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Prevalence, Patterns, Predictors and effect of Cyberbullying among Sohag University Students

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Abstract:

Background: Cyberbullying can be defined as intentional aggression through electronic routes, such as text messages, e-mails, chat rooms, online games, and social websites. Numerous subtypes of cyberbullying have been reported.

The aim of the current study was to study the situation, patterns, and the implications of cyberbullying among Sohag University students.

Methods: An analytical cross-sectional study was conducted among 500 students of Sohag University, during the period from October 2022 to April 2023, using a semi-structured questionnaire to collect data about sociodemographic characteristics of the study participants, correlates and patterns of cyberbullying.

Results illustrated that (54.6%) of the study participants reported being cyberbullied. Males reported more subjection to cyberbullying (53.11%) as compared to females. "Facebook" was the first platform on the social media showing existence of cyberbullying, with offensive comments and spreading rumors in most of the cases of cyberbullying.

Recommendation: Based on the results of the study , it's recommended to: Implement anticyberbullying programs tailored for university students will be a major step .Such programs should include anticyberbullying policies and materials and provision for guidance of students, their parents, and their teaching staff.

Keywords: cyber bullying, sohag, university, students

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Introduction:

One billion homes have internet connectivity, and almost one in two people on the planet use it. Over 2.5 billion people utilize the internet in developing nations.⁽¹⁾

Between 2009 and 2016, there were 12.3 million internet users in Egypt; by 2016, that number had significantly increased to 29.84 million. ⁽²⁾Egypt is rated 17th in the world for Facebook subscriptions,

with 98% of internet users having accounts, and 52% of those users being under 24. While a third of Egyptian internet users are active on Instagram, half of them have Twitter accounts.⁽¹⁾

Social networking has several well-established advantages, including improved social support, communication, information gathering, and access to educational resource. (3)

Social media platforms have, however, been linked to a number of detrimental effects, including cybercrime, exposure to offensive content, and cyberbullying. (4)

Intentional hostility via electronic means, including text messages, e-mails, chat rooms, online games, and social media platforms, is known as cyber bullying. When compared to traditional bullying, cyber bullying has many distinct features that amplify its negative effects. These features include the inability to avoid bullying, the existence of a larger and more potential audience, the continuous nature of bullying regardless of time or location, and the perpetrator's frequent anonymity. (5)

Because of these particular requirements, there is a power disparity between the offenders and their victims, which leads to cyber victimization (6)

Subtypes of cyber bullying have been documented: "threating and intimidation" (sending frightful or terrifying messages), "exclusion" (singling out from online groups or chat rooms), "denigration and mockery" (revealing secrets or sensitive material), "flaming," which consists of intense and hostile arguments that frequently include insulting, "outing," which involves using hurtful statements to put the victim down, and "harassment" (involving unsolicited communications or interactions. (7)

The prevalence of cyber bullying among youth is difficult to monitor due to varying definitions of the term and disparities in the groups that are targeted. Additionally, researchers evaluated victimization at various times and used various strategies. (8)

Cyber bullying has been linked to a wide range of psychological impacts, including somatic problems, depression, and suicide thoughts, in addition to emotional discomfort, low academic success, absenteeism, and loss of attention. (9)

The present study's goals were to investigate the prevalence and trends of cyber bullying, identify risk factors for cyber bullying among Sohag University students, including family dynamics, and examine the effects of cyber bullying on its victims.

Methodology:

Study setting: The study was carried out at Sohag University, a regional university. It is situated in Sohag governate.

Study design: A cross sectional study was carried out among randomly selected students of Sohag

University. The study was conducted in four randomly chosen faculties, two practical faculties (the faculty of Engineering and the faculty of Nursing) and two theoretical faculties (the faculty of Law and the faculty of Literature).

Sample size: According to the equation: $N=z^2$ p (1-p) / d^2 . The sample size by the equation will include 383 students and increased to 500 students to overcome expected drop out and to increase accuracy of the study. P= prevalence of cyberbullying is based on the finding of a previous study conducted in Beni-suif University where cyberbullying was detected in 48.2 % in students.

Sampling technique: The sample was taken by the mean of cluster random sampling technique among the students of four faculties that were chosen by simple randomization among both the practical and theoretical faculties; the faculty of Engineering and the faculty of Nursing and two theoretical faculties; the faculty of Law and the faculty of Literature. Then a suitable random cluster sample were taken from the students of the determined faculties after fulfilling the eligibility criteria

Inclusion criteria: Students who accepted to participate in the study.

Exclusion criteria: Students who refused to participate in the study.

Data collection & procedure: Data was collected through personal interviews using a self-administered questionnaire after a brief explanation of the aims of the study and their acceptance. It took around 15–20 minutes to be fulfilled. The investigator chose a suitable time for students; either at break time or at the end of their lectures. Two questionnaires were adapted; the first was from a research from The Reading and Knowledge Journal and the other from a study from the United Arab Emirates University and Beni-suif study. The questionnaire is divided into two sections:

1-The first section: included the socio-demographic characters & correlates of cyber bullying as (age, sex, residence, family factors.....etc.)

2-The second section: included the situation, pattern and implications of cyber bullying on victims; the last were studied using 5-aspects Likert scale that was varying from strongly disagree (score 1) until strongly agree (score 5).

Statistical analysis: The collected data were coded and verified prior to computerized data entry. The data were statistically analyzed using SPSS version 23 to express in tables and Excel program for graphs. The Quantitative data were tested for normality by Kolmogorov-Smirnov then represent in mean

and standard deviation when normally distributed and median and IQ if not. Percentages of Qualitative data were compared by chi-square. In all analyses, P value ≤ 0.05 indicated statistical signifycance.

Results:

Table 1: Distribution of cyberbullying among students of the study

Have you been cyberbullied on social media platforms before?	Number	%
Yes	273	54.6%
No	227	45.4%
Total	500	100.0%

Table (1) shows that 273 students (54.6%) were subjected to cyberbullying while 227 students (45.4%) reported that they weren't subjected to cyberbullying.

Table 2: Relationship between cyberbullying and sociodemographic characteristic of students in the study

Variables	Have yo	u been cyber platforr	Total	P value		
(n=500)	Yes	(N=273)	No ((N=227)		
. ,	No.	%	No.	%		
Gender						
Males	145	52.0%	134	48.0%	279; 55.8%	0.185
Females	128	57.9%	93	42.1%	221, 44.2%	0.183
Marital status						
Single	248	56.5%	191	43.5%	439	0.23
Married	25	41%	36	59%	81	0.23
Faculty						
Engineering	57	54.3%	48	45.7%	105	
Nursing	81	55.9%	64	44.1%	145	0.33
Literature	73	59.8%	49	40.2%	122	0.33
Law	62	48.4%	66	51.6%	128	
Age				<u> </u>		
mean±SD	20.1±1.4		20.4±1.4		20.3±1.5	0.052
median(IQR)	20(19:21)		20(19,20))	20(19,21)	0.032
range	18:29		18:24		18:29	
Residence						
Rural	94	46.5%	108	53.5%	202	0.675*
Urban	133	44.6%	165	55.4%	298	0.073**
Current resident						
With family	168	53.5%	146	46.5%	314	
Student dormitory	67	55.8%	53	44.2%	120	0.9*
With friends	21	56.8%	16	43.2%	37	0.9
With relatives	17	58.6%	12	41.4%	29	
Room						
Shared	205	54.5%	171	45.5%	376	0.95*
Private	68	54.8%	56	45.2%	124	
Academic year						
First	70	54.3%	59	45.7%	129	
second	69	58.5%	49	41.5%	118	0.66*
Third	75	55.1%	61	44.9%	136	0.00
Fourth	59	50.4%	58	49.6%	117	
Marital status of parents						
Existing	199	53.5%	173	46.5%	372	
Divorced	40	58.0%	29	42.0%	69	0.69*
Widow	34	57.6%	25	42.4%	59	
Conflicts between parents					55, 11%	
Yes	27	49.1%	28	50.9%	287,	
Sometimes	152	53%	135	47%	57.4%	0.285*
No	94	59.5%	64	40.5%	158,	0.203
<u></u>					31.6%	

P value was calculated by Chi square test, the percentages is row percentage

Table (2) shows that 279 students out of 500 were males, 55.8%, of them more than half; 145 students (52%) were subjected to cyberbullying before and 134 students (48%) were not subjected to cyberbullying. In 221 female students, with percent 44.2%; 128 (57.9%) were subjected cyberbullying before and 93 female students (42.1%) reported didn't cyberbullied before, there is statistically significant difference cyberbullying and gender, with p-value (p = 0.185) as well as the case in both the age, marital status, the faculties to which the students belong and even the graduation year, family original residence, student residence at the academic year, room sharing and the current marital status of parents (p > 0.05 in each case with approximating percentages). Table (2) shows also that 11% and 57.4% had often or sometimes conflicts between their parents respectively while 158 students (31.6%) reported absence of conflict in their families; although many of them 94 students (59.5 %) were previously subjected to cyberbullying.

Table (3): Role of student's families in cyberbullying

Variables	Have	you been cy media platf	Total	Davidore			
variables			Yes (N=273)		No (N=227)		P value
	No.	%	No.	%			
Does your family provide the ideal role model for	Yes	133	53.6%	115	46.4%	248	
you in using the Internet and specially the social	Sometimes	111	54.4%	93	45.6%	204	0.68
networking sites?	No	29	60.4%	19	39.6%	48	
Is the family interested to know your friends on the	Yes	126	53.6%	109	46.4%	235	
real level or on the virtual level?	Sometimes	126	58.1%	91	41.9%	217	0.18
	No	21	43.8%	27	56.3%	48	
Does your family encourage you to spend your spare	Yes	161	52.1%	148	47.9%	309	
time in useful work?	Sometimes	91	58.3%	65	41.7%	156	0.35
	No	21	60.0%	14	40.0%	35	
Does your family promote a culture of dialogue	Yes	148	52.9%	132	47.1%	280	
among their children?	Sometimes	114	57.3%	85	42.7%	199	0.61
	No	11	52.4%	10	47.6%	21	
Does your family earn you the culture and ethics of	Yes	84	50.3%	83	49.7%	167	
safe use of the Internet and social networking sites?	Sometimes	136	57.4%	101	42.6%	237	0.36
	No	53	55.2%	43	44.8%	96	
Does your family follow what you publish on your	Yes	63	46.7%	72	53.3%	135	
accounts on social networking sites?	Sometimes	140	55.1%	114	44.9%	254	0.036
	No	70	63.1%	41	36.9%	111	
Does your family follow your friends on social	Yes	47	53.4%	41	46.4%	88	
networking sites?	Sometimes	118	51.1%	113	48.9%	231	0.21
	No	108	59.7%	73	40.3%	181	
Does your family warn you against publishing any	Yes	137	56.8%	104	43.2%	241	
information about your friends on social media	Sometimes	97	51.1%	93	48.9%	190	0.45
without their knowledge?	No	39	56.5%	30	43.5%	69	
Does the family care to educate you not to repeat	Yes	147	55.9%	116	44.1%	263	
rumors or spread them on social media?	Sometimes	100	53.8%	86	46.2%	186	0.77
	No	26	51%	25	49%	51	

Chi-square test was used to elucidate significance.

Table (4) illustrates that cyberbullying didn't affected statistically in a significant manner by the student perspectives (whether exposed to be cyber bullied before on the media or not exposed to this experience); regarding the presence of cyberbullying on the social media platforms, nor its

frequency in any of these platforms, nor even the form in which it was predominated in. The reasons for people who cyberbullying others were many as reported by our students, yet these reasons were't of statistical significance (p > 0.05).

Table (4): Student perspective about cyberbullying

Table (4): Student perspective about cyberbullying Have you been cyberbullied on								
				Total				
Variables		social media platforms before:				P value		
		Yes (N=273)		`	N=227)			
D 41-2-1-41-4	Г	No.	%	No.	%			
Do you think that	Yes	268	54.4%	225	45.6%	493	0.46	
cyberbullying exists on social media platforms?	No	5	71.4%	2	28.6%	7	0.40	
social media piattornis:	1-Facebook	100	47.4%	111	52.6%	211		
	2-Twitter	17	51.5%	16	48.5%	33		
		3	75%		25%	4		
Which of the following	3-Snapshot 4-You-tube	19	70.4%	1 8	29.6%	27		
social media platforms	5-Instagram	15	60%	10	40%	25	0.99	
have more cyberbullying?	6-Facebook&twitter	27	69.2%	12	30.8%	39		
	7-Facebook&Instagram	44	56.4%	34	43.6%	78		
	<u> </u>			35		83		
	8-Facebook & You tube 1-Offensive comments	48 64	57.8% 48.1%	69	42.2% 51.9%	133		
						49		
	2-Hate speech 3-Online shaming	30	61.2% 33.3%	19 2	38.8% 66.7%	3		
		21	55.3%	17	44.7%	38		
	4-Posting or sharing embarrassing photos and /or	21	33.3%	1 /	44.7%	30		
	videos	27	55.1%	22	44.9%	49		
If you have some somes	5-Spreading rumors	19	48.7%	$\frac{22}{20}$	51.3%	39		
If you have come across	6-Using emojis as a form of	52	53.1%	46	46.9%	98		
cyberbullying on social media platforms, what	ridicule	32	33.1%	40	40.9%	90	0.318	
was its form?	7-Offensive	59	64.8%	32	35.2%	91		
was its form:		39	04.070	32	33.270	71		
	comments&usingemojis as a form of ridicule							
	8-Offensive comments & spreading rumours							
	spreading runiours							
	1-Out of boredom	42	56%	33	44%	75		
	2-To become popular	35	56.5%	27	43.5%	62		
	3-A defence mechanism for	13	59.1%	9	40.9%	22		
	their own insecurities							
	4-They have personal issues and	38	53.5%	33	46.5%	71		
In your opinion, why do	frustrations						0.62	
people cyberbullying others?	5-Other reasons	27	61.4%	17	38.6%	44	0.63	
	6-out of boredom& to become	54	47%	61	53%	115		
	popular	64	57.7%	47	42.3%	111		
	7-To become popular and they							
	have personal issues and							
	frustrations							

Table (5): Reaction of students on cyberbullying

			e you been	T			
Variables		social media platforms before?					
		Yes (N=273)		No (N=227)		Total	P value
		No.	%	No.	%		
	1-I ignore the situation	68	58.1%	49	41.9%	117	
	2-I change the social media platform	9	56.3%	7	43.8%	16	
Describe your	3-I respond to bully	9	32.1%	19	67.9%	28	
•	4-I confide in a friend	16	45.7%	19	54.3%	35	0.217*
response to cyberbullying?	5-I report the account of the bully	36	60%	24	40%	60	0.217
cyberbunying:	6-Ignore the situation & confide a friend	49	53.8%	42	46.2%	91	
	7-ignore the situation & report the						
	account of the bully	86	56.2%	67	43.8%	153	
If you have told	1-A friend	98	53.3%	86	46.7%	184	
someone about	2-Your parent	65	52.8%	58	47.2%	123	0.12*
cyberbullying, that	3-Your sibling	67	64.4%	37	35.6%	104	0.12**
person will be:	4-No body	43	48.3%	46	51.7%	89	
	1 Faaling anger						
	1-Feeling anger 2-Feeling hatred	47	51.6%	44	48.4%	91	
If you were bullied	3-Feeling sorrow	15	62.5%	9	37.5%	24	
before, what was	4-Feeling fear	60	56.1%	47	43.9%	107	
your emotional	5-Feeling disappointment	1	100%	0	0%	1	0.89**
response to this	6-Feeling loneliness	23	56.1%	18	43.9%	41	
situation?		12	46.2%	14	53.8%	26	
	7-feeling anger & sorrow	61	53%	54	47%	115	
	8-Feeling sorrow & disappointed	54	56.8%	41	43.2%	95	
	1-Asking them to stop	11	40.7%	16	59.3%	27	
	2-ignoring it	81	59.1%	56	40.9%	137	
	3-Keeping a record of nasty emails or	30	56.6%	23	43.4%	53	
	text messages (SMS)						
	4-I did not respond to the threatening or	3	75%	1	25%	4	
What are the best	nasty emails						
What are the best	5-I asked for help from someone I trust	22	62.9%	13	37.1%	35	
ways to stop	such as a friend or family						0.107**
students from bullying others online?	6-Reporting to police or authority	25	50%	25	50%	50	0.107**
	7-I stayed away from the person	0	0%	3	100%	3	
	bullying me or the website	1					
	8-I made a joke of it	14	42.4%	19	57.6%	33	
	9- ignoring it & asking for help from	35	46.1%	41	53.9%	76	
	someone trust	1					
	10-keeping a record of nasty emails&	52	63.4%	30	36.6%	82	
	reporting to police	1					

*Chi-square test **fisher exact test were used to elucidate significance.

Table (5) describes the reaction of most of the students who exposed to cyberbullying by ignoring the situation or proceed to report the account of the bullying as answered 68 and 86 students (24.9% and 31.5%) respectively, which constituted the same answer for those who didn't exposed to cyberbullying before (49 and 67 students; 21.6% and 29.5% respectively). A friend or the parents

were mostly the person/s who were be told about the cyberbullying in both the already bullied or not bullied before. Feeling anger & predominated as a feeling toward cyber bullying and ignoring the event was the best ways to stop students from bullying others online in the students opinion.

Table (6): Implications of cyberbullying on victims in the study

	Table (0). Implications of cyber	Have	e you been	cyberbu	ıllied on		
,	Variables	social media platforms before?					P
	v at lables			No (N=227)		Total	value
		No.	%	No.	%		
	1-Strongly disagree (score1)	2	25%	6	75%	8	0.46**
I would like to witness	2-Disagree (score2)	9	60%	6	40%	15	
more kindness and	3-Neutral (score3)	52	58.4%	37	41.6%	89	
respect on social media.	4-Agree (score4)	122	54.2%	103	45.8%	225	
	5-Strongly agree (score5)	88	54%	75	46%	163	
	1-Strongly disagree (score1)	14	63.6%	8	36.4%	22	
	2-Disagree (score2)	15	50%	15	50%	30	
I would report being	3-Neutral (score3)	58	65.2%	31	34.8%	89	
cyberbullied	4-Agree (score4)	125	51.7%	117	48.3%	242	
	5-Strongly agree (score5)	61	521%	56	47.9%	117	0.19*
	1-Strongly disagree (score1)	25	52.1%	23	47.9%	48	
There are effective ways	2-Disagree (score2)	61	61%	39	39%	100	
There are effective ways	3-Neutral (score3)	43	47.3%	48	52.7%	91	0.42*
to stop cyberbullying	4-Agree (score4)	91	55.8%	72	44.2%	163	
	5-Strongly agree (score5)	53	54.1%	45	45.9%	98	
	1-Strongly disagree (score1)	1	100%	0	0%	1	
I would like to see more	2-Disagree (score2)	5	55.6%	4	44.4%	9	
strict laws dealing with	3-Neutral (score3)	41	48.8%	43	51.2%	84	0.7**
cyberbullies.	4-Agree (score4)	128	55.7%	102	44.3%	230	
	5-Strongly agree (score5)	98	55.7%	78	44.3%	176	
	1-Strongly disagree (score1)	11	55%	9	45%	20	
Cyberbullying online is	2-Disagree (score2)	37	53.6%	32	46.4%	69	
the same as offline (real	3-Neutral (score3)	112	57.4%	83	42.6%	195	0.8*
world).	4-Agree (score4)	73	50.7%	71	49.3%	144	
	5-Strongly agree (score5)	40	55.6%	32	44.4%	72	
	1-Strongly disagree (score1)	2	66.7%	1	33.3%	3	
Cyberbullying is a	2-Disagree (score2)	7	58.3%	5	41.7%	12	
crime like any other	3-Neutral (score3)	37	59.7%	25	40.3%	62	0.8**
crime	4-Agree (score4)	134	55.1%	109	44.9%	243	
	5-Strongly agree (score5)	93	51.7%	87	48.3%	180	
	1-Strongly disagree (score1)	3	60%	2	40%	5	
Cyberbullies should be	2-Disagree (score2)	12	60%	8	40%	20	
Punished.	3-Neutral (score3)	36	59%	25	41%	61	0.75*
r umsneu.	4-Agree (score4)	117	56%	92	44%	209	
	5-Strongly agree (score5)	105	51.2%	100	48.8%	205	

*Chi-square test **fisher exact test were used to elucidate significance.

Table (6) shows the use of 5-aspects Likert scale as a tool to detect the implication of cyberbullying on Sohag University students where the answers of those who were cyberbullied before or not were mostly agreeing or strongly agreeing that they were witnessing more kindness and respect on social media, reporting being cyberbullied and believing that there were effective ways to stop cyberbullying

by strict laws dealing with cyberbullies as it is a crime; must be punished as well as that in the offline real world

Discussion:

In this study the percentage of cyberbullying among students was 54.6%, the majority of them were males 53.11% but there is no statistically relation

between subjected to cyberbullying before and gender, with p-value (p=0.185). In Jara et al. (2017)males were more than females. Unlike researches done in Bani-suef , which showed that females are more than males.

In our study the prevalence was higher in single than married students. We found also that students in age from 18 to 29 were more exposed to cyberbullying unlike Raskauskas & Stoltz, (2007) which showed that the age between 13-18 years are more to be exposed to cyberbullying. (10)

The students which live with friends and relatives are more likely to be exposed to cyberbullying than who live with family and this is in line with Buelga et al. (2017) which discuss the family role and its importance in preventing cyberbullying. The more academic years they have, the greater the effects of cyberbullying. Additionally, the more educated the parents are, the greater the effects of cyberbullying on their children. (11)

Students who use their own devices for Internet report seeing more instances access cyberbullying than those who use shared devices. It seems sense that higher instances of cyberbullying would be seen among students who use personal devices to access the Internet. Compared to those who use shared devices to access the Internet, individuals who own personal devices have more time, flexibility, and tolerance to use the Internet around-the-clock and participate in online communities.

Regarding the group that had experienced cyberbullying prior to now, their range was 1-8 with a median and interquartile range of 3(2,4). In contrast, the group that had not experienced cyberbullying prior to now had a range of 1-8 with a median and interquartile range of 3(2,4). A statistically significant relationship was found between the number of siblings and having experienced cyberbullying prior to now, with a p-value of 0.004, which is consistent with Monks et al. (2009). (12)

An important aspect for consideration is that the degree of severity of cyberbullying, like traditional

bullying, can have short-, medium-, and long-term effects on victims.

To help victims of cyberbullying, they should be able to reach out for help without feeling scared or intimidated by any consequences. Faculty and staff of educational institutions can hold seminars or sessions to educate children and youth on the negative impacts of cyberbullying.

These should not be onetime awareness sessions, rather comprehensive, detailed programs to help combat cyberbullying. Counseling is also a remedial approach to help victims of cyberbullying.

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