

“Haters back off!” Psychometric Properties of the Coping with Cyberhate Questionnaire and Relationship with Well-being in Spanish Adolescents

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Abstract

Background: Cyberhate is a growing form of online aggression against a person or a group based on race, ethnicity, nationality, sexual orientation, gender, religion, or disability. The present study aims to examine psychometric properties of the Coping with Cyberhate Questionnaire, the prevalence of coping strategies in Spanish adolescents, differences in coping strategies based in sex, age, and victim status, and the association between coping with cyberhate and adolescents' mental well-being. **Method:** The sample consisted of 1,005 adolescents between 12 and 18 years old (Mage = 14.28 years, SD = 1.63; 51.9% girls) who completed self-report measures on coping strategies, victimization status, and mental well-being. **Results:** The results of confirmatory factor analyses showed a structure for the Coping with Cyberhate Questionnaire composed of six factors, namely Distal advice, Assertiveness, Helplessness/ Self-blame, Close support, Technical coping, and Retaliation. It demonstrated acceptable internal consistency. The three most frequently endorsed coping strategies were Technical coping, Close support, and Assertiveness. In addition, lower Helplessness/Self-blame, and higher Close-support, Assertiveness, and Distal advice were significantly related to adolescents' better mental well-being. **Conclusion:** Prevention programs that educate adolescents about how to deal with cyberhate are needed.

Keywords: Cybervictimization, hate speech, well-being.

Resumen

Propiedades Psicométricas del Cuestionario de Afrontamiento del Ciberodio y su Relación con el Bienestar en Adolescentes Españoles. **Antecedentes:** el ciberodio es una forma creciente de agresión online contra una persona o un grupo por motivos de raza, etnia, nacionalidad, orientación sexual, género, religión o discapacidad. El presente estudio examina las propiedades psicométricas del Cuestionario de Afrontamiento del Ciberodio, la prevalencia de estrategias de afrontamiento en adolescentes, las diferencias en función del sexo, la edad y el estatus de víctima, y la asociación entre las estrategias de afrontamiento del ciberodio y el bienestar. **Método:** la muestra estuvo compuesta por 1.005 adolescentes entre 12 y 18 años (edad media = 14,28 años, DT = 1,63; 51,9% chicas) que completaron autoinformes sobre estrategias de afrontamiento, victimización y bienestar psicológico. **Resultados:** los análisis factoriales confirmatorios mostraron una estructura para el Cuestionario de Afrontamiento de Ciberodio de seis factores: Consejo distal, Asertividad, Indefensión/Autoculpa, Apoyo cercano, Afrontamiento técnico y Venganza, con una consistencia interna adecuada. Las estrategias de afrontamiento con mayor frecuencia fueron el Afrontamiento técnico, el Apoyo cercano y la Asertividad. Finalmente, una menor Indefensión/Autoculpa y un mayor Apoyo cercano, Asertividad y Consejo distal se relacionaron significativamente con un mayor bienestar de los adolescentes. **Conclusión:** es necesario implementar programas de prevención que eduquen a los adolescentes en cómo afrontar con el ciberodio.

Palabras clave: cibervictimización, discurso del odio, bienestar.

Cyberhate or hate speech is a form of online aggression carried out against people because of their race, sexual orientation, gender, religion, ethnicity, nationality, or disability that aims to promote hostility, discrimination, and/or violence (Agustina et al., 2020). Cyberhate can be offensive, cruel, or threatening, and it can be expressed through degrading online writing or speech, such as

posts, comments, text messages, videos, or images (Costello et al., 2019; Wachs & Wright, 2019). While cyberbullying, cyberharassment, and cyberstalking are typically carried out against one individual or a small group of related individuals (Smith, 2012), cyberhate targets a social subgroup of the population or a group of individuals representative of that subgroup (Blaya, 2019; Wachs et al., 2019a).

Initial research has shown that experiences of youth with cyberhate around the globe are relatively common. Hawdon et al. (2015) found that about 53% of Americans, 48% of Finns, 39% of British and 31% of Germans adolescents and young adults had witnessed cyberhate. In the same study, 16% of Americans, 10% of Finns, 12% of British, and 4% of German participants reported

that they had been personally attacked by messages of cyberhate. A study with French youth between the ages of 11 and 20 reported that around 57% of the participants were exposed to cyberhate, 10% were victims on social networks, and 5% published or shared hate material online (Blaya & Audrin, 2019). In addition, Wachs et al. (2019b) carried out a study in Asia, Europe and North America and found that being bystanders of cyberhate ranged from 21% among Indian to 68% of Spanish adolescents, indicating that cyberhate exposure is a frequent phenomenon among Spanish adolescents.

Research on cyberhate is needed because emerging evidence indicate that victimization through cyberhate increases prejudice via desensitization, is correlated with negative emotions, depression, anxiety, deviant behavior, and decreases well-being (Soral et al., 2018; UK Safer Internet, 2016; Wachs & Wright, 2018; Wachs et al., 2019a).

Adolescents' coping strategies have drawn researchers' attention (e.g., Calvete et al., 2011; Sticca et al., 2015). Coping refers to the set of actions taken to control environmental stress and the subsequent emotions triggered by the stress (Lazarus, 2013). Although research has addressed coping strategies for online harassment, cyberbullying, and cybergrooming (Machackova et al., 2013; Shoeps et al., 2020; Sticca et al., 2015; Wachs et al., 2012; Wright et al., 2018), less is known about coping with cyberhate. A study by the UK Safer Internet Center (2016) found that 43% of young people who experienced cyberhate ignored it, 25% reported it to the website, app, game or social network, 21% talked to a friend, 18% blocked the author, 13% told a parent or other adult, 13% publicly replied to the perpetrator, 4% reported to a teacher or another professional, and 2% reported the behavior to the police. Furthermore, the actions most frequently used by German adolescents to cope with cyberhate were blocking the aggressor or saving evidence (66.1%), being assertive with the aggressor to let him/her know that his/her behavior is unacceptable and must stop (59.9%), and seeking close support (52.3%), such as asking a friend or family member for advice (Wachs et al., 2020). Some adolescent victims felt helpless (22.6%), attempted revenge (21.9%), or sought an institutional support resource (21%), such as the police.

Coping strategies can affect mental health outcomes and well-being among victimized adolescents. For example, Singh and Bussey (2011) found that avoiding self-blame and victim-role disengagement (i.e., taking the victimization personally) were related to reduced depression and social anxiety, while proactive behavior and avoiding aggressive behavior reduced social anxiety. Similarly, Trompeter et al. (2018) found that coping strategies, such as avoiding self-blame, avoiding aggressive behavior, and reducing victim-role disengagement, decreased depression and social anxiety related to cyberbullying victimization. Machmutow et al. (2012) reported that higher helplessness and lower close support were related to more depressive symptoms among victims of cyberbullying. They also found that higher levels of assertiveness were related to increased depressive symptoms. However, distal advice (i.e., seeking help from a professional source such as the police or a helpline) and retaliation were unrelated to depression. Despite the empirical evidence on the relationship between coping strategies in bullying/cyberbullying and adolescents' mental health outcomes, to our knowledge, no previous studies have examined the role of coping with cyberhate in adolescents' psychological wellbeing.

Although the development and validation of adequate instruments to evaluate cyberhate is essential to advance researchers' ability to prevent this problem, there is a scarcity of research on the measurement of coping strategies used to deal with cyberhate. One exception is the Coping with Cyberhate Questionnaire (Wachs et al., 2020), a multidimensional instrument to evaluate different strategies for coping with cyberhate. These strategies include distal advice (e.g., to tell the police or call a helpline), assertiveness (i.e., actions that seek to defend rights), helplessness/self-blame (i.e., feelings of desperateness and guilt), close support (i.e., ask for help from someone close such as friends or family), technical coping (i.e., technological defense strategies, such as saving screenshots or block the aggressor) and retaliation (i.e., respond with aggression in revenge). The German version of the questionnaire showed adequate psychometric properties including factor validity and reliability.

The prevalence and potential consequences of cyberhate among adolescents is a growing and worrisome problem (e.g., Blaya & Audrin, 2019). Understanding how adolescents cope with cyberhate might help to develop prevention programs which support adolescents' ability to deal with cyberhate. Until now, there are no validated questionnaires in Spanish language to evaluate coping strategies with cyberhate. To this end, this study pursued three related objectives. First, we adapt and analyze the psychometric properties of the Coping with Cyberhate Questionnaire among Spanish adolescents. As in the original validation study (Wachs et al., 2020), we hypothesized a structure made up of 6 factors called Distal advice, Assertiveness, Helplessness/Self-blame, Close support, Technical coping, and Retaliation. A second aim was to describe the prevalence of cyberhate among Spanish adolescents and the differences in cyberhate as a function of sex, age, and victim status. Finally, to inform interventions on the ways of coping that could minimize the relationship between cyberhate and negative outcomes, we analyzed the relationship between coping strategies and adolescents' well-being.

Method

Participants

The sample consisted of 1,005 adolescents between 11 and 18 years ($M_{\text{age}} = 14.28$ years, $SD = 1.63$). Regarding sex, 522 (51.9%) of the participants were girls, 481 were boys (47.9%), and 2 did not indicate sex (0.2%). The participants came from 32 classrooms in three secondary education institutes in Madrid. Eleven schools were randomly selected and contacted from all secondary education institutes in the region, with three agreeing to participate in the study. One of the institutes was public and two were privately funded schools. Most of the participants were born in Spain (91%), while 6.07% were born in Latin America, 0.9% in African countries, 0.8% in other European countries, 0.6% in Asian countries, and 0.1% in North America.

Instruments

The Coping with Cyberhate Questionnaire. This questionnaire evaluated coping strategies in cyberhate situations and it was adapted by Wachs et al. (2020) who modified the questionnaire from another instrument developed by Sticca et al. (2015) to assess coping with cyberbullying. The following information is included at the beginning of the questionnaire:

"Cyberhate describes the usage of information and communication technologies (e.g. WhatsApp, Facebook, Instagram, Twitter) to offend and hurt somebody because of his or her race, gender, ethnic group, nationality, disability, sexual orientation, or religion. It can be either targeted directly at a person or group, or generally shared online. Cyberhate can be offensive, mean or threatening, and can be expressed through degrading writings or speech online such as posts, comments, text messages, videos or pictures."

Then students read the following scenario:

"A person has expressed hateful or degrading writings or speech online through posts, comments, text messages, videos or pictures, which inappropriately attacked you because of your race, gender, ethnic group, sexual orientation, or religion via chats or social networks (e.g. Facebook, Instagram, WhatsApp)."

After the description, we asked: "Have you ever experienced a situation of this kind?" Participants answered "no" (0) or "yes" (1). When participants responded that they had experienced cyberhate, they were asked what they did to cope with it. If students have not experienced it, they imagined how they would deal with cyberhate. There were 20 possible coping behaviors grouped into six subscales: (1) Distal Advice (DA) (3 items, e.g., "...call a helpline"); (2) Assertiveness (AS) (4 items, e.g., "...let the person know that his behavior is not acceptable at all"); (3) Helplessness/Self-blame (HS) (3 items, e.g., "...ask myself why this happened to me"); (4) Close Support (CS) (4 items, e.g., "...talk to my friends because it's good for me"); (5) Technical Coping (TC) (3 items, e.g., "...save messages/pictures as evidence"); (6) Retaliation (RET) (3 items, e.g., "...do it back"). Participants rated the coping actions on a scale of "definitely not" (0) to "definitely" (3).

For the adaptation of the Coping with Cyberhate Questionnaire to Spanish, the translation/back-translation method was used with the participation of two bilingual experts (Hambleton et al., 2004). The researchers reviewed the back translated version of the instrument, which led to some modifications to the Spanish version to safeguard conceptual equivalence with the original (Table 1).

Well-being. Perceived mental well-being was measured with the seven-item short version of The Warwick-Edinburgh Mental Well-being Scale (WEMWBS), originally developed by Tennant et al. (2007) and validated by Hunter et al. (2015; Spanish version of Castellví et al., 2014). This scale measures adolescents' perception of their positive mental well-being within the last two weeks. Example items include "I've been feeling optimistic about the future" and "I've been feeling useful." Answers were provided on 5-point Likert scale ("none of the time" to "all of the time"). Cronbach's alpha was $\alpha = .83$.

Procedure

Parents were informed of the purpose of the study and asked for their consent for their children to participate. Participation of the students was voluntary and responses were anonymous to promote sincerity. Five students declined to participate. Participants completed the questionnaire during regular class time. Participants were told that they could choose not to answer questions and that

participation could be stopped at any time without giving a reason and without consequence. At the end of the study, participants received an information sheet with support resources. The procedure followed the standards of the Declaration of Helsinki. This study is part of a larger research project on online risks among adolescents, which was reviewed and approved by the ethics committee of the Autonomous University of Madrid.

Table 1 Spanish version of the "Coping with Cyberhate Questionnaire"			
¿Alguna vez has experimentado una situación de este tipo? ["Have you ever experienced a situation of this kind?"]			
Sí [Yes]		No [No]	
¿Qué hiciste en esta situación? ¿Qué harías en esta situación? [What did you do in that situation? What would you do]			
Definitivamente no [Definitely not]	Probablemente no [Probably not]	Probablemente sí [Probably]	Definitivamente sí [Definitety]
0	1	2	3
DA1	...Ir a la policía [...go to the police]		
DA2	...Informar a un/a profesor/a o al director/a del colegio [...inform a teacher or the principal]		
DA3...	Llamar a un servicio telefónico de ayuda [...call a helpline]		
AS1	...Hacer saber a la persona que no me hace gracia en absoluto [...let the person know that I do not find it funny at all]		
AS2	...Hacerle saber a la persona que su comportamiento no es aceptable en absoluto [...let the person know that his behavior is not acceptable at all]		
AS3	...Decirle a la persona que deje de hacerlo [...tell the person to stop it]		
AS4	...ask the person why he/she is doing this]		
HS1	...Estar completamente desesperado/a [...be completely desperate]		
HS2	...Preguntarme por qué me pasó esto [...ask myself why this happened to me]		
HS3	...No saber qué hacer [...not know what to do]		
CS1	...Hablar con mis amigos/as porque es bueno para mí [...talk to my friends because it's good for me]		
CS2	...Acudir a alguien que me escucha y me reconforta [...go to someone who listens to me and comforts me]		
CS3	...Pasar tiempo con mis amigos/as para no pensar en ello [...spend time with my friends to take my mind off it]		
CS4	...Hablar con mis padres y pedirles consejo [...talk to my parents and ask for their advice]		
TC1	...Prestar más atención a quién accede a mis datos [...pay more attention to who gets access to my data]		
TC2	...Bloquear a esa persona para que no pueda contactarme más [...block that person so that he/she cannot contact me anymore]		
TC3	...Guardar mensajes/fotos como evidencia (p.ej., copias o capturas de pantalla) [... save messages/pictures as evidence (e.g., copies or screenshots)]		
RET1	...Se la devuelvo con la ayuda de amigos/as en el ciberespacio (en internet, p.ej., mensaje de texto, correo electrónico) [... get back at the person with the help of friends in cyber space (e.g., text message, email)]		
RET2	...Insulto a la persona en el ciberespacio (en internet, p.ej., mensaje de texto, correo electrónico) [... insult the person in cyber space (e.g., text message, email)]		
RET3	...Se la devuelvo [... do it back]		

Data analysis

To perform the confirmatory factor analysis, we used the EQS 6.1 software (Bentler & Wu, 2005). Between 0.4% (n = 4; well-being) and 1.3% (n = 13; close support) of data were missing for the main study variables. The Little's MCAR test revealed that the data were missing completely at random ($\chi^2 = 43.23$; df = 34; $p = .133$), suggesting that the missing data could be dealt with using of the full-information maximum likelihood (FIML; Enders, 2010). Thus, we employed the maximum likelihood (ML) estimation with FIML to impute missing values in the items. Given the violation of the normality assumption that was observed in the data (normalized Mardias' coefficient = 38.36), the Yuan-Bentler Chi-Square, analogous to the Satorra-Bentler Chi-Square, was used along with robust standard errors. To study the adequacy of the estimated models, the standardized root mean square residual (SRMR), the non-normative fit index (NNFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA) were used. NNFI and the CFI values above .90 indicate an adequate fit and those above .95 indicate a good fit. SRMR and RMSEA values close to .05 indicate an excellent fit and those between .05 and .08 indicate adequate fit (Byrne, 2013; Hu & Bentler, 1998). In addition to Cronbach's alpha (α), we computed McDonald's omega (ω), which is a more adequate indicator of internal consistency (Viladrich et al., 2017).

Results

Preliminary descriptive analyses

The percentage of adolescents that reported being cyberhate victims was 13.3% of the total sample (n = 133). More girls (15.7%, n = 81) than boys (10.6%, n = 50) ($\chi^2(1) = 5.46, p < .05$) reported cyberhate victimization. About 11.5% of the younger adolescents (15 years old or less) and 15.4% of older adolescents (16 years old or more) reported being cyberhate victims, although not significantly different ($\chi^2(1) = 3.26, p = .07$). Individual coping behaviors more frequently endorsed by the participants were "block that person so that he/she cannot contact me anymore" (89.6% of adolescents), "tell the person to stop it" (83.6%), "let the person know that I do not find it funny at all" (82.4%), and "let the person know that his/her behavior is not acceptable at all" (82%).

Psychometric properties of the Coping with Cyberhate Questionnaire

The proposed measurement model (Model 1) includes the correlated factors of Distal advice, Assertiveness, Helplessness/Self-blame, Close support, Technical coping, and Retaliation. The fit of this model was less than optimal (e.g., NNFI = .86; CFI = .89; SRMR = .09). Thus, we checked the modification indices to analyze misfit causes. The addition of cross-loading between the factor Close Support and the item "I get back at the person with the help of friends in cyber space (online, text message, email)" was recommended. Because this item refers to the help of friends, which is related to the factor of Close support, we added this cross-loading and the model was re-estimated. The final model showed adequate fit: [Yuan-Bentler $\chi^2(154) = 807.97, p < .001$; NNFI = .91; CFI = .93; SMRS = .056; RMSEA = .060 (.055-.064)].

Figure 1 shows the standardized values of the factor loadings for each item in their respective factor in model 1. The factor loading of the items ranged from .31 to .99 ($p < .001$). Regarding the correlations between the factors, two of them were not significant: between Distal advice and Retaliation and between Close support and Retaliation. The remaining correlations ranged from .11 to .77 ($p < .01$)

The internal consistencies for the subscales were .78, .87, .80, .78, .74, and .63 for the scales of Distal advice, Assertiveness, Helplessness/Self-blame, Close support, Technical coping, and Retaliation, respectively. The coefficient McDonald's ω for the scales were .79 (Distal advice), .87 (Assertiveness), .73 (Helplessness/Self-blame), .72 (Close support), .77 (Technical coping), and .58 (Retaliation).

Frequencies of Coping Strategies for Cyberhate

Table 2 presents the results of frequency analyses for each coping strategy and the differences by sex, age, and victimization status. Chi-square test with Bonferroni correction for multiple comparisons was used. To compute prevalence, we dichotomized the coping items (definitely not and probably not = 0; probably and definitely =1). Then, items of each scale were summed and the prevalence computed (i.e., percentage of adolescents that endorsed that "probably" or "definitely" for one item of a given subscale). The two most frequently endorsed coping strategies were Technical coping (95.3%), Close support (92.6%), and Assertiveness (92.2%). Regarding sex differences, girls reported

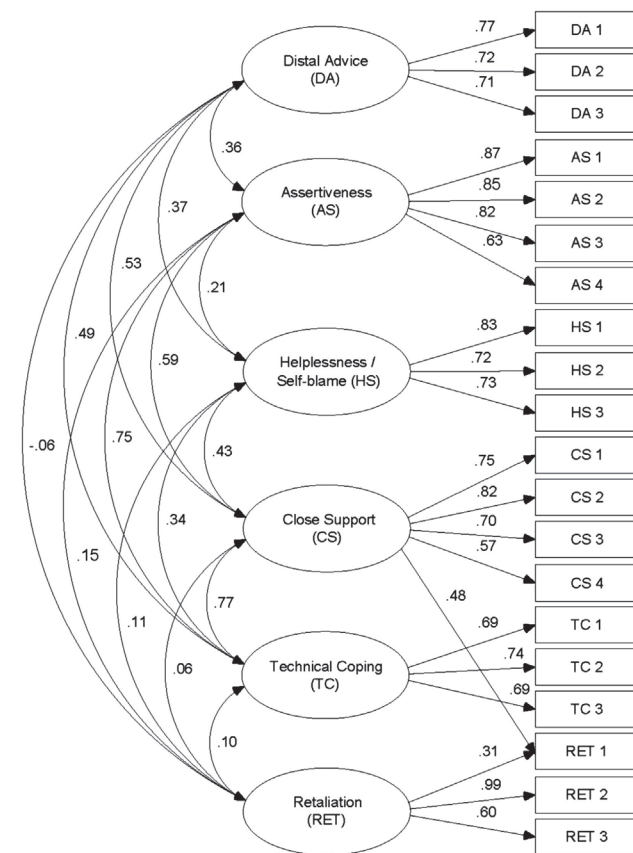


Figure 1. Final estimated structural model

Table 2
Prevalence of coping strategies as a function of victim status, sex, and age

	Victimization Status					Sex				Age			
	Total	Victims (n = 857)	Non- victims (n = 131)	χ^2	Sig.	Girls (n = 522)	Boys (n = 481)	χ^2	Sig.	Younger (n = 563)	Older (n = 439)	χ^2	Sig.
Distal Advice	69.4	36.6	74.3	75.90	$p < .001$	68.6	70.1	0.26	$p = .61$	77.1	59.5	36.09	$p < .001$
Assertiveness	92.2	84.7	93.3	11.73	$p < .01$	92.9	91.3	0.93	$p = .33$	91.8	92.5	0.15	$p = .70$
Helplessness/Self-Blame	55.5	49.6	56.4	3.09	$p = .15$	61.5	49.1	15.66	$p < .001$	59.3	50.5	8.06	$p < .01$
Close Support	92.6	84	94.2	17.71	$p < .001$	95.4	89.6	12.31	$p < .001$	94	91.1	2.95	$p = .09$
Technical Coping	95.3	90.1	96.1	94.4	$p < .01$	96.2	94.4	1.78	$p = .18$	96.3	94.1	2.65	$p = .10$
Retaliation	63.8	59.5	64.1	1.00	$p = .32$	64.2	63.2	0.10	$p = .75$	63.8	63.6	0.01	$p = .95$

more frequent use of Helplessness/ self-blame (girls: 61.5%, boys: 49.1%, $\chi^2(1) = 15.66, p < .001$) and Close support (girls: 95.4%, boys: 89.6%, $\chi^2(1) = 12.31, p < .001$) compared with boys.

Regarding age, we divided the adolescent in two groups: younger adolescents (ages 12-14) and older adolescents (ages 15-18) following the approach suggested by American Academy of Pediatrics (2020). Younger adolescents endorsed Distal advice (younger: 77.2%, older: 59.3%, $\chi^2(1) = 37.08, p < .001$) and Helplessness/Self-blame (younger: 59.5%, older: 50.5%, $\chi^2(1) = 8.14, p < .01$) more often than older adolescents. No age differences were found for the rest of coping strategies.

Non-victims reported that they would use Distal advice (victims: 36.6%, non-victims: 74.3%, $\chi^2(1) = 75.90, p < .001$), Assertiveness (victims: 84.7%, non-victims: 93.3%, $\chi^2(1) = 11.73, p < .01$), Close support (victims: 84%, non-victims: 94.2%, $\chi^2(1) = 17.71, p < .001$), and Technical coping (victims: 90.1%, non-victims: 96.1%, $\chi^2(1) = 9.44, p < .01$) more frequently than victims.

Relationships between coping strategies and well-being

We conducted a linear regression analyses to investigate the relationship between coping strategies and mental well-being of adolescents, while controlling for sex and age. The mean score of the items of each scale was used. To keep the consistency with the original questionnaire, the item RET1 was kept in the variable "Retaliation" and Close Support was composed of CS1 to CS4

Table 3

Regression analysis on the relationship between coping strategies and well-being

	B	SE	β	t	Sig.
Constant	2.483	0.252		9.844	$p < .001$
<i>Control variables</i>					
Sex	0.148	0.049	0.094	3.026	$p < .01$
Age	-0.056	0.015	-0.116	-3.695	$p < .001$
<i>Coping Strategies</i>					
Close support	0.042	0.010	0.173	4.296	$p < .001$
Technical coping	0.022	0.014	0.064	1.543	$p = .123$
Distal advice	0.030	0.010	0.104	2.917	$p < .01$
Assertiveness	0.026	0.009	0.110	2.866	$p < .01$
Helplessness/Self-blame	-0.056	0.010	-0.189	-5.834	$p < .001$
Retaliation	0.008	0.014	0.019	0.627	$p = .531$

Note: Well-being was used as criterion variable

item. The results indicate that higher levels of Helplessness/Self-blame predicted lower levels of mental well-being, whereas higher levels of Close-support, Assertiveness, and Distal advice predicted higher levels (see Table 3). Technical coping and Retaliation were unrelated to well-being. The equation model accounted for 14% ($R^2 = 0.14$) of the variance of wellbeing.

Discussion

Cyberhate is a growing problem because of concerning negative mental health outcomes for adolescents. It is essential to provide adequate knowledge to adolescents concerning coping strategies that allow them to minimize the impact of cyberhate. Thus, the first aim of this study was to analyze the psychometric properties of a multidimensional instrument to evaluate coping strategies for cyberhate among adolescents.

The results supported a structure made up of six factors, which is consistent with the structure found in the initial validation study among German adolescents (Wachs et al., 2020), as well as evidence from a study on cyberbullying coping strategies (Sticca et al., 2015). These factors include strategies focused on the problem, such as Technical coping (e.g., blocking the aggressor) and Assertiveness (e.g., ask to stop); strategies based on seeking others' help, such as Close support (family, friends) and Distal advice (e.g., reporting the police); and strategies more problematic, such as Helplessness/Self-blame and Retaliation. Most of these strategies are correlated, suggesting that victims could simultaneously use several strategies to cope with cyberhate, which is consistent with previous research and theory (e.g., Lazarus, 2013). However, it is important to highlight that Retaliation showed the lowest correlations with other coping strategies. These findings could indicate that Retaliation might reduce adolescents' tendency to use other strategies. These results suggest that it is important to educate youth on appropriate coping strategies (e.g., close support).

A cross-loading from the Close support to the item "I get back at the person with the help of friends in cyber space (e.g., online, text message, email)" (initially in the factor of Retaliation only) was added. Given that this item refers to seeking/getting "help of friends", this relationship makes theoretical sense as it might be possible that help seeking from friends could involve getting back at others who harmed them. However, the translation to Spanish reveals that the expression "get back" was translated as "respondi" instead "se la devolví". Although both translations are correct, the latter could better preserve the nature of "retaliation" or "revenge" that characterizes the factor in which the item was

originally included and, therefore, could be more appropriate. Thus, modifying this item with “se la devolví” makes it closer to the essence of Retaliation. Internal consistency was appropriate for all the factors ($> .70$), except for Retaliation, which was $.63$, perhaps because of the item of “I get back at the person”.

Prevalence analyses showed that most adolescents endorsed Technical coping (e.g., block that person), Close support (e.g. looking for help of family), and Assertiveness, with a prevalence rate higher than 90%. The Helplessness/Self-blame and Retaliation strategies, although less frequent, were endorsed by more than half of adolescents. These findings are partially consistent with those from Wachs et al.'s (2020) study in which items on the subscales of Technical Coping and Assertiveness were most endorsed, while those least endorsed were Helplessness/Self-blame, Retaliation, and Distal Advice.

Several interesting differences emerged based on sex, age, and victim status. Girls reported more Helplessness/Self-blame and Close support than boys. These findings are consistent with traditional gender roles assigned to girls, which assign girls a more passive role in society and as being more oriented towards seeking social support (e.g., Spence & Buckner, 2000). Regarding age, younger adolescents used the Distal advice and Helplessness/Self-blame strategies more frequently than older adolescents. These results are aligned with findings from previous studies reporting that younger adolescents were more likely to talk to someone about the incident, particularly to parents (Perren et al., 2012), and more likely to use passive strategies than older adolescents (Görzig & Machackova, 2016). Older adolescents might have more technological skills, leading to less helpless than younger adolescents, who, in turn, seek more external advice. Finally, non-victims report that they would use more Distal advice, Assertiveness, Close support, and Technical coping strategies than victims did. There are at least two possible interpretations for these results. These results could indicate that when adolescents are asked about a hypothetical situation, they think that they would use more strategies than real victims actually use. For example, it is probable that a non-victim thinks that he/she would go to the police in a cyberhate situation, but a real victim might be unlikely to go to the police. This hypothesis is consistent with the limited research on coping with cyberbullying (Dehue, 2016). A second interpretation is that victims have fewer coping strategies than non-victims, which could increase victimization. These explanations are proposals that should be analyzed in future longitudinal studies.

Regarding the relationship of coping strategies with adolescents' well-being, Self-blame and Close support were related to well-being. Self-blame could lead to feelings of helplessness and psychological distress, which could reduce levels of well-being. Consistent with this proposal, previous studies have shown that self-blame increases depression symptoms (Horwitz et al., 2011). Seeking close support of family and friends could improve the response to hate and minimize its negative impact, which could increase psychological well-being. Previous studies have shown that social support is a resilience factor that could protect from the negative effects on mental health (Eisman et al., 2015). It is also consistent with previous studies showing that close support is related to less depressive symptoms associated with cybervictimization among adolescents (Machmutow et al., 2012). Greater use of distal advice of community resources and assertive behavior were significantly related to adolescents' well-

being. These strategies could reduce the impact of cyberhate by dissuading the aggressor or aggressors from continuing their hateful behaviors. The estimated model explained 14% of the variance of well-being, suggesting that adolescents' well-being is a complex variable that have multiple determinants. Overall, these results should be integrated into cyberhate prevention programs to teach coping strategies that could prevent the negative impact on victims' psychosocial adjustment.

Finally, the results showed that more girls than boys were victims of cyberhate. This result is congruent with the idea that cyberhate seeks to discriminate against people based on certain characteristics (e.g., sex). The finding is also consistent with other research on people experiencing cyberhate based on their sex (UK Safer Internet, 2016). These results underscore the need to combat discrimination against girls.

This study has some limitations to keep in mind for future research. We analyzed some psychometric properties of construct validity and reliability of the instrument. Future studies should explore additional psychometric properties such as predictive validity and test-retest reliability. Second, although the sample is large, it is not representative of Spanish adolescents. Future research should replicate the findings with additional samples in Spain and in other cultural contexts. Third, cross-sectional nature of the design precludes the establishment of causal relationships between coping strategies and well-being. Future longitudinal studies should explore the temporal relationships between coping of cyberhate and well-being along with other indicators of psychological health. Finally, future studies should examine how cyberhate due to specific conditions (i.e., for race, for sexual orientation, for religion) could affect victims (Pistella et al., 2019). This research might also consider intersections among different groups (e.g., ethnicity, sexual identity or orientation) to identify risk groups.

Conclusions and practical implications

Cyberhate has received considerable attention in recent years and is increasingly present on the Internet and social networks. However, cyberhate among Spanish adolescents has not been investigated thoroughly. This is the first study that validate an instrument to assess coping strategies with cyberhate among Spanish adolescents. The results highlight the need to consider a multidimensional approach to cope with cyberhate, which includes a wide range of behaviors and strategies. The Coping with Cyberhate Questionnaire could be used in school prevention programs to educate and train the most appropriate strategies to respond to cyberhate. Given that several strategies are associated with adolescents' well-being, interventions with victims should improve victims' implementation of these strategies to cope with cyberhate. Although research on the prevention of cyberbullying has advanced considerably in recent years (Del Rey et al., 2019; Garaigordobil & Martínez-Valderrey, 2015), it is additionally important to prevent cyberhate by addressing specific coping strategies. To this end, the development of valid and reliable measures is a necessary first step.

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