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Prevalence and Predictors of Cyberbullying in Middle and High School Students During the COVID-19 Pandemic

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Abstract. Schools were closed during the COVID-19 pandemic, and the learning process has changed dramatically. Students spent countless hours online for learning and leisure activities and risked themselves by engaging in cyberbullying. This study aims are twofold: (1) to investigate the prevalence of cyberbullying perpetration and victimization during the COVID-19 pandemic, and (2) to investigate predictors of cyberbullying perpetration and victimization. A cross-sectional survey method was used in this study. This study used three questionnaires named Cyberbullying Perpetration and Victimization, Problematic Internet Use Questionnaire Short Form-6 (PIUQ-SF 6), and Cyberbullying Attitudes Measure. Participants are middle and high school students (N = 3,752; 52.4% were girls, 81.6% were middle school students). Data were analyzed using descriptive statistics and multivariate linear regression. Results showed that more students engaged in cyberbullying victimization than perpetration. Boys were more likely to engage in cyberbullying perpetration. Girls were more likely to engage in cyberbullying victimization. The most prevalent cyberbullying perpetration and victimization were posted mean or hurtful comments online. PIU, particularly more time spent online, harms both perpetrators and victims, as many as 3.4% for perpetrators and 4.5% for victims. Having fun teasing others online and feeling good attacking others online made the highest contributions to engaging in cyberbullying perpetration, as many as 10.9% and 10.1%, respectively. Do not accept harming others online and do not feel-good attacking others online, protecting the individuals from being cyberbullied as many as 4.2%. The attitude that school rules will be ineffective at stopping cyberbullying made the highest contribution to being cyberbullied, as many as 4.2%.

Keywords: cyberbullying; prevalence; predictors; school; students

On March 11, 2020, the WHO (2020) declared the Coronavirus pandemic and named it COVID-19. It was a pneumonia-like disease that was reported to be found for the first time in Wuhan, China, in December 2019. COVID-19 affected many aspects of human life, not only adults but also children and adolescents. It affected not only the physical health of individuals but also their mental health. To prevent spreading the virus, WHO instituted locking down, so people could only work and learn from home (WHO, 2020). During the lockdowns, schools were closed and shifted to learning online. Consequently, children spend countless hours online, engaging with remote online learning and education processes and using social media to communicate and interact with friends and for leisure activities (Borualogo & Casas, 2021, 2022).

Although there are benefits to increase productivity such as from online interactions, it also

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increases the risks of being cyberbullied. Barlett et al. (2021) found that the number of cyberbullying cases increased during the school closure. Patchin (2021) also reported that the number of school bullying incidents decreased significantly during the COVID-19 pandemic, however, cyberbullying did not increase considerably during the COVID-19 pandemic, but it likely did not decrease either.

Unicef (Mashabi & Galih, 2020) and the Indonesian Ministry of Education, Culture, Research, and Technology (Ramadhanty, 2021) stated an increased number of cyberbullying incidents during the COVID-19 pandemic in Indonesia. Borualogo and Casas (2023) found that school bullying incidents in Indonesia were lower during the COVID-19 pandemic than before the COVID-19 pandemic, while sibling bullying during the COVID-19 pandemic was higher than before the pandemic. It suggested that bullying victimization moved from school to home during COVID-19. Barlett et al. (2021) revealed the increased number of cyberbullying perpetrations during the COVID-19 pandemic. However, we cannot find any scientific publications that reported the prevalence of cyberbullying in Indonesia during the COVID-19 pandemic. Therefore, this study's first aim is to investigate the prevalence of cyberbullying victimization and perpetration during the COVID-19 pandemic in Indonesia.

Patchin and Hinduja (2015) defined cyberbullying as "*willful and repeated harm inflicted through computers, cell phones, and other electronic devices*." Studies on cyberbullying started in the 2000's along with technological advancement and increased internet use. Since then, there have been increased numbers of scientific publications on cyberbullying. Several international studies investigated predictors of cyberbullying victimization and perpetration.

A systematic review revealed that most studies on cyberbullying focus on person-related predictors, for example, internalizing problems such as depression, suicidal ideation, emotional distress, and loneliness (Camerini et al., 2020). Studies on media-related factors (for example, problematic internet use) were scarce (Camerini et al., 2020). Studies in Indonesia mainly focused on person-related predictors, for example, a survey by Reginasari et al. (2021). Few studies investigated the association between problematic internet use and cyberbullying perpetration and victimization. Feijóo et al. (2021) and Yudes et al. (2021) found a positive association between cyberbullying perpetration and Problematic Internet Use (PIU). A study among Chinese adolescents revealed that cyberbullying victimization related positively to PIU through the mediating variables of mindfulness and depression (Liu et al., 2020). Few studies showed that PIU was an essential factor that needs to be considered to prevent cyberbullying incidents (Brighi et al., 2019; Méndez et al., 2020).

Several studies also investigated cyberbullying attitudes' contribution to individuals' involvement in cyberbullying incidents. Doane et al. (2014) found that more positive cyberbullying attitudes predicted higher intentions to cyberbully and remarkably predicted more frequent cyberbullying perpetration. A cross-cultural study among seven countries suggested a stronger relationship between positive cyberbullying attitudes and cyberbullying perpetration in independent countries that participated in the study, such as Australia, Brazil, Germany, and the United States of America (Barlett et al., 2021). A longitudinal cross-lagged analysis also found that adolescents who favor cyberbullying attitudes were more likely to cyberbully others (Barlett et al., 2019).

Studies on predictors of cyberbullying perpetration and victimization in Indonesia are scarce.

Along few studies, a study in Jakarta highlighted social support from family and friends as factors related to cyberbullying (Handono et al., 2019). However, it is difficult to find any scientific reports on predictors of cyberbullying in the Indonesian context. Therefore, this study's second aim is to investigate cyberbullying predictors by analyzing PIU and cyberbullying attitudes. Research questions of this study are: 1) how is the prevalence of cyberbullying perpetration and victimization in Indonesia during the COVID-19 pandemic? and 2) how do sociodemographic variables, PIU, and cyberbullying attitudes predict cyberbullying perpetration and victimization?

Method

Design

A cross-sectional survey design was used in this study to investigate prevalence and predictors of cyberbullying in middle and high school students during the COVID-19 pandemic. A cross-sectional survey design was used in this study to investigate prevalence and predictors of cyberbullying in middle and high school students during the COVID-19 pandemic.

Sample

This study used convenience sampling Indonesian middle and high school students living in Bandung City, West Java, from 11 to 18 years old. The research team sent a link to Google Form to teachers of middle and high schools in Bandung City and requested their assistance in sending the link to parents of their students. Details of participants of this study are presented in Table 1. This study used convenience sampling Indonesian middle and high school students living in Bandung City, West Java, from 11 to 18 years old. The research team sent a link to Google Form to teachers of middle and high schools in Bandung City and requested their assistance in sending the link to parents of their students. Details of participants of this study are presented in Table 1.

Procedure

Ethical Clearance

Nusantara Scientific Psychology Consortium (*Konsorsium Psikologi Ilmiah Nusantara* /KPIN) approved the ethical clearance of this study (Number 001/2022/Etik/KPIN). The Google Form embedded the parent's written consent. Students' written consent was obtained after clicking the Google Form button to participate. The research team also informed students that they would treat students' data confidentially and were free to answer or not answer the questions.

Instruments

The research team adapted all instruments used in this study to the Indonesian context following guidance from Borualogo et al. (2019).

Cyberbullying Victimization Scale and Cyberbullying Perpetration Scale

Patchin and Hinduja (2015) developed these two cyberbullying scales. A systematic international review of cyberbullying measurements (Chun et al., 2020) indicated that these cyberbullying scales from Patchin and Hinduja (2015) are one of the valid and reliable (.89 - .97) scales to measure cyberbullying in middle and high school students using online data collection. These two cyberbullying scales originated in English and have been adapted to Indonesian (Borualogo & Casas, 2022). There are nine items with slightly different wording on each scale. Students were asked whether they had been cyberbullied within the previous 30 days, and they were also asked to report on these same nine questions concerning their actions toward others. There are nine items with slightly different wording on each scale. Students were asked whether they had been cyberbullied within the previous 30 days, and they were also asked to report on these same nine questions concerning their actions toward others.

for cyberbullying victimization are 1) "*I have been cyberbullied*", 2) "*Someone posted mean or hurtful comments about me online*", 3) "*Someone posted a mean or hurtful picture online of me online*", 4) "*Someone posted a mean or hurtful video online of me online*", 5) "*Someone created a mean or hurtful web page about me*", 6) "*Someone spread rumors about me online*", 7) "*Someone threatened to hurt me through a cell phone text message*", 8) "*Someone threatened to hurt me online*", 9) "*Someone pretended to be me online and acted in a way that was mean or hurtful*" (Patchin & Hinduja, 2015). For this sample, the Cronbach's alpha = .858. The questions for cyberbullying perpetration scale are 1) "*I cyberbullied others*", 2) "*I posted mean or hurtful comments about someone online*", 3) "*I posted a mean or hurtful picture online of someone*", 4) "*I posted a mean or hurtful video online of someone*", 5) "*I created a mean or hurtful web page about someone*", 6) "*I spread rumors about someone online*", 7) "*I threatened to hurt someone through a cell phone text message*", 8) "*I threatened to hurt someone online*", 9) "*I pretended to be someone online and acted in a way that was mean or hurtful to them*" (Patchin & Hinduja, 2015). For this sample, the Cronbach's alpha = .672. The options for items on both scales were Never = 0, Once = 1, A few times = 2, Several times = 3, and Many times = 4 (Patchin & Hinduja, 2015).

Problematic Internet Use Questionnaire Short Form-6 (PIUQ-SF 6)

Demetrovics et al. (2016) developed PIUQ-SF 6. The items were (1) How often do you spend time online when you'd rather sleep?, (2) How often do you feel tense, irritated, or stressed if you cannot use the internet for as long as you want to?, (3) How often does it happen to you that you wish to decrease the amount of time spent online but you do not succeed?, (4) How often do you try to conceal the amount of time spent online?, (5) How often do people in your life complain about spending too much time online?, and (6) How often does it happen to you that you feel depressed, moody, or nervous when you are not on the internet and these feelings stop once you are back online? Demetrovics et al. (2016). The options were Never = 1, Rarely = 2, Sometimes = 3, Often = 4, and Always/Almost always = 5 (Demetrovics et al., 2016). For this sample, the Cronbach's alpha = .765.

Cyberbullying Attitude Measure

Barlett et al. (2016) developed nine items of the cyberbullying attitude measure. The items were (1) Teasing or making fun of others with harmful comments online is fun to me, (2) It is alright to send harmful online messages/posts to another, (3) It makes me feel good to attack others online when they deserve it, (4) I have no reservation about using technology to hurt others when they deserve it, (5) Harming others via electronic media is acceptable to do, (6) School rules will be ineffective at stopping cyberbullying, (7) Sending mean electronic messages to others is less harmful than face-to-face communication, (8) Attacking others online can be justifiable, and (9) Because I am not face-to-face with another person while online, I feel I can say whatever I want, even if it is mean or harmful (Barlett et al., 2016). The options were Strongly disagree = 1, Agree a little bit = 2, Agree somewhat = 3, Agree = 4, Strongly agree = 5. For this sample, the Cronbach's alpha = .642.

Data analysis

We provides crosstabs to classify study participants by gender and school grades. The prevalence of cyberbullying perpetration and victimization were analyzed using frequency for each cyberbullying indicator. Three independent variables included in this study are sociodemographic variables (gender and school grades), PIU, and cyberbullying attitudes. Multivariate linear regression was used to test the contribution of each independent variable to cyberbullying perpetration and victimization separately. Data were calculated using SPSS 25.

Results

Table 1
Characteristics of Participants

School Levels	Girls		Boys		Total	
	n	%	*n*	%	*n*	%
Middle school students	1,608	42.9	1,452	38.7	3,060	81.6
High school students	358	9.5	334	8.9	692	18.4
Total	1,966	52.4	1,786	47.6	3,752	100

Table 1 showed that 52.4% of the participants were girls, and 81.6% were middle school students. The average age was 14.29 (*SD* = 1.47). The higher percentage of girls and middle school students indicated that cyberbullying is most prevalent among this group.

Table 2
Prevalence Of Cyberbullying Perpetration And Victimization By Gender And School Gradel

			Girls		Boys		Middle School		High School		Total	
			n	%	n	%	n	%		%	n	%
		Perpetration										
		Never	1,774	47.3	1,450	38.6	2,674	71.3	550	14.7	3,224	85.9
1.	I cyberbullied others	Once	153	4.1	206	5.5	265	7.1	94	2.5	359	9.6
		A few times	39	1.0	123	3.3	118	3.1	44	1.2	162	4.3
		Never	1,792	47.8	1,528	40.7	2,729	72.7	591	15.8	3,320	88.5
2.	I posted mean or hurtful comments about someone online	Once	144	3.8	161	4.3	241	6.4	64	1.7	305	8.1
		A few times	30	0.8	97	2.6	90	2.4	37	1.0	127	3.4
		Never	1,929	51.4	1,706	45.5	2,979	79.4	656	17.5	3,635	96.9
3.	I posted a mean or hurtful picture online of someone	Once	32	0.9	54	1.4	60	1.6	26	0.7	86	2.3
		A few times	5	0.1	24	0.6	20	0.5	9	0.2	29	0.8
		Never	1,941	51.7	1,729	46.1	3,007	80.1	663	17.7	3,670	97.8
4.	I posted a mean or hurtful video online of someone	Once	20	0.5	38	1.0	38	1.0	20	0.5	58	1.5
		A few times	5	0.1	18	0.5	14	0.4	9	0.2	23	0.6
		Never	1,903	50.7	1,699	45.3	2,938	78.3	664	17.7	96.0	
5.	I spread rumors about someone online										3,602	
		Once	57	1.5	68	1.8	103	2.7	22	0.6	125	3.3
		A few times	6	0.2	19	0.5	19	0.5	6	0.2	25	0.7
		Never	1,935	51.6	1,721	45.9	2,993	79.8	663	17.7	3,656	97.4
6.	I threatened to hurt someone online	Once	28	0.7	46	1.2	54	1.4	20	0.5	74	2.0
		A few times	3	0.1	16	0.4	12	0.3	7	0.2	19	0.5
		Never	1,916	51.1	1,700	45.3	2,959	78.9	657	17.5	3,616	96.4
7.	I threatened to hurt someone through a cell phone text message	Once	46	1.2	60	1.6	82	2,2	24	0.6	106	2.8
		A few times	4	0.1	23	0.6	17	0.5	10	0.3	27	0.7
		Never	1,935	51.6	1,734	46.2	3,001	80.0	668	17.8	3,669	97.8
8.	I created a mean or hurtful web page about someone	Once	27	0.7	41	1.1	52	1.4	16	0.4	68	1.8
		A few times	4	0.1	8	0.2	5	0.1	7	0.2	12	0.3
	I pretended to be someone else online and acted in a way that	Never	1,951	52.0	1,762	47.0	3,037	80.9	676	18.0	3,713	99.0
9.	was mean or hurtful to them											
		Once	14	0.4	19	0.5	18	0.5	15	0.4	33	0.9
		A few times	1	0.0	3	0.1	3	0.1	1	0.0	4	0.1
		Victimization										
1.	I have been cyberbullied	Never	1,136	30.3	1,053	28.1	1,809	48.2	380	10.1	2,189	58.3
		Once	444	11.8	331	8.8	617	16.4	158	4.2	775	20.7

Table 2 (Continued)

Prevalence Of Cyberbullying Perpetration And Victimization By Gender And School Gradel

			Girls		Boys		Middle School		High School		Total	
		A few times	285	7.6	303	8.1	471	12.6	117	3.1	588	15.7
		Never	1,329	35.4	1,351	36.0	2,222	59.2	458	12.2	2,680	71.4
2.	Someone posted mean or hurtful comments about me online	Once	358	9.5	231	6.2	454	12.1	135	3.6	589	15.7
		A few times	222	5.9	176	4.7	313	8.3	85	2.3	398	10.6
		Never	1,766	47.1	1,585	42.2	2,753	73.4	598	15.9	3,351	89.3
3.	Someone posted a mean or hurtful picture online of me online	Once	126	3.4	115	3.1	191	5.1	50	1.3	241	6.4
		A few times	62	1.7	73	1.9	99	2.6	36	1.0	135	3.6
		Never	1,843	49.1	1,663	44.3	2,870	76.5	636	17.0	3,506	93.4
4.	Someone posted a mean or hurtful video online of me online	Once	79	2.1	63	1.7	103	2.7	39	1.0	142	3.8
		A few times	34	0.9	51	1.4	75	2.0	10	0.3	85	2.3
		Never	1,438	38.3	1,441	38.4	2,374	63.3	505	13.5	2,879	76.7
5.	Someone spread rumors about me online	Once	283	7.5	172	4.6	361	9.6	94	2.5	455	12.1
		A few times	166	4.4	137	3.7	236	6.3	67	1.8	303	8.1
		Never	1,739	46.3	1,571	41.9	2,708	72.2	602	16.0	3,310	88.2
6.	Someone threatened to hurt me online	Once	147	3.9	134	3.6	224	6.0	57	1.5	281	7.5
		A few times	56	1.5	60	1.6	96	2.6	20	0.5	116	3.1
		Never	1,706	45.5	1,564	41.7	2,689	71.7	581	15.5	3,270	87.2
7.	Someone threatened to hurt me through a cell phone text message	Once	170	4.5	148	3.9	239	6.4	79	2.1	318	8.5
		A few times	68	1.8	60	1.6	108	2.9	20	0.5	128	3.4
		Never	1,754	46.7	1,627	43.4	2,784	74.2	597	15.9	3,381	90.1
8.	Someone created a mean or hurtful web page about me	Once	129	3.4	96	2.6	170	4.5	55	1.5	225	6.0
		A few times	57	1.5	46	1.2	77	2.1	26	0.7	103	2.7
	Someone pretended to be me online and acted in a way that was	Never	1,814	48.3	1,648	43.9	2,834	75.5	628	16.7	3,462	92.3
9.	mean or hurtful											
		Once	110	2.9	88	2.3	151	4.0	47	1.3	198	5.3
		A few times	26	0.7	40	1.1	56	1.5	10	0.3	66	1.8

Table 2 only presents the high and low incidents of cyberbullying. Table 2 showed that 9.6% of students reported that they cyberbullied others at least once, while 20.7% reported that they had been cyberbullied at least once. The most prevalent cyberbullying perpetration was posting mean or hurtful comments about others at least once (8.1%) and a few times (3.4%). The least prevalent cyberbullying perpetration was pretending to be someone else online and acting in a way that was mean or hurtful to them (0.9% at least once and 0.1% a few times). The most prevalent cyberbullying victimization was someone posted mean or hurtful comments online (15.7%). Someone spread rumors was also relatively high in prevalence (12.1%). Someone posting a mean or hurtful video online, pretending to be someone else, and acting in a way that was mean or hurtful to someone else were the less prevalent among other cyberbullying actions.

Table 3
Linear Regression of Predictors of Cyberbullying Perpetration and Cyberbullying Victimization (Only significant ones were presented)

	B	SE	β	t	p	Lower Bound	Upper Bound
	Cyberbullying Perpetration						
	Sig = .000; F = 7.801; df1= 17; df2= 500; Adjusted R2 = .183						
Gender	.536	.187	.121	2.859	.004	.168	.904
School grade	.562	.202	.116	2.777	.006	.164	.904
Cyberbullying Att 1	.441	.165	.120	2.671	.008	.117	.766
Cyberbullying Att 2	1.603	.312	.243	5.135	.000	.990	2.217
Cyberbullying Att 4	.342	.139	.130	2.457	.014	.068	.615
	Cyberbullying Victimization						
	Sig = .000; F = 5.937; df1 = 17; df2 = 1514; Adjusted R2 = .052						
PIU 5	.245	.108	.065	2.274	.023	.034	.456
PIU 6	.304	.119	.078	2.548	.011	.070	.539
Cyberbullying Att 1	.864	.276	.083	3.314	.002	.323	1.404
Cyberbullying Att 3	-.595	.213	-.095	-2.796	.005	-1.012	-.177
Cyberbullying Att 4	.703	.253	.092	2.776	.006	.206	1.200
Cyberbullying Att 9	.485	.240	.056	2.022	.043	.015	.956

All models presented in Table 3 for predictor of cyberbullying perpetration included 500 cases. It was able to explain 18.3% variability of cyberbullying perpetration. Being a boy (β = .536, p = .004) and a high school student (β = .562, p = .006) increased the probability of being a perpetrator. Cyberbullying attitude that feels alright to send harmfull online message to another (β = 1.603, p = .000) giving the highest contribution to cyberbullied other. They make fun of others with harmful comment online (β = .441, p = .008), but have no reservations about using technology to hurt other (β = .342, p = .014). Table 3 also presented for predictor of cyberbullying victimization included 1,514 cases. It was able to explain 5.2% variability of cyberbullying victimization. PIU was predict cyberbullying victimization. People in their life complain about they use too much time online (β = .245, p = .023). They also feel depressed, moody, or nervous when they are not online (β = .304, p = .011). Among cyberbullying attitude, making fun of others with harmful comment was fun to them (β = .864, p = .002). But they do not feel good to attack others online (β = -.595, p = .005) because they do not have reservation about using technology to hurt other (β = .703, p = .006).

Discussion

This study shows that more students reported being cyberbullying victimization rather than cyberbullying perpetration. This is aligned with findings from Malaysia that showed a higher prevalence of cyberbullying victimization (31.6%) than cyberbullying perpetration (20.9%) (Sivabalan et al., 2020). A scoping review of 159 studies also showed a higher prevalence of cyberbullying victimization than cyberbullying perpetration (Brochado et al., 2016). Given that cyberbullying occurs because of the existence of the perpetrator and the victim, the results of this study indicate that the perpetrator may be cyberbullying more than one victim so that the prevalence of cyberbullying perpetration is lower than victimization. This report needs to be seriously taken into account by teachers and parents. When they find their students or children become cyberbullying perpetrators, they need to prevent the perpetrators from cyberbullying other victims.

Being a boy increases the probability of being a cyberbullying perpetrator. These results aligned with findings in Spain, where more male adolescents engaged in cyberbullying perpetration (Yudes et al., 2020, 2021). Studies in China showed that girls were more likely to engage in cyberbullying victimization (Geng et al., 2021), and boys were more likely to engage in cyberbullying perpetration (Wang et al., 2019). Another study highlighted prior cyberbullying experiences where males were more likely to engage in cyberbullying perpetration when they had been cyberbullied previously (Zsila et al., 2018). Being an older student, in this case, being a high school student, increase the probability of being cyberbullying perpetrator. Age does not consistently show that being older increases the likelihood of becoming cyberbullying perpetrators and victims (Kowalski et al., 2019). Therefore, it is essential to be constantly aware of the likelihood of individuals engaging in cyberbullying, regardless of age. Among cyberbullying attitude, both perpetrator and victim, they tend make fun of teasing online and don't have reservation using technology to hurt other. Posting mean or hurtful comments online was the most prevalent cyberbullying perpetration and victimization. A study in Malaysia also showed that posted online harassment or hurtful comments were the most prevalent in both cyberbullying perpetration and victimization (Sivabalan et al., 2020).

More frequent spending time online, concealing the amount of time spent online, and feeling depressed, moody or nervous when they were not online contributed significantly to the increased probability of cyberbullying victims. People in their life complain about they use too much time online. In contrast with the study, a study by (Brighi et al., 2019) indicated that online time mediated cyberbullying and PIU. Moreover, Alheneidi et al. (2021) found that individuals who spent more hours online felt lonely. This loneliness risks the prevalence of individuals engaged in cyberbullying victimization (Olenik-Shemesh et al., 2012; Varela et al., 2022). These results suggest that PIU harms victims, particularly regarding the amount of time spent. Regarding cyberbullying attitude, the perpetrators tend to have the fun of attacking others, increasing the probability of engaging in cyberbullying perpetration. Aligned with these results, Barlett (2015) stated that positive cyberbullying attitudes risk individuals engaging in cyberbullying perpetration. The victims tend to unfavored the cyberbullying attitudes. They think that school rules are ineffective at stopping cyberbullying and increasing the probability of being cyberbullied. On the other side, they feel that individuals can use technology to hurt others when they deserve it. However, they do not accept harming others online and do not feel good attacking others online, protecting the individuals from being cyberbullied. There are several limitations to this study. This study only focused on middle and high school students, whereas very few studies have focused on cyberbullying among elementary school students. Therefore, future studies are essential to investigate cyberbullying among elementary school students,

mainly because they have gotten used to spending more online time since the COVID-19 pandemic. This study used convenience sampling; therefore, results can not be generalized.

Despite these limitations, this study has strengths. It has contributed to filling the gap in cyberbullying studies in Indonesia. This study is the first to investigate the prevalence and predictors of cyberbullying among middle and high school students during the COVID-19 pandemic in Indonesia.

Conclusion

Cyberbullying perpetration and victimization are serious problems that need to be considered. The number of incidents tends to increase during the COVID-19 pandemic, along with the increased time spent online. Boys tend to engage in cyberbullying perpetration. Feeling positive about cyberbullying attitudes (i.e., having fun of attacking others) increases the probability of cyberbullying perpetration. Cyberbullying victims tend to think that school rules are ineffective at stopping cyberbullying. Therefore, teachers should take this seriously to enforce school rules to prevent cyberbullying.

Recommendation

This study shall increase parents' and teachers' knowledge about cyberbullying, particularly during the COVID-19 pandemic, since students spend more time online studying and leisure activities. Parents and teachers shall be more aware of the increasing number of cyberbullying incidents and prevent cyberbullying incidents.

Declaration

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Author Contribution

ISB designed the study, lead in the data collection, conducted the data analysis, and wrote the article. HW and SK contributed equally in conducting the study. All authors read and approved the final version of the manuscript.

Conflict of Interest

The authors declare that they have no conflict of interest to disclose.

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