

Same Personality, New Ways to Abuse: How Dark Tetrad Personalities Are Connected With Cyber Intimate Partner Violence

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Abstract

New technologies bring new forms of intimate partner violence (IPV) or abuse, such as cyber intimate partner violence (C-IPV). This is a contemporary issue with different consequences from in-person IPV. C-IPV is a complex phenomenon triggered by a number of factors, including personality traits such as the Dark Tetrad, composed of four “malevolent” qualities: subclinical narcissism, Machiavellianism, subclinical psychopathy, and everyday sadism. The Dark Tetrad plays an important role in predicting the perpetration or victimization of the resulting pervasive behaviors. Although the correlations between in-person IPV and the Dark Tetrad have been studied before, to our knowledge this investigation is the first to look at the links between

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these four dark personality traits and C-IPV. With a sample of 1,189 participants, we measured C-IPV victimization and perpetration rates and compared the results with the Dark Tetrad profiles of the respondents. To analyze these correlations, we conducted bivariate analysis and structural equation modeling. The analysis yielded positive relations of psychopathy and narcissism with cyber controlling behaviors. Psychopathy was found to be strongly related with direct cyber aggression behaviors; sadism was mainly related with C-IPV victimization in both controlling and direct aggression, and, finally and interestingly, Machiavellianism presented negative correlations with direct cyber aggression. Remarkable is that joining sadistic personalities increased vulnerability to victimization from C-IPV direct aggression, as well as more psychopathic traits and an increased probability of perpetration. These combinations may create dangerous situations. In conclusion, we found that both C-IPV perpetrators and victims present higher scores in the dark personality traits and gender-based differences than in-person IPV actors.

Keywords

Dark Tetrad, Dark Triad, everyday sadism, cyber intimate partner violence, intimate partner violence, personality, domestic violence, abuse

Introduction

Intimate partner violence (IPV), as one of the most common types of violence, has become recognized as a public health problem in the last decennium (World Health Organization, 2013). The magnitude of the problem is reflected by the fact that 30% of women reported having experienced some type of sexual or physical aggression by their partner (World Health Organization, 2013). Earlier research showed that numbers of aggression victimization are similar in western male samples, making the “in-person IPV phenomenon” bidirectional (Archer, 2000, 2006; World Health Organization, 2002). These rates are reasons why identifying, tracking, and reducing IPV triggers is of vital importance. Generally, two forms of in-person IPV have been studied: psychological and physical (World Health Organization, 2013). However, new technologies brought new ways of abuse (Borrajó, Gámez-Guadix, & Calvete, 2015). As a result, relevant risk factors of this criminal typology must be addressed (López-Ossorio et al., 2020). Our investigation focuses on the relations between the dark sides of personality—the Dark Tetrad (Chabrol et al., 2009; Paulhus & Williams, 2002)—and cyber intimate partner violence or cyber IPV (C-IPV) perpetration and victimization.

New Technologies, New Ways of Abuse

The rise of new technologies has brought new social issues (Zweig et al., 2014). Among these problems are new ways of aggression between romantic partners (Taylor & Xia, 2018). C-IPV refers to a wide range of online actions, from insults, threats, humiliations, dissemination of private information, harassment, and stalking, to controlling behaviors and monitoring of the romantic partner invading their privacy (Borrajó, Gámez-Guadix, Pereda et al., 2015; March et al., 2020; Melander, 2010). One recently reported C-IPV action is the use of new phone applications to track the location of their partner (Flach & Deslandes, 2019). These new types of aggression are present in everyday life. Marganski and Melander (2018) revealed that 73% of their participants experienced some kind of intimate partner cyber aggression, and Borrajó, Gámez-Guadix, and Calvete (2015) showed an aggression rate of around 50%. However, there is no consensus as to the prevalence of this type of cyber abuse or aggression. In a review conducted by Cavalcanti and Coutinho (2019), 20 empirical studies with quantitative methodology reported prevalences from 1.1% to 91.9% for victimization and from 2.7% to 97.7% for perpetration. Moreover, findings as to gender in the prevalence levels of victimization and perpetration are controversial across studies. While Borrajó, Gámez-Guadix, and Calvete (2015) or Zweig et al. (2014) reported no gender differences concerning rates of C-IPV victimization, Deans and Bhogal (2017) found that being female was significantly associated with less perpetration of C-IPV.

Why C-IPV Needs to Be Stopped: Consequences

Beyond the prevalence rates shown earlier, in-person IPV correlates with devastating outcomes for victims (World Health Organization, 2002). Recent studies found victims of psychological IPV and C-IPV suffer similar consequences (Duerksen & Woodin, 2019; Hellevik, 2019; Sargent et al., 2016). Other authors conclude that C-IPV correlates with more types of maladaptive behavior than in-person IPV (Melander & Marganski, 2020). Mental health consequences related to C-IPV victimization include: depressive symptoms (Cantu & Charak, 2020; Melander & Marganski, 2020; Sargent et al., 2016), anxiety and posttraumatic stress disorder (Pico-Alfonso et al., 2006; Zweig et al., 2014), substance abuse including but not limited to alcohol and marijuana (Duerksen & Woodin, 2019; Melander & Marganski, 2020), aggressiveness or hostility (Sargent et al., 2016; Zweig et al., 2014), and suicidal ideation or attempts (Exner-Cortens et al., 2013; Hellevik, 2019).

Possibilities to Stop C-IPV: Risk Factors

To understand and prevent C-IPV from taking place, triggering risk factors need to be analyzed. As to sociodemographic factors, young people (Borrajó, Gámez-Guadix, & Calvete, 2015; Crane et al., 2018) and same sex relationships (Borrajó, Gámez-Guadix, & Calvete, 2015) were found to present increased risk, while no consensus exists as to gender (Cavalcanti & Coutinho, 2019). People with a record of previous abuse (Borrajó, Gámez-Guadix, & Calvete, 2015; Holmes et al., 2020; Temple et al., 2016) and people with multiple partners over time or with an early onset in their first relationship reported higher rates of cyber dating abuse (Hancock et al., 2017). Regards other possibly dangerous behaviors, C-IPV appears highly related to substance abuse or alcohol (Brem et al., 2017, 2019; Crane et al., 2018), risky sexual activity (Dick et al., 2014), and other online practices such as cyberbullying or sexting (Borrajó, Gámez-Guadix, Pereda et al., 2015; Machimbarrena et al., 2018; Morelli et al., 2016). From a psychological perspective: having experienced intrusive and controlling behaviors from parents which leads to early insecure attachment, is also related to these behaviors (Birkley & Eckhardt, 2015). Additionally, low self-esteem, high rates of anxiety and depression (Hancock et al., 2017; Machimbarrena et al., 2018), and of anger, hostility, and jealousy (Deans & Bhogal, 2017) are related to C-IPV. Finally, it presents strong links with personal beliefs linked to gender roles and romantic love myths that justify these forms of cyber dating abuse (Cava et al., 2020).

Other factors predicting the perpetration of C-IPV are: lower capacities to empathize and emotion dysregulation (Bliton et al., 2016; Ramos et al., 2017). Interestingly, these impairments in empathy and emotion regulation are intimately correlated with the dark sides of personality, manifest in Dark Tetrad traits (Pajevic et al., 2018; Pineda, Valiente, et al., 2018; Zeigler-Hill & Vonk, 2015).

The Dark Tetrad

The Dark Triad was first described by Paulhus and Williams (2002). The construct refers to a composition of three personality traits (i.e., subclinical psychopathy [lack of empathy], Machiavellianism [ruthless deceitfulness], and subclinical narcissism [excessive self-love]) deeply immersed in a large number of antisocial and antimoral behaviors (Muris et al., 2017, 2020). Everyday sadism, as fourth subclinical trait was introduced by Chabrol et al. (2009), forming the Dark Tetrad. The Dark Tetrad personality construct presents gender differences, with males displaying higher levels (March et al., 2020; Pineda, Sandín, et al., 2018).

Psychopathy as a subclinical trait is clinically described as an antisocial behavior with affective deficits, together with a manipulative and conflict-seeker personality, and high impulsivity (Hare, 1999). People with high scores in psychopathy, although predisposed to aggress when unprovoked, tend to use aggression for utilitarian, short-term purposes (Buckels et al., 2013; Jones & Paulhus, 2010). Machiavellianism is characterized by a cynical, deceitful, callous, and manipulative pattern of personality that does not follow moral guidelines and aims to achieve its own goals (Fehr et al., 1992); perpetrating aggression in situations when the cost–benefit assessment turns out to their advantage (Jones & Paulhus, 2010). Narcissism applies to self-centered individuals with exaggerated views of self and ideas of grandiosity and superiority, who have a problematic sense of entitlement and seek attention (Raskin & Hall, 1981). These individuals would react aggressively when their ego or their position is threatened (Jones & Paulhus, 2010). The fourth trait is everyday sadism, referring to personalities that deliberately carry out or watch activities that humiliate or harm others just for self-pleasure or dominance, behaviors that can include fear, aggression, or manipulation (Plouffe et al., 2017). People with high scores in everyday sadism differ from other Dark Triad personalities in that they may aggress at own cost just for the pleasure of it (Buckels et al., 2013).

Relation Between the Dark Tetrad and C-IPV

To our knowledge, there is no research studying the relations between the dark side of personality and C-IPV, although there is some that links Dark Tetrad traits with in-person IPV (Carton & Egan, 2017; Kiire, 2017). The relation seems to be clear: Elevated scores in the Dark traits correlated with higher levels of in-person IPV (Carton & Egan, 2017). Furthermore, Webster et al. (2016), in a study with couples, found that high scores in the Dark traits correlated with more partner aggression, confirming the influence of these traits not only in in-person IPV perpetration but also in in-person IPV victimization.

Several authors agree that psychopathy is the trait most related to in-person IPV (Iyican & Babcock, 2018; Kiire, 2017; Tetreault et al., 2018; Webster et al., 2016; Westhead & Egan, 2015). Machiavellianism is related to in-person IPV in terms of emotional and psychological control but not physical abuse (Brewer et al., 2018; Tetreault et al., 2018). Narcissism appears a more polemic trait. Whereas some authors claim a direct connection between narcissism and in-person IPV perpetration (Talbot et al., 2015; Webster et al., 2016), other researchers found narcissism no longer associated with antisocial outcomes when traits such as low agreeableness and psychopathy are

taken into consideration (Westhead & Egan, 2015). Finally, sadism has demonstrated to be related to psychological in-person IPV, but mainly among women (Tetreault et al., 2018).

As stated before, stalking is a specific C-IPV behavior. Recently, March et al. (2020) carried out research that found this online behavior to be associated with displaying psychopathic, narcissistic, and sadistic traits but not with Machiavellianism. It should be noted that they found gender differences as narcissism and sadism were significant predictors for women, and only psychopathy a significant predictor for men.

These findings give considerable indication as to how Dark personalities are related to in-person IPV or to a specific C-IPV behavior (i.e., stalking). However, as said before, no previous studies assess correlations between Dark Tetrad traits and C-IPV behaviors.

The Current Study

The primary objective of the current study was to develop those personality profiles based on the Dark Tetrad that are more prone to perpetrate or being victimized by C-IPV behaviors. To this end, our study examines relations between Dark Tetrad personality traits and C-IPV both as victimization and as perpetration behaviors, using structural equation modeling to control for direct and indirect effects of all variables involved. We also investigate other relations between variables that can affect perpetration and victimization risk factors. Moreover, we intend to clarify gender differences in perpetration or victimization of C-IPV. Although in-person IPV has been demonstrated to be bidirectional among couples in Western cultures (Archer, 2006), this gender effect has not been confirmed for C-IPV (Borrajó, Gámez-Guadix, Pereda et al., 2015; Deans & Bhogal, 2017).

In order to address these aims we formulated the following research questions (RQ) to guide the study:

RQ 1: How are the different Dark Tetrad personality traits linked to C-IPV perpetration and victimization?

RQ 2: Are there any differences in victimization and perpetration prevalence between men and women?

The hypotheses we made to answer these causal questions are:

H₁: Higher scores in the Dark Tetrad will imply higher rates of C-IPV perpetration in both controlling attitudes and direct aggression.

H₂: Psychopathy and sadism will be the traits most linked to both forms of perpetration.

H₃: Since being male is related to higher scores in Dark Tetrad traits, higher scores in C-IPV perpetration are expected for males.

Method

Participants and Procedure

The sample of the study was composed of 1,189 participants (261 men, 928 women), with a total average age of 29.36 years ($SD=10.46$), between 18 and 65 of age. The average age of women was 28.70 ($SD=9.63$) and of male participants 29.79 ($SD=10.36$). Participants were asked for their educational level with a multiple-choice question (“university studies,” “vocational training,” “high school,” “secondary school,” or “primary school”). A total of 61.8% had completed their university studies, 17.3% finished vocational training, 9.1% high school, 6.9% secondary school, and 4.9% primary school.

After the Research Ethics Committee of the Miguel Hernández University of Elche, Spain approved the project, participants were recruited using internet convenience sampling. The link to the online questionnaire was posted in social media used by each researcher (e.g., Instagram, Facebook, Twitter) and participants were encouraged to share the link. Participants answered an online questionnaire that asked for demographic data and subsequently presented a measures section, in the order as described here. Participants did not receive any compensation for their participation, were informed and gave their consent.

Measures

Cyber Dating Abuse Questionnaire (CDAQ; Borrajo, Gámez-Guadix, Pereda et al., 2015). The CDAQ is a self-report questionnaire consisting of 40 questions aiming at gathering information about different types of virtual social media aggression. A total of 20 items refer to victimization and 20 more to perpetration. Participants answer with a six-point Likert scale from 1 “Never” to 6 “Always. More than 20 times.” The scale divides results in two subscales: “direct aggression” and “control and monitoring” by the partner. The direct aggression subscale measures behaviors that are purposely harmful towards the partner through the use of different social media, as for example “I have written a comment on the wall of a social network to insult or humiliate my partner or former partner.” To measure direct aggression victimization, the perpetration items were rephrased (e.g., “My partner or former partner has written a comment on the wall of a social network to insult or humiliate me.”). On the other hand, the control and monitoring perpetration subscale measures behaviors directed at restricting the freedom of the partner with items such as, “I have controlled the time of the last connection of my partner or former partner in mobile applications.” In the same way as with the direct aggression subscale, the items were rephrased to measure control and

monitoring victimization (e.g., “My partner or former partner has controlled the time of my last connection in mobile applications.”).

The internal consistency values of our sample were $\alpha = .73$ for direct aggression perpetration, $\alpha = .86$ for control perpetration, $\alpha = .93$ for control victimization, and $\alpha = .84$ for direct aggression victimization. The ω values were .65 for direct aggression perpetration, .87 for control perpetration, .93 for control victimization and .85 for direct aggression perpetration.

Short Dark Triad. (SD3; Jones & Paulhus, 2014). The SD3 is a 27 item, self-report questionnaire with answers in a Likert scale from 1 “Strongly disagree” to 5 “Strongly agree.” This scale measures the three Dark Triad traits with nine items for each of Machiavellianism, psychopathy, and narcissism. The instrument used was the Spanish version of the SD3 (Pineda, Sandin, et al., 2018). For this sample, the internal consistency values were $\alpha = .72$ for psychopathy, $\alpha = .80$ for Machiavellianism, and $\alpha = .65$ for narcissism. The omega coefficients were $\omega = .73$ for psychopathy, $\omega = .80$ for Machiavellianism, and $\omega = .75$ for narcissism.

Assessment of Sadistic Personality (ASP; Plouffe et al., 2017). The Spanish version of the ASP (Pineda et al., in press) was used to measure sub-clinical sadism as part of the Dark Tetrad (Plouffe et al., 2017). It is a brief questionnaire developed to be added to the SD3 described before. It consists of nine items that measure this trait, with answers in a Likert scale from 1 “Strongly disagree” to 5 “Strongly agree.” The internal consistency value for our sample was $\alpha = .68$ and $\omega = .71$.

Data Analyses

The descriptive statistics and the bivariate analyses were elaborated using the 23rd version of the SPSS. In order to avoid measurement error and determine if the correlations between Dark Tetrad traits and C-IPV measures were specifically due to the personality traits or if they depended on other C-IPV measures, we conducted structural equation modeling (SEM). The SEM was conducted with statistical program *R* (R Core Team, 2016) and with the Lavaan package (Rosseel, 2012), and the syntax as defined by Beaujean (2014). Diagonally weighted least squares (DWLS) procedure was used to estimate parameters as it makes no distributional assumptions about the observed variables and is created for ordinal data. It has demonstrated greater accuracy and less bias than other estimation procedures (e.g., robust maximum likelihood; Li, 2016).

To elaborate the path model (Figure 1), we included paths from each of the personality traits to (a) direct aggression perpetration, (b) control perpetration, (c) control victimization and (d) direct aggression victimization.

The variables included were developed controlling all the items from the different scales. For fit interpretation we used the root mean square error approximation (RMSEA), the standardized root mean square residual (SRMR), the goodness-of-fit statistic (GFI), the normed-fit index (NFI) and the comparative fit index (CFI). A good model fit would result if RMSEA was less than or equal to .08; SRMR less than or equal to .05 (and acceptable until .08); CFI equal or greater than .95; GFI equal or greater than .90; NFI greater than .90, and a non-significant χ^2 (Hu & Bentler, 1999; Kline, 2010).

Results

All the bivariate analyses (see Table 1) conducted to explore the relations between Dark Tetrad personality traits and C-IPV, produced positive correlations, confirming H_1 . H_2 , related to perpetration behaviors in virtual media, was confirmed to correlate positively mainly with sadism ($r = .265, p < .01$), and psychopathy ($r = .234, p < .01$), showing the highest correlations with the direct aggression variable. Following with the correlations observed with direct aggression rates: being victimized this way was also mainly associated with sadism ($r = .211, p < .01$). Similar patterns observed in C-IPV direct perpetration variable correlations are displayed in the control aggression variable correlations, proving high associations with psychopathy ($r = .141, p < .01$), and sadism ($r = .132, p < .01$).

Table 1. Correlations between sex, the Dark Tetrad and Cyber Intimate Partner Violence measures (C-IPV).

	1	2	3	4	5	6	7	8	9
1. Sex	1								
2. Control victimization	-.025	1							
3. Direct aggression victimization	.009	.587**	1						
4. Control perpetration	-.122**	.570**	.232**	1					
5. Direct aggression perpetration	.000	.308**	.499**	.401**	1				
6. Sadism	.175**	.143**	.211**	.132**	.265**	1			
7. Machiavellianism	.191**	.045	.072*	.122**	.145**	.366**	1		
8. Narcissism	.184**	.085**	.113**	.124**	.144**	.219**	.329**	1	
9. Psychopathy	.259**	.096**	.137**	.141**	.234**	.486**	.506**	.367**	1

Note. For sex, 0 = female and 1 = male.

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

Regarding gender-related analyses (H_3), men showed higher associations with Dark Tetrad traits, and were showing positive correlations, but no significant relations with any of the C-IPV subscales. On the other hand, women reported higher rates of C-IPV control perpetration ($r = -.122, p < .01$).

The higher correlations in our analyses were observed between being victimized and perpetrating these cyber-abuse behaviors, with correlations from $r = .308$ to $r = .587$ ($p < .01$).

The tests performed for the SEM (see Figure 1), showed a good fit ($\chi^2 = 1541.61, DF = 568, p < .01, RMSEA = .037, SRMR = .051, CFI = .956, GFI = .964, NFI = .937$).

As expected, when we added to the model the structural paths connecting each of the Dark Tetrad traits with the different types of C-IPV perpetration and victimization, the associations as identified by bivariate analyses between the personality traits and C-IPV variables decreased. This explains part of these links due to interactions between the subscales of the C-IPV questionnaire. Nevertheless, and partially confirming H_2 , it is remarkable that sadism seems to be a good predictor of direct aggression victimization ($\beta = .140$). In a similar way, high scores in psychopathy seem to predict direct aggression perpetration ($\beta = .197$). A narcissistic personality was found to predict control behaviors ($\beta = .121$). After adding the structural paths referred to, Machiavellianism does not appear as trigger of C-IPV, showing negative relations primarily with direct aggression perpetration ($\beta = -.146$) and control victimization ($\beta = -.084$).

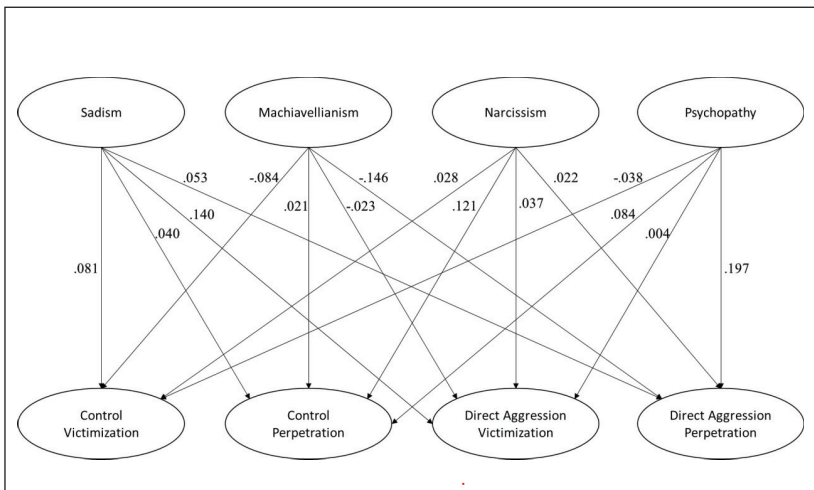


Figure 1. SEM of the Dark Tetrad predicting C-IPV.

Discussion

The main objective of this investigation was to study the links between the Dark Tetrad traits and C-IPV, such as perpetration and victimization. Our results show that the Dark Tetrad is intimately related with perpetration of C-IPV as well as with being victimized by C-IPV. These findings suggest that the dark personality of C-IPV perpetrators is quite similar to that of in-person IPV perpetrators (Carton & Egan, 2017; Kiire, 2017). Furthermore, this relation is mediated differently by each of the Dark Tetrad traits, the most related traits being psychopathy with direct aggression perpetration, and sadism with direct aggression victimization.

Several authors established that psychopathy is the personality trait most linked to perpetration of in-person IPV behaviors (Carton & Egan, 2017; Tetreault et al., 2018; Westhead & Egan, 2015). Our investigation studied C-IPV instead of in-person IPV, and found psychopathy to be mainly related to C-IPV direct aggression, more than to C-IPV control. This finding is convergent with the aggressive nature of people with high scores in psychopathy, who tend to use aggression with instrumental purposes (Buckels et al., 2013).

Machiavellianism was the only Dark Tetrad trait that positively correlated with C-IPV victimization and perpetration but did not predict it due to an inverse relation with C-IPV. This finding is consistent with March et al. (2020) who found Machiavellianism to be the only trait that did not predict the perpetration of cyber stalking. However, other studies found the opposite, including that people with high punctuations on Machiavellianism perpetrate in-person IPV behaviors through controlling (Brewer et al., 2018) which underlines that, although psychological IPV and C-IPV are similar in some aspects, they still are different constructs. The opposed results between in-person IPV and C-IPV may be explained by the inherent Machiavellian aggressive tendencies, where the risk of getting caught while perpetrating aggressive behaviors is greater in virtual media than in person (Jones & Paulhus, 2010).

The results we found for narcissists C-IPV perpetration and victimization were similar to the ones by Talbot et al. (2015), Tetreault et al. (2018) and Webster et al. (2016), where this personality trait predicted in-person IPV behaviors, without being the most decisive trait. This weak relation may be due to a narcissist's propensity to directly aggress only when their ego or personal position is threatened (Jones & Paulhus, 2010). Specifically, narcissism is primarily related to cyber controlling, presumably because these people feel entitled to monitor or dominate their partner's behavior (Raskin & Hall, 1981; Talbot et al., 2015).

Finally, sadistic personalities reported more victimization at the same time as perpetration. This finding shows C-IPV as a two-way relationship where

individuals with a prominent sadistic trait tend to suffer direct abuse behaviors (Webster et al., 2016) at the same time they perpetrate them. Likewise, sadism is related to being victimized from cyber controlling behaviors. Thus, this sadistic trait is dangerous both for those showing it prominently and their intimate partners (Plouffe et al., 2017; Tetreault et al., 2018).

Our results also provide considerable support for a strong association between being victimized and perpetrating C-IPV, identifying it as a bidirectional phenomenon (Borrajó, Gámez-Guadix, & Calvete, 2015; Holmes et al., 2020; Temple et al., 2016). Similar findings have been reported in previous research for in-person IPV (Renner & Whitney, 2012). This strong association may be explained by a normalization of these behaviors due to having perpetrated or having been victimized before. This normalization can also result from romantic love beliefs (Cava et al., 2020). The association between being victimized and perpetrating these behaviors may also happen as a reaction of the victims to intimate partner controlling or aggressive behaviors (Holmes et al., 2020).

Perpetration tendencies were found susceptible to gender. Contrary to the results of Borrajó, Gámez-Guadix, & Calvete (2015) and Deans and Bhogal (2017), who reported less perpetration by women or no relation between gender and perpetration, our study found that being female is more related to perpetration of C-IPV controlling behaviors than being male. This finding of women displaying more controlling behaviors than men is consistent across the literature (Burke et al., 2011; March et al., 2020). Concerning direct aggression perpetration, no gender effect was found, showing similarities between in-person IPV and C-IPV in these populations (Archer, 2006). Disparity in presenting Dark traits is noticeable, where men feature darker personalities. This finding reinforces previous studies that specified a stronger link with psychopathy, more than with other Dark traits (Pineda, Sandín, et al., 2018)

Limitations and Conclusion

A first limitation concerns the measures being self-reported and the same instrument asking about victimization and perpetration behaviors. The self-report instrument can cause measurement errors due to behavior misinterpretations or recall failures. Moreover, since the instrument asks for victimization situations but also for perpetration, participants may under-report their behaviors due to social desirability. A second limitation concerns the instruments used to measure the Dark Tetrad, SD3, and ASP. Although they are reliable, they should be considered screening measures, and it would be optimal to use specific measures for each subclinical trait. A third limitation

implicates the participants, since our sample was mainly composed of women (78%), all of them from Western culture, thus generalizing the results may be compromised since in-person IPV pattern changes depend on culture (Archer, 2006). Thus, we encourage future studies to constitute a more diverse sample, including non-Western and minority participants, allowing comparisons between groups. Finally, a fourth limitation refers to the lack of in-person IPV data. Further research should compare the differences in personality of C-IPV perpetrators and victims with personalities of in-person perpetrators and victims.

In conclusion, we have established connections between the different traits of the Dark Tetrad and C-IPV. These findings show psychopathic personalities to be most related to direct aggressions to intimate a partner using virtual media, where sadistic personalities were the most victimized ones. Machiavellianism, on the other hand, presented a negative link with the perpetration of direct virtual aggressive behaviors toward intimate partners. Finally, narcissistic personalities tend to feature behaviors to monitor and control their partner. We found evidence of the bidirectionality of C-IPV, indicated by strong links between being victimized from C-IPV and perpetrating these behaviors.

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References

- Archer, J. (2000). Sex differences in aggression between heterosexual partners: A meta-analytic review. *Psychological Bulletin*, 126(5), 651–680. <https://doi.org/10.1037/0033-2909.126.5.651>
- Archer, J. (2006). Cross-cultural differences in physical aggression between partners: A social-role analysis. *Personality and Social Psychology Review*, 10(2), 133–153. https://doi.org/10.1207/s15327957pspr1002_3
- Beaujean, A. A. (2014). Latent variable modeling using R: A step-by-step guide. *Communications of the ACM*, 53(12). <https://doi.org/10.1145/1859204.1859227>

- Birkley, E., & Eckhardt, C. I. (2015). Anger, hostility, internalizing negative emotions, and intimate partner violence perpetration: A meta-analytic review. *Physiology & Behavior, 176*(3), 139–148. <https://doi.org/10.1016/j.cpr.2015.01.002>
- Bliton, C. F., Wolford-Clevenger, C., Zapor, H., Elmquist, J. A., Brem, M. J., Shorey, R. C., & Stuart, G. L. (2016). Emotion dysregulation, gender, and intimate partner violence perpetration: An exploratory study in college students. *Journal of Family Violence, 31*(3), 371–377. <https://doi.org/10.1007/s10896-015-9772-0>
- Borrajó, E., Gámez-Guadix, M., & Calvete, E. (2015). Cyber dating abuse: Prevalence, context, and relationship with offline dating aggression. *Psychological Reports, 116*(2), 565–585. <https://doi.org/10.2466/21.16.PR0.116k22w4>
- Borrajó, E., Gámez-Guadix, M., Pereda, N., & Calvete, E. (2015). The development and validation of the cyber dating abuse questionnaire among young couples. *Computers in Human Behavior, 48*, 358–365. <https://doi.org/10.1016/j.chb.2015.01.063>
- Brem, M. J., Florimbio, A. R., Grigorian, H., Wolford-Clevenger, C., Elmquist, J. A., Shorey, R. C., Rothman, E. F., Temple, J. R., & Stuart, G. L. (2017). Cyber abuse among men arrested for domestic violence: Cyber monitoring moderates the relationship between alcohol problems and intimate partner violence. *Psychology of Violence, 9*(4), 410–418. <https://doi.org/10.1037/vio0000130>
- Brem, M. J., Stuart, G. L., Cornelius, T. L., & Shorey, R. C. (2019). A longitudinal examination of alcohol problems and cyber, psychological, and physical dating abuse: The moderating role of emotion dysregulation. *Journal of Interpersonal Violence*. Advance online publication. <https://doi.org/10.1177/0886260519876029>
- Brewer, G., Bennett, C., Davidson, L., Ireen, A., Phipps, A. J., Stewart-Wilkes, D., & Wilson, B. (2018). Dark triad traits and romantic relationship attachment, accommodation, and control. *Personality and Individual Differences, 120*(9), 202–208. <https://doi.org/10.1016/j.paid.2017.09.008>
- Burke, S. C., Wallen, M., Vail-Smith, K., & Knox, D. (2011). Using technology to control intimate partners: An exploratory study of college undergraduates. *Computers in Human Behavior, 27*(3), 1162–1167. <https://doi.org/10.1016/j.chb.2010.12.010>
- Buckels, E. E., Jones, D. N., & Paulhus, D. L. (2013). Behavioral confirmation of everyday sadism. *Psychological Science, 24*(11), 2201–2209. <https://doi.org/10.1177/0956797613490749>
- Cantu, J. I., & Charak, R. (2020). Unique, additive, and interactive effects of types of intimate partner cybervictimization on depression in Hispanic emerging adults. *Journal of Interpersonal Violence*. Advance online publication. <https://doi.org/10.1177/0886260520915552>
- Carton, H., & Egan, V. (2017). The dark triad and intimate partner violence. *Personality and Individual Differences, 105*, 84–88. <https://doi.org/10.1016/j.paid.2016.09.040>
- Cava, M. J., Buelga, S., & Carrascosa, L., & Ortega-Barón, J. (2020). Relations among romantic myths, offline dating violence victimization and cyber dating violence victimization in adolescents. *International Journal of Environmental Research and Public Health, 17*(5), 11–15. <https://doi.org/10.3390/ijerph17051551>

- Cavalcanti, J. G., & Coutinho, M. (2019). Abuso digital en las relaciones amorosas: Una revisión sobre prevalencia, instrumentos de evaluación y factores de riesgo [Cyber Dating Abuse: A Review of Prevalence, Evaluation Instruments and Risk Factors]. *Avances En Psicología Latinoamericana*, 37(2), 235. <https://doi.org/10.12804/revistas.urosario.edu.co/apl/a.6888>
- Chabrol, H., Van Leeuwen, N., Rodgers, R., & Séjourné, N. (2009). Contributions of psychopathic, narcissistic, machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*, 47(7), 734–739. <https://doi.org/10.1016/j.paid.2009.06.020>
- Crane, C. A., Umehira, N., Barbary, C., & Easton, C. J. (2018). Problematic alcohol use as a risk factor for cyber aggression within romantic relationships. *American Journal on Addictions*, 27(5), 400–406. <https://doi.org/10.1111/ajad.12736>
- Deans, H., & Bhogal, M. S. (2017). Perpetrating cyber dating abuse: A brief report on the role of aggression, romantic jealousy and gender. *Current Psychology*, 38(5), 1077–1082. <https://doi.org/10.1007/s12144-017-9715-4>
- Dick, R. N., McCauley, H. L., Jones, K. A., Tancredi, D. J., Goldstein, S., Blackburn, S., Monasterio, E., James, L., Silverman, J. G., & Miller, E. (2014). Cyber dating abuse among teens using school-based health centers. *Pediatrics*, 134(6), e1560–e1567. <https://doi.org/10.1542/peds.2014-0537>
- Duerksen, K. N., & Woodin, E. M. (2019). Cyber dating abuse victimization: Links with psychosocial functioning. *Journal of Interpersonal Violence*. Advance online publication. <https://doi.org/10.1177/0886260519872982>
- Exner-Cortens, D., Eckenrode, J., & Rothman, E. (2013). Longitudinal associations between teen dating violence victimization and adverse health outcomes. *Pediatrics*, 131(1), 71–78. <https://doi.org/10.1542/peds.2012-1029>
- Fehr, B., Samsom, D., & Paulhus, D. (1992). The construct of Machiavellianism: Twenty years later. In C. D. Spielberger & J. N. Butcher (Eds.), *Advances in Personality Assessment* (Vol. 9; pp. 77–116). Lawrence Erlbaum Associates.
- Flach, R. M. D., & Deslandes, S. F. (2019). Cyber dating abuse or proof of love? The use of apps for surveillance and control in affective-sexual relations. *Cadernos de Saude Publica*, 35(1), 1–14. <https://doi.org/10.1590/0102-311x00060118>
- Hancock, K., Keast, H., & Ellis, W. (2017). The impact of cyber dating abuse on self-esteem: The mediating role of emotional distress. *Cyberpsychology*, 11(2), Article 2. <https://doi.org/10.5817/CP2017-2-2>
- Hare, R. D. (1999). *Without conscience. the disturbing world of the psychopaths among us*. The Guilford Press.
- Hellevik, P. M. (2019). Teenagers' personal accounts of experiences with digital intimate partner violence and abuse. *Computers in Human Behavior*, 92(5), 178–187. <https://doi.org/10.1016/j.chb.2018.11.019>
- Holmes, S. C., Johnson, N. L., Zlotnick, C., Sullivan, T. P., & Johnson, D. M. (2020). The association between demographic, mental health, and intimate partner violence victimization variables and undergraduate women's intimate partner violence perpetration. *Journal of Interpersonal Violence*. Advance online publication. <https://doi.org/10.1177/0886260520907354>

- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Iyican, S., & Babcock, J. C. (2018). The relation between the two factors of psychopathy and intimate partner aggression. *Journal of Aggression, Maltreatment and Trauma*, 27(2), 119–130. <https://doi.org/10.1080/10926771.2017.1334020>
- Jones, D. N., & Paulhus, D. L. (2010). Different provocations trigger aggression in narcissists and psychopaths. *Social Psychological and Personality Science*, 1(1), 12–18. <https://doi.org/10.1177/1948550609347591>
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the Short Dark Triad (SD3): A Brief Measure of Dark Personality Traits *Assessment*, 21(1), 28–41. <https://doi.org/10.1177/1073191113514105>
- Kiire, S. (2017). Psychopathy rather than Machiavellianism or narcissism facilitates intimate partner violence via fast life strategy. *Personality and Individual Differences*, 104, 401–406. <https://doi.org/10.1016/j.paid.2016.08.043>
- Kline, R. B. (2010). *Principles and practice of structural equation modeling* (3rd ed.). The Guilford Press.
- Li, C. -H. (2016). Confirmatory factor analysis with ordinal data: Comparing robust maximum likelihood and diagonally weighted least squares. *Behavior Research Methods*, 48(3), 936–949. <https://doi.org/10.3758/s13428-015-0619-7>
- López-Ossorio, J. J., González-Álvarez, J. L., Loinaz, I., Martínez-Martínez, A., & Pineda, D. (2020). Intimate partner homicide risk assessment by police in Spain: VPR5.0-H the dual protocol. *Psychosocial Intervention*, 27(1), 47–55. <https://doi.org/10.5093/pi2020a16>
- Machimbarrena, J. M., Calvete, E., Fernández-González, L., Álvarez-Bardón, A., Álvarez-Fernández, L., & González-Cabrera, J. (2018). Internet risks: An overview of victimization in cyberbullying, cyber dating abuse, sexting, online grooming and problematic internet use. *International Journal of Environmental Research and Public Health*, 15(11), 1–15. <https://doi.org/10.3390/ijerph15112471>
- March, E., Litten, V., Sullivan, D. H., & Ward, L. (2020). Somebody that i (used to) know: Gender and dimensions of dark personality traits as predictors of intimate partner cyberstalking. *Personality and Individual Differences*, 163, 110084. <https://doi.org/10.1016/j.paid.2020.110084>
- Marganski, A., & Melander, L. (2018). Intimate partner violence victimization in the cyber and real world: Examining the extent of cyber aggression experiences and its association with In-Person dating violence. *Journal of Interpersonal Violence*, 33(7), 1071–1095. <https://doi.org/10.1177/0886260515614283>
- Melander, L. A. (2010). College students' perceptions of intimate partner cyber harassment. *Cyberpsychology, Behavior, and Social Networking*, 13(3), 263–268. <https://doi.org/10.1089/cyber.2009.0221>
- Melander, L. A., & Marganski, A. J. (2020). Cyber and in-person intimate partner violence victimization: Examining maladaptive psychosocial and behavioral correlates. *Cyberpsychology*, 14(1), Article 1. <https://doi.org/10.5817/CP2020-1-1>
- Morelli, M., Bianchi, D., Baiocco, R., Pezzuti, L., & Chirumbolo, A. (2016). Sexting, trastorno psicológico y noviazgo violento en adolescentes y adultos jóvenes

- [Sexting, psychological distress and dating violence among adolescents and young adults]. *Psicothema*, 28(2), 137–142. <https://doi.org/10.7334/psicothema2015.193>
- Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature on the dark triad (Narcissism, Machiavellianism, and psychopathy). *Perspectives on Psychological Science*, 12(2), 183–204. <https://doi.org/10.1177/1745691616666070>
- Muris, P., Otgaar, H., Meesters, C., Papasileka, E., & Pineda, D. (2020). The dark triad and honesty-humility: A preliminary study on the relations to pornography use. *Dignity: A Journal on Sexual Exploitation and Violence*, 5(1). <https://doi.org/10.23860/dignity.2020.05.01.03>
- Pajević, M., Vukosavljević-Gvozden, T., Stevanović, N., & Neumann, C. S. (2018). The relationship between the dark tetrad and a two-dimensional view of empathy. *Personality and Individual Differences*, 123, 125–130. <https://doi.org/10.1016/j.paid.2017.11.009>
- Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36(6), 556–563. [https://doi.org/10.1016/S0092-6566\(02\)00505-6](https://doi.org/10.1016/S0092-6566(02)00505-6)
- Pico-Alfonso, M. A., García-Linares, M. I., Celda-Navarro, N., Blasco-Ros, C., Echeburúa, E., & Martínez, M. (2006). The impact of physical, psychological, and sexual. *Journal of Women's Health*, 15(5), 599–611. <https://doi.org/10.1089/jwh.2006.15.599>
- Pineda, D., Sandín, B., & Muris, P. (2018). Psychometrics properties of the Spanish version of two dark triad scales: The dirty dozen and the short dark triad. *Current Psychology*, 39, 1873–1881. <https://doi.org/10.1007/s12144-018-9888-5>
- Pineda, D., Valiente, R. M., Chorot, P., Piqueras, J. A., & Sandín, B. (2018). Factorial and temporal invariance of a Spanish version of the Emotional Regulation Questionnaire (ERQ). *Revista de Psicopatología y Psicología Clínica*, 23(2), 109–120. <https://doi.org/10.5944/rppc.vol.23.num.2.2018.21823>
- Pineda, D., Piqueras, J. A., Galán, M., & Martínez-Martínez, A. (in press). Everyday sadism: Psychometric properties of three Spanish versions for assessing the construct. *Current Psychology*.
- Plouffe, R. A., Saklofske, D. H., & Smith, M. M. (2017). The Assessment of Sadistic Personality: Preliminary psychometric evidence for a new measure. *Personality and Individual Differences*, 104, 166–171. <https://doi.org/10.1016/j.paid.2016.07.043>
- Ramos, M. C., Miller, K. F., Moss, I. K., & Margolin, G. (2017). Perspective-taking and empathy mitigate family-of-origin risk for electronic aggression perpetration toward dating partners: A brief report. *Journal of Interpersonal Violence*. Advance online publication. <https://doi.org/10.1177/0886260517747605>
- R Core Team. (2016). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing.
- Raskin, R., & Hall, C. S. (1981). The Narcissistic Personality Inventory: Alternative Form Reliability and Further Evidence of Construct Validity.

- Journal of Personality Assessment*, 45(2), 159–162. https://doi.org/10.1207/s15327752jpa4502_10
- Renner, L. M., & Whitney, S. D. (2012). Risk factors for unidirectional and bidirectional intimate partner violence among young adults. *Child Abuse and Neglect*, 36(1), 40–52. <https://doi.org/10.1016/j.chiabu.2011.07.007>
- Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48(2), 1–36.
- Sargent, K. S., Krauss, A., Jouriles, E. N., & McDonald, R. (2016). Cyber victimization, psychological intimate partner violence, and problematic mental health outcomes among first-year college students. *Cyberpsychology, Behavior, and Social Networking*, 19(9), 545–550. <https://doi.org/10.1089/cyber.2016.0115>
- Talbot, F., Babineau, M., & Bergheul, S. (2015). Les dimensions du narcissisme et de l'estime de soi comme prédicteurs de l'agression en lien avec la violence conjugale [Narcissism and self-esteem dimensions as predictors of aggression in intimate partner violence]. *Annales Medico-Psychologiques*, 173(2), 193–196. <https://doi.org/10.1016/j.amp.2013.07.005>
- Taylor, S., & Xia, Y. (2018). Cyber partner abuse: A systematic review. *Violence and Victims*, 33(6), 983–1011. <https://doi.org/10.1891/0886-6708.33.6.983>
- Temple, J. R., Choi, H. J., Brem, M., Wolford-Clevenger, C., Stuart, G. L., Peskin, M. F., & Elmquist, J. A. (2016). The temporal association between traditional and cyber dating abuse among adolescents. *Journal of Youth and Adolescence*, 45(2), 340–349. <https://doi.org/10.1007/s10964-015-0380-3>
- Tetreault, C., Bates, E. A., & Bolam, L. T. (2018). How dark personalities perpetrate partner and general aggression in Sweden and the United Kingdom. *Journal of Interpersonal Violence*. Advance online publication. <https://doi.org/10.1177/0886260518793992>
- Webster, G. D., Gesselman, A. N., Crysel, L. C., Brunell, A. B., Jonason, P. K., Hadden, B. W., & Smith, C. V. (2016). An actor-partner interdependence model of the Dark Triad and aggression in couples: Relationship duration moderates the link between psychopathy and argumentativeness. *Personality and Individual Differences*, 101, 196–207. <https://doi.org/10.1016/j.paid.2016.05.065>
- Westhead, J., & Egan, V. (2015). Untangling the concurrent influences of the dark triad, personality and mating effort on violence. *Personality and Individual Differences*, 86, 222–226. <https://doi.org/10.1016/j.paid.2015.05.031>
- World Health Organization. (2002). *World report on violence and health*. Author.
- World Health Organization. (2013). *Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence*. Author. <https://www.who.int/publications/i/item/9789241564625>
- Zeigler-Hill, V., & Vonk, J. (2015). Dark personality features and emotion dysregulation. *Journal of Social and Clinical Psychology*, 34(8), 692–704. <https://doi.org/10.1521/jscp.2015.34.8.692>

Zweig, J. M., Lachman, P., Yahner, J., & Dank, M. (2014). Correlates of cyber dating abuse among teens. *Journal of Youth and Adolescence*, 43(8), 1306–1321. <https://doi.org/10.1007/s10964-013-0047-x>

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