correlation with suicidal ideation.
2. To find the gender difference between males and females for Suicidal Ideation.
3. To record demographic factors associated with cyber bullying and the participants.

Purpose of this study

This study is required for better understanding and analysis of cyberbullying, looking at the effect on the suicidal ideation and mental health of university students, it can be used to spread awareness about the psychological impact cyberbullying has on a young adult, and is generalizable to a population of young adults between ages 18-30 years of age. The study can be used to measure the level of exposure of cyberbullying that the current generation of young adults face and how this can influence their desire to live or function normally. This study is also useful in understanding the gender differences found in the severity of suicidal ideation in both men and women, which can be used for further research on the gender and social norms which influence the severity of suicidal ideation in men and women.

REVIEW OF LITERATURE

Traditional bullying is defined as aggression that showcases behavior that ‘is intended to harm or disturb’, ‘occurs repeated over time’ and has ‘an imbalance of power, with a more powerful person or group attacking a less powerful one’ (Nansel et al., 2001)^[16]. It includes three main types of behaviour, one that is directed to harm others and is done more than once, as well as the power of the victim and victimiser. However, traditional bullying has evolved over time with the advancement of technology to incorporate a new form of bullying, one that requires very little overt aggression, an “aggression that is intended to harm others physically” (Crick et al., 1997)^[17] which uses physically abusive methods to harm the victim, but rather relational aggression which seeks to harm the victim by damaging their social circles and relationships. This new way of bullying which uses technology to target the victim has been defined as cyberbullying.

Cyberbullying

According to The Global Youth Online Behaviour Survey by Microsoft^[18], India is the 3rd most prominently rampant in cyberbullying in the world, in which 53% were underage responders who admitted to being cyberbullied.

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Cyber bullying can be described as 'wilful and repeated harm inflicted through the use of computers, cell phones and other electronic devices' (Hinduja and Patchin, 2006) [19]. It involves the use of technology to intentionally inflict harm (whether this be psychological, emotional, physical or social) on the victim with the intention to do so more than once. This can lead to negative effects on the individual's social, psychological, emotional, physical and behavioural stability and can lead to the person suffering in each of these factors. (Patchin and Hinduja, 2006) [20].

Ways someone can harm a victim through cyberbullying includes through insults, threats and offensive text messages and emails, exchange and spread of private content, spreading rumours, etc. (Martínez-Monteagudo, Delgado, Díaz-Herrero & García-Fernández, 2020) [21]. This can be done through various platforms and online environments, including email, chat rooms, messages, cell phone, video call, Facebook, Twitter, SnapChat, YouTube, Instagram, other social networking websites, virtual world, multiplayer online gaming, playing online with Xbox, PlayStation, Wii, PSP or similar device. (Hinduja, S. & Patchin, J. W., 2015) [22]. According to Patchin & Hinduja, 2015 [23], cyberbullying can be conceptualised to distinguish it from similar harmful activities conducted in an online setting. Three main factors that define cyber bullying and distinguish it from other forms of bullying is that it is 'repetitive', 'intentional', 'harmful' and an 'imbalance of power' (Patchin & Hinduja, 2015) [24]. According to this study, it is only considered cyberbullying if there is a repeated form of misconduct instead of a single attack, though the study does take into consideration that the spread of one post is also repetition. The attack has to be intentional as well, directed to harm the victim. The intentions need to have a purpose and have to be done wilfully. The impact on the victim has to be harmful, causing a negative trigger to the victim. The imbalance of power mentioned is to do with the amount of power the cyber bully has against the victim, and their ability to inflict the victim. This could be perceived or actual power. This power could be popularity, extraversion, quick wit, intelligence, confidence, social competence, sex, race, age, physical strength, etc.

1. Suicidal Ideation and Cyberbullying

A recent ASDI report (Accidental Deaths and Suicides in India) [25] report on suicides of the year 2020, looking at the 'Distribution of Suicides by Means/ Mode Adopted during 2020' by the NCRB (National Crime Records Bureau) shows that a total of 153052 deaths occurred in 2020, with 57.8% dying due to hangings, 25% by poison and 5.2% by drowning.

Cyberbullying has been linked to suicidal ideation and depression in many studies of different countries and communities (Hinduja & Patchin, 2010 [26]; Brailovskaia et al., 2018 [27]; Peng et al., 2019 [28]) it is still a very new topic discussed in India. Cyber bullying that results in a suicide, whether the experience connecting the two terms is direct or indirect, has been given the name 'cyberbullicide' (Hinduja & Patchin, 2010) [29]. It can cause serious social, psychological and emotional harm to the victim (Hinduja & Patchin, 2006) [30].

Unlike traditional bullying, which is restricted to the requirement that the bully be present at a specific location, cyber bullies have the capacity to cross geographic locations and target their victims at any time. (Waasdorp & Bradshaw, 2015). [31]

While some may argue that the best way to prevent cyber bullying is to simply switch off and disconnect from the electronic devices used to communicate the threats, and this is mostly true, it has been found that cyber bullying can also be linked to the person's real life-including their social groups, mental health, physical and environmental experiences and

status. For example, in a study on Bullying, Cyberbullying and Suicide, it was found that in the sample, Whites were less likely to be suicidal than Non- Whites (Hinduja & Patchin, 2010)^[32], 60% adolescents reported being affected by cyberbullying at their school (Hinduja & Patchin, 2006)^[33] and university students in Myanmar who were cyberbullied had more difficulty in concentrating on lectures and were a more likely victim of substance abuse (Khine et al., 2020)^[34].

While most studies look at the effect of cyberbullying on adolescents, there is very little known about its effects on young adults and university students. Studies have shown that cyberbullying has a major effect on low self-esteem, anger, helplessness, sleep disorders and concentration problems in university students which affects their academic performance (Faucher, Jackson & Cassidy, 2014^[35]; Jenaro et al., 2017^[36]; Schenk and Fremouw, 2012^[37]) and even includes suicidal ideation, delinquency and psychological distress (Kim, Kimber, Boyle & Georgiades, 2018)^[38] and depression (Martínez-Monteagudo, Delgado, Díaz-Herrero & García-Fernández, 2020)^[39].

The Gender difference in rates of cyberbullying

Studies conducted on cyberbullying have found a difference in results when looking at the gender of the participant, in which females are more likely to be victimised by cyberbullies (once-9.4%, more than once-13.3%) as compared to males (once-8.3%, more than once-7.8%). However, there was a noted improvement in reporting psychological distress, suicidal ideation and delinquency among females than males, while there was a noted increase in only females of substance abuse linked to cyberbullying. (Kim, Kimber, Boyle & Georgiades, 2018)^[40]. In a study conducted in New Zealand (Wang et al., 2019)^[41], women were found having greater levels of cyberbullying (15.8%) than men, but no difference was found between the gender in a one-month gap. This study was conducted across the life span of the participants, and collected samples from various ethnicities.

In study conducted on female students in college (Selkie et al., 2015)^[42] it was found that females who were cyberbullied (27%) were more likely to meet the criteria for depression, of which 17.4% were also suffering from a drinking problem. The study categorised four most affective cyberbullying behaviours that were linked to increased depression in females, it was found that the highest odds were from those who experienced some form of unwanted sexual advances online or through text messages. Hence, there is a noted increase in cyberbullying in women compared to men, which is also found to increase their susceptibility to depression, suicidal ideation, substance abuse and delinquency. This study will also look at the gender difference between males and females in relation to cyberbullying and suicidal ideation.

METHODOLOGY

Participants and Procedures

The study was a cross sectional research conducted to find the correlation between the level of cyberbullying a person has experienced (the independent variable) and their level of suicidal ideation (the dependent variable). Extraneous variables controlled includes experimenter variables, as the surveys were distributed without their titles to prevent the participants from getting clues about the study, and demand characteristics as the participants only took part in the study once. Other demographic factors were also recorded, such as the gender, age, religion, academic qualification, and relationship status of the participants. Data was collected through online surveys sent to a selected population of young adults within the age range of 18-30 years from Gurgaon, a city in North India, using a non-probability convenience sampling method. The participants were all university students, and the data was

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collected both online, using Google forms, and offline through distribution of the printed surveys. Before taking part of the survey, the participants were asked to read a small paragraph to see if they met the requirements for the study. This paragraph was-
“This scale will be used by the researcher for research purposes and all data accumulated is to remain private and confidential. If you would like to participate in this research, you are agreeing to provide consent to the researcher to use this data in the research. All items must be filled and participants are requested to answer as honestly as possible. You are required to have experienced some form of cyberbullying (as a victim or perpetrator). Cyberbullying is a type of bullying that occurs over digital devices such as^{[43][44]} cell phones, computers, and tablets.^[45] Cyberbullying includes sending, posting, or sharing negative, harmful, false, or mean content about someone else. It can include sharing private content about another person which leads to embarrassment or public shame. Cyberbullying is when someone repeatedly harasses, mistreats, or makes fun of another person (on purpose to hurt them) online or while using cell phones or^[47] other^[48] electronic devices.^[49] Participants are required to be between 18 to 30 years of age.”

After reading the paragraph, participants were given as much time as they wanted to fill the two surveys and once completed, they were thanked for their cooperation. The total number of participants was 212, with 116 females (54.7%) and 96 males (45.3%). All participants agreed to give their informed consent and voluntary participation. Privacy was respected and Confidentiality was maintained for all participants in the study.

Measures and tools

Independent variable

The independent variable in this study was the level of cyberbullying the participant experienced within the last 30 days as the victim and offender. This was measured using the Cyberbullying and Online Aggression Survey (Hinduja, S. & Patchin, J. W., 2015)^[50]. This survey is divided into two scales- Cyberbullying Victimization Scale and Cyberbullying Offending Scale. In each scale, there was a total of 9 questions, making up 18 questions for the whole survey. A summary Likert scale was used to measure the responses for each question, which were ‘Never’(0), ‘Once’(1), ‘A few times’(2) and ‘Many times’(3). A total sum of every item calculated per scale determines the level of cyberbullying (for both Victimization and Offending) with a range of 0-30. This data is continuous in nature with an average of 13.5, and hence, we can assume that any number above 13.5 is proof of some form of cyberbullying.

Covariates in this study include gender, academic qualification, religion, age and relationship status.

Dependent Variable

The dependent in this study was the severity of Suicidal Ideation found in the participants. Using the Suicidal Ideation Attributes Scale (SIDAS) (van Spijker et al., 2014)^{[51][52]}, a Likert Scale, we measure five question items on a scale of 0-10, where each question had a different label for 0 and 10. For example- in the item question “In the past month, how often have you had thoughts about suicide?”, 0 was ‘Never’ and 10 was ‘always’ but in another question, “In the past month, how much have thoughts about suicide interfered with your ability to carry out daily activities, such as work, household tasks or social activities”^[52] (van Spijker et al., 2014) 0 was labelled ‘Not at all’ while 10 was ‘Extremely’. This was given by the creator as each question is uniquely different, and one label does not suit all questions. However, the scoring is exactly the same for each question, in which scores are calculated as

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the sum of all five items, with controllability reverse scored. This means that the scoring for '10' is 0, '9' is 1, '8' is 2, and so on. The maximum score is 50.

Statistical Analysis

The statistical tool used in this study was IBM SPSS Statistics Subscription, Version 28.0.1.0 (142). The data was analysed using a Pearson Bivariate Correlation with a two tailed test of significance and a scatterplot, and data was also described using descriptive frequencies and graphs.

Hypothesis

There will be no significant positive correlation between Cyberbullying and Suicidal Ideation. There is no gender difference in the level of Suicidal Ideation. There will be no significant correlation in the level of cyberbullying and suicidal ideation with the age of the participants.

RESULTS AND DISCUSSION

The data was non- parametric because the scales used were both Likert Scales which were collected through Google Forms and offline through a questionnaire. The data for cyberbullying was measured in the time-span within 30 days. Out of 212 participants with 116 females (54.7%) and 96 males (45.3%), 124 showed some characteristics of suicidal ideation and 160 claimed they were cyberbullied in some way. 24.5% said they experienced no form of cyberbullying, but 75.5% agreed they experienced some form of cyberbullying. Out of the 75.5% that were cyberbullied, 24% experienced severe cyberbullying, while 51.5% experienced a minor form of cyberbullying. The Cyberbullying scale was divided into two types, Victim and Offender cyberbullying. [Fig. 1.]

Valid	Frequency	Percent
0	52	24.5
1	12	5.7
2	36	17
3	15	7.1
4	9	4.2
5	15	7.1
6	5	2.4
7	9	4.2
8	5	2.4
9	3	1.4
10	9	4.2
11	3	1.4
12	5	2.4
13	8	3.8
14	6	2.8
15	6	2.8
16	2	0.9
17	4	1.9
18	4	1.9
19	1	0.5
30	3	1.4
Total	212	100

[Fig.1] Cyberbullying

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Out of the 124 participants who showed signs of suicidal ideation using the SIDAS, 17.6% showed signs of extreme suicidal ideation while 82.4% showed some signs of suicidal ideation.[Fig.2.] The demographic factors measured in the study included relationship status, religion, age, gender and educational qualification. Out of these demographic factors, age and gender were considered covariates to the study. The relationship status of participants included 72.6% were single, 19.8% were dating someone, 5.7% were married and 1.9 % who were divorced. [Fig.3]. The sample had a majority 67.5% Hindus, 9.0% Christian, 5.2% not identifying with any specific religion, 4.7% Sikhs, 3.8% Muslims and other minority religions such as Agnostics (1.9%), Atheists (1.9%) Buddhists (1%), etc. [Fig.4]

Valid	Frequency	Percent
0	88	41.5
1	4	1.9
2	6	2.8
3	4	1.9
4	4	1.9
5	3	1.4
6	2	0.9
7	3	1.4
8	2	0.9
9	3	1.4
10	33	15.6
11	4	1.9
12	3	1.4
13	4	1.9
14	5	2.4
15	2	0.9
16	1	0.5
17	1	0.5
19	3	1.4
20	5	2.4
21	2	0.9
22	1	0.5
23	2	0.9
24	4	1.9
25	1	0.5
26	4	1.9
27	1	0.5
28	1	0.5
29	1	0.5
30	2	0.9
32	1	0.5
36	2	0.9
40	4	1.9
41	1	0.5
42	1	0.5
46	2	0.9
48	1	0.5
50	1	0.5
Total	212	100

[Fig.2] Suicide Ideation

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Valid	Frequency	Percent
Single	154	72.6
Dating Someone	42	19.8
Married	12	5.7
Devorced	4	1.9
Total	212	100

[Fig.3] Relationship Status

Valid	Frequency	Percent
Agnostic	4	1.9
Atheist	4	1.9
Buddhist	2	1
Brahman	1	0.5
Christian	19	9
Gengal	1	0.5
Hindu	143	67.5
Islam	15	7
Meitei	1	0.5
None	11	5.1
Satanist	1	0.5
Sikh	10	4.7
Total	212	100

[Fig.4] Religion

Educational qualifications included 13.2% Bachelors in Arts, 12.7% Bachelors in Science, 7.5% Bachelors in Pharmacy, 7.1% Bachelors in Architecture, 6.6%BBA, and other degrees, (ranging from Bachelors to PhD). [Fig.5]. Among the sample 24.5% were 19 years old, 17% were 18 years old, 14.2% were 20 years old, 12.3% were 21 years old, etc. with a range of 18 to 30 years old. [Fig.6] The mean age was 21.0 in the total sample, while the mean score for cyberbullying was 5.3868 and suicidal ideation was 8.9764, the SD (Standard Deviation) for age was 2.994, for cyberbullying was 6.05202 and Suicidal Ideation was 11.59524. [Fig.7]

Valid	Frequency	Percent
18	36	17
19	52	24.5
20	30	14.2
21	26	12.3
22	16	7.5
23	15	7.1
24	11	5.2
25	9	4.2
26	3	1.4
27	3	1.4
28	2	0.9
30	9	4.2
Total	212	100

[Fig.6] Age

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Valid	Frequency	Percent
12+	3	1.4
B Arch	15	7.1
B Com	7	3.3
B Des	7	3.2
B DFS	1	0.5
B Ed	2	1
B Eng	1	0.5
B Opt	7	3.3
B Pharm	16	7.5
B Tech	11	5.2
BA	28	13.2
BA CCB	1	0.5
BA LLB	2	0.9
BBA	14	6.6
BBA LLB	2	0.9
BCA	2	0.9
BFA	1	0.5
BHM	13	6.1
BSc	31	14.6
HM	1	0.5
M Arch	2	0.9
M Com	1	0.5
M Des	4	1.9
M Nutri	1	0.5
M Opt	11	5.2
M Plan	3	1.4
M Div	1	0.5
MA	2	0.9
Masters	1	0.5
MBA	11	5.2
Med	2	0.9
MSc	5	2.4
None	2	0.9
PHD	1	0.5
Total	212	100

[Fig.5] Educational Qualifications

Valid	Age	Educational Qualification	Religion	Relationship Status	Cyberbullying	Suicidal Ideation
N	212	212	212	212	212	212
Mean	21				5.3868	8.9764
Median	20				3	4.5
Std. Deviation	2.994				6.05202	11.59524
Minimum	18				0	0
Maximum	30				30	50

[Fig.7] Statistics

When the data was analysed using a Pearson Bivariate Correlation, results showed a slight positive correlation of 0.549 between Cyberbullying and Suicidal Ideation, which makes it

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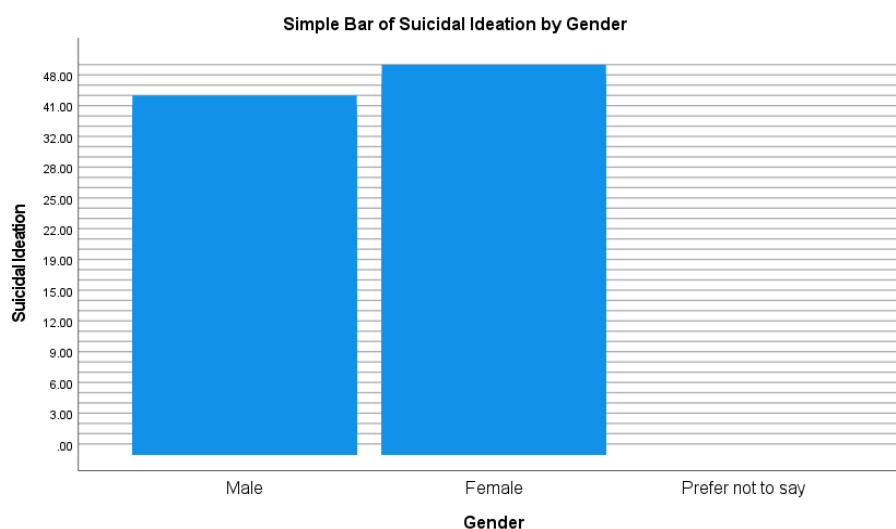
significant at the 0.01 level with a 2-tailed test of significance. However, there was no significant correlation found between age and gender with cyberbullying or suicidal ideation. [Fig.8] Hence, we can refute the Null Hypothesis (H_0) that states that ‘there will be no significant positive correlation between Cyberbullying and Suicidal Ideation’, and agree on an Alternative Hypothesis (H_a) that states ‘There is a slight positive correlation between Cyberbullying and Suicidal Ideation’. However, we must accept the Null Hypothesis (H_0) that states that ‘There will be no significant correlation in the level of cyberbullying and suicidal ideation with the age of the participants.’ As this is proven using SPSS Pearson Correlation, which shows no significant correlation between age and the level of cyberbullying and Suicidal Ideation, and therefore, we must accept the Null Hypothesis.

		Age	Gender	Cyberbullying	Suicidal Ideation
Age	Pearson Correlation	1	-0.059	0.063	0.023
	Sig.(2-tailed)		0.394	0.358	0.735
	N	212	212	212	212
Gender	Pearson Correlation	-0.059	1	0.019	-0.056
	Sig.(2-tailed)	0.394		0.783	0.418
	N	212	212	212	212
Cyberbullying	Pearson Correlation	0.063	0.019	1	0.549**
	Sig.(2-tailed)	0.358	0.783		<.001
	N	212	212	212	212
Suicidal Ideation	Pearson Correlation	0.023	-0.056	0.549**	1
	Sig.(2-tailed)	0.735	0.418	<.001	
	N	212	212	212	212

***correlation is significant at the 0.001 level (2-tailed)*

[Fig.8] Correlation

The other Null Hypothesis in this study, which states that ‘There is no gender difference in the level of Suicidal Ideation’ can be refuted as there was a slight gender difference found between males and females in relation to their Suicidal Ideation (2.5% more in females). Thus, the Alternative Hypothesis (H_a) is accepted that states ‘There is a slight gender difference in the level of Suicidal Ideation’. [Fig.9]



[Fig.9] Suicidal Ideation by Gender

CONCLUSION

To conclude, the study discovered that there is a positive correlation between the level of suicidal ideation and cyberbullying in participants, with a slight gender gap in the level of suicidal ideation, in which females scored 2.5% more than males. However, this could be due to the fact that men are more likely to avoid seeking social relationships and support with mental health than females^[53] and more pressure to adhere to social norms that cause negative emotional impact on their lives.^[54] The study included resident and online university students between the ages 18-30 (under the young adults subgroup) who observed or experienced some form of cyberbullying, either as a victim or offender, and suffered from suicidal ideation, and included covariates such as age and gender, along with demographic factors such as educational qualification, religion and relationship status. Since the study was cross sectional, the data was collected only once and the participants took part in the study only once. This study looks at the relation between cyberbullying (as both victims and offenders) and suicidal ideation in university students in India, and is applicable to further research and reference of cyberbullying in young adults and university students. The gap was found in the sample of previous research which was of mainly adolescents or students from countries besides India. This study is generalizable to anyone between the ages 18-30 years old. It can also be used in understanding the gender difference in the severity of suicidal ideation among university students.

Limitations

The study was cross sectional, and does not look at the long-term results of cyberbullying on suicidal ideation. Since there is no longitudinal data, the outcome of the effect of cyberbullying on suicidal ideation cannot be derived from the sample for future reference and hence, reduces the validity of the study. The study is also limited to university students and does not take into account young adults from other socioeconomic backgrounds, who cannot afford a university education, lowering the generalizability of the findings. Another limitation is that the results show a correlation, but not causation. Hence, a true cause-and-effect relationship is not derived, and requires further research to prove validity. The sample is predominantly made up of Hindus as a majority, which creates a religious bias in the sample size, and also includes primarily singles, and students pursuing a Bachelors degree. The sample was collected through a non-probability convenience sampling, which might bias the results, as only a certain representation of the population which were willing to take part in the study, were studied. The participants could have experienced a social desirability bias as they might have understood the true nature of the study by taking cues from the questions asked on the surveys. There were also a larger number of females than males in the sample.

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Conflict of Interest

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Appendix

Valid	Frequency	Percent
Male	92	45.3
Female	116	54.7
Total	212	100

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Gender

