Perception of cyberdating abuse from the victims' perspective: effect of the type of suffered behavior and gender

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Abstract

Direct cyberaggression and cybercontrol, although both are manifestations of cyberdating abuse (CDA), seem to show different intentionality and impact. Furthermore, how young people perceive and experience CDA within heterosexual relationships varies by gender. However, no studies have examined whether the victims' perception of offense and severity in an incident of CDA and the motivations that they attributed to their aggressor's behavior vary by the type of victimization and gender. This research ($N = 92$ participants; 56.5% men and 43.5% women) was aimed at addressing this gap in the literature. Participants randomly completed an essay in which the CDA victimization (direct cyberaggression vs. cybercontrol) was manipulated and then responded to dependent measures. The results showed that (a) direct cyberaggression (vs. cybercontrol) victimization was perceived as more offensive and severe; (b) women (vs. men) perceived greater offense and severity in a CDA victimization incident; (c) direct cyberaggression victimization was more frequently attributed to anger/frustration and online disinhibition, whereas cybercontrol victimization was attributed to personality and jealousy; and (d) a higher percentage of men indicated that their partners had perpetrated CDA against them because of the partners' personality, whereas a higher percentage of women indicated that they had been victims of CDA because their partners experienced online disinhibition. We discussed the theoretical and practical contributions of our findings in the CDA field.

Keywords Cybercontrol · Direct cyberaggression · Victimization · Gender · Perception

Introduction

Cyberdating abuse (CDA), which integrates a wide range of behaviors facilitated by digital media, is a widespread health and social problem in young people's romantic relationships. There is no consensus on definitions and concepts to designate intimate partner violence (IPV) using the Internet, but the term CDA has been the most used in literature (for a review, see Caridade et al., 2019). It refers to the "control, harassment, stalking, and abuse of one's dating partner via technology and social media" (Zweig et al., 2014, p. 1306). Such behaviors may be directed at current or ex-partners with whom perpetrators have or have had a bonding characterized by affection, sexual involvement, and/or dating (Borrajo et al., 2015b).

CDA is a complex phenomenon that needs to be examined within the context in which it takes place. Several researchers suggest young people often do not identify CDA behaviors they have experienced in their relationships as a form of IPV (e.g., Belotti et al., 2022; Sánchez-Hernández et al., 2020). This leads to the risk that sensitivity to CDA and the ability to respond to it can be lost by minimizing, denying, or normalizing these behaviors. Therefore, it is not enough to examine the frequency with which the CDA behaviors occur; it is essential to analyze contextual factors such as the meaning that those involved attribute to the CDA experiences, the perceived severity, or the impact CDA has on victims. Although interest in examining the effects of CDA victimization has increased recently, less effort has been devoted to understanding how victims perceive and experience CDA situations depending on the nature of the behavior suffered. This research will address this gap in the literature.

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CDA behaviors

According to Borrajo et al. (2015b), the set of online behaviors that make up the CDA phenomenon can be classified into two types of abuse: *cybercontrol*, that is, online abusive behaviors intended to control and surveil the partner/ex-partner via digital media (e.g., checking the partner/ex-partner's mobile phone without permission or sending insidious messages to the partner/ex-partner), and *direct cyberaggression*, that is, deliberate behaviors aimed at harming the partner/ex-partner, such as insulting, threatening, or humiliating them through technology (e.g., sending sexually explicit photos of the partner/ex-partner without their consent via WhatsApp or social network sites). Both direct cyberaggression and cybercontrol behaviors manifest violence within intimate partner relationships and seem to have detrimental effects on the well-being of individuals and relationships. However, they present differences in terms of their nature that should be taken into account.

For example, Reed et al. (2021a) have recently observed in a sample of adolescent students that the main reasons for direct cyberaggression against a partner were being upset or angry or being in a situation of conflict and fighting, whereas the main motivations for cybercontrol were insecurity, normally in situations of jealousy and suspicions of infidelity. Moreover, several researchers has suggested that direct cyberaggression behaviors take on more explicit and recognizable manifestations of IPV, whereas cybercontrol includes indirect abusive behaviors that may go unnoticed (e.g., Borrajo et al., 2015b; Stonard et al., 2017). In particular, cybercontrolling behaviors are often perceived as a consequence of digital media use rather than CDA manifestations (Belotti et al., 2022). The features of the digital environment (e.g., easy access to the partner's information, constant connection without temporal or geographical limits, or the possibility of carrying out the abusive behavior without being seen by others) could be legitimizing cybercontrol against one's partner by not involving a clear violation of the partner's privacy and, therefore, of moral codes of behavior (Utz & Beukeboom, 2011). Moreover, many young people tend to accept and normalize cybercontrol behaviors from their partners by interpreting them as expressions of love and concern (Nardi-Rodríguez et al., 2018).

Such observed differences in the perception of these CDA behaviors seem, in turn, to be consistent with their prevalence rates. Although it is difficult to determine the actual prevalence of CDA due to a lack of consensus on CDA terms, its operationalization, and CDA measures (for a review, see Soto & Ibabe, 2022), international research has suggested that rates of direct cyberaggression victimization range from 14% (Borrajo et al., 2015b) to 31.7% (Gámez-Guadix et al., 2016), whereas cybercontrol victimization ranges from 65% (Van Ouytsel et al., 2017) to 81% (Gámez-Guadix et al., 2016). Similarly, the prevalence of direct aggression perpetration ranges from 10.6% (Borrajo et al., 2015a) to 14.7% (Caridade et al., 2019), and that of cybercontrol perpetration ranges from 49.6% (Van Ouytsel et al., 2017) to 88.4% (Borrajo et al., 2015b).

In sum, previous research suggests that the behaviors most exercised against partners by young people and least identified as manifestations of IPV are cybercontrol behaviors (Donoso-Vazquez et al., 2018). In contrast, direct cyberaggression behaviors seem to receive greater social sanction (Reed et al., 2021b), which could explain why they show lower prevalence ratio. Considering the above, it would be reasonable to think that experiencing direct cyberaggression behaviors perpetrated by a partner is perceived as more offensive and severe than suffering controlling behaviors. We have tested this assumption in our research.

Gender differences in CDA experiences

The literature has amply demonstrated that the way people perceive and experience CDA varies by gender. For instance, women seem to experience more physical and mental health and behavioral problems (e.g., depressive symptoms, anxiety, fear, suicidal ideation, substance use, or sexually transmitted diseases) as a result of CDA than men (e.g., Brown et al., 2022; Stonard et al., 2017). Moreover, while men often perceive a positive connotation in suffering CDA behaviors (i.e., they feel protected and loved by their partner), women tend to perceive these behaviors as more upsetting and offending and experience greater fear (Stonard et al., 2017). Some findings have also suggested that, in comparison with women, men tend to perceive it to be easier to stop or escape from their situation of CDA victimization (Brown et al., 2022). These findings align with the argument that CDA in heterosexual relationships is gender asymmetrical, placing women in a position of vulnerability in their romantic relationships (Walby & Towers, 2018). Therefore, analyzing only the frequency of CDA behaviors and relying on a standard definition is inadequate; it is essential to understand how people perceive and experience the episodes of CDA in their relationships based on their gender.

On the other hand, although both men and women engage in CDA behaviors within their relationships, the intentions underlying CDA and the tactics exercised seem to vary by gender (Reed et al., 2021a, b). Specifically, several researchers have suggested that men tend to engage in more frequent perpetration of explicit CDA manifestations such as sexual cyberdating abuse and direct cyberaggression against their partner (e.g., Brown et al., 2022; Reed et al., 2021b). In contrast, women seem to exercise more passive and indirect

tactics, such as cybercontrol (e.g., Linares et al., 2021; Reed et al., 2021b).

Likewise, although the previous findings were not conclusive, the literature has suggested that the motivations that women express for exercising CDA are more related to insecurity, jealousy, or the need to save the relationship at all costs (e.g., Calvete et al., 2021; Stonard, 2017), while the CDA exercised by boys seems to be more explicit and is more motivated by anger or a perceived threat to their status within the relationship (e.g., Reed et al., 2021a, b). In summary, previous literature suggests that while both men and women seem to engage in and experience CDA in their relationships, the intentions for its perpetration, the way it is perceived, as well as its consequences appear to differ (Brown et al., 2022).

Research overview

Building on the reviewed literature, we conducted a retrospective survey study aimed at examining differences in CDA experiences within heterosexual relationships from the victim's perspective. In particular, we first examined whether there are differences in the perceived offense and severity of a CDA incident as a function of the type of victimization (direct cyberaggression vs. cybercontrol) and the participant's gender (man vs. woman). Specifically, we expected that participants who described, in writing, a situation of direct cyberaggression victimization would perceive greater offense (Hypothesis 1a) and severity (Hypothesis 1b) than those who described an incident of cybercontrol victimization. Similarly, we hypothesized that women would perceive greater offense (Hypothesis 2a) and severity (Hypothesis 2b) compared to men, primarily those who were asked to vividly describe a situation of victimization by direct cyberaggression (vs. cybercontrol; Hypothesis 3a and b, respectively).

Second, few researchers have paid attention to examining the aggressor's motivations to commit CDA from the victims' perspective. To our knowledge, only one study has addressed this question directly using a quantitative measure with a multiple-choice response format (see Borrajo et al., 2015a). The results showed that the majority of victims (51.4%) indicated that their partners had exercised CDA against them in a context of jealousy, 26.1% reported that it happened in a game or joking context, 23.9% reported a retaliation situation (i.e., reactive violence), and 12.8% reported a manifestation of anger or annoyance as the context. However, in the study in question, results were not examined by gender or each type of victimization (direct cyber aggression vs. cyber control). On the other hand, Calvete et al. (2021) observed in a sample of adolescents that IPV victims, considering different manifestations of offline

and online violence, interpreted the most frequent reasons for aggression were jealousy (50.7%) and anger (43.7%) followed by demonstrations of love (28.3%), play (22.8%), and reactivity (20.6%). These reasons were very consistent with those observed from the offender's perspective. However, this study also does not examine the reasons for victimization depending on the type of behavior suffered. Moreover, these types of quantitative CDA and IPV measures that include "incident-specific follow-up questions" to capture motivations for CDA perpetration have received criticism in the literature (see Hamby, 2016).

In our study, we aimed to address this limitation by employing an open-response format to better understand the context in which CDA takes place and examine whether other motivations emerge beyond those contemplated by Borrajo et al. (2015a, 2015b). Furthermore, we extended their work by exploring motivations for CDA as a function of the type of CDA victimization (direct cyberaggression vs. cybercontrol) and the gender of the participants (man vs. woman). We consider it essential to investigate whether victims can determine the reasons that lead their partners to exercise CDA behaviors against them, not only to know the context in which each type of CDA arises but also to understand how victims interpret the CDA situation based on gender and how such interpretation could influence, in turn, their perception of severity and offense and their relational dynamics.

Because previous research is scarce and inconsistent, we did not hypothesize about the frequency of emergent motivations and their possible differences according to CDA behaviors (direct cyberaggression vs. cybercontrol) and gender. However, in line with previous findings (Reed et al., 2021a), we anticipated that we could find differences in the motivations that CDA victims attributed to their aggressors' behavior depending on the type of abuse suffered, given the different nature of each behaviors. Similarly, because some gender differences have been predicted in CDA motivations (e.g., Calvete et al., 2021; Reed et al., 2021a), we also anticipate that the attributed motivations might differ by victims' gender.

Method

Participants and procedure

Of the 284 people who took the survey, 80 (28.17%) were excluded because they did not complete the full questionnaire, 21 (7.39%) because they responded incorrectly to the manipulation check item (i.e., the condition they were in), and 12 (4.23%) because they failed attention check items (i.e., "If you are reading this question, answer with 3").

Moreover, 79 (27.82%) participants were redirected to the end of the survey because they indicated not having experienced the critical incident, and we thanked them for their participation. Thus, the final sample consisted of 92 participants (M_{age} = 22.74, SD = 3.63, range 18–32 years; 56.5% men). All of them had a Spanish nationality and a heterosexual orientation. Half of all participants reported being in a dating relationship (55.4%), 34.8% participants were single, 8.7% were cohabiting, and 1.1% was married.

We implemented a between-subjects factorial design manipulating the type of CDA victimization (direct cyberaggression vs. cybercontrol), using the critical incident technique (Flanagan, 1954). Specifically, similar to what other authors have previously done (e.g., Alonso-Ferres et al., 2021), participants were randomly assigned to complete an essay intended to elicit different experiences of CDA victimization (direct cyberaggression: n = 40 participants [22 men and 18 women]; cybercontrol: n = 52 participants [30 men and 22 women]). We designed these essays or conditions based on the operational definition of CDA by Borrajo et al. (2015b). After writing about the assigned incident, they were asked to complete another short questionnaire about this situation.

We used the Qualtrics research platform to develop an online survey containing the variable of interest and, following a snowball sampling, we distributed it through an open-access link in several online social media (i.e., email and social network sites: Facebook and WhatsApp). The participants had to fulfill the following criteria: (a) having Spanish nationality, (b) being between 18 and 35 years of age[1], (c) having a heterosexual orientation, and (d) having been in a past or current romantic relationship. Before completing the questionnaire, we informed to participants about the study's goal and its anonymous and voluntary nature. First, they had to give their consent to voluntarily collaborate in our research, according to the Declaration of Helsinki, and then fill in a single questionnaire based on their personal opinions and experiences. They were not paid for their participation. Participants took approximately 15 min to complete the task. Once participants completed the survey, they were fully debriefed and thanked. This study was conducted after receiving the approval of Ethics Committee of University of Granada.

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[1] We delimited the age range of young adults based on the term *emerging adulthood* coined by Arnett (2000). It refers to the new developmental stage that emerges as a result of environmental factors (i.e., sociocultural and economic) which seem to be delaying the acquisition of the traditional markers of adulthood (e.g., marriage, parenthood, financial independence, and home ownership). Likewise, previous researchers have used this same standard to delimit the stage of emerging adulthood (e.g., Sánchez-Hernández et al., 2020).

Measures

Cyberdating abuse victimization

The victimization subscale of the Cyber Dating Abuse Questionnaire (CDAQ; Borrajo et al., 2015b) was administered to assess the frequency with which individuals experience CDA behaviors. This measure was composed of 20 items divided into two dimensions: (a) *direct cyberaggression* (eleven items, e.g., "My partner has created a fake profile about me on a social network to cause me problems") and (b) *monitoring/cybercontrol* (nine items, e.g., "My partner or ex-partner has used my passwords [phone, social networks, email] to snoop on my messages and/or contacts without my permission"). The response format was a 6-point Likert-type scale with the anchors 1 (*never*), 2 (*not in the last year, but it occurred before*), 3 (*rarely: 1 or 2 times*), 4 (*sometimes: between 3 and 10 times*), 5 (*often: between 10 and 20 times*), and 6 (*always: more than 20 times*). We calculated a global CDA victimization score from the average, where high scores indicated a high frequency of victimization. In this sample, we obtained a Cronbach's α coefficient of .91.

Manipulation of the type of CDA victimization

Based on the critical incident technique (Flanagan, 1954), participants were instructed to remember and describe in writing a situation in which their partner or ex-partner had exercised one cyberabusive behavior against them, depending on the type of victimization (direct cyberaggression vs. cybercontrol). More specifically, we gave them the following instructions: "Recall and describe a situation in which your current partner or ex-partner used some technological means (social networks, Whatsapp, SMS, etc.) with the intention of," (for the direct cyberaggression condition), "deliberately harming you (e.g. insulting you, threatening you, humiliating you)," or (for the cybercontrol condition), "controlling you (e.g., monitoring you and invading your privacy)."

After describing the incident, participants who had indicated that they had suffered the situation above answered other short questions about it.

Relationship described in the incident

To control whether the participants were referring to their current or past relationship and its possible effect on the perception of the described CDA incident (i.e., recognition bias, see Sánchez-Hernández et al., 2020), we designed the following item with a two-alternative categorical response format: "The situation you have just described refers to your: (a) current relationship or (b) past relationship."

Offense

We measured the offense experienced in the scenario described using previous research by Valor-Segura et al. (2014) as a basis. Specifically, we used the item, "How offensive did you find the described behavior of your partner/ex-partner towards you?" with a Likert-type response format ranging from 1 (*not at all offensive*) to 7 (*extremely offensive*).

Severity

To assess the perceived severity of the incident described, we used the following item based on Sánchez-Hernández et al. (2020): "How severe do you consider the behavior described above?" The format response was Likert-type ranging from 1 (*not severe at all*) to 7 (*extremely severe)*.

Motivations for perpetration

To assess the causes to which participants ascribed cybervictimization by their partners as described in the critical incident, we used the item developed by Borrajo et al. (2015b) for this purpose ("For what reasons do you think your partner or ex-partner was able to carry out that behavior towards you through new technologies [Social networks, Whatsapp, SMS, etc.]?"). Nevertheless, we used an openended answer (i.e., "Please describe briefly") with the aim of contemplating possible emerging categories beyond those described by Borrajo et al. (2015b) in the development of their scale (i.e., jealousy, game/joke, frustration/anger, discussions, personality, and reactive violence).

Manipulation check

We designed one item to check whether participants had answered to dependent variables according to the incident they had just recalled (i.e., "In the previous situation, you were asked to recall and describe an aggressive act by your partner/ex-partner towards you with the intention of: [a] deliberately harming you, or [b] controlling or monitoring you").

Sociodemographic information

Data about participants' gender ("What is your gender identity? Man/Woman/Other [specify]"), age ("What is your age?"), and relational status ("What is your relational status? Single/Dating/Cohabiting/Married/ Other [specify]") were collected.

Statistical analysis strategy

To estimate the effect size in our sample, first we carried out a sensitivity power analysis using G*Power (Version 3.1.9.4) with our sample ($N = 92$; $1 - \beta = 95\%$; $\alpha = 0.05$) to ANCOVA with four groups, one degree of freedom, and two covariates. The design had the ability to detect a medium effect size, $f^2 = 0.38$.

Data analysis was performed using SPSS (Version 23). Prior to performing the main analyses, we checked the assumptions of normality and multilinearity. We also estimated the main descriptive statistics and the associations between the study variables through correlation analyses. Moreover, we conducted independent samples t test analyses to estimate gender differences; gender was included as the independent variable (IV; $1 = man$; $2 = woman$) and offense and severity as dependent variables (DVs). Thereafter, we conducted a chi-square test to check the manipulation efficacy, further using the phi coefficient to estimate effect sizes. We then carried out a bifactorial multivariate analysis of variance (MANCOVA) to examine our predictions about the influence of the type of victimization (Hypothesis 1), gender (Hypothesis 2), and their interaction effect (Hypothesis 3) on the perception of the severity and offensiveness of the CDA suffered. The type of victimization ($1 = direct cyberaggression$; $2 = cybercontrol$) and gender were included as the IVs, and the severity and offensiveness perceived as DVs. Ultimately, we included the relationship described in the critical incident ($1 = current$; $2 = past$) and the frequency of CDA victimization as covariates in our analysis. When the emerging interactions were significant, we performed simple a slope analyses to facilitate their interpretation.

Finally, we conducted a deductive content analysis (Hsieh & Shannon, 2005) to examine differences in the perceived motivations to CDA from the victims' perspective. First, we generated a main document containing the motivations described verbatim by the participants in each condition (direct cyberaggression vs. cybercontrol). Second, the three authors each independently read all the answers to the question, noting down recurring themes. Next, we discussed the themes that emerged in creating and defining the categories, which were collected in a codebook. In particular, we followed Borrajo et al. (2015b) categorical classification of motivations for CDA and identified other emergent motives in participants' responses. Following the considerations of Crocker et al. (1988), we then selected two experts—psychologists with research experience in the field of IPV—who were unaware of the objectives of the study (for more information, see Supplementary Material [SM1.1]). Each judge coded the responses and classified them according to our themes indicating which motivations were present. We

then tested the inter-rater agreement for each motivation; in accordance with Landis and Koch (1977), the kappa values showed adequate reliability across all motivational codes: 0.72 for jealousy, 0.85 for anger/frustration, 0.80 for arguments/verbal confrontation, 0.76 for personality, 0.75 for re-establishment of control and/or power, and 0.90 for online disinhibition. Subsequently, we computed the occurrences of motivation codes and performed several chi-square tests to explore potential differences based on the type of CDA victimization (direct cyberaggression vs. cybercontrol) and participants' gender (man vs. woman). Thus, we included the type of CDA victimization or gender as IVs separately, and the various motivational codes as dependent variables DVs. Sankey plots were also drawn using Atlas.ti (version 22) to facilitate the visualization of data. All research data and scripts are publicly available and can be accessed at the Open Science Framework (OSF).

Results

Preliminary analyses

Descriptive statistics and correlations among study variables

As shown in Table 1, we did not observe the problem of multicollinearity because correlations among variables were less than 0.80 (Shrestha, 2020). Concerning normality, the analysis showed that the skewness and kurtosis values for all measures were within acceptable limits of ± 2 (ranging between -0.81 and 0.77), which indicated a normal distribution (Gravetter & Wallnau, 2014).

Regarding correlation analyses, the main results showed that the type of victimization was negatively related to offense and severity: Participants in the direct cyberaggression (vs. cybercontrol) condition scored higher in offense and severity. Gender was positively associated with offense and severity, with women (vs. men) manifesting higher scores in both variables. Similarly, gender was positively related to CDA victimization, with women showing a higher frequency of it compared to men. Furthermore, the perceived offense was positively related to the perception of severity. On the other hand, CDA victimization was positively associated with the perception of offense and severity. The relationship described in the critical incident was positively related to the perception of severity, with greater scores in participants who recalled a past relationship (vs. the current relationship).

The independent t-test analysis showed that women reported a greater perception of offense and severity in the described incident than men. Additionally, women exhibited a higher frequency of CDA victimization compared to men (see Table 1).

Manipulation check

The results showed that 88.6% of the participants belonging to the cyberaggression condition responded correctly to the manipulation check item (i.e., they selected the *deliberately harming you* answer option), and 91.4% of the participants allocated to the cybercontrol condition also correctly identified their condition (i.e., they indicated the *controlling or monitoring you* option). The chi-square test yielded statistically significant differences and a large effect size (χ^2 [1, 102] = 65.31, $p < .001$, $\varphi = 0.80$), which supported the

Table 1 Descriptive statistics and correlations among study variables

	1	2	3	4	5	6
1. Type of victimization[a]	–					
2. Gender[b]	– 0.03	–				
3. Offense	– 0.28**	0.34**	–			
4. Severity	– 0.32**	0.40**	0.61**	–		
5. Relationship described [c]	– 0.19	– 0.12	0.20	0.30**	–	
6. CDA victimization	0.08	0.21*	0.21*	0.26*	0.07	–
M (SD)	–	–	5.82 (0.99)	5.53 (1.07)	–	2.04 (0.77)
Mmen (SD)	–	–	5.52 (0.92)	5.15 (1.00)	–	1.90 (0.67)
Mwomen (SD)	–	–	6.20 (0.97)	6.03 (0.97)	–	2.23 (0.86)
Gender difference *t*	–	–	– 3.45***	– 4.20***	–	5.95*
Cohen's *d*	–	–	– 0.72	– 0.89	–	– 0.43
Skewness/Kurtosis	–	–	– 0.37/– 0.62	– 0.11/–0.81	–	0.77/–0.12

$N_{overall} = 92$; $N_{men} = 52$, $N_{women} = 40$. CDA = cyberdating abuse

*$p < .05$, **$p < .01$, ***$p < .001$

[a]1 = direct cyberaggression, 2 = cybercontrol

[b]1 = man, 2 = woman

[c]1 = current, 2 = past

manipulation's effectiveness. We removed those participants ($n = 10$) who failed the manipulation check item from analysis.

Effect of type of victimization and gender on perceived offense and severity

The results showed a statistically significant effect of the type of victimization on participants' perception of offense (F [1, 91] = 9.63, $p = .003$, $\eta_p^2 = 0.10$) and severity (F [1, 91] = 9.64, $p = .003$, $\eta_p^2 = 0.10$). Specifically, participants who had described an incident of direct cyberaggression victimization expressed greater offense ($M_{direct-aggression}$ = 6.13, $SD = 0.97$; $M_{control}$ = 5.58, $SD = 0.96$) and greater severity ($M_{direct-aggression}$ = 5.93, $SD = 1.02$; $M_{control}$ = 5.23, $SD = 1.02$) than participants who had described an incident of cybercontrol victimization, which supported Hypothesis 1. On the other hand, the results indicated that participants' gender significantly influenced their perception of offense (F[1, 91] = 14.59, $p < .001$, $\eta_p^2 = 0.15$) and severity (F[1, 91] = 19.51, $p < .001$, $\eta_p^2 = 0.19$) in the described incident. That is, women manifested higher levels of offense (M_{women} = 6.20, $SD = 0.97$; M_{men} = 5.52, $SD = 0.92$) and severity (M_{women} = 6.02, $SD = 0.97$; M_{men} = 5.15, $SD = 1.00$) than men. These findings supported Hypothesis 2.

Finally, the results yielded a statistically significant interaction effect between type of victimization and participants' gender on offense (F [1, 91] = 10.45, $p = .002$, $\eta_p^2 = 0.11$). A simple slopes analysis indicated that the effect was significant for women ($b = -1.15$, $SE = 0.27$, $t = -4.20$, $p < .001$, 95% CI [−1.69, −0.60]), but not for men ($b = 0.01$, $SE = 0.24$, $t = 0.05$, $p = .96$, 95% CI [−0.46, 0.48]). Thus, women who described a direct cyberaggression victimization situation manifested greater offense compared to those who described a cybercontrol victimization scenario, supporting Hypothesis 3a (see Fig. 1).

The interaction effect between type of victimization and participants' gender on severity was not statistically
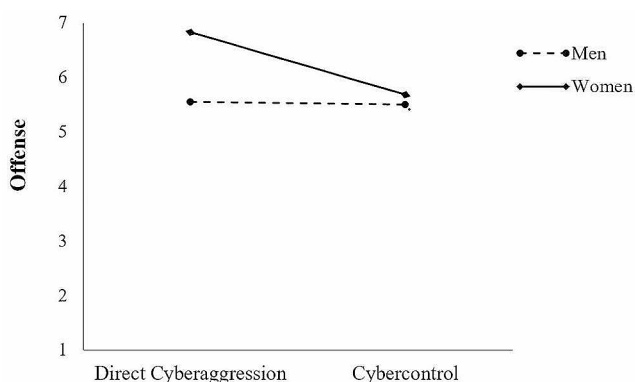

Fig. 1 Two-way interaction between type of victimization and gender in offense

significant, rejecting Hypothesis 3b (F [1, 91] = 0.01, $p = .95$, $\eta_p^2 = 0.00$).

In terms of covariates, the results indicated that the relationship described in the critical incident significantly affected perceived severity (F [1, 91] = 10.01, $p = .002$, $\eta_p^2 = 0.10$). Specifically, participants who recalled a CDA victimization situation that took place in past relationships perceived greater severity in the incident than participants who recalled a CDA victimization situation in their current relationship (M_{past} = 5.67, $SD = 1.02$; $M_{current}$ = 4.79, $SD = 1.12$). Similarly, CDA victimization positively influenced the perception of severity (F [1, 91] = 4.21, $p = .043$, $\eta_p^2 = 0.05$), indicating that participants with a high frequency of CDA victimization reported a high degree of perceived severity.

Qualitative analysis of motivations

Participants' responses about their motives for their partners' victimizing them were coded into six themes. Following Borrajo et al. (2015b) classification, we observed that the victims attributed their aggressor' behaviors to *jealousy* (e.g., "Because of unhealthy jealousy"), *anger/frustration* (e.g., "Because of the heat of the moment in that situation, since he was angry"), *arguments/verbal confrontation* (e.g., "Because she wanted to talk about a particular topic and I didn't want to at that moment"), and *personality* (e.g., "She was a distrustful person, probably because of her insecurities and comparing herself to other girls"). However, the motivational categories of *playing/joking* and *reactivity* were no present. Furthermore, two new motives for CDA emerged in the victims' perceived responses, which we called *reestablishment of control and/or power* and *online disinhibition*. According to the works of previous researchers (e.g., Marganski & Fauth, 2013), the first refers to those cases in which victims interpreted that one's partner exercised CDA against them to regain lost power or control within the relationship (e.g., "Because my partner wanted to gain security and control over the relationship," or, "Because he didn't see me as a person just like him, and he thought he could treat me however he wanted"). Similarly, according to the definition proposed by Suler (2004), online disinhibition motivation manifested itself when victims interpreted that their partner felt more liberated and uninhibited to perform certain CDA behaviors, even behaving differently online compared to the offline environment (e.g., "Through digital media, the behavior went more unnoticed by others and, as he was not brave enough to face the problems in a real way, he hid behind a screen" or "Because through a screen it is easier to hurt the other person; you can simply say something hurtful and turn off the mobile and disengage, for example"). Some participants also reported that they had no response to

the open-ended question (e.g., "I don't really know"). These responses were coded as not applicable because they were not relevant to the study purpose.

Frequency of motivation codes based on type of victimization and gender

As shown in Table 2, over half of the participants indicated that the most frequent reason for which their partners exercised CDA behaviors against them was personality (51.1%), followed by jealousy (43.5%), reestablishment of control and/or power (26.1%), online disinhibition and anger/frustration (14.1% for each), and verbal arguments/confrontations (2.2%).

We also noted significant differences based on the type of victimization in the attributed motives of personality and jealousy (see Table 2; Fig. 2). Specifically, we observed that a higher significantly percentage of participants who described a situation of cybercontrol victimization indicated that they had suffered this type of abuse because of their partner's personality (67.3%) and jealousy (59.6%) compared to the percentage of participants who experienced direct cyberaggression for the same reasons: personality (30%) and jealousy (22.5%). Similarly, the results highlighted significant differences in the attributed motives of anger/frustration and online disinhibition. In this case, a higher percentage of participants belonging to the direct cyberaggression victimization condition indicated that the reasons their partners victimized them were anger/frustration (25%) and ease of disinhibition through digital media (32.5%) compared to the percentage of participants belonging to the cybercontrol victimization condition who also

reported these reasons: anger/frustration (5.8%) and online disinhibition (0%).

Regarding participants' gender (man vs. woman), we also found significant differences in some motivation codes. In particular, a statistically greater percentage of men (59.6%) than women (40%) reported that their partners had exercised CDA against them because of their personalities. Likewise, results showed a higher percentage of women (22.5%) than men (7.7%) reported experiencing CDA because their partners felt more uninhibited in behaving differently through digital media compared to a face-to-face context. In addition, a substantially higher percentage of women (35%) than men (19.2%) reported that their partners exercised CDA against them to exert power and/or control in the relationship; however, these differences were not significant. Similarly, a higher percentage of men than women reported that their partners carried out CDA behaviors against them because they were jealous, but this difference was also not significant (see Table 2; Fig. 3).

Auxiliary analyses

We explored in an auxiliary way whether the motivations that victims attributed to their aggressors' behavior affect their perception of offense and severity in the described scenario (see SM2.1). Thus, we conducted two linear regression analyses including all emergent motivational codes (coded as 0 if the motivation was not present and 1 if it was) as predictor variables and offense and severity measures as criterion variables. Scores were standardized before analyses were performed.

Table 2 DCDA motivation rates by type of victimization and gender

Motivations codes	Overall (N = 92)	Direct cyberaggression (n = 40)	Cyber-control (n = 52)	χ^2	Φ	Men (n = 52)	Women (n = 40)	χ^2	Φ
Jealousy	43.5% (40)	22.5% (9)	59.6% (31)	12.67***	0.37	48.1% (25)	37.5% (15)	1.03	− 0.11
Frustration/anger	14.1% (13)	25% (10)	5.8% (3)	6.89**	− 0.27	17.3% (9)	10% (4)	0.99	− 0.10
Arguments/confrontation	2.2% (2)	2.5% (1)	1.9% (1)	0.04	− 0.02	1.9% (1)	2.5% (1)	0.04	0.02
Personality	51.1% (47)	30% (12)	67.3% (35)	12.59***	0.37	59.6% (31)	40% (16)	3.48*	− 0.20
Control/power	26.1% (24)	25% (10)	26.9% (14)	0.04	0.02	19.2% (10)	35% (14)	2.92	0.18
Online disinhibition	14.1% (13)	32.5% (13)	0%	19.68***	− 0.46	7.7% (4)	22.5% (9)	4.09*	0.21
NA	3.3% (3)	5% (2)	1.9 (1%)	0.68	− 0.09	3.8% (2)	2.5% (1)	0.13	− 0.04

Prevalence rates with *n* in parenthesis

NA not applicable

*p < .05, **p < .01, ***p < .001

Fig. 2 Net frequency of motivations codes by type of CDA victimization
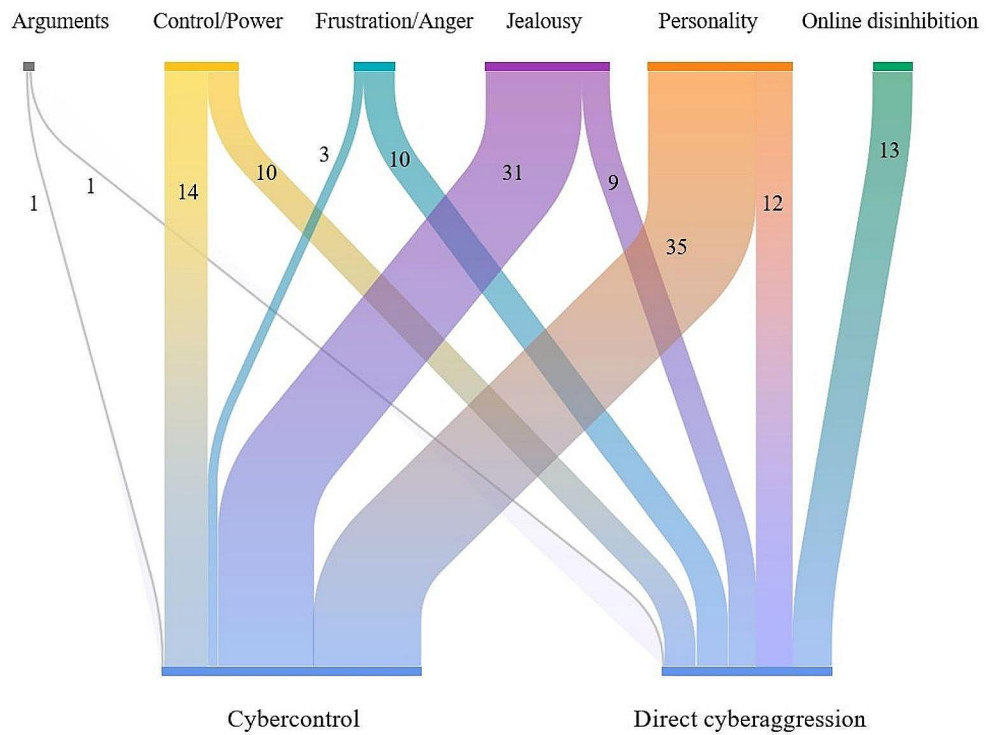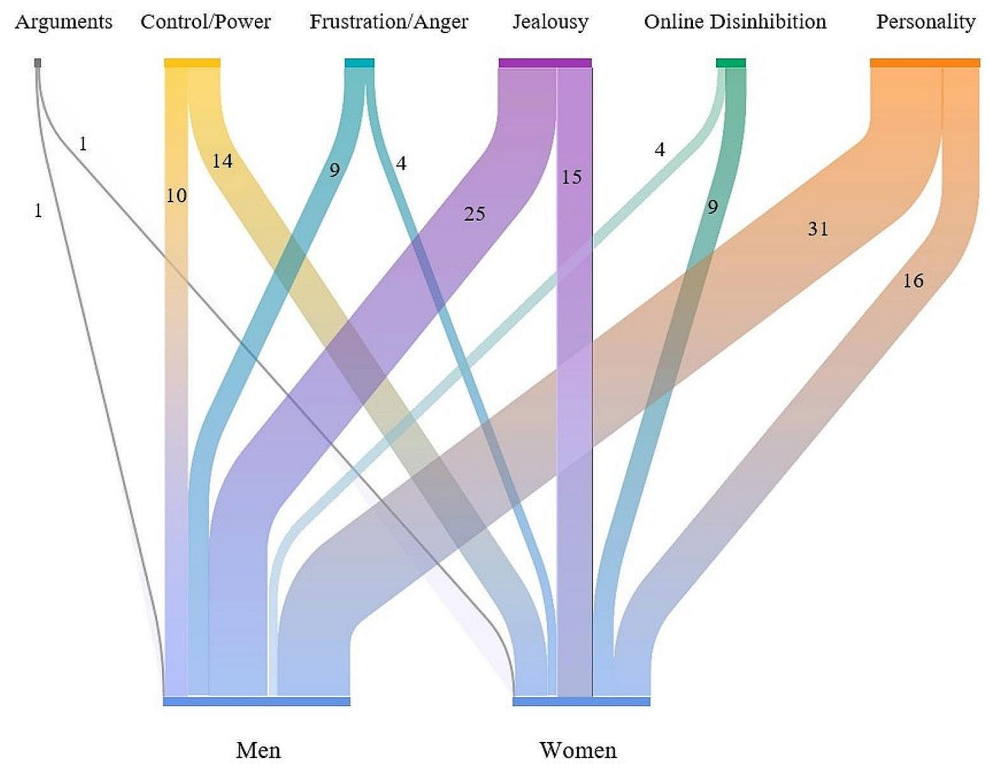

Fig. 3 Net frequency of motivations codes by gender

The results showed no significant effects of the attributed motivations on perceived offense ($p > .05$). For perceived severity, our results showed a statistically significant effect of online disinhibition motivation ($b = 2.15$, $p = .035$). Specifically, when the online disinhibition motivation was present according to the victims' interpretation, they attributed greater severity to the described incident of cybervictimization. We found no significant effects of the other motivations on the severity measure ($p > .05$). [2]

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[2] When linear regression analyses were performed controlling for the effects of the relationship described in the critical incident (current vs. past) and the frequency of CDA victimization, included in the first

Discussion

Although analysis of CDA has attracted a great deal of interest in recent years, less effort has been devoted to understanding the nature and perception of CDA in heterosexual relationships from the victims' perspective. The present research aimed to examine the perceived offense and severity of a CDA incident and the aggressor's motivations depending on the type of victimization and the participant's gender.

First, our results showed that the perceived severity and offense may vary by the type of CDA suffered. Specifically, participants who recalled a situation of victimization by direct cyberaggression perceived more severity and offensiveness than participants who recalled an incident of victimization by cybercontrol. This could be due to the fact that direct aggression is a more explicit and recognizable CDA manifestation and implies intentionality to harm the partner (Borrajo et al., 2015b). Therefore, it makes sense that participants were more sensitive to identifying the seriousness and offensiveness of this type of violence. Moreover, this finding is in line with previous research suggesting that cybercontrolling behaviors seem to be more socially acceptable forms of abuse, as they often do not constitute a clear violation of privacy (Utz & Beukeboom, 2011) and/or are interpreted as expressions of love and/or concern within the relationship (Nardi-Rodríguez et al., 2018).

Second, our results highlighted that gender also affected the victims' perception of the CDA incident described. In particular, women expressed greater perceived severity and offense of the CDA victimization than men. These findings are consistent with studies noting that women report more severe emotional consequences to CDA than men (e.g., anguish, fear, anxiety, depression; Brown et al., 2022) and perceive greater difficulty in stopping or escaping the abusive situation (Stonard et al., 2017). At the same time, these contribute to Brown et al.'s (2022) work suggesting that young men tend not to perceive the severity of the impact of CDA on women.

More specifically, our results showed an interaction effect between the type of victimization and gender on perceived offense, indicating that women who described a situation of victimization by direct cyberaggression manifested greater offense than those who related an incident of victimization by cybercontrol; nevertheless, this effect was not observed for men. These results are in line with the findings of Donoso-Vazquez et al. (2018), who observed that there are no gender differences in the identification and perception of controlling behaviors against the partner, as these are highly

normalized among young people. In contrast, women seem to be more sensitive to perceiving those behaviors aimed at harming the partner (i.e., direct cyberaggression) as offensive, which could be due to the fact that they are in a situation of vulnerability in the social and cultural framework and most frequently experience this type of violence from their partners (Reed et al., 2021b). Moreover, this could be related to the fact that men tend to justify and normalize IPV and CDA to a greater extent than women (e.g., Martín-Fernández et al., 2018). However, more research is required in this field to substantiate the above claims.

Regarding reasons the victims attributed to their aggressor's behavior, the content analysis results yielded two emerging motivations beyond those assessed by Borrajo et al. (2015b). Specifically, we observed that victims frequently alluded to the factors of the virtual context favoring online disinhibition (e.g., the ability to hide behind a screen, accessibility and easy use of technologies, immediacy, or constant contact with the partner; Suler, 2004) to explain why their partners had exercised CDA against them. Thus, we called this new motivational category *online disinhibition*. These results are in line with previous research suggesting that, although CDA is a form of IPV, it comprises distinctive aspects that highlight the need for a specific approach to the problem (Stonard, 2020). Thus, the digital environment could be amplifying the occurrence of abusive behaviors in romantic relationships by favoring a scenario where young people experience a greater sense of freedom and disinhibition, without apparent restrictions (Stonard, 2020; Suler, 2004). In this sense, several participants indicated that their partners performed violent behaviors against them that they would less likely perform in a face-to-face context (e.g., "It is a quick tool accessible to everyone. Plus, face-to-face, he had a different demeanor").

Likewise, we noted that another of the reasons for which some victims believed suffering cybervictimization was that their partners wanted to exert control and power over them, naming this category *reestablishment of control and/or power*. This result is consistent with previous research showing that exerting control over one's partner is a common underlying motive for perpetrating IPV (Johnson & Ferraro, 2000). According to our results, some CDA victims considered that their aggressors had used technologies as an instrument of control and power within relationships because of their tools and facilities (e.g., immediacy, invisibility, or elimination of geographic and time barriers). In this sense, a partner who perceives themselves as less powerful may engage in CDA behaviors as a way to restore power and/or control within the relationship (Álvarez, 2012). As a consequence, the online environment could be generating a false sense of empowerment that, rather than favoring

step, the effect of motivations on offending remains non-significant ($p > .05$), and the significant effect of online disinhibition motivation on severity disappears ($p > .05$).

constructive conflict resolution strategies, could be fostering a culture of cyberabuse within the couple.

Moreover, our results also suggest that direct cyberaggression and control behaviors could have a different nature and purpose. According to the victims' perception, direct cyberaggression (vs. cybercontrol) victimization occurred more frequently in situations of anger and/or frustration in the relationship and because of the feeling of disinhibition derived from the use of technological media. A plausible explanation could be that, in moments of anger, the characteristics of the online environment (e.g., invisibility, decreased empathy with the victim, or minimization of responsibility and consequences) could be encouraging people to employ direct cyberaggression behaviors against partners to harm them, which would be less likely to be carried out in a face-to-face context.

In contrast, participants interpreted that their aggressors' cybercontrolling behaviors were more motivated by romantic jealousy or by the perpetrator's own personality traits, such as insecure attachment, dependence on the partner or distrust. These results are consistent with empirical research showing that such factors (i.e., romantic jealousy, insecure attachment, distrust, emotional dependence) are robust predictors of controlling behaviors against partners in young people (e.g., see Frampton & Fox, 2018; Wright, 2017). In this sense, cybercontrol behaviors—indirect manifestations of aggression toward the partner (Borrajo et al., 2015b)—could be being employed as maladaptive and unhealthy strategies aimed at reducing individual levels of concern and emotional distress about the stability of the relationship (Reed et al., 2015).

Overall, our results with regard to the motivations that victims attributed to their abusers' CDA behavior are consistent with the findings of Reed et al. (2021a). Through a qualitative approach, these authors observed in a sample of adolescent students that there is a distinct pattern in the motivations reported for each CDA dimension from the perspective of the aggressors. For direct cyberaggression, both boys and girls reported primarily negative arousal and conflict motivations, particularly, "Because I was angry," "Because I was upset," and, "Because we were in a fight," whereas, for cybercontrol, participants primarily reported being motivated by insecurity, including situations of jealousy and suspicion of infidelity. Therefore, our work builds on the findings of Reed et al. (2021a) by providing consistent results but from the perspective of the victims and incorporating online disinhibition as a new motivation leading to the perpetration of direct cyberaggression.

Regarding gender differences in the perception of the offender's motivations for CDA, our findings yielded a higher percentage of women (vs. men) who acknowledged experiencing CDA because their partners felt more uninhibited in the online context. This is congruent with empirical research showing that men tend to experience greater online disinhibition than women (e.g., Wang et al., 2021). Also, our results indicated that men (vs. women) more frequently reported that their partners cybervictimized them because of certain personality traits such as fear, emotional dependence, or insecurity. This finding is also in line with previous works (e.g., Stonard et al., 2017) suggesting that women in general seem to manifest greater concern than men about the care and maintenance of the relationship. According to social role theory (Eagly, 1987), the observed gender differences may arise from the set of complementary, stereotypical, unequal, and sexist roles traditionally assigned to women and men in their romantic and sexual relationships based on their biological sex—men are secure, powerful, competitive, and physically aggressive, whereas women are passive, emotionally dependent, and pleasing people who prioritize others. In this respect, women could be engaging in CDA as a maladaptive strategy to counteract discomfort (i.e., anxiety, worry, and insecurity) and/or maintain the relationship at all costs. Conversely, commitment to conventional masculine roles might prompt men to display uninhibited behavior in the online context involving CDA. However, it is essential to note that this is not the only plausible explanation and other alternative theoretical perspectives may be considered to interpret our results.

Finally, auxiliary analyses showed that, in general, the motivations that the victims attributed to their aggressors' behavior did not influence the perception of offense and severity in the incident. We only found a significant effect of online disinhibition motivation on perceived severity, indicating that, when such motivation was attributed, victims perceived greater severity to the described situation of cybervictimization. That is, CDA victims might recognize the severity of violence to a greater extent when they perceive that their partner engaged in CDA against them because they felt more uninhibited through technology. This result could be encouraging in the sense that people might be aware, to some degree, of the severity and impact that misuse of digital media can have in the context of intimate partner relationships. However, given the nature of our study, we cannot draw firm conclusions from these results. More research is needed to address these issues and to discern whether there is an effect of online disinhibition motivation on perceived severity from the victim's perspective or whether this is a false positive.

Implications for theory and practice

This work makes a novel contribution to the literature examining the perception of CDA from the victim's perspective, which is still insufficient. Specifically, through a

manipulation, our research contributes to the literature by demonstrating that victims' perceptions about the motivations of their aggressors and the offense and severity of CDA victimization are influenced by both the type of behavior suffered and gender, so far unexplored. Also, following a qualitative approach, our study delves into the reasons or motives that CDA victims ascribed to the behavior their partners engaged in depending on the type of abuse suffered, suggesting that direct cyberaggression and cybercontrol behaviors have a different nature and impact. In addition, the gender differences that permeate our findings are in line with the assumptions that CDA is asymmetrical. Furthermore, besides the motivations observed by other authors in previous research (i.e., jealousy, anger/frustration, arguments/verbal confrontation, and personality; Borrajo et al., 2015b), we noted that two new motives for CDA emerged in the victims' answers: reestablishment of control and/or power and online disinhibition.

This study also has some important practical implications for psychology professionals. On the one hand, our findings could encourage clinical psychologists working with CDA victims to focus on understanding the context in which CDA behaviors arise as well as the victims' perception and interpretation of the violent situation and its possible impact, also taking into account the role of the type of CDA suffered and gender. Likewise, our work could serve as a basis for the development of psychoeducational programs aimed at the effective prevention of CDA and the responsible use of digital media to promote healthy and quality relationships from an early age. Finally, data on young adults' views about the motivations that constitute CDA and their perception of severity and offense can also be used to inform the design of more effective measurement instruments. Our research derives the need to develop and validate instruments that contemplate not only the different CDA behaviors experienced by victims but their nature and the disparate impact that those could have according to gender.

Limitations and directions for future research

This study has some limitations that should be noted. First, the critical incident technique may capture a limited picture of participants' perceptions of cybervictimization experiences by referring to a specific event (i.e., the recalled abusive incident) and may trigger recall biases. However, this retrospective technique has been widely used in social psychology, denoting its effectiveness and strong external validity in conflict or past situations (e.g., Alonso-Ferres et al., 2021). Moreover, we manipulated the type of victimization in two levels (i.e., direct cyberaggression and cybercontrol), thereby allowing us to apply more control over our findings. Nevertheless, future researchers should replicate our results

using experimental designs that allow for drawing more robust causal conclusions. Second, we did not control for the potential effects of certain cognitive factors (e.g., normalization, attentional biases, cognitive distortions, cultural biases) on CDA recognition; hence, results and conclusions derived from our work must be taken cautiously. Besides, it should be taken into account that, regarding sensitive topics like CDA, respondents may be less likely to endorse abusive behavior and may be susceptible to social desirability (Lu et al., 2021), which makes it difficult to obtain large samples. Due to the social stigma surrounding CDA, future studies could contribute to research in this area by implementing innovative methods like dyadic research designs, which consider both romantic partners. Third, the sample selection was carried out by nonprobability snowball sampling via several social network sites (SNSs), and we only selected Spanish participants with a heterosexual orientation and between 18 and 35 years old. Thus, we cannot obtain generalized conclusions from our results, because the sample is not representative of the population. Future researchers should corroborate our findings using larger samples and random sampling to obtain a heterogeneous sample in terms of, for example, age, nationality, sexual orientation, and cultural values. In this respect, recent works have also indicated that CDA experiences may vary between partner categories defined by sexual orientation (heterosexual vs. non-heterosexual) and gender identity (cisgender vs. non-cisgender; e.g., Butler et al., 2023). Moreover, variables such as gender social norms (López-Zafra et al., 2008) and SNS use (Statista, 2020) may differ across countries, so it would be also interesting to carry out cross-cultural research. In particular, we encourage other researchers to build on our findings by investigating the potential influence of traditional gender mandates (i.e., roles, behaviors, and expectations associated with being a man or woman) on victims' perceptions of CDA episodes. In addition, it would be interesting to explore whether attribution of the causes of CDA and/or the perceived offensiveness and severity of such violence could influence victims' coping and consequences, depending on the type of CDA behavior experienced and gender.

Conclusions

The culture of cyberviolence is taking root in relationships at an early age, with the risk of it becoming normalized. This research provides novel data on perceptions of CDA incidents within heterosexual relationships from the victim's perspective. Specifically, our findings contribute to the understanding of the causal attributions and perceptions that victims of such violence have of their aggressors' behavior. In general, the results show that such interpretation and/

or causal attribution, as well as the perception of offense and severity of CDA, may vary according to the type of abuse suffered (direct cyberaggression vs. cybercontrol) and gender. Our work could help psychological professionals develop specific interventions in CDA considering the specific characteristics of each type of abuse as well as the role of gender identity. Moreover, we hope that our findings will encourage other researchers to explore new avenues of work that delve deeper into the psychological mechanisms that influence CDA victims' perception of violent events and how this might shape their coping strategies.

Declarations

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