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Cyberbullying on social media under the influence of COVID-19

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Abstract
The sudden emergence of the COVID-19 pandemic has introduced new norms largely revolving around the use of social media, disrupting the mentality of Internet users, especially the youth, resulting in an increase in cyberbullying. The rise in the popularity of many apps that facilitate online interactions has increased the risk of cyberbullying incidents. Not only did the COVID-19 pandemic transform social life, work, and education towards online modes of interaction, but it has also contributed to the ongoing digitization of bullying. As work moved to the home, so did bullying. This study aims to understand how the COVID-19 pandemic, which affects social media usage, increases the incidence of cyberbullying. We tested our hypotheses using a sample of 200 Malaysian participants. The results showed that the relationship between the COVID-19 pandemic's influence and cyberbullying was significant. However, we failed to find any statistical evidence that gender moderates this relationship. This study found an increase in cyberbullying incidents resulting from the increased use of social media due to the COVID-19 pandemic's influence. Our findings contribute to the body of knowledge on the prevalence of cyberbullying in Malaysia, which may benefit future research.

KEYWORDS
COVID-19 pandemic, cyberbullying, gender, mental state, social media

1 | INTRODUCTION

It has been considerable amount of time since the COVID-19 pandemic began impacting the world in numerous ways and imparting upon people new perspectives. Technology has taken over many aspects of the world, and the COVID-19 virus has accelerated the transformation of many manual jobs and tasks to that of electronic-assisted and enabled ones. The COVID-19 pandemic has forced millions of students to stay indoors, adapt to the "new normal," and engage in distance learning at home, thus

placing online learning in the spotlight (Munir et al., 2021). Many businesses have ceased operations due to various obstacles presented by the pandemic (Hu & Kee, 2021), while some businesses have converted the COVID-19 experience to that of entrepreneurial opportunity identification (Tunde et al., 2021). Arguably, the COVID-19 pandemic has further accelerated the adoption of technology via its use across many remote activities, such as in online classrooms, shopping, delivery, and work applications, as well as in the form of video conferencing applications (Lim, 2021). The phenomenon of working and studying online by default has become widespread, which has led to the spread of many virtual applications and programs aimed at electronically facilitating many operations. In the case of

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social distancing, it is the Internet connection that makes us aware of local and global developments, and through which we are able to run our businesses and maintain a measure of mental and physical well-being.

The COVID-19 pandemic is a double-edged sword (Kee et al., 2021). Today, the COVID-19 pandemic has created new social habits owing to a drastic shift in lifestyles, and the increase in social media use is likely to play a crucial role in expanding the prevalence of cyberbullying. Technology and social media dependency may lead to the success or detriment of an individual, depending on who utilizes it and how it is utilized. The sudden shift in lifestyle as a result of the COVID-19 pandemic is likely related to the increased reliance on social networks among the youth and should be studied so as to understand and reduce cyberbullying.

In this decade, direct or "traditional" bullying has expanded to include a new form of bullying referred to as "cyberbullying", which is perpetrated and facilitated through the use of technology (Anwar et al., 2020; Tokunaga, 2010). Cyberbullying refers to the use of electronic communication, and mobile phones and the Internet in particular, to bully a person—typically by sending messages of an intimidating or threatening nature. Cyberbullying is commonly defined as "any behavior performed through electronic or digital media by individuals or groups that repeatedly communicate hostile or aggressive messages intended to inflict harm or discomfort on others"(Tokunaga, 2010, p. 278). Both cyberbullying and traditional bullying occur when there is a power imbalance or display of aggressive behavior from the parties involved (Kowalski et al., 2014). Some studies suggest that a dangerous aspect of cyberbullying is the anonymity present in many situations that leads to the creation of a sense of powerlessness (Dooley et al., 2009). Hence, cyberbullying has become very popular due to the ease of committing such acts anonymously, meaning that as the use of the Internet increases, so does cyberbullying. Understanding the impact of social media on cyberbullying in the wake of COVID-19 can allow businesses and organizations to understand the impacts of cyberbullying influences, which can be reflected in workplace climates, motivations (Kalyar et al., 2020), efficiency, morale, and even trust (Cerna et al., 2015). Malaysia was used as the context for this study. Based on 2017 statistics, a survey conducted by the DIGI Cyber Safe found that 90% of children are at risk of being cyberbullied. Through a poll, 28% out of 6795 young people in Malaysia claimed to be victims of online bullying (U-Report Malaysia, 2019). In addition, 43% of respondents reported that they experienced cyberbullying through online games, private messaging, and social media apps—including Facebook, Instagram, WhatsApp, YouTube, and Twitter (U-Report Malaysia, 2019).

Four of the nine young people in Malaysia said that they knew about private online groups used to bully others. Only two of the seven young people in Malaysia revealed that they knew of a helpline to turn to if they were victims of cyberbullying or online violence (U-Report Malaysia, 2019). The Ministry of Communications and Multimedia received 10,406 complaints regarding cyberbullying between 2016 and September 2020 (Tan et al., 2020). From 2020 to July 2021, the Malaysian Communication and Multimedia Commission received over 6000 cyberbullying and harassment complaints (Carvalho et al., 2021).

In Malaysia, social media platforms have continued to cause severe psychological and emotional trauma to users through acts of cyberbullying. For example, in May 2020, a 20-year-old Penang girl, a victim of cyberbullying, hanged herself from a ceiling fan after a TikTok video of her and a colleague drew criticism on Facebook and went viral (Basyir & Perimbanayagam, 2020). In August 2020, a 17-year-old girl from Penang leaped to her death from a condominium after her boyfriend threatened to upload her private photos to social media (Basyir, 2020). In May 2019, another cyberbullying victim, a 16-year-old Sarawak girl, jumped to her death after an Instagram Poll open to her followers asked for help in deciding whether she should continue living or kill herself. (Hassan, 2019). These recent incidents highlight that cyberbullying cases have recently increased in Malaysia, leading to instances of suicide and growing mental health problems faced by cyberbullying victims within the country. These sad cases alerted us to the notion that cyberbullying negatively impacts Malaysian youth's physical, social, and cognitive functioning, as well as their development and psychological well-being.

Important measures that have been implemented to combat the COVID-19 pandemic—such as the use of quarantine and movement control systems—have led to many people sitting at home, requiring them to change their lives virtually. Therefore, the importance of the Internet has increased, and life has become more difficult for those who cannot keep up with the Internet and its innovations, leading to deteriorating mental health. However, the widespread use of social media has become a phenomenon that cannot be ignored. However, with the frequent use of the Internet and social media, there are many advantages and disadvantages —one such significant disadvantage is that this trend facilitates cyberbullying (Casas et al., 2013). In recent years, cyberbullying has been one of the most serious threats facing the lives of young people.

Generation Z (referring to those born between 1981 and 1996) was born with the Internet as their main muse and, as such, it is not surprising that cyberbullying among the youth is a topic that has been thoroughly studied. However, further studies on its sudden alarming increase and
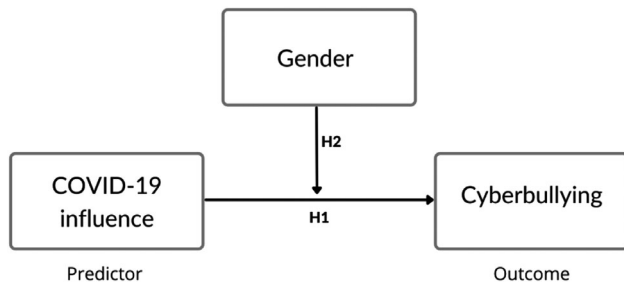
FIGURE 1 Our research model

its correlation with the pandemic will lead to a better understanding of prevention methods. Specifically, Internet usage among the youth should be studied so as to learn what may cause decisions to bully, and ultimately lead to a better understanding of how to maintain a healthy online environment. Thus, this study attempts to determine how the COVID-19 pandemic affected Internet usage among the youth and its subsequent ability to increase cyberbullying rates. The influence had by COVID-19, a determinant of social media usage, was the predictor for cyberbullying in this study. Figure 1 clarifies the research framework of the relationship between the determinants of Malaysian youth behavior on social media usage (COVID-19 influence) and cyberbullying.

Given the strong evidence that the COVID-19 pandemic may impact social media usage and cyberbullying, this study adds to what is known about the relationship between social media usage and cyberbullying under the influence of the COVID-19 pandemic in Malaysia. This study proposes that the nature of gender may moderate this relationship. This study makes several contributions to the already-extant body of literature: (a) it aims to integrate the influence of COVID-19 and social media usage in predicting cyberbullying; (b) we develop items for COVID-19 and social media usage and cyberbullying; and (c) most studies on cyberbullying have been conducted in the United States. This study adds to the literature by testing the moderating effect of gender on cyberbullying within the Malaysian context.

2 | LITERATURE REVIEW

Through a literature review, this section will discuss perpetrators of cyberbullying, in which several scholars agree that they are mainly concerned with mental health and social media use. Our study will help progress cyberbullying research by exploring the mental state of Malaysian youth and their mindset towards cyberbullying during the COVID-19 pandemic, and will shed light on the indirect influence this pandemic has on cyberbullying through the increased usage of social media platforms, thus helping to

discover ways to reduce it. In an era where social media has become a prevalent method of interaction, it is essential to conduct studies that will further the knowledge on how to have healthy and safe interactions online.

2.1 | Cyberbullying and one's mental state

While efforts are being directed at reducing direct and indirect bullying in its traditional forms—verbal, physical, and emotional—the existence of another form of bullying that is no less important is that of cyberbullying, in which the bully uses electronic means in their actions against others. In many cases, cyberbullying may take a backseat to traditional bullying, as it is often overlooked and may be considered unimportant. However, this aspect of bullying has a significant effect. Cyberbullying comprises harassment, denigration, impersonation, outing, trickery, exclusion, cyberstalking, and cyber threats (Willard & Steiner, 2007).

It is important to consider the different mental states of perpetrators to learn the causes and effects, and how to deal with them effectively. Mental illness or ruminated anger can linger within the victim of cyberbullying and possibly turn them into bullies themselves—the study by Lee and Shin (2017), for example, has suggested that individuals with previous cyberbullying experiences have a higher possibility of becoming cyberbullies. Consider that such experiences carry the capacity to produce low self-esteem and empathy, which are predictors of a higher rate of cyberbullying perpetrators (Brewer & Kerslake, 2015). Thus, both perpetrators and victims can suffer from psychological distress (Schenk et al., 2013). Another contribution to the victims' and perpetrators' mental state is, as suggested by Buelga et al. (2017), poor family relationships. These factors can turn individuals into cyberbullies and cause them to develop other psychological problems—such as social anxiety. Youths who engage in cyberbullying might exhibit social withdrawal behavior, which may increase social anxiety (Coelho & Romão, 2018). According to research, an increase in social anxiety caused by cyberbullying can, in turn, increase the likelihood of developing several symptoms of depression (Wang et al., 2019). Several scientific studies have established the existential possibility of mental illnesses with severe depressive symptoms developing in most perpetrators and victims of cyberbullying (Bottino et al., 2015; Tian et al., 2018).

Despite its potential negative effects on one's mental health, it is also important to note that social workers, counselors, and therapists have mostly reported a positive view of their therapeutic relationships with their clients using social media (Rosenberg et al., 2021). In addition,

during the COVID-19 pandemic, there have been reports that the Internet, social media, and other forms of visual entertainment have helped individuals cope with the lockdown. Naslund et al. (2020) have stated that, as advances in digital mental health progress, social media could provide people with the need for mental health services with easy access to information, help, and support. Furthermore, Cauberghe et al. (2021) have stated that social media could reduce loneliness among users by helping them stay in touch with their families and friends. However, the study also reported that while loneliness was reduced, it did not mean increased levels of happiness—especially when social media experiences served as a substitute for physical interaction. Social media also provides social support for older adults who report reduced loneliness (Zhang et al., 2020). Social media's positive and negative effects are ultimately determined by the users' usage patterns, context, and personal circumstances (Van Zoonen et al., 2022).

2.2 | Cyberbullying perpetrators and social media usage

Frequency of Internet usage is a significant predictor of cyberbullying and victimization. It can be suggested that Internet usage is often associated with the initiation of cyberbullying activities. Balakrishnan's (2015) study reported that individuals going online for 3–5 h a day are more exposed to cyberbullying engagement than those who spend less time online. The longer the time spent online, the higher one's chance of bullying or being bullied. Phillips and Wisniewski (2021) have stated that the amount of depression and anxiety that frequent social media users can develop or experience depends on their emotional responses and interactions with other users during the time they spend online. The study adds that, if the use of social media is healthy, there is a reduction in the perceived adverse effects of excessive use. Perpetrators of cyberbullying often display a lack of restraint and high degrees of aggression, both offline and online (You & Lim, 2016). However, many may wonder if cyberbullies are aware of their actions and their effects. The answer may lie in several studies, including Sari's (2016) findings, which indicate a positive relationship between aggressive humor and cyberbullying. For example, cyberbullies may sometimes not consider themselves as bullies and may instead convince themselves that they are just having fun. Anwar et al. (2022) have also reported that social media bullying in the workplace impacts employees' work engagement and psychological well-being. Therefore, based on previous studies, it can be suggested that increased use of social media could be a factor in promoting cyberbullying if used in an unhealthy way.

2.3 | COVID-19's influence as a determinant of social media usage

One of the many inevitable aspects of the COVID-19 pandemic is the creation of many new norms and habits. These new standards include distance learning, working from home, and online communication, all of which require the proper facilitation of the Internet. For example, people who have to quarantine and spend their time at home have turned to social media for entertainment so as to ease their stress throughout the pandemic. Social media usage has proven advantageous in times such as the COVID-19 pandemic, where the urgency of time, physical distancing, and widespread information distribution are sorely needed (Tsao et al., 2021; Wong et al., 2020). A study conducted by Zhong et al. (2021) found that, at the onset of COVID-19, Wuhan citizens turned to social media to help emotionally mitigate the threat of COVID-19. Abbas et al. (2021) have argued that social media is beneficial for obtaining emotional support and information. In particular, COVID-19 has placed humans in a vulnerable position, exposing their fears concerning their social existence (Have & Gordijn, 2021). Anwar et al. (2022) have also found that news concerning COVID-19 distributed via social media affects employees' work boredom and task performance.

Social media has been widely utilized in aiding the distance learning process through video-conferencing platforms, as well as in terms of applications enabling chat and discussion (Batubara et al., 2021). Another example is that people must stay home to avoid infection and, thus, learn, work, and perform their daily tasks online. Social media adoption has spiked to the point that it has redirected marketing methods away from physical to online channels, especially communication and promotion among Gen Z (Galati et al., 2017). This phenomenon has evolved to the point whereby it is incorporated into the lives of baby boomers, homemakers, and other older generations, who have started to see online shopping as an effective and safe option for grocery shopping and the acquiring of household necessities.

One common impact that highlights the COVID-19 relationship between social media is the active engagement of people with digital technology. People, especially young adults, are the most active online, interacting with an average of five digital platforms (e.g., TikTok, Twitter, WeChat, and Instagram) daily (Volkmer, 2021). The pandemic has aided the rise in demand for certain applications, including Webex Cisco, Zoom, Google Meet, and other applications. TikTok, for example, has dominated Facebook as the most searched-for social media platform in the world. A statement released by the UXEL SEM digital marketing solution team indicates that TikTok has experienced

a more-than 100% year-on-year increase in users in the United States, United Kingdom, Canada, France, Spain, Brazil, Italy, and Germany.

Facebook, meanwhile, experienced the biggest drop between January 2021 and September 2021. The previously well-known YouTube Website also fell in popularity among all countries surveyed, except Germany—where its usage grew by by 5% (Murugiah, 2021). With COVID-19 causing major changes in social media, the ease of access and time spent on the Internet and social media have created new opportunities to engage in cyberbullying and online acts of aggression (Craig et al., 2020). According to previous research, the more time students spend engaging in social media activities, the more likely they are to engage in cyberbullying activities and perpetration (Lee & Shin, 2017; You & Lim, 2016). Humans will always try to find ways to survive external pressures and, as such, we have hypothesized that:

> **H1**: COVID-19's influence is positively related to cyberbullying as a social media determinant.

2.4 | Effects of gender difference on cyberbullying

Most studies have suggested that men are more likely to be perpetrators of cyberbullying than women (Lee & Shin, 2017; Wong et al., 2014, 2018). Thus, findings suggest that the purpose and intentions of perpetrators can differ depending on their gender. However, biological differences are not as evident as psychological differences in terms of perpetrating acts of cyberbullying. Several studies have noted that one's mental state is an important factor that may influence cyberbullying perpetrators (Bottino et al., 2015; Tian et al., 2018). For example, anger rumination can occur in both women and men and can, subsequently, influence cyberbullying. Men have been found to have a higher rate of anger rumination (Maxwell et al., 2005). Studies show that, when faced with a stressful event, men have been found to have a higher tendency to project aggression and confrontation, while women are more likely to react to stress through seeking attention and comfort from their social group (Taylor et al., 2000). Wang et al. (2019) have reported that cyberbullying was more prevalent among women than among men, but only when considering the lifetime history of cyberbullying. Kim et al. (2017) have found that cyberbullying was more prevalent among men than women in terms of behavioral problems. It is worth noting that sex differences vary across the reported body of literature. In light of the complexity concerning gender differences, we have attempted to determine whether gender differences affect the relationship between COVID-19 and cyberbullying as our second hypothesis. In other words, does gender play a role in influencing cyberbullying tendencies under the pressures from the COVID-19 pandemic?

> **H2**: *Gender moderates the relationship between the COVID-19 pandemic's influence and cyberbullying such that the relationship would be stronger in women than in men.*

3 | METHODS

The study made use of a cross-sectional design by analyzing online survey data. Our sample consisted of 200 Malaysian university students. The questions used in this survey were designed so as to identify the Malaysian mindset towards cyberbullying and in support of our concept that the COVID-19 pandemic indirectly caused cyberbullying to intensify as social media use drastically became the new norm. An online survey was used to collect answers from the required audience. Online surveys are also the most appropriate means of data collection for our study given that the COVID-19 pandemic inhibits the ability to conduct face-to-face surveys.

Data were collected according to a 5-point Likert scale (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree). In total, 230 surveys were collected. However, after data screening was conducted, only 200 surveys were found to be usable. We developed cyberbullying (four items) and the COVID-19 pandemic's influence and social media (three items), followed by a series of psychometric analyses (such as content validation ratios and factor analyses). To develop the instrument, care was taken to measure the content validity of the items in question. Content validation was performed based on expert judgment. Ten academics reviewed the items, determining whether each one was essential to the category of the pandemic's influence, social media, and cyberbullying.

After collection, the content validity ratio (CVR) was computed as follows:

$CVR = (N_e - N/2) / (N/2)$, whereby N_e signifies the number of judges who rated the items as "essential," and where N represents the number of judges involved. The required level of CVR with an $N = 10$, which is necessary to reach a significant statistical level, is .62 (Lawshe, 1975). All the items were measured to fall above the recommended ratio. Factor analysis was then performed. The three items measuring the pandemic's influence in terms of social media usage, as well as the four items measuring cyberbullying, were submitted to a principal components analysis and rotated for varimax factor analysis. Two factors met the

selection criteria of eigenvalues greater than 1.0, explaining 68% of the variance. Factor 1 comprised three items concerning the pandemic's influence in terms of social media usage, while Factor 2 consisted of four items concerning cyberbullying. All items had factor loadings above 0.6, with no cross-loadings greater than 0.25. Before the actual data collection, pretest and pilot tests were conducted once the questionnaire was developed. The pre-test helped to ensure the clarity of the instructions given and the items or contents of the survey. Three respondents were invited to further refine the questionnaire so as to ensure that a well-validated instrument was used for this research. A revised version of the questionnaire was used in the pilot study. Thirty sets of questionnaires were distributed to full-time Malaysian university students. The pilot study's findings showed that the instrument concerning the pandemic's influence in terms of social media usage, and cyberbullying was valid and reliable, with Cronbach's alpha values of above .70.

The questionnaire consisted of one section designed to measure the pandemic's influence on social media usage. We asked the respondents whether they thought the COVID-19 pandemic had increased their social media use. We used three items for this variable, in which the sample items were as follows: "*The COVID-19 pandemic has increased my social media usage*," "*There has been an increase in social media influencers due to the COVID-19 pandemic*," and "*Social media has become the new norm to socialize due to the COVID-19 pandemic*." The reported mean for the COVID-19 pandemic's influence and social media use was 4.41. Another section of the questionnaire assessed cyberbullying. The four items concerning cyberbullying was directed towardsparticipants in terms of whether they thought social media increased the likelihood of online bullying. The mean for cyberbullying was 4.49. The sample items were: "*Too much time on social media can increase the risk of cyberbullying*," "*Bullies find it easier to use social media to attack their victims because bullies can hide their identities*," "*Cyberbullying is damaging because hate speech or negative content can be stored and shared easily*," and "*Social media made hate or inappropriate speech to be spread easily, providing a medium for cyberbullies*." As shown in Table 1, cyberbullying and the COVID-19 pandemic's influence have Cronbach's alpha of .89 and .90, respectively, thereby demonstrating good reliability.

4 | RESULTS AND DISCUSSION

Data analyses were performed using Statistical Package for Social Science (SPSS). Table 2 summarizes the demographic information of the 200 respondents in this study.

TABLE 1 Descriptive statistics, Cronbach's correlation alpha and zero order correlations

Variables	1	2
Cyberbullying	.89	
COVID-19 influence	.84**	.90
Mean	4.49	4.41
Standard Deviation	.72	0.94

Note: $N = 200$; *$p < .05$, **$p < .01$, ***$p < .001$. Diagonal entries indicate Cronbach's coefficients alpha.

TABLE 2 Demographic profile of respondents ($N = 200$)

Gender	Frequency	Percentage (%)
Male	88	44.0
Female	112	56.0
Age		
Below 18	0	0
18-25	188	94.0
26 and above	12	6.0

The demographics surveyed consisted of 44% males and 56% females, all of whom were over 18 years old. Since our research is primarily related to Malaysian youth, our survey intentionally targeted participants whose ages were within the Generation Z range. As a result, most Malaysian respondents to this survey were between 18 and 25 years old, which contributed to 94% of the survey. Only 6% were over 26, and none were under 18.

More than half of the respondents were female (56%). The majority of respondents (94%) were of the age group ranging from 18 to 25 years. As our research is primarily related to the youth (of Malaysia), our survey intentionally targeted participants whose ages were within the Generation Z range. Most Malaysian respondents to this survey were between 18 and 25 years old, which contributed to 94% of the survey. Only 6% were over 26 years of age, and none were under 18 years of age.

4.1 | The proportion of cyberbullies and victims

Respondents were asked two "yes or no" questions to determine whether they were more likely to be cyberbullied or engage in cyberbullying. About 68% of the respondents answered "yes" when asked if they had experienced cyberbullying, with the remaining 32% having answered "no." As for whether respondents had been guilty of cyberbullying someone before, 64% stated that they had not. Although only 36% of respondents admitted to experiencing cyberbullying, the number was still quite high for sensitive topics—such as cyberbullying. We assumed that all the respondents answered with complete impartiality.

4.2 | Respondents' mindsets towards cyberbullying

One question was asked to understand the knowledge of respondents concerning the phenomenon of cyberbullying in general, as they were asked what they thought the most common form of cyberbullying was. About 62% of respondents chose online stalking and harassment, 24% chose catfishing or the creation of fake profiles, and the rest chose exclusion or avoidance. Given that Facebook is known to be the most used platform for online bullying, it was no surprise that 46% of Malaysians who took part in the survey answered "Facebook" when asked what they thought was the most used app for online bullying. Approximately 34%, 10%, and 6% of respondents had answered with Instagram, Twitter, and TikTok, respectively. Based on the observation, the sudden rise of Instagram "reels" posts, along with TikTok having gained a sudden boost in the spotlight as social media use increased may be the reason for increased cyberbullying incidents.

Respondents were then asked how often they saw offensive notes, posts, or comments on other people's content while scrolling. 48% answered that they always did, and 44% answered with "sometimes." Only a few participants stated that they rarely saw any offensive comments, indicating a high incidence of cyberbullying in apps within the Malaysian youth community. One of the questions showed that 53% of respondents believed that body and physical appearance were the most common aspects of bullying, with 32.7% stating that opinions and beliefs are heavily bullied in Malaysia, but that people are not cyberbullied because of their race, nationality, or education.

4.3 | Regression analysis

Based on Table 3, the relationship between the COVID-19 pandemic's influence as a determinant of social media usage and cyberbullying is evident. Our study used the COVID-19 pandemic as a predictor of cyberbullying. We initially assumed that COVID-19 indirectly influenced the sudden increase in cyberbullying among Malaysian youth because they (young people) had to move everything home, including their social lives. As a result, the COVID-19 pandemic has become a determinant of social media usage, which has—in turn—caused it to increase drastically among the youth. Hypothesis 1 predicted the relationship between COVID-19 influence and cyberbullying. As shown in Table 3, the COVID-19 influence was significantly related to cyberbullying, with beta values of .84. Thus, Hypothesis 1 was supported. After proving that the COVID-19 pandemic is a determinant, we came to the conclusion that the influence of the pandemic intensified

TABLE 3 Summary of regression analysis

Variable	Cyberbullying
COVID-19 Influence	.84***
R^2	.71
F Value	485.39
Durbin-Watson Statistic	2.01

Note: $N = 200$; *$p < .05$, **$p < .01$, ***$p < .001$.

Based on this table, the relationship between COVID-19 influence as a social media usage determinant and cyberbullying is evident. In which our study used the COVID-19 influence as a predictor for the outcome, cyberbullying. We initially assumed that COVID-19 indirectly influenced the sudden increase of cyberbullying amongst Malaysian youth because people had to move everything home, including their social life. As a result, COVID-19 has become a determinant of social media usage, which caused it to increase drastically among the youth. Hypothesis 1 predicts the relationship between COVID-19 Influence and Cyberbullying. As shown in this table, COVID-19 influence was significantly related to cyberbullying with beta values of .84. Thus, H1 received support. After proving that COVID-19 is a determinant, we came to the creation of our study that COVID-19 influence has intensified cyberbullying incidents. R^2 of 0.709 indicates that 71% of the cyberbullying variation is indeed affected by its predictor, COVID-19 influence. As for the COVID-19 influence significance, its significance shows 0.00, evidently higher than the 0.01 significance level: hence, there is a strong significant relationship between Cyberbullying and COVID-19 influence.

TABLE 4 Summary of the moderating effect of gender

Cyberbullying	
Variable entered	Beta
Step 1 (R^2 = .68)	
COVID-19 Influence	.84***
Step 2 (R^2 change = .00)	
Gender	.06
Step 3 (R^2 change = .01)	
COVID-19 Influence × Gender	.18

The results in this table below show that gender is not a moderator variable due to the insignificance of the relationship. H2 is rejected. Such findings get us to the point that COVID-19's tendency to cyberbully is unrelated to the individual's gender. Whether the person was a female or male, both genders seem to be influenced equally by the COVID-19 and react similarly to it when it comes to bullying.

cyberbullying incidents. An R^2 of .709 indicates that 71% of the cyberbullying variation is, indeed, affected by its predictor, the influence of the pandemic. As for the pandemic's influence, its significance is 0.00, higher than the 0.01 significance level: hence, there is a strong and significant relationship between cyberbullying and the influence of the COVID-19 pandemic.

To examine the moderating effect of gender on the relationship between the pandemic's influence and cyberbullying as a social media determinant, a simple moderation analysis employing SPSS was conducted. Such a model helps explain whether a moderator alters the strength and/or direction of the relationship between an antecedent and outcome. A summary of the results of the hierarchical regression is presented in Table 4. The

interaction terms were statistically insignificant, indicating that gender did not moderate the relationship between the pandemic's influence, social media, and cyberbullying. Hence, Hypothesis 2 is rejected. These findings reveal that the pandemic's tendency toward promoting cyberbullying is unrelated to an individual's gender. Whether the person was female or male, both genders seemed to be equally influenced by the pandemic and reacted similarly to it when it came to cyberbullying.

The spread of virtual bullying worldwide, and especially in the case of Malaysia, is a hidden crisis that may destroy young people's self-confidence and may even indirectly affect the confidence and performance of employees within organizations. This study examined the mentality of Malaysians towards cyberbullying during the pandemic so as to further understand young people's perceptions of this topic. Our findings clearly showed that respondents believed that cyberbullying and social media were directly proportional. This analysis aimed to demonstrate that respondents who believed that there was an increase in cyberbullying due to social media also believed that it was related to increased social media use due to the COVID-19 pandemic. In other words, this proves that young people are assuming that the COVID-19 pandemic has indirectly affected the increase in social media usage, which further exacerbates cyberbullying through its effect on users who spend more time on social media. Most Malaysian youths regard social media and cyberbullying as positively correlated with the increase in its usage, with the COVID-19 pandemic acting as a catalyst.

Gender was found to be unrelated to the pandemic's influence and cyberbullying. This indicates that gender has no influence on the relationship between COVID-19, social media, and cyberbullying. This could be explained by the fact that Malaysians perceived the influence of the COVID-19 pandemic and social media upon an increased risk of cyberbullying, regardless of gender. It is also possible that both men and women may experience negative situations leading to cyberbullying. Thus, the moderating effect of gender is absent.

Few studies have been conducted on the perception of cyberbullying in Malaysia; however, those which have been conducted tend to focus on the psychological effects of cyberbullying (Balakrishnan, 2015). Therefore, Malaysian youth see that the COVID-19 pandemic has intensified the use of social media among Malaysian youth and has caused a significant increase in cyberbullying.

5 | IMPLICATIONS AND CONCLUSIONS

This study has several important implications regarding cyberbullying among Malaysian youths. First, the literature on cyberbullying and mental health has been expanded through a study conducted among Malaysians. This study is the first to empirically investigate cyberbullying on social media under the influence of the COVID-19 pandemic among Malaysian youths. This study found that the proportion of cyberbullies who used online social networking applications is much higher than that of their victims. Based on the survey conducted, it was found that Malaysians perceived Facebook as the most used application of cyberbullying, and that physical appearance was the most attacked aspect that cyberbullies target in their victims. This study also found a significant impact of the COVID-19 pandemic on cyberbullying, which acts as a determinant of Malaysians' behavior in using social media more often. In other words, this study has found that the COVID-19 pandemic has caused a sharp increase in cyberbullying among the youth surveyed in Malaysia.

The findings of this study highlight the urgency of combating cyberbullying, as it is a growing problem among Malaysians—and especially young people—with cyberbullying seriously affecting their mental health. The rising popularity of social media—which facilitates online interactions—has increased the risk of cyberbullying. Policymakers and educators in schools, colleges, and universities should consider the following: education and psychology professionals should provide interventions concerning technology, its uses, and abuse as part of the curriculum, along with ethics, so as to possibly reduce the potential threat of cyberbullying. These interventions could potentially positively impact an individual's critical thinking skills, self-awareness, and independence online, possibly enabling Malaysian youths to respond to cyberbullying incidents in a self-organized manner. The findings of this study indicate that the general approach to cyberbullying should be preventive and proactive, rather than reactive, and should be based on apprehending and engaging the perpetrators, as well as by creating safe and respectful environments for young people.

Implications for practice can be evident in this paper, in which organizations, web developers, publishers, and administrators can be informed of the COVID-19 pandemic's role as an indirect influence on the increased rates of cyberbullying. Even though the survey of this research focused on the youth residing in Malaysia, organizations and management can correlate the increase in cyberbullying rates to the overall organizational performance of workers affected by it; the sudden increase in cyberbullying incidents under the influence of the COVID-19 pandemic can negatively impact employee mentality and, thus, employee performance. In other words, our assumption of an increase in cyberbullying due to the COVID-19 pandemic is likely to be related to the mental stress

that individuals experience from sudden lifestyle changes, such as working from home. Managers educated using such information can integrate their work systems to promote a healthy environment, thereby improving employee performance. In addition, this paper discusses how the COVID-19 pandemic has made the Internet our new home, and how people are now in desperate need of a secure platform to connect and engage with the outside world. Therefore, organizations aiming to eradicate cyberbullying can take action after becoming aware of the recent uptick in hate speech among online users owing to the COVID-19 pandemic. Certain AI start-ups creators, like "L1GHT"—a company formed in 2018—have already taken the initiative by partnering with different Website owners to clear their platforms of toxicity and hate speech. L1GHT has previously collaborated with Facebook, WhatsApp, and other Websites where cyberbullying is prevalent.

Although this study has produced interesting and new information that can be used in psychology, some limitations need to be addressed and studied in future research. First, this study only employed one method of data collection. An online survey was created because of the restrictions presented by the pandemic, which limited our ability to try different methods. Second, the data collection and analysis offered only a limited sample size of 200 respondents. Our study focused on young people, and especially university students in Malaysia, so a significant improvement will be made by increasing the sample size to include different nationalities and age groups. Finally, including future variables relating to organizational performance might produce interesting insights, especially those regarding how cyberbullying, the pandemic influence, and social media might affect organizational performance or hinder employees' motivation. Such concepts can expand future research on other managerial issues related to cyberbullying during pandemics.

CONFLICT OF INTEREST

The authors confirmed that there is no conflict of interest with any party.

AUTHOR CONTRIBUTIONS

Daisy Mui Hung Kee: Resources; Supervision; Validation; Writing – review & editing. Maryam Ammar Lutf Al-Anesi and Sarah Ammar Lutf Al-Anesi: Conceptualization; Formal analysis; Methodology; Resources; Writing – original draft; Writing – review & editing.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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REFERENCES

Abbas, J., Wang, D., Su, Z., & Ziapour, A. (2021). The role of social media in the advent of COVID-19 pandemic: Crisis management, mental health challenges, and implications. *Risk Management and Healthcare Policy*, *14*, 1917–1932. https://doi.org/10.2147/rmhp.s284313

Anwar, A., Kee, D. M. H., & Ahmed, A. (2020). Workplace cyberbullying and interpersonal deviance: Understanding the mediating effect of silence and emotional exhaustion. *Cyberpsychology Behavior and Social Networking*, *23*(5), 290–296. https://doi.org/10.1089/cyber.2019.0407

Anwar, A., Kee, D. M. H., & Ijaz, M. F. (2022). Social media bullying in workplace and its impact on work engagement: A case of psychological well-being. *Information*, *13*(4), 165, https://doi.org/10.3390/info13040165

Anwar, A., Kee, D. M. H., Salman, A., & Jabeen, G. (2022). Impact of COVID-19 social media news on employee behavior: The mediating role of psychological well-being and depression. *Asian Development and Educational Studies*, *11*(1), 196–211. https://doi.org/10.1108/AEDS-07-2020-0159

Balakrishnan, V. (2015). Cyberbullying among young adults in Malaysia: The roles of gender, age and Internet frequency. *Computers in Human Behavior*, *46*, 149–157. https://doi.org/10.1016/j.chb.2015.01.021

Basyir, M. (2020). Penang teen leaps to death after 'boyfriend' threatens to viral private photos. https://www.nst.com.my/news/nation/2020/08/615846/penang-teen-leaps-death-after-boyfriend-threatens-viral-private-photos

Basyir, M., & Perimbanayagam, K. (2020). Cyberbullying victim found dead after viral Tik Tok video. https://www.nst.com.my/news/nation/2020/05/594223/cyberbullying-victim-found-dead-after-viral-tik-tok-video

Bottino, S. M. B., Bottino, C. M. C., Regina, C. G., Correia, A. V. L., & Ribeiro, W. S. (2015). Cyberbullying and adolescent mental health: Systematic review. *Cadernos de Saúde Pública*, *31*(3), 463–475. https://doi.org/10.1590/0102-311%D7;00036114

Brewer, G., & Kerslake, J. (2015). Cyberbullying, self-esteem, empathy, and loneliness. *Computers in Human Behavior*, *48*, 255–260. https://doi.org/10.1016/j.chb.2015.01.073

Batubara, I. H., Nur, K., Lubis, A. T., & Arianto, N. (2021). The effectiveness of learning using social media during the COVID-19 pandemic in higher education. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, *4*(2), 2177–2183. https://doi.org/10.33258/birci.v4i2.1908

Buelga, S., Martínez–Ferrer, B., & Cava, M. (2017). Differences in family climate and family communication among cyberbullies, cybervictims, and cyberbully victims in adolescents. *Computers in Human Behavior*, *76*, 164–173. https://doi.org/10.1016/j.chb.2017.07.017

Camodeca, M., Goossens, F. A., Terwogt, M. M., & Schuengel, C. (2002). Bullying and victimization among school-age children: Stability and links to proactive and reactive aggression. *Social Development*, *11*(3), 332–345. https://doi.org/10.1111/1467-9507.00203

Carvalho, M., Rahim, R., & Tan, T. (2021). Annuar Musa: MCMC received over 6,000 cyberbullying and harassment complaints from 2020 to July this year. https://www.thestar.com.my/news/nation/2021/09/20/annuar-musa-mcmc-received-over-6000-cyberbullying-and-harassment-complaints-from-2020-to-july-this-year

Casas, J. A., del Rey, R., & Ortega-Ruiz, R. (2013). Bullying and cyberbullying: Convergent and divergent predictor variables. *Computers in Human Behavior*, *29*(3), 580–587. https://doi.org/10.1016/j.chb.2012.11.015

Cauberghe, V., van Wesenbeeck, I., de Jans, S., Hudders, L., & Ponnet, K. (2021). How adolescents use social media to cope with feelings of loneliness and anxiety during COVID-19 lockdown. *Cyberpsychology, Behavior, and Social Networking*, *24*(4), 250–257. https://doi.org/10.1089/cyber.2020.0478

Cerna, A., Machackova, H., & Dedkova, L. (2015). Whom to trust: The role of mediation and perceived harm in support seeking by cyberbullying victims. *Children & Society*, *30*(4), 265–277. https://doi.org/10.1111/chso.12136

Coelho, V. A., & Romão, A. M. (2018). The relation between social anxiety, social withdrawal and cyberbullying roles: A multilevel analysis. *Computers in Human Behavior*, *86*, 218–226. https://doi.org/10.1016/j.chb.2018.04.048

Craig, W., Boniel-Nissim, M., King, N., Walsh, S. D., Boer, M., Donnelly, P. D., Harel-Fisch, Y., Malinowska-Cieślik, M., Gaspar De Matos, M., Cosma, A., van den Eijnden, R., Vieno, A., Elgar, F. J., Molcho, M., Bjereld, Y., & Pickett, W. (2020). Social media use and cyberbullying: A cross-national analysis of young people in 42 countries. *Journal of Adolescent Health*, *66*(6), S100–S108. https://doi.org/10.1016/j.jadohealth.2020.03.006

Dooley, J. J., Pyzalski, J., & Cross, D. (2009). Cyberbullying versus face-to-face bullying. *Journal of Psychology*, *217*(4), 182–188. https://doi.org/10.1027/0044-3409.217.4.182

Galati, A., Crescimanno, M., Tinervia, S., & Fagnani, F. (2017). Social media as a strategic marketing tool in the Sicilian wine industry: Evidence from Facebook. *Wine Economics and Policy*, *6*(1), 40–47. https://doi.org/10.1016/j.wep.2017.03.003

Have, H., & Gordijn, B. (2021). Vulnerability in light of the COVID-19 crisis. *Medicine, Health Care and Philosophy*, *24*(2), 153–154. https://doi.org/10.1007/s11019-021-10013-8

Hassan, H. (2019). Malaysian police investigate case of teen who committed suicide after Instagram poll. https://www.straitstimes.com/asia/se-asia/malaysian-police-investigate-case-of-teen-who-committed-suicide-after-instagram-poll

Hu, M. K., & Kee, D. M. H. (2021). Strategic measures and tactical interventions for COVID-19 impact relief on SMEs. In N. Baporika (Ed.), *Handbook of research on strategies and interventions to mitigate COVID-19 impact on SMEs* (pp. 522–541). IGI Global. https://doi.org/10.4018/978-1-7998-7436-2

Hu, M. K., & Kee, D. M. H. (2022). SMEs and business sustainability: Achieving sustainable business growth in the new normal. In I. Management Association (Ed.). *Research anthology on business continuity and navigating times of crisis* (pp. 1036–1056). IGI Global. https://doi.org/10.4018/978-1-6684-4503-7.ch052

Kalyar, M. N., Saeed, M., Usta, A., & Shafique, I. (2020). Workplace cyberbullying and creativity: Examining the roles of psychological distress and psychological capital. *Management Research Review*, *44*(4), 607–624. https://doi.org/10.1108/mrr-03-2020-0130

Kee, D. M. H., Al-anesi, M., Chandran, S., Elanggovan, H., Nagendran, B., & Mariappan, S. (2021). COVID-19 as a double-edged sword: The perfect opportunity for Grabfood to optimize its performance. *Journal of the Community Development in Asia*, *4*(1), 53–65.

Kowalski, R., Giumetti, G., Schroeder, A., & Lattanner, M. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin*, *140*(4), 1073–1137. https://doi.org/10.1037/a0035618

Kim, S., Colwell, S. R., Kata, A., Boyle, M. H., & Georgiades, K. (2017). Cyberbullying victimization and adolescent mental health: Evidence of differential effects by sex and mental health problem type. *Journal of Youth Adolescent*, *47*, 661–672. https://doi.org/10.1007/s10964-017-0678-4

Lawshe, C. H. (1975). A quantitative approach to content validity. A paper presented at Bowling Green State University. https://doi.org/10.1111/j.1744-6570.1975.tb01393.x

Lee, C., & Shin, N. (2017). Prevalence of cyberbullying and predictors of cyberbullying perpetration among Korean adolescents. *Computers in Human Behavior*, *68*, 352–358. https://doi.org/10.1016/j.chb.2016.11.047

Lim, W. M. (2021). History, lessons, and ways forward from the COVID-19 pandemic. *International Journal of Quality Innovation*, *5*, 101–108.

Maxwell, J. (2004). Anger rumination: An antecedent of athlete aggression? *Psychology of Sport and Exercise*, *5*(3), 279–289. https://doi.org/10.1016/s1469-0292(03)00007-4

Maxwell, J. P., Sukhodolsky, D. G., Chow, C. C., & Wong, C. F. (2005). Anger rumination in Hong Kong and Great Britain: Validation of the scale and a cross-cultural comparison. *Personality and Individual Differences*, *39*(6), 1147–1157. https://doi.org/10.1016/j.paid.2005.03.022

Munir, F., Anwar, A., & Kee, D. M. H. (2021). Online learning and students' fear of COVID-19 and online learning: Study in Malaysia and Pakistan. *The International Review of Research in Open and Distributed Learning*, *22*(4), 1–21. https://doi.org/10.19173/irrodl.v22i4.5637

Murugiah, S. (2021, November 11). TikTok world's most searched for social media platform, Facebook takes a dive. The Edge Markets. https://www.theedgemarkets.com/article/tiktok-most-searched-social-media-platform-around-world-facebook-takes-dive

Naslund, J. A., Bondre, A., Torous, J., & Aschbrenner, K. A. (2020). Social media and mental health: Benefits, risks, and opportunities for research and practice. *Journal of Technology in Behavioral Science*, *5*(3), 245–257. https://doi.org/10.1007/s41347-020-00134-x

Ortega, R., Elipe, P., Mora-Merchán, J. A., Genta, M. L., Brighi, A., Guarini, A., Smith, P. K., Thompson, F., & Tippett, N. (2012). The emotional impact of bullying and cyberbullying on victims: A European cross-national study. *Aggressive Behavior*, *38*(5), 342–356. https://doi.org/10.1002/ab.21440

ÖZdemir, E. Z., & Bektaş, M. (2021). The effects of self-efficacy and locus of control on cyberbully/victim status in adolescents. *Journal of Pediatric Nursing*, *61*, E15–E21. https://doi.org/10.1016/j.pedn.2021.04.004

Peled, M., & Moretti, M. M. (2009). Ruminating on rumination: Are rumination on anger and sadness differentially related to aggression and depressed mood? *Journal of Psychopathology and Behavioral Assessment*, *32*(1), 108–117. https://doi.org/10.1007/s10862-009-9136-2

Phillips, W. J., & Wisniewski, A. T. (2021). Self-compassion moderates the predictive effects of social media use profiles on depression and anxiety. *Computers in Human Behavior Reports*, *4*, 100128. https://doi.org/10.1016/j.chbr.2021.100128

Quintana-Orts, C., & Rey, L. (2018). Forgiveness and cyberbullying in adolescence: Does willingness to forgive help minimize the risk of becoming a cyberbully? *Computers in Human Behavior*, *81*, 209–214. https://doi.org/10.1016/j.chb.2017.12.021

Radanliev, P., & David de, R. (2021). Alternative mental health therapies in prolonged lockdowns: Narratives from COVID-19. *Health and Technology*, *11*(5), 1101–1107. https://doi.org/10.1007/s12553-021-00581-3

Rosenberg, H., Ophir, Y., & Billig, M. (2021). OMG, R U OK? Therapeutic relationships between caregivers and youth at risk on social media. *Children and Youth Services Review*, *120*, 105365. https://doi.org/10.1016/j.childyouth.2020.105365

Sari, S. V. (2016). Was it just joke? Cyberbullying perpetrations and their styles of humor. *Computers in Human Behavior*, *54*, 555–559. https://doi.org/10.1016/j.chb.2015.08.053

Schenk, A. M., Fremouw, W. J., & Keelan, C. M. (2013). Characteristics of college cyberbullies. *Computers in Human Behavior*, *29*(6), 2320–2327. https://doi.org/10.1016/j.chb.2013.05.013

Selkie, E. M., Kota, R., Chan, Y. F., & Moreno, M. (2015). Cyberbullying, depression, and problem alcohol use in female college students: A multisite study. *Cyberpsychology, Behavior, and Social Networking*, *18*(2), 79–86. https://doi.org/10.1089/cyber.2014.0371

Song, M. (2019). Effects of aggressive traits on cyberbullying: Mediated moderation or moderated mediation? *Computers in Human Behavior*, *97*, 167–178. https://doi.org/10.1016/j.chb.2019.03.015

Statista. (2021b, August 26). Facebook: Bullying and Harassment-related content removal Q4 2017 - Q2 2021. https://www.statista.com/statistics/1013569/facebook-bullying-and-harassment-content-removal-quarter/

Statista. (2021c, October 15). Distribution of video comments removed from YouTube worldwide Q2 2021. https://www.statista.com/statistics/1133165/share-removed-youtube-video-comments-worldwide-by-reason/

Sukhodolsky, D. G., Golub, A., & Cromwell, E. N. (2001). Development and validation of the anger rumination scale. *Personality and Individual Differences*, *31*(5), 689–700. https://doi.org/10.1016/s0191-8869(00)00171-9

Tan, T., Carvalho, M., & Rahim, R. (2020). 10,406 complaints over cyber-bullying between 2016 and Sept 2020. https://www.thestar.com.my/news/nation/2020/11/11/10406-complaints-over-cyber-bullying-between-2016-and-sept-2020

Tanrikulu, I., & Campbell, M. (2015). Correlates of traditional bullying and cyberbullying perpetration among Australian students. *Children and Youth Services Review*, *55*, 138–146. https://doi.org/10.1016/j.childyouth.2015.06.001

Taylor, S. E., Klein, L. C., Lewis, B. P., Gruenewald, T. L., Gurung, R. A. R., & Updegraff, J. A. (2000). Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review*, *107*(3), 411–429. https://doi.org/10.1037/0033-295x.107.3.411

Tian, L., Yan, Y., & Huebner, E. S. (2018). Effects of cyberbullying and cyber victimization on early adolescents' mental health: Differential mediating roles of perceived peer relationship stress. *Cyberpsychology, Behavior, and Social Networking*, *21*(7), 429–436. https://doi.org/10.1089/cyber.2017.0735

Tsao, S. F., Chen, H., Tisseverasinghe, T., Yang, Y., Li, L., & Butt, Z. A. (2021). What social media told us in the time of COVID-19: A scoping review. *The Lancet Digital Health*, *3*(3), e175–e194. https://doi.org/10.1016/s2589-7500(20)30315-0

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior*, *26*(3), 277–287. https://doi.org/10.1016/j.chb.2009.11.014

Tunde, O. A., Kee, D. M. H., Ayodele, A. Y., Lukman, J. A., & Abiodun, A. O. (2021). Blessing or curse: Converting COVID-19 experience to entrepreneurial opportunity identification. *Journal of Hunan University Natural Science*, *48*(10), 529–530.

Turton, S., & Campbell, C. (2007). Tend and befriend versus fight or flight: Gender differences in behavioral response to stress among university students. *Journal of Applied Biobehavioral Research*, *10*(4), 209–232. https://doi.org/10.1111/j.1751-9861.2005.tb00013.x

U-Report Malaysia. (2019, 3rd June). Cyberbullying and online violence in Malaysia. U-Report Malaysia. https://malaysia.ureport.in/opinion/3444/

Van Zoonen, W., Treem, J. W., & ter Hoeven, C. L. (2022). A tool and a tyrant: Social media and well-being in organizational contexts. *Current Opinion in Psychology*, *45*, 101300. https://doi.org/10.1016/j.copsyc.2022.101300

Volkmer, I. (2021). *Social media and Covid-19: A global study of digital crisis interaction among Gen Z and millennials*. The World Health Organization.

Wang, W., Xie, X., Wang, X., Lei, L., Hu, Q., & Jiang, S. (2019). Cyberbullying and depression among Chinese college students: A moderated mediation model of social anxiety and neuroticism. *Journal of Affective Disorders*, *256*, 54–61. https://doi.org/10.1016/j.jad.2019.05.061

Wang, M. J., Yogeeswaran, K., Andrews, N. P., Hawi, D. R., & Sibley, C. G. (2019). How common is cyberbullying among adults? Exploring gender, ethnic, and age differences in the prevalence of cyberbullying. *Cyberpsychology Behavioral Social Network*, *22*, 736–741. https://doi.org/10.1089/cyber.2019.0146

Willard, N. E., & Steiner, K. (2007). *Cyberbullying and Cyberthreats: Responding to the challenge of online social aggression, threats, and distress (Book and CD)* (2nd ed.). Research Press.

Wong, A., Ho, S., Olusanya, O., Antonini, M. V., & Lyness, D. (2020). The use of social media and online communications in times of pandemic COVID-19. *Journal of the Intensive Care Society*, *22*(3), 255–260. https://doi.org/10.1177/1751143720966280

Wong, D. S., Chan, H. C. O., & Cheng, C. H. (2014). Cyberbullying perpetration and victimization among adolescents in Hong Kong. *Children and Youth Services Review*, *36*, 133–140. https://doi.org/10.1016/j.childyouth.2013.11.006

Wong, R. Y., Cheung, C. M., & Xiao, B. (2018). Does gender matter in cyberbullying perpetration? An empirical investigation. *Computers in Human Behavior*, *79*, 247–257. https://doi.org/10.1016/j.chb.2017.10.022

You, S., & Lim, S. A. (2016). Longitudinal predictors of cyberbullying perpetration: Evidence from Korean middle school students. *Personality and Individual Differences*, *89*, 172–176. https://doi.org/10.1016/j.paid.2015.10.019

Zhang, K., Kim, K., Silverstein, N. M., Song, Q., & Burr, J. A. (2020). Social media communication and loneliness among older adults: The mediating roles of social support and social contact.

The Gerontologist, *61*(6), 888–896. https://doi.org/10.1093/geront/gnaa197

Zhong, B., Huang, Y., & Liu, Q. (2021). Mental health toll from the coronavirus: Social media usage reveals Wuhan residents' depression and secondary trauma in the COVID-19 outbreak. *Computers in Human Behavior*, *114*, 106524. https://doi.org/10.1016/j.chb.2020.106524

Zsila, G., Urbán, R., Griffiths, M. D., & Demetrovics, Z. (2018). Gender differences in the association between cyberbullying victimization and perpetration: The role of anger rumination and traditional bullying experiences. *International Journal of Mental Health and Addiction*, *17*(5), 1252–1267. https://doi.org/10.1007/s11469-018-9893-9

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