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To ignore or not to ignore: The differential effect of coping mechanisms on depressive symptoms when facing adolescent cyberbullying

Jorge J. Varela [a,*], Cristóbal Hernández [b,f], Christian Berger [c], Sidclay B. Souza [d], Emanuel Pacheco [e]

[a] Facultad de Psicología, Universidad Del Desarrollo, Chile
[b] Escuela de Psicología, Universidad Adolfo Ibáñez, Chile
[c] Escuela de Psicología, Pontificia Universidad Católica de Chile, Chile
[d] Departamento de Psicología, Facultad de Ciencias de La Salud, Universidad Católica Del Maule, Chile
[e] Fundación Summer, Chile
[f] Instituto Milenio para la Investigación en Depresión y Personalidad, MIDAP, Chile

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ABSTRACT

Cyberbullying among adolescents has negative consequences for their mental health, especially when it comes to depressive symptoms. Previous studies highlight individual protective factors such as coping strategies; however, there are no studies that examine the harmful effects of cyberbullying and the implications of different coping strategies on depressive symptoms in the context of a pandemic in diverse regional and national samples. We used two independent samples (the first consisted of 463 adolescents, 73.4% females, and the second had 694 adolescents, 85.45% females, all 15–19 years old). We ran moderation models through ordinary least squares regressions on depressive symptoms. Our results found that victims have higher levels of depression. Disconnecting from social media is associated with depressive symptoms when the frequency of cyberbullying is low. Ignoring the situation is associated with lower depressive symptoms when the cyberbullying frequency is low. Our study adds evidence of the importance and specificity of coping strategies while facing cyberbullying in a context of an adolescent's increased virtual interactions.

1. Introduction

Accumulated evidence over the past decades has consistently shown associations between being victimized by peers and depressive symptoms among adolescents. Experiencing bullying constitutes a significant predictor of internalizing problems with lasting effects over the course of adolescence and even into adulthood (Copeland et al., 2013; Vaillancourt et al., 2013; Zwierzynska et al., 2013). Peer victimization, particularly during adolescence, prevents individuals from achieving significant developmental goals such as establishing intimate relationships with peers and being recognized by the peer group and having social standing within it (Ojanen et al., 2005).

Cyberbullying, another form of peer victimization, presents similar negative effects. Several studies show how cyber victimization is associated with both internalizing and externalizing problems during adolescence (Fisher et al., 2016). Adolescents experiencing cyber victimization show moderate to severe depressive symptoms, substance use, and an increasingly consistent link with suicide (Aboujaoude et al., 2015; Bottino et al., 2015; Iranzo et al., 2019; Van Geel et al., 2014), making the issue a public health priority.

The prevalence of cyber victimization worldwide ranges from 10% to 40% (Kowalski et al., 2007). In Chile, the last National Survey of Violence in the School Context (ENVAE) carried out in 2014 found that 26.2% of 7th to 12th grade students reported being victimized regularly (Chile, Ministerio del Chile Ministerio del Interior, 2016). Earlier studies reported that 16% of 6th and 7th graders are victimized by their peers (Berger, 2012). Regarding cyber victimization specifically, in 2017 the Chilean Home Office gave the first National Poly-Victimization Survey to 19,867 students (7th to 11th grade), finding that 8% suffered nine or more forms of victimization over the course of the last year, 69% of whom reported being victims of cyberbullying. The age of highest prevalence is 15 years (Home Office, 2017; MINEDUC, 2018). The victimization rate in Chile has remained stable over time (Varela et al., 2010). Despite this evidence, there are no recent studies examining the

* Corresponding author.
E-mail address: jovarela@udd.cl (J.J. Varela).

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harmful effects of cyberbullying in the context of a pandemic for the Chilean adolescent population. In addition, less is known about protective factors that can mitigate cyberbullying and its pervasive effects, particularly in the context of enhanced online interactions due to the Covid-19 pandemic (Yang, 2021). In this scenario where virtual contexts have become the main stage for adolescents' relationships to unfold, cyber victimization might be even more damaging for adolescents' wellbeing and consequently for their mental health indicators.

1.1. Protective factors against bullying and cyberbullying

Research on traditional bullying has identified several ways to effectively intervene in bullying situations. Among these, activating positive peer support and prosocial defending behavior and standing up against abuse (Eliot et al., 2010; Palacios et al., 2019; Saarento & Salmivalli, 2015), timely adult interventions (De Luca et al., 2019; Murphy et al., 2018), whole-school approaches (Azeredo et al., 2015; Espelage & Hong, 2019) and explicit school policies (Berger et al., 2019) have shown positive impacts on lessening bullying dynamics and promoting redress and the wellbeing of victimized adolescents. However, this clarity fades when addressing cyberbullying. In fact, in the context of the International Conference on School Bullying organized by United Nations Educational, Scientific and Cultural Organization (UNESCO) and the French Ministry of Education in 2020, the document 'Recommendations by the Scientific Committee on preventing and addressing school bullying and cyberbullying' highlighted that cyberbullying has additional features that need to be considered (United Nations Educational Scientific and Cultural Organization, 2020), particularly given the increasing time that youth spend online.

Cyberbullying has been defined as "an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376). As a phenomenon of online social interaction (Souza et al., 2018), it can be characterized as one type of bullying behavior that incorporates the use of technologies. Even though there is an important overlap between bullying and cyberbullying (Slonje et al., 2013), scholars have argued for the need to make clear distinctions between offline and cyber bullying and victimization (Olweus, 2013), considering specific features of the cyber context such as anonymity (Kowalski & Limber, 2007) as well as the occasions and context in which victimization can occur (Tokunaga, 2010). Therefore, prevention programs and interventions against cyberbullying should not simply be an adaptation of successful programs against traditional bullying. As shown by Gaffney et al. (2019), cyberbullying prevention programs can reduce it by around 14% (with a mean effect size (OR = 1.22), but these programs' unique features are still unclear due to the overlap with traditional bullying behavior. Thus, more studies are needed to recognize specific protective factors against cyberbullying and its consequences among adolescents.

Virtual experiences, although shared by countless peers concurrently, ultimately constitute events of an individual's private sphere. Youths who experience victimization in virtual contexts demonstrate higher levels of loneliness (Cañas et al., 2020; Varghese et al., 2017). Consequently, they may feel a lack of peer support and perceive that reporting or looking for help is pointless and feel hopeless as a result (Brandau & Davis, 2018; Chu et al., 2018), which might become a self-reinforcing cycle. Earlier studies on cyber bullying have shown that young people who were unable to intervene in the face of cyberbullying (ignored the situation) were more likely to become a victim or an aggressor, in contrast to those who intervened (Ferreira et al., 2016). These results highlight the role of personal resources while coping with cyberbullying, which is in line with a recent systematic review proposing that the ways in which victimized youth appraise and cope with cyberbullying seems to be essential for advancing intervention strategies (Raskauskas & Huynh, 2015).

1.1.1. Cyber victimization and coping strategies

A recent literature review on cyberbullying identified different protective factors against cyberbullying, such as high self-esteem, higher levels of social and emotional competencies, and lower use of technology (Ansary, 2020). These results were consistent with other systematic reviews of meta-analyses (Zych et al., 2019) that also summarize community, school, family, peer, and individual protective factors for bullying and cyberbullying. In particular for cyber victimization, individual level factors such as lesser use of technology and self-oriented personal competencies showed a higher effect size compared to other levels. Studies have also identified protective factors in proximal contexts such as among peers and in the family. For instance, Wright et al. (2021) examined the relationship between parental mediation, family support, and adolescents' use of problem-focused coping strategies toward cyberhate. They found that instructive mediation increases protective coping strategies such as distal advice, support from friends, assertiveness and technical actions such as blocking the person. However, it is worth noting that being cyber victimized is also associated with internalizing problems (Trompeter et al., 2018) and avoidance behaviors (Keith, 2018), meaning victimized youth might not reach out for peer or familial support.

In view of the consequences in the lives of the victims and others involved, the private nature of the experience of cyber victimization and the impediments against social support, the strategies used in the face of this phenomenon are of extreme importance, since the impacts of cyberbullying can be mitigated to some extent by the application of beneficial coping strategies (Raskauskas & Huynh, 2015). According to the Transactional Model of Stress and Coping used as the theoretical base model for the present study, coping strategies are defined by Lazarus and Folkman (1984) as the cognitive and behavioral efforts employed to reduce stress triggered by specific events. Coping strategies are generally categorized as problem-centered or emotion-centered, meaning the coping approach may focus on solving the problem or on reducing the stress associated with it. In this sense, strategies emerge to either take action regarding the experiences and/or to redefine the value and meaning attributed to the phenomenon in a cyclical logic in which one can change the emotions and, consequently, the strategies used in a new episode if one were to occur (Lazarus & Folkman, 1984). However, it is important to note that this is not a concrete distinction as each relevant situation is associated with a particular emotional response, which in turn is associated with a particular action tendency to deal with said situation, creating a recursive system (Gross & Thompson, 2007). In other words, actions influence emotions through their impact on the environment, generating an initial affective response in which emotions also elicit actions to deal with said environment or situation.

Specifically regarding cyberbullying, Price and Dalgleish (2010) argue that the strategies used to resolve cyberbullying have received considerable attention in the literature, addressing them as forms of coping or attitudes toward the phenomenon, which can be applied either individually, by peers, or by the educational community (parents and teachers). Research has shown that the negative impact of cyberbullying on young people's well-being can be mitigated through the use of coping strategies, either to reduce immediate stress or prevent long-term consequences (Raskauskas & Huynh, 2015). The existing body of research on coping strategies concerning cyberbullying has shown that victims of cyberbullying use different coping strategies, although with low effectiveness (see Chan & Wong, 2017; Machackova et al., 2013). For instance, Kokkinos et al. (2013) found that victims of cyberbullying were more likely to use avoidance to cope with the situation. From this same perspective, Lodge and Frydenberg (2007) additionally found that adolescent girls who used emotion-focused coping strategies (both apprehensive and avoidant) against cyber victimization experienced poorer well-being. As Lin and colleagues (2021) argue, although no coping strategy is effective in all situations, some may be more effective than others. Furthermore, Völlink, Bolman, and Dehue et al. (2013) showed that children (aged 11 and 12) who were victims of

cyberbullying were more likely to use emotion-centered coping strategies compared to their peers. More importantly, their findings suggest a negative reinforcing cycle in which emotion-centered coping in daily life was associated with depressive coping when facing cyber bullying, which in turn led to depressive feelings and mental health problems (see also Völlink, Bolman, Eppingbroek, & Dehue, 2013). As such, both problem-focused and emotion-focused coping strategies can be viewed as adaptive or maladaptive conditional upon their context and flexibility in the implementation. This idea is similar to what is discussed in the literature about emotion regulation (Aldao, 2013) and in recent meta models of psychotherapy such as Process-Based CBT (Hoffmann et al., 2021), which aims to develop a higher degree of variation and flexibility in the affective, cognitive, and behavioral dimensions in order to improve a person's mental health and well-being.

Applying this to coping strategies when confronted with cyberbullying, adults' common sense might suggest that in order to stop cyber victimization, adolescents should disconnect from virtual spaces to cut out the possibility for aggression. However, virtual experiences do not stop when disconnected, but are continued offline (Gaffney et al., 2019). Disconnecting from the network might increase anxiety about what is happening and might isolate adolescents from their peers (Wu et al., 2016), which in turn may create other problematic and depressogenic experiences. According to the PEW Research Center (2018), adolescents aged 13 to 17 who constantly use social media tend to experience more connections with their friends. However, constant use of social media may also amplify negative feelings such as peer pressure to look good or being overwhelmed by 'all the drama' online. This may be an indication that when dealing with cyber victimization, balance should be achieved between the positive aspects of an adolescent's reaction (e.g., disconnecting may take away the media through which cyber victimization is committed) and the negative ones (e.g., loss of connections and isolation). The risks of disconnecting may be higher than the benefits when the frequency of cybervictimization is low, as the effects of losing connections may be stronger than benefits of the avoidance of exposure to aggression. By contrast, when cyber victimization is high, the balance between risks and benefits of disconnecting might favor the latter by diminishing the experience of victimization. Less is known regarding the potential effects of disconnecting in moderating the effects of cyberbullying on depression as a significant coping protective factor.

Another commonly recommended strategy may be to ignore the problem, as it may go away. Distraction, a way to ignore situations by changing the attentional focus, has been posited as an adaptive emotion regulation strategy for depression that counteracts ruminative thoughts (Roelofs et al., 2009; Silke & Kuehner, 2009). However, the potential of distraction to alleviate the negative consequences of a problem may also be dependent on its adequacy to the particular ongoing context, as flexibility in the implementation of emotion-regulation strategies is a key component for their success (Aldao & Nolen-Hoeksema, 2012). This may also apply to the frequency of cyber-bullying; ignoring an inconsequential or a once-only aggression may be beneficial, but when cyber bullying is an enduring feature of an adolescent's daily life, ignoring it may hinder seeking support and finding adaptive ways of dealing with the problem. Ignoring the situation might worsen the negative effects of cyber victimization on depression and mental health depending on the frequency of experienced cyberbullying.

As Yang (2021) argues, during the pandemic period due to physical distancing, people have generally been using electronic devices and social media to a greater extent. This has consequently increased the potential risks of cyberbullying (Ye et al., 2021). However, understanding cyberbullying during the pandemic along with its association with coping strategies and implications for mental health issues is still incipient and particularly scarce within the Chilean context. Given the heightened exposure to online interactions and potential risks for cyber victimization, the effect that the frequency of cyberbullying might have on the relationship between coping strategies and depressive symptoms is addressed. Specifically, we aimed to analyze if the relationship between coping strategies (disconnecting and ignoring the situation) and depressive symptoms is moderated by the frequency of cyberbullying. Addressing this question is essential considering the increasing relevance that online contexts have for adolescents, especially during the global COVID-19 pandemic.

2. Materials and methods

The present study featured a cross-sectional and correlational design using self-reported data. We collected two independent samples for replication purposes. The first sample was collected in the largest and capital region in the country (Región Metropolitana). The second one was at the national level. The study used "StatKnows" sampling methodology for online surveys (Elórtegui et al., 2020). This methodology employs artificial intelligence to efficiently identify participants based on publicly available information that is voluntarily provided by participants in previous studies. The sampling strategy was probabilistic and stratified with allocation proportional to the size of each stratum. The selection of the sample was conducted in two phases. The probability of being an internet user was first considered. Taking this into account, the probability of being part of the proposed population of victims of cyberbullying was looked at next. These two phases were used in order to compensate for potential bias given that the study was conducted online.

Based on the StatKnows algorithm, in a stratified and random way, people reflecting the required diversity were invited to participate in an online survey in August 2020. Using the same methodology, a nationwide sample was collected in December 2020. Samples were actively adjusted as people freely accepted or declined the invitation to participate. People were invited through banners on websites and social networking sites.

2.1. Participants

2.1.1. First sample

Participants were male and female adolescents and young adults between 15 and 29 years of age from the Metropolitan Region of Chile. The ethical committee at the Universidad del Desarrollo approved this study. Ethical research protocols and guidelines were followed, emphasizing the confidentiality of the information. Informed consent was obtained from them and from parents or guardians for all adolescents under the age of 18.

The final sample consisted of 2,056 participants with an estimated sampling error of 4.34% and a confidence level of 95% for the prevalence of participants who were cyberbullied in the last 3 months at least once. For the study's purposes, a subset of adolescents 15–19 years of age who declared experiencing at least one incident of cyberbullying in the last three months was extracted, resulting in 463 participants (22.5% of the total sample and 52.19% of the sample of adolescents) of which 73.43% were female.

2.1.2. Replication sample

We used a second independent sample to replicate the results obtained with the original one. As with the original sample, participants were Chilean male and female adolescents and young adults between 15 and 29 years of age from anywhere in the country instead of being restricted to the Metropolitan Region. The same sampling methodology was used, resulting in 2,370 participants with an estimated sampling error of 3.22% and a confidence level of 95% for the prevalence of participants who were cyberbullied at least once in the last three months. An equivalent subset of adolescents was extracted from the general sample (29.28% of the total sample, and 54.39% of the sample of adolescents), resulting in 694 participants of which 85.45% were female.

2.2. Instruments

2.2.1. Patient Health Questionnaire-9

To assess levels of depression, we used the Patient Health Questionnaire-9 or PHQ-9 (Kroenke et al., 2001). The PHQ-9 measures both the presence of depressive symptoms and their severity. The PHQ-9 is a self-administered evaluation with minimal operational requirements and proven effectiveness. In Chile, it has been studied in the context of primary health care showing a high internal consistency with a Cronbach's alpha of 0.84 and a sensitivity and specificity of 88% and 92%, respectively (Saldivia et al., 2019). The scale has nine Likert-type questions (1 = Never; 4 = Almost every day). It has an optimal cut-off score of 10 to detect the presence of clinically significant depressive symptoms (Levis et al., 2020). Cronbach's alpha for the first sample was .76, and .93 for the second sample.

2.2.2. Cyberbullying

To measure cyberbullying victimization, we used the Cyberbullying and Online Aggression Survey (Hinduja & Patchin, 2015) taking the single item that measures the frequency of being cyberbullied ('how many times have you been virtually bullied in the last three months?') structured in a Likert-type response style (0 = 'Never'; 1 = 'Once or twice'; 2 = 'Once a week'; 3 = 'Several times a week').

2.2.3. Coping strategies against cyberbullying

We also asked our respondents whether they used two common coping strategies to deal with cyberbullying; disconnecting from social media and ignoring what is happening. Both questions had binary responses (yes/no) and indicated if they employed these strategies when virtually bullied.

2.2.4. Control variables

The demographic variables used (all self-reported) were age, daily internet usage time (ranging from 1 = 'less than 1 h' to 4 = 'more than 5 h' in the original sample and from 1 = 'less than 1 h' to 5 = 'more than 8 h' in the second sample), biological sex and sexual orientation. Sexual orientation was assessed through the question "What is your sexual orientation?" with three response options of heterosexual, I don't know and LGBTIQ +, which were then dummy-coded into heterosexual and I don't know (0) and LGBTIQ+ (1).

2.3. Data analysis

Data was analyzed using the statistical environment R (R Core Team, 2020). As our intention was to test the conditional relationships of frequency and reactions to cyberbullying with depressive symptoms, we calculated two different moderation models by means of ordinary least squares regressions (OLS).

First, we calculated the effect of disconnecting from social media as a focal predictor, moderated by the frequency of cyberbullying (Preacher et al., 2008). Next, we calculated the effect of ignoring the situation as a focal predictor, also moderated by the frequency of cyberbullying. All binary variables were dummy-coded, while the frequency of cyberbullying was grand-mean centered to facilitate the interpretation of the intercept as an average frequency. The same was done for age and internet daily usage time. If significant, the interaction effect is graphically presented and formally tested by means of a single slope analysis (Aiken & West, 1991) in which the sample was separated into substantively meaningful groups of low frequency of cyberbullying (once or twice in the last three months) and high frequency cyberbullying (almost every day). All models were visually inspected for heteroskedasticity and normality of the residuals.

For replication purposes, we applied the same analytic procedure with the second nation-wide sample. Consequently, all estimates are presented in duplicate in the tables, with values in parentheses representing the replication analyses. For parsimony, only the focal moderation is reported for both samples.

3. Results

3.1. Descriptive results

Table 1 provides descriptive results for our study variables. The presence of clinically significant depressive symptoms was 63.71% in the original sample of victims of cyberbullying, slightly higher than those who were not victims of cyberbullying (56.84%). Most of the sample (57.24%) used the internet more than 5 h a day, while 19.01% of our original sample experienced cyberbullying several times a week in the last three months.

3.2. Moderation analysis

3.2.1. Disconnecting from social media

The first model tested the conditional relationship of turning off the phone and disconnecting, and the effects of frequency of cyberbullying on depressive symptomatology. Internet usage time showed a positive and statistically significant association with depressive symptoms ($b = 1.019$, $t\,(455) = 2.653$, $p = .008$), while age ($b = 0.860$, $t\,(455) = 3.934$, $p < .001$) and being part of the LGTBIQ + community ($b = 2.292$, $t\,(455) = 3.515$, $p < .001$) were also associated with statistically higher levels in depressive symptoms. The moderation effect of cyberbullying frequency

Table 1
Sample descriptives.

	Mean [SD]	Value (Categorical)	N	Percentage
PHQ-9	14.00 [6.90] (17.11 [7.59])	Sub-Threshold	168 (174)	36.29% (25.07%)
		Clinically significant symptoms	295 (520)	63.71% (74.93%)
Daily Usage		less than 1 h	0 (0)	0.00% (0.00%)
		1–3 h	81 (136)	17.49% (19.59%)
		3–5 h	117 (145)	25.27% (20.89%)
		more than 5 h	265 (413)	57.24% (59.51%)
Age	17.03 [1.30] (16.9 [1.47])			
Sex		Male	123 (101)	26.57% (14.55%)
		Female	340 (593)	73.43% (85.45%)
LGBTIQ+		No	292 (444)	63.07% (63.97%)
		Yes	171 (250)	36.33% (36.02%)
CyberB Frequency		Once or twice	321 (494)	69.33% (71.18%)
		Once a week	54 (67)	11.66% (9.65%)
		Several times/ week	88 (133)	19.01% (19.16%)
Ignoring		No	267 (561)	57.67% (80.84%)
		Yes	196 (133)	42.33% (19.16%)
Disconnection		No	348 (317)	75.06% (45.68%)
		Yes	115 (377)	24.84% (54.32%)

Note. PHQ-9 = Depressive symptoms; Dailiy Usage = Dailiy internet usage; Age = Age, Sex = Biological Sex; LGBTIQ + = = Being part of the LGBTIQ + community, CyberB Frequency = Frequency of cyberbullying; *Ignoring = Ignoring the situation; Disconnection* = Turning off the phone or disconnecting. Replication estimates from the replication sample are presented in parentheses.

on the association between turning off the phone and disconnecting and depressive symptoms was statistically significant for both the original ($b = -3.147$, t (455) $= -4.324$, $p < .001$) and replication samples ($b = -3.377$, t (686) $= -5.112$, $p < .001$). Moderation effects for both samples are graphically represented in Fig. 1. All relevant regression parameters are presented in Table 2 with the replication sample estimates in parentheses.

Disconnecting from social media is associated with increased depressive symptoms when the frequency of cyberbullying is low and with decreased depressive symptoms when the frequency of cyberbullying is high. We disentangled this effect by separating our sample into two groups: low frequency cyberbullying (once or twice in the last three months) and high frequency cyberbullying (various times a week). The same model was tested separately for both groups.

In the low frequency cyberbullying group, disconnecting from social media significantly predicted higher levels of depressive symptoms for both the original ($b = 5.689$, t (315) $= 7.881$, $p < .001$) and replication samples ($b = 7.013$, t (488) $= 11.236$, $p < .001$). On the contrary, in the high frequency cyberbullying group, disconnecting from social media significantly predicted lower levels of depressive symptoms, also for both the original ($b = -2.910$, t (82) $= -2.102$, $p = .039$) and replication samples ($b = -2.975$, t (128) $= -2.450$, $p = .016$).

3.2.2. *Ignoring the situation*

The second model tested the conditional relationship of ignoring the situation and the frequency of cyberbullying on depressive symptomatology. The moderation effect was also statistically significant in the original ($b = 3.258$, t (455) $= 3.568$, $p < .001$) and replication samples ($b = 4.782$, t (686) $= 5.136$, $p < .001$) and is depicted in Fig. 2. The rest of the parameters are presented in Table 3.

Ignoring the situation is associated with lower depressive symptoms when the frequency of cyberbullying is low, while higher symptoms were observed when the frequency of cyberbullying is high. We tested this effect separately in the low and high frequency cyberbullying groups.

When the frequency of cyberbullying was once or twice in the last three months, ignoring the situation was associated with lower depressive symptoms in the original ($b = -1.832$, t (315) $= -2.138$, $p = .033$) and replication samples ($b = -5.154$, t (488) $= -5.700$, $p < .001$). When the frequency was several times a week, however, ignoring the situation was associated with higher depressive symptoms in the original ($b = 8.289$, t (82) $= 4.906$, $p < .001$) and replication samples ($b = 8.072$, t (128) $= 4.897$, $p < .001$).

Table 2
Depressive symptoms predicted by cyberbullying and disconnection.

Variables	B	SE.	df	t-value	p-value
(Intercept)	11.425	.609	455	18.745	.000
	(11.237)	(.704)	(686)	(15.957)	(.000)
CyberB Frequency	3.125	.512	455	6.106	.000
	(2.464)	(.531)	(686)	(4.643)	(.000)
Disconnecting	3.674	.608	455	6.046	.000
	(5.922)	(.552)	(686)	(10.735)	(.000)
Internet usage	1.019	.384	455	2.653	.008
	(1.334)	(.282)	(686)	(4.727)	(.000)
Sex (F)	.464	.384	455	.691	.489
	(3.759)	(.762)	(686)	(4.932)	(.001)
Age	.860	.219	455	3.934	.000
	(−0.025)	(.179)	(686)	(−0.140)	(.889)
LGBTIQ+	2.292	.652	455	3.515	.000
	(−1.022)	(.573)	(686)	(−1.783)	(.075)
CyberB Freq * Disconnecting	−3.147	.728	455	−4.324	.000
	(−3.377)	(.661)	(686)	(−5.112)	(.000)

Note. CyberB Frequency = Frequency of cyberbullying; Disconnecting = Turning off the phone or disconnecting; Internet Usage = Self Reported daily internet usage; LGBTIQ+ = Being part of the LGBTIQ + community; CyberB Freq * Disconnecting = Conditional relationship with Cyberbullying and Disconnecting (interaction effect). Replication estimates from sample two are presented in parentheses.

4. Discussion

The present study aimed to analyze the moderating effect of cyberbullying frequency on the relationship between coping strategies and depressive symptoms. The robustness of our results was strengthened by the usage of two representative samples of victims of cyberbullying and by presenting a successful replication of the same analyses with an equivalent nation-wide sample. Specifically, we focused on analyzing whether the relationship between coping strategies (disconnecting from social media, and ignoring the situation) and depressive symptoms could be moderated by the frequency of cyberbullying. The results from our original sample showed that in comparison with those who did not experience cyberbullying in the last three months, those who did experience it had higher levels of depressive symptoms. This is consistent with previous studies (Aboujaoude et al., 2015; Bottino et al., 2015) as cyberbullying can be an intense adverse event that is difficult to handle (Wright et al., 2021).

These results present an important contribution to the literature since previous studies found differential associations of problem-focused coping and emotion-focused coping with cyberbullying and depression (Yang, 2021). In particular, problem-focused coping was negatively

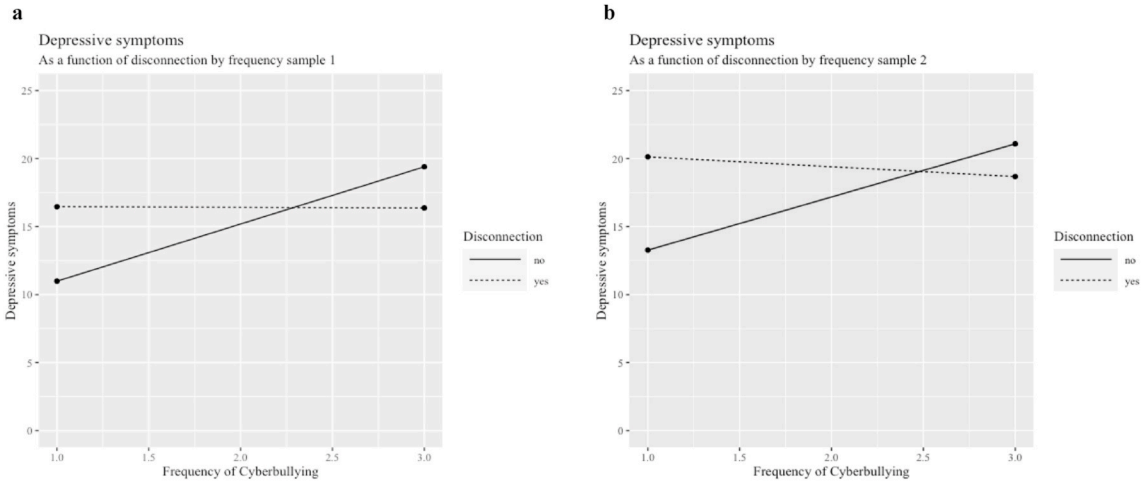

Fig. 1. Moderation Results for Between Victims of Cyberbullying and Depression according to Disconnecting from Social MediaNote
a: Sample 1, Región Metropolitana sample. b = Sample 2, national data.

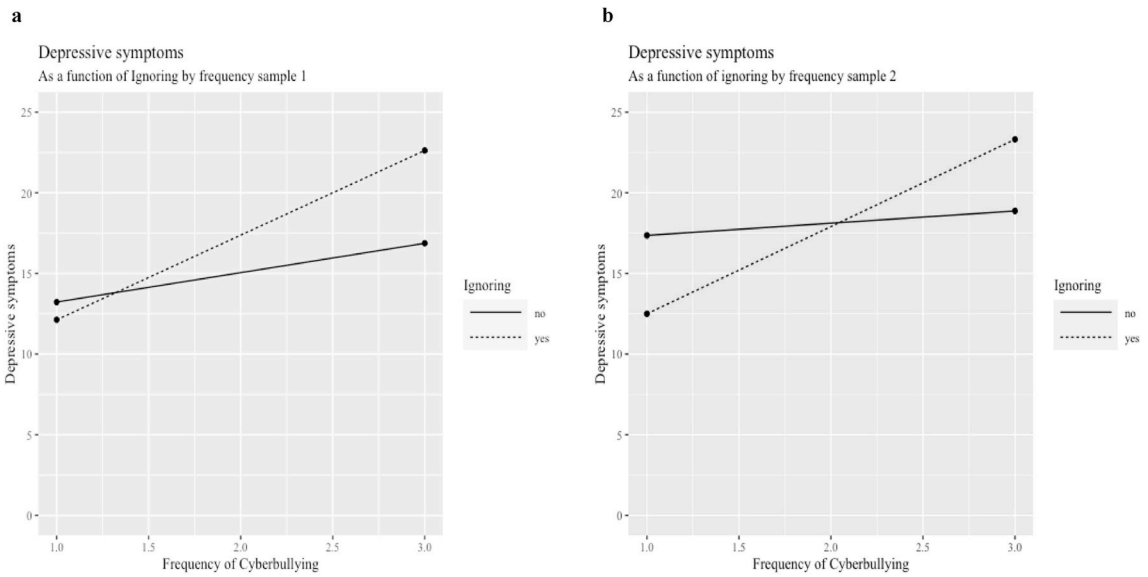

Fig. 2. Moderation Results for Victim of Cyberbullying and Depression According to Ignoring the SituationNote
a: Sample 1, Región Metropolitana sample. b = Sample 2, national data.

Table 3
Depressive symptoms predicted by cyberbullying and ignoring the situation.

Variable	B	SE.	df	t-value	p-value
(Intercept)	11.882	.619	455	19.197	.000
	(12.222)	(.727)	(686)	(16.823)	(.000)
CyberB	.994	.434	455	2.289	.023
Frequency	(−.176)	(.384)	(686)	(−0.459)	(.646)
Ignoring	-.855	.685	455	−1.248	.213
	(−3.531)	(.714)	(686)	(−4.945)	(.000)
Internet usage	1.086	.397	455	2.733	.007
	(.911)	(.298)	(686)	(3.055)	(.002)
Sex (F)	1.221	.697	455	1.752	.080
	(6.007)	(.802)	(686)	(7.487)	(.000)
Age	.925	.229	455	4.038	.000
	(−.169)	(.192)	(686)	(−0.879)	(.379)
LGBTIQ+	3.845	.649	455	5.923	.000
	(.858)	(.599)	(686)	(1.431)	(.153)
CyberB Freq *	3.258	.913	455	3.568	.000
Ignoring	(4.782)	(.931)	(686)	(5.136)	(.000)

Note. CyberB Frequency = Frequency of cyberbullying; Ignoring = Ignoring the situation; Internet Usage = Self Reported daily internet usage; LGBTIQ+ = Being part of the LGBTIQ + community; CyberB Freq * Ignoring = Conditional relationship with Cyberbullying and ignoring (interaction effect). Replication estimates from sample two are presented in parentheses.

associated with cyberbullying behaviors but not with depression, while emotion-focused coping was associated with both cyberbullying and depression. Specifically, the association between emotion-focused coping and depression was mediated by cyberbullying.

In line with these findings, our results show that disconnecting from social media was associated with higher levels of depressive symptoms when cyberbullying happened infrequently, while it constituted a protective factor when cyberbullying occurred regularly. This result is consistent with the idea that the internet affords also positive social and recreational experiences to its users, especially adolescents (Pujazon-Zazik & Park, 2010; Valkenburg, 2009) who may become isolated from their peers without access to the internet, a factor that has been especially critical during the current pandemic. For example, internet use can be linked with identity formation, personal autonomy, and additional substantial relationships outside of the family (Borca et al., 2015). In fact, perceived social support has shown to be a protective factor against depression (Auerbach et al., 2011; Rueger et al., 2016). As such, it is reasonable to think that disconnection from the internet can also serve to attenuate its positive affordances. In turn, this may indicate that when cyberbullying is not so frequent, the potential benefits of disconnection can be overshadowed by the loss of social connection, leisure time activities and positive reinforcers in general. Adolescents recognize positive features for online communications, such as entertainment, humor and social connections in general (Radovic, 2017).

By contrast, ignoring the situation when cyberbullying happened was rarely associated with a decrease in depressive symptoms, while the opposite pattern was found when cyberbullying happened regularly. These results corroborate previous studies on coping strategies and, in particular, the strategy of ignoring the cyberbullying situation as a way of avoiding the problem. In this line, the study by Heiman et al. (2019) showed that adolescents who were victims of cyberbullying reported a lower use of problem-focused coping strategies and a higher level of use of emotion-focused or avoidance-focused coping strategies compared to adolescents who were not cyber victimized. Together, these findings suggest that letting go and continuing one's life when the frequency of cyberbullying is not high may be a protective factor, while when the situation happens almost every day it may impede an individual from dealing appropriately with this experience. In fact, depression is associated with a decreased orientation to solving problems and a passive attitude toward those problems (Visted et al., 2018), since they are experienced as unmodifiable (Bondolfi et al., 2015), which may in turn worsen the problems that originated the depressive state. In keeping with this idea, a recent study found that deferring facing difficult situations increased the relationship between problematic internet use and depressive symptoms among adolescents (Hernández et al., 2019). Thus, our results contribute substantially to the literature on cyberbullying and coping among adolescents, showing that using emotionally-focused coping to deal with cyberbullying may not always have a negative impact on mental health. In other words, our results highlight the conditional role of coping strategies in buffering the adverse effects of cyberbullying on depression, consistent with previous studies (Ansary, 2020). Coping strategies are essential assets for adolescents, particularly considering the importance of social media in their lives. Since individuals who are victims of cyberbullying are at a higher risk of experiencing negative emotions than youth who are victims of traditional bullying (Gualdo et al., 2015), it is possible that the higher the frequency of cyberbullying incidents, the more likely they are to employ emotion-focused coping strategies (Völlink, Bolman, Dehue, & Jacobs, 2013). Our results may indicate that different ways of dealing with the

situation (e.g. disconnecting from social media) and its emotional impact (e.g. ignoring the situation) may be harmful or beneficial depending on the timing and flexibility with which they are implemented, contrary to a "one-size-fits-all" perspective on coping strategies.

All these antecedents may indicate that when facing cyberbullying the severity of the situation should be assessed -as in this case by means of its frequency-given that an adolescent's reaction may have a differential effect depending on how often they experience cyberbullying. These results, however, should not minimize the fundamental role of family and school in promoting and teaching them how to cope with cyberbullying, together with the importance of the development and care for healthy relationships as protective factors.

4.1. Limitations, future directions and implications for practice

The implications of our findings should be considered acknowledging our study limitations. First, we used cross-sectional data. Future studies can follow adolescents over time to better understand these processes. Second, we did not examine internet addiction among adolescents, which can be important to test the use of coping strategies by adolescents who use the internet in an uncontrolled way. Third, we focus on cyberbullying behaviors without considering other possible forms of online aggression such as sexting, microaggressions, hate speech and trolling, to name a few. Finally, an additional limitation of this study is that we assessed only two coping strategies, namely disconnecting from social media and ignoring cyberbullying situations. Considering the complexity surrounding coping strategies as cognitive and behavioral mechanisms, future studies may deepen the relationship of these mechanisms with depressive symptoms and the implications that involve being cyber victimized. Also, both of our studies relied on self-reported measures of cyberbullying, depressive symptoms and coping. As such it was not possible to clearly separate out and evaluate the influence of method variance, a common source of bias in correlational and self-report studies. This means future studies may benefit by the inclusion of a multimethod-monotrait framework to decrease the uncertainty of our results even more (Podsakoff et al., 2012). Despite these limitations, our study contributes to the literature by highlighting basic coping strategies for adolescents within the context of the pandemic and online communications, which is essential for them in this developmental period. We also provide a replication of the results in an independent sample, strengthening our conclusions.

Even with its limitations, this study has important implications for policy and practice. Initially, we highlight the fact that, as evidenced in previous studies, a higher frequency of cyberbullying can be related to youth mental health problems, specifically regarding episodes of depression. In this sense, educational communities should address cyberbullying with their students as a way to prevent not only its occurrence, but also mental health problems among young people. To this end, it is important to promote awareness actions, carry out integration activities, offer support programs, and, in addition, encourage students to report cases of cyberbullying. Schools should also describe and share with their students some common scenarios of cyberbullying behaviors and illustrate the effects that these may imply for the victims in order to promote empathic behavior among students.

In addition, based on the results of this study, particular coping strategies should not be encouraged or supported indiscriminately, but should take the frequency of cyberbullying into account. Disconnection from social media should be encouraged only when the frequency of cyberbullying is high (e.g. several times a week), given that it may be a strategy with a high social cost, as it may lead an individual to forego the positive aspects of the internet. On the contrary, ignoring the situation should be encouraged only when the frequency of cyberbullying is low (e.g. once or twice in the last three months), given that when facing severe situations more adaptive coping strategies may be hindered if no attention is paid to the problem. On the one hand, we agree with what some authors argue when they state that young people should be encouraged to develop and demonstrate greater self-confidence and employ effective strategies to deal with the problems of daily life and put an end to cyberbullying (e.g., Chan & Wong, 2017; Völlink, Bolman, Dehue, & Jacobs, 2013). But on the other hand, our study results reveal that specific behaviors can also have a buffering effect if employed in a timely manner when cyberbullying occurs.

This highlights the important role that coping strategies play as a way to deal with the various facets of cyberbullying and, additionally, as a way to prevent students' mental health problems. Our results, however, do not diminish the need for schools and families to provide guidance based on other strategies such as blocking contacts, contacting the appropriate authorities, and asking a trusted person for help. These and other strategies can be used not only to intervene in situations of cyberbullying, but also as a way to promote the mental health of students and contribute to their healthy psychosocial development.

Credit author statement

Jorge J. Varela: Conceptualization, Methodology, Validation, Formal analysis, Visualization, (Most) Writing – original draft, Writing – review & editing, Supervision, Project administration. **Cristóbal Hernández**: Formal analysis, Visualization, (Section) Writing – original draft, (Assisting) Writing – review & editing. **Christian Berger: Sidclay B. Souza**: Writing – original draft; Writing – review & editing. **Emanuel Pacheco**: Funding acquisition; Project administration; Resources; Writing – review & editing.

Authorship confirmation statement

All the co-authors contribute to different sections of the study and manuscript preparation.

Authors disclosure statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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