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## Witnessing Parental Violence and Cyber IPV Perpetration in Hispanic Emerging Adults: The Mediating Role of Attitudes Toward IPV

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**Witnessing Parental Violence and Cyber IPV Perpetration in Hispanic Emerging  
Adults: The Mediating Role of Attitudes Towards IPV**

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## WITNESSING PARENTAL VIOLENCE AND CYBER IPV

### Abstract

Recent studies indicate that the perpetration of intimate partner violence via cyberspaces (cyber IPV), namely, psychological aggression, sexual aggression, and cyberstalking is high among emerging adults. However, little is known of the risk factors that lead to cyber IPV and far lesser within Hispanic adults. Based on the intergenerational transmission of violence hypothesis, the present study examined the indirect effect of witnessing parental violence during childhood on the three types of cyber IPV through attitudes condoning IPV in Hispanic men and women, separately. Participants were 1,136 Hispanic emerging adults in the age range of 18 to 29 years ( $M = 20.53$  years,  $SD = 2.42$ ; 72.5% women, 88% Mexican descent). Over half of the participants (54.2%) witnessed at least one instance of parental violence during childhood. In contrast to women, men were more likely to hold attitudes accepting of IPV and perpetrate cyber sexual IPV; whereas, women were more likely to report cyberstalking perpetration. Men and women with exposure to mother-to-father violence held attitudes justifying IPV that was associated with perpetrating the three cyber IPV types in adulthood (women:  $B_{range} = .016$  to  $.036$ ; men:  $B_{range} = .016$  to  $.024$ ). No significant gender differences were found in the associations of mother-to-father WPV and father-to-mother WPV on the three types of cyber IPV perpetration. These findings are discussed in the context of Hispanic culture, which has specific implications for cyber IPV intervention strategies.

**Keywords.** cyber IPV, attitudes towards violence, witnessing parental violence, Hispanic, emerging adults

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### **Witnessing Parental Violence and Intimate Partner Cyber IPV Perpetration in Hispanic Emerging Adults: The Mediating Role of Attitudes Towards IPV**

The use of the internet and social network platforms have increased during the last decade, particularly among young adults (Vogels, 2019), with Hispanic emerging adults being a very active population in the use of communication technologies (Smith & Anderson, 2018). In addition to the traditional face-to-face IPV, cyberspace presents another avenue for perpetration of IPV (Caridade et al., 2019; Marganski & Melander, 2018). Nonetheless, the majority of the literature in cyber IPV is based on individuals who identify as White non-Hispanic (e.g., Wolford-Clevenger et al., 2016), with only a few studies examining its impact on sub-populations and social contexts (e.g., in lesbian, gay, bisexual adults: Charak et al., 2019; in Hispanic young adults: Cantu & Charak, 2020). Additionally, considering that most of the existing preventative strategies focus on face-to-face IPV perpetration (Duerksen & Woodin, 2019), it is important to consider the phenomenon of cyber IPV in order to identify avenues for intervention and prevention adapted to Hispanic emerging adults (Terrazas-Carrillo & Sabina, 2019).

While there are between- and within-domain differences in the definitions and denominations regarding the use of technology to perpetrate violence against an intimate partner (e.g., dating violence, Caridade et al., 2019), in the present study cyber IPV is defined as range of acts committed through the use of technology, such as phones, electronic mails, and social media (e.g., Facebook, WhatsApp) with the aim of controlling and causing harm to an intimate partner (Watkins et al., 2018). Like face-to-face IPV, cyber IPV is a multidimensional phenomenon which encompasses online forms of psychological aggression (e.g., sending information or pictures to emotionally hurt one's partner, Leisring & Giumetti, 2014), sexual aggression (e.g., sexting coercion behaviors, Watkins et al.,

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2018), and stalking-like behaviors (e.g., accessing electronic devices and accounts without a partner's permission, Watkins et al., 2018).

### **Witnessing Parental Violence and Cyber IPV: Gendered Pathways**

When witnessing a parent using violence against the other parent (WPV), children may learn to use violence as a tool for dealing with disagreements and conflicts, which may lead them to model the aggressive behavior of the parent(s) in their intimate partner relationships (e.g., Copp et al., 2019; Karsberg et al., 2019). This association is based on the Intergenerational Transmission of Violence hypothesis (ITV; Widom, 1989). There is evidence to suggest that individuals who witness face-to-face IPV in their family of origin are more likely to perpetrate such forms of violence during adulthood (Black et al., 2010) but few studies have considered if WPV also makes the individual more likely to perpetrate violent acts through technology and over cyberspace (Ramos et al., 2017).

Furthermore, the social cognitive theory of gender development and differentiation states that gender roles are construed through observation and modeling of same-gender parents/caregivers' behaviors (Bussey & Bandura, 1999), implying that girls may model behaviors of their mothers and boys the behavior of their fathers. By extension, this suggests that girls who witness mother-to-father perpetration and boys who witness father-to-mother perpetration are more likely to perpetrate violence in their intimate relationships. Findings from prior studies on gendered pathways between WPV and cyber IPV offer mixed evidence in this regard (Forke et al., 2018; Kimber et al., 2018). While some studies suggest that women who observed mother-to-father violence, and men who observed father-to-mother violence were more likely to perpetrate IPV during adulthood (Milletich et al. 2010), other studies suggest that both types of WPV equally predict IPV in men and women (e.g., Kwong et al., 2003). Thus, the present study aims to examine whether witnessing mother-to-father and father-to-mother parental violence during childhood

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increases the likelihood of perpetrating cyber IPV during adulthood, and if these associations are similar across Hispanic men and women. Since WPV and childhood maltreatment (abuse and neglect) often co-occur (e.g., Charak et al., 2018) as do face-to-face IPV and cyber IPV types (Trujillo et al., 2020; Watkins et al., 2018), their effects were controlled for in order to examine the unique associations between WPV and cyber IPV types.

### **Attitudes Towards IPV**

Not everyone exposed to WPV goes on to perpetrate violence against a romantic partner, which indicates that risk and protective factors operate within this association (Haj-Yahiae et al., 2019; Wright et al., 2016). One risk factor in particular concerns attitudes towards violence, which has been the focus of programmatic efforts promoting the identification and modification of unhealthy beliefs about intimate relationships (Campbell & Manganello, 2006; Fincham et al. 2008). For example, acceptance of intimate partner violence has been found to explain the relation between WPV and physical and psychological perpetration among youth (Temple et al., 2013). Yet, few studies have examined the role of attitudes in IPV perpetration among racial and ethnically diverse individuals, including Hispanics (Terrazas-Carrillo & Sabina, 2019).

Furthermore, prior studies investigating attitudes towards violence also show mixed findings for Hispanic individuals, with some revealing higher levels of acceptance of violence in intimate relationships (e.g., Moracco et al., 2005), and others reporting no differences between Hispanic and non-Hispanic individuals (Copp et al. 2019; Smith et al., 2005). Altogether, these findings suggest that gender norms and cultural affiliation influence the formation and internalization of attitudes (e.g., Flood & Pease, 2009; Temple et al. 2013). Therefore, more research is warranted in testing the association between WPV

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and IPV/cyber IPV in Hispanic communities to better understand the mechanisms and risk factors, that would improve cultural sensitivity when imparting evidence-based treatments.

### **The Present Study**

The present study aimed to examine the indirect effect of witnessing gendered parental violence on adulthood cyber IPV through attitudes towards violence in Hispanic emerging adults when controlling for the effects of childhood maltreatment and face-to-face IPV. Additionally, we wanted to examine the presence of gendered pathways given that gender plays a role in the process of socialization and the development of societal norms (Bussey & Bandura, 1999). Based on the outlined literature, we hypothesized that like face-to-face IPV (Black, et al., 2010) (i) women's childhood exposure to mother-to-father violence and men's childhood exposure to father-to-mother violence (Forke et al., 2018) would be associated with perpetration of cyber IPV (i.e., psychological, sexual, stalking) in adulthood; (ii) increase in WPV (i.e., mother-to-father and father-to-mother) would lead to increase in perpetration of three types of cyber IPV, namely, psychological, stalking, and sexual for women and men (Temple et al., 2013) through attitudes condoning violence.

## **Method**

### **Participants**

Participants were 1,136 emerging adults (women:  $n = 823$ , men:  $n = 313$ ), ages 18-29 years ( $M_{women} = 20.53$ ,  $SD_{women} = 2.47$ ;  $M_{men} = 20.50$ ,  $SD_{men} = 2.30$ ), attending a university in South Texas. All participants self-identified as Hispanic, with 88% indicating their country of origin as Mexico ( $n = 852$ ), 8.1% as United States ( $n = 78$ ), 1.8% indicated two or more Central American countries as their country of origin (e.g. Mexico and El Salvador) ( $n = 17$ ), and the remaining participants (2.1%,  $n = 21$ ) indicated other countries such as Spain, Honduras, Cuba, Colombia, Peru, and Philippines as their country of origin.

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Nearly 74% of the emerging adults ( $n = 840$ ) self-identified as White, to a lesser extent as American Indian/Alaska Native ( $n = 7$ , 0.6%), Black/African American ( $n = 4$ , 0.4%), Asian ( $n = 3$ , 0.3%), Native Hawaiian/other Pacific Islander ( $n = 1$ , 0.1%), and 24.7% as being of other races ( $n = 281$ ). More than 41% ( $n = 401$ ) of the participants had an income higher than the median yearly income of the present sample (i.e., more than \$40,000), another 46.5% ( $n = 527$ ) reported a yearly household income between \$10,000 and \$39,000, and 12.1% ( $n = 138$ ) reported a yearly household income of less than \$10,000. More than half of the sample were currently in a romantic relationship ( $n = 716$ , 57.6%). With regards to relationship status, most of the participants were in an intimate relationship but were not married nor cohabitating with their partner ( $n = 994$ , 87.5%), 44 were married (3.9%), 85 were cohabitating (7.5%), and 13 separated or divorced (1.1%).

### Measures

**Witnessing parental violence.** Computer Assisted Maltreatment Inventory (CAMI, DiLillo et al., 2010) is a self-report measure of histories of childhood maltreatment. For the purpose of the present study only the subscale of exposure to interparental violence was used. Of the 34-items measuring WPV, 17-items assess violence directed by the mother towards the father and another 17-items measure violence directed by the father towards the mother. Each item indicates the severity of behaviors depending on the level of exposure with the following options: 1 = *I was in the room or area and saw this happen*, 2 = *I was close by and heard this happen but did not see it*, 3 = *I was gone when this happened but heard about it later*, and 4 = *This never occurred*. In the present study, response options 1-3 were recoded as 1 = *presence of WPV* and response option 4 was recoded as 0 = *absence of WPV* for each item of the scale. The total score of each subscale (mother-to-father and father-to-mother) was calculated by adding the 17 items, indicating the total number of exposure experiences (from 0 to 17). Items measuring various dimensions of the



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victimization experience (e.g., the frequency of the behaviors, age of onset, and whether medical attention was needed) were also used. The subscale of WPV of CAMI has demonstrated adequate interrater reliability (kappa statistics ranged from .54 to .80, DiLillo et al., 2010). Moreover, the developers of CAMI reported good criterion-related validity for total severity score on CAMI when compared with the Childhood Trauma Questionnaire (CTQ; DiLillo et al., 2010) in a sample of White college students. For the present study, Cronbach's alpha for both types of interparental violence was adequate (witnessing violence from the father towards the mother, women:  $\alpha = .93$ , men:  $\alpha = .95$ , and witnessing violence from the mother towards the father, women:  $\alpha = .94$ , men:  $\alpha = .95$ ).

**Childhood maltreatment.** The Childhood Trauma Questionnaire-Short Form (CTQ-SF; Bernstein et al., 2003) is a screening measure for childhood maltreatment in clinical and community samples that encompasses five subscales, namely, emotional abuse, sexual abuse, physical abuse, emotional neglect and physical neglect. The CTQ-SF consists of 28-items (25 clinical items and three validity items) measured in a five-point Likert-type scale (1 = *never true* to 5 = *very often true*). The total score was used by adding the 25-items with higher scores indicative of greater severity levels of childhood maltreatment. The CTQ-SF demonstrates good reliability and validity, including an internal consistency reliability coefficient ranging from a median .66 to .92 across a range of seven different samples (e.g., adult substance users, a psychiatric adolescent sample, and a community sample), test-retest reliability coefficient ranged from .79 to .86 over an average period of 3.6 months, and convergent validity assessed through other trauma measures like the clinician rated interviews and therapist ratings of abuse and neglect with the CTQ-SF were found to be correlated (Bernstein et al., 2003). In the present study, the Cronbach's alpha for the total score was .91 for women and .90 for men.

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**Attitudes towards IPV.** The Intimate Partner Violence Attitude Scale—Revised (IPVAS-R; Fincham et al., 2008) is a 17-item self-report questionnaire assessing tolerant attitudes towards IPV across three subscales, namely, attitudes towards violence, attitudes towards abuse, and attitudes towards control. Items were rated on a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). A higher score represents holding more positive attitudes regarding IPV. The IPVAS-R was adapted from a previous version developed in a sample of predominantly Mexican American college students (Smith et al., 2005). The authors of the IPVAS–R reported good discriminant validity when comparing the scores of IPVAS-R subscales with relationship satisfaction (-.16 to -.23; Fincham et al., 2008). Additionally, IPVAS-R subscales was positively correlated with psychological and physical violence in relationships (.17 and .43) indicative of good convergent validity (Fincham et al., 2008). Test-retest reliability over a 14-week period was also acceptable (.39 to .58) (Fincham et al., 2008). The revised version has not been previously used in a Hispanic sample. For the present study, the total score was used with a Cronbach’s alpha = .81 (men) and .79 (women).

**Cyberperpetration in intimate relationships.** Cyber Aggression in Relationships Scale (CARS; Watkins et al., 2018) is a 34-item questionnaire that measures victimization and perpetration of cyber intimate partner violence across three domains, namely, psychological, stalking, and sexual perpetration. For the present study we used the perpetration subscale of CARS which has 17-items with an eight-point Likert scale that quantifies the prevalence of behaviors in the past 12 months (0 = *never* to 6 = *more than 20 times*) and lifetime (7 = *not in the past 12 months, but it did happen before*). To calculate total scores of the subscales, the items were recoded as 0 = *absence* and 1 = *presence*. The total scores of each subscale indicated the number of behaviors perpetrated by the individual in their lifetime, ranging from 0 to 5 in the cyber psychological IPV, from 0 to 4

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in the cyber sexual IPV, and from 0 to 8 in the cyber stalking IPV. The three-factor model of the CARS was developed and validated in a sample of adults using factor analysis (Watkins et al., 2018). Furthermore, there was good internal consistency reliability, and factor analysis suggested that a three-factor model had an acceptable fit (Watkins et al., 2018). Moreover, correlations between the CARS and face-to-face IPV ranged from .13 and .71, indicative of good construct and predictive validity (Watkins et al., 2018). For the present study, Cronbach's alpha for the subscales were acceptable (cyber psychological:  $\alpha_{women} = .64$  and  $\alpha_{men} = .74$ ; cyber sexual:  $\alpha_{women} = .81$  and  $\alpha_{men} = .78$ ; cyber stalking:  $\alpha_{women} = .81$  and  $\alpha_{men} = .83$ ).

**Face-to-face IPV perpetration.** Conflict Tactics Scale 2 Short Form (CTS2-SF; Straus & Douglas, 2004) assesses sexual, physical, and psychological intimate partner victimization and perpetration. CTS2-SF is a 20 items measure with eight-point Likert scale that quantifies the frequency of the behaviors in the past year (1 = *once*, 2 = *twice*, 3 = *3–5 times*, 4 = *6–10 times*, 5 = *11–20 times*, 6 = *more than 20 times*), lifetime 7 (*not in the past year, but it did happen before*) or absence (8 = *never*). For the propose of this study, only the sexual, psychological, and physical perpetration subscales were used. A dichotomous variable was created indicating the perpetration of any of the three subtypes of IPV across the lifespan. Participants who endorsed 1-7 in any of the items were coded as 1 = *presence*, and those who endorsed 8 in all items were coded as 0 = *absence*. The CTS2-SF was adapted from a larger version of 78-items using a college sample (Straus & Douglas, 2004). The authors of the measure indicated moderate to high correlations (ranging from .65 to .94) between the CTS2-SF and the larger version, indicative of good concurrent and construct validity (Straus & Douglas, 2004). For the present study, Cronbach's alpha was adequate for men ( $\alpha = .86$ ) and women ( $\alpha = .81$ ).

### Procedure

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Data for the present study were collected from students enrolled in undergraduate psychology courses at a university in South Texas through an online survey between the fall of 2016 and summer of 2019. The SONA system, an automated participatory pool management software that assists researchers' setup of studies, recruiting of participants, and managing of course credits for participation was used for recruitment. On average it took students 45 minutes to complete the survey. Participants who completed the online survey were granted predetermined course credit if enrolled in the General Psychology course, and students enrolled in other Psychology courses were granted extra-credit at the discretion of their instructor. To avoid coercion, alternative research activities (e.g., attending a seminar, conference, writing a reflection paper) were available for students who did not want to take the surveys. The Institutional Review Board at the corresponding author's institution approved the study protocol and the students were asked to provide consent before participation. The criteria for inclusion were (i) in the age range of 18-29 years; (ii) a United States citizen or legal resident; and (iii) currently in a romantic relationship or having been in a relationship in the past.

### **Statistical Analyses**

The data analytical approach followed three stages. First, using IBM SPSS version 25 descriptive statistics as well as *t*-test and chi-square analyses were used to examine the characteristics of the sample and assess gender differences across study-variables. Next, bivariate correlations were conducted to test the association between WPV, childhood maltreatment, the attitudes towards violence, and cyber IPV types in the form of psychological, sexual, and stalking. Third, in *Mplus* version 8.0, mediation analyses were carried out to evaluate the direct and indirect effects of mother-to-father WPV, father-to-mother WPV on the three types of cyberperpetration through attitudes towards violence (mediator). The effects of childhood abuse and neglect were controlled for in each study

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variable, and the effect of face-to-face perpetration was controlled for the three subtypes of cyber IPV perpetration. All variables were treated as manifest/observed variables. Residual covariances were calculated between the three mediators and among the outcome variables. The magnitude of the indirect effect was examined using the product-of-coefficient approach (Bishop et al., 1975) to calculate standard errors of the indirect effects. The coefficient of the indirect effect is divided by its standard error and compared to a critical value with a  $z$ -test. As recommended by Preacher and Hayes (2008), bias-corrected bootstrapping procedures for confidence intervals with a total of 10,000 bootstrapped samples were used to corroborate findings from the product-of-coefficient tests. The use of the bootstrapping method is recommended over the traditional causal steps approach, as the former has higher power while maintaining reasonable control over the Type I error rate (MacKinnon et al., 2004). In the present study, a 95% confidence interval not containing a zero was considered statistically significant.

### Results

Table 1 depicts the descriptive statistics,  $t$ -tests and chi-square ( $X^2$ ) analyses indicating differences between men and women on WPV, attitudes towards violence, cyber IPV types, and face-to-face IPV perpetration. Over half of the participants (54.2%) reported to have witnessed or being aware (e.g. someone told them after the event occurred) of at least one incident of interparental violence. Of those that endorsed WPV, 36.7% ( $n = 456$ ) witnessed bidirectional parental violence, 11.9% ( $n = 148$ ) from father-to-mother only, and 5% ( $n = 62$ ) from mother-to-father only. Furthermore, participants indicated that they were between 1-7 years old ( $M = 7.0$ ,  $SD = 4.11$ ) when they witnessed the first interparental violence. Of those participants who indicated WPV, 543 (47.8%) reported that the events occurred only once, another 235 (20.7%) reported WPV between 1-5 times, 111 (9.8%) between 5-10 times, 77 (6.8%) between 10-20 times, and 170 (15%) more than 20 times. A

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quarter (25.8%;  $n = 293$ ) indicated that alcohol and/or drugs played a role in the conflict, and 6.2% ( $n = 70$ ) reported that the incidents resulted in injuries that needed medical attention. Nearly 32% ( $n = 365$ ) reported that WPV events as an experience that was very difficult for them and 26.5% ( $n = 301$ ) reported that the event was somewhat difficult for them.

No significant difference was found on total scores of WPV (mother-to-father and father-to-mother) across men and women. The specific percentages of the WPV items across men and women are reported in Table 2. Furthermore,  $t$ -tests demonstrated that men held attitudes supportive of IPV and perpetrate cyber sexual IPV to a higher extent than women. Additionally, women (vs. men) were more likely to perpetrate cyber stalking IPV (Table 1). Those who had exposure to WPV were more likely to perpetrate cyber psychological IPV ( $t(1134) = 8.123, p < .001, M = 1.06, SD = 1.26$ ), cyber sexual IPV ( $t(1,134) = 3.444, p < .005, M = .22, SD = .74$ ), and cyber stalking ( $t(1134) = 5.469, p < .001, M = 2.03, SD = 2.24$ ) than those that did not WPV during childhood (cyber psychological:  $M = .64, SD = .91$ ; cyber sexual:  $M = .10, SD = .47$ ; cyber stalking:  $M = 1.36, SD = 1.89$ ).

Bivariate correlations demonstrated that all study variables, except attitudes towards violence and face-to-face IPV, were significantly and positively correlated (Table 3). The mediation analysis demonstrated that there was a significant direct effect between father-to-mother WPV and the three types of cyber IPV across men and women, and mother-to-father WPV and cyber sexual, and cyber stalking perpetration (Hypothesis 1; Figure 1). Those with exposure to mother-to-father violence had attitudes in favor of IPV that in turn lead to a higher likelihood of psychological, sexual, and stalking cyber IPV for women and men (Figure 1), after controlling for the effects of childhood abuse and neglect and face-to-face IPV. Findings showed a complete mediation effect of attitudes towards IPV on the

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association between mother-to-father violence and cyber psychological perpetration, and partial mediation effects on the association between mother-to-father violence and cyber sexual and stalking perpetration. Table 4 displays the indirect effects of the mediation model (Hypothesis 2).

### **Discussion**

The present study examined the associations between WPV during childhood and cyber IPV adult perpetration in a sample of Hispanic emerging adults. The rates of WPV reported in this study are higher (ranging from 40.6 % to 51.6%) than those found in a prior sample of predominantly Hispanic women (32% WPV; Davies et al., 2004). Those with exposure to WPV were more likely to perpetrate cyber IPV than those with no exposure to WPV, which is in line with the ITV hypothesis. Moreover, the rates of the cyber IPV perpetration subtypes were between 9.3% to 53.8%, which is within the range found in previous studies based predominantly on White non-Hispanic college students (rates of cyber perpetration: 13.3% to 93.7%; Leisring & Giumetti, 2014). Additionally, gender differences in cyber IPV types were in line with previous studies on dating violence, which report higher rates of cyber stalking perpetration in females and cyber sexual perpetration in males (Reed et al., 2017). The present study is the first to examine the effect of WPV on the perpetration of cyber IPV subtypes, and the mechanistic role of attitudes towards violence in Hispanic emerging adults. Details of the study findings are elaborated below.

### **Summary of Findings**

Hypothesis 1 was not supported as the data did not reveal differences in the associations between the two types of WPV (i.e., mother-to-father and father-to-mother IPV), and cyber IPV perpetration during adulthood across men and women. Although these findings contrast with the social cognitive theory of gender role development and differentiation (Bussey & Bandura, 1999), it is noteworthy that our findings are in line with

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previous research that suggests WPV leads to perpetration of face-to-face IPV, regardless of the sex of the perpetrating parent (Kwong et al., 2003). Thus, the current study findings suggest that regardless of the gender of the child or that of the perpetrating parent, an environment where IPV is common has an impact on the transmission of violence.

Hypothesis 2 was partially supported as findings indicated significant indirect effects of mother-to-father IPV on the three types of cyber IPV through attitudes towards violence for men and women. Notably, witnessing father-to-mother IPV did not predict the development of attitudes in support of perpetrating IPV. These findings *may be* explained in the context of gender roles in Hispanic cultures, such as the Mexican American culture although the present study did not explicitly assess for these. First, in the Hispanic culture a family unit is highly cohesive and there is strong identification with individuals within the family (e.g., Mexican American and Dominican sample, Calzada et al., 2012; predominantly Puerto-Rican sample, Lugo-Steidel & Contreras, 2003) in comparison with White non-Hispanic (Ramirez et al., 2004). Second, mothers' in the Hispanic culture have a central role in the family and are the primary caregivers, which in turn has a significant impact on child development and their educational needs (e.g., in a predominantly Mexican American sample, Durand, 2011). Consequently, mothers in Hispanic families who perpetrate IPV *may* play a more influential role in the formation of attitudes about IPV in comparison with non-Hispanic White parents (Durand, 2011).

The present study revealed that in those families where the mother perpetrated violence against the father, approximately 37% of the participants also reported violence from the father towards the mother, while 5% reported violence perpetrated only by the mother. This is meaningful as it suggests higher instances of bidirectional violence when the mother is the perpetrator. This finding is supported by prior studies that suggest that a household where the mother is the perpetrator of IPV may be indicative of an environment



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where violence is a common occurrence (Temple et al., 2013). Perhaps the violence of the mother towards the father may be the consequence of her reaction towards an already existing violence directed by her partner; however, the bidirectionality of violence in our sample *may* be interpreted through a cultural lens. Studies indicate that cultural values of *machismo* and *marianismo* that emphasize gender-roles where men are expected to be the bread-winner and domineering, and women are expected to be the primary caregivers and submissive, contribute to the normalization and acceptance of violence initiated by men in an intimate relationship (Cianelli et al., 2008; Terrazas-Carrillo & Sabina, 2019). These values and beliefs may compel Hispanic women to continue staying in abusive relationships (e.g., sample of Mexican American women, Frías & Agoff, 2015; Terrazas-Carrillo et al., 2019). Therefore, they may attempt to manage relational abuse in other ways, such as aggression or violence (Allen et al., 2009), leading to a more violent environment that in turn impacts a child's view of dealing with abuse in intimate relationships.

### **Limitations**

The findings of the present study should be interpreted with the following limitations in mind. First, although the measures used for childhood and adulthood victimization inquire behavior-specific questions which increases accuracy in reporting (Fricker et al., 2003), the findings are based on retrospective self-reports which introduces the chance of recall bias. Second, the cross-sectional design of the study assumes temporal and causal association between the study variables. However, this is acceptable since the experiences during childhood (e.g., WPV) precede the cyber IPV in adulthood. Third, to investigate the impact of the gender of the perpetrating parent, the present study examined it as separate unidirectional constructs (mother-to-father and father-to-mother), while studies, including the current one indicate that children often witness bidirectional violence

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between parents (Forke et al., 2018). Notably, in the present study the reciprocal relation between the types of parental violence (or WPV) was represented by a correlation between WPV between mother-to-father and father-to-mother. Fourth, findings are based on a sample of college students, which may not generalize across the entirety of the Hispanic communities of emerging adults. Also, the study-sample was predominantly of Mexican descent, and replication of these findings in samples from other Hispanic communities is recommended since Hispanic ethnicity comprises a diverse population (e.g., Puerto Rican, Cuban-Americans, Dominican-Americans).

### **Implications**

The present study has important implications for research and clinical practice. First, the overall findings imply support for the intergenerational transmission of violence framework in Hispanic emerging adults. Second, findings can facilitate the development of preventative and intervention programs for cyber IPV, such as educational campaigns focusing on changing attitudes that have previously been successful in reducing the impact of face-to-face IPV (Terrazas-Carrillo et al., 2020). Such strategies can be used for alleviating instances of cyber IPV along with strategies focusing on other individual risk factors of cyber IPV (e.g., emotion dysregulation, alcohol use, Brem et al., 2019). Furthermore, treatment programs should include the impact of the attitudes towards IPV on cyber IPV, especially among emerging adults since the attitudes that perpetrators hold seem to affect the effectiveness of IPV-focused programs (Eckhardt & Crane, 2014). Likewise, the finding that mother's perpetration of violence against the father has a significant influence in the development of attitudes condoning IPV has important connotations. Mental health providers who work with Hispanic families must be sensitive to these cultural nuances to develop preventative strategies, such as creating parenting skills

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programs focusing on alleviating the transmission of violence and awareness programs regarding cyber IPV.

### **Avenues for Future Research**

Future studies should address the role of the intergenerational transmission of violence theory in the association of WPV and cyber IPV perpetration in Hispanic populations from a longitudinal perspective. Future research should address the role of different mechanisms and risk factors that lead to the perpetration of cyber IPV, such as problematic internet use, which encompasses loss of control and a constant preoccupation regarding the use of the internet (Gómez-Guadix et al., 2016). It is also essential to address the role of cultural norms in the transmission of violence (Haselschwerdt et al., 2017) to direct subsequent work in identifying the effect of specific cultural norms, such as *machismo* and *marianismo* (Cummings & Sandoval, 2013) which may act as risk factors under volatile conditions.

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## WITNESSING PARENTAL VIOLENCE AND CYBER IPV

Table 1

*Prevalence, Mean, Standard Deviation and t-test of the Study Variables across Women and Men.*

Variable	Women (n = 823)			Men (n = 313)			t/ $\chi^2$ *	p
	n (%)	M	SD	n (%)	M	SD		
Mother-to-father WPV	352 (42.8)	1.72	3.42	127 (40.6)	1.92	3.87	.871	.410
Father-to-mother WPV	425 (51.6)	2.19	3.66	134 (42.8)	1.99	3.74	-.837	.403
Childhood maltreatment	542 (65.9)	39.12	14.25	229 (73.2)	40.15	13.71	1.099	.272
Attitudes towards IPV	---	29.05	8.58	---	32.57	9.25	6.036	< .001
Psychological cyber IPV	416 (50.5)	.84	1.11	130 (41.5)	.76	1.22	-1.035	.301
Sexual cyber IPV	51 (6.2)	.31	.82	54 (17.3)	.11	.53	4.644	< .001
Stalking cyber IPV	484 (58.8)	1.81	2.13	164 (52.4)	1.48	2.04	-2.420	< .05
Face-to-face IPV perpetration	461 (56.0)	---	---	156 (49.8)	---	---	3.876	.144

*Note.* WPV = Witnessing parental violence. IPV = Intimate partner perpetration during adulthood. \*Degrees of freedom = 1,134. To calculate rates study variables were recode as (0) absence and (1) presence.

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Table 2

*Prevalence of Types and Severity of WPV across Hispanic Women and Men.*

	Women ( <i>n</i> = 823)								Men ( <i>n</i> = 313)							
	Mother-to-father (%)				Father-to-mother (%)				Mother-to-father (%)				Father-to-mother (%)			
	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Verbally	64.8	18.0	10.0	7.2	51.9	26.5	13.5	8.1	65.2	16.9	12.1	5.8	60.7	21.4	13.4	4.5
Grab	83.6	8.5	4.0	3.9	72.3	13.6	6.0	8.1	83.4	8.3	4.5	8.3	77.3	11.5	5.8	5.4
Push	81.5	10.0	3.5	5.0	74.8	13.1	5.0	7.0	79.2	11.2	4.2	5.4	75.4	12.5	5.8	6.4
Shook*	89.4	6.3	2.8	1.5	82.2	9.5	2.8	5.5	89.8	5.6	0.5	4.1	83.2	9.7	1.5	5.6
Pull hair	92.5	4.0	1.0	2.6	87.5	6.3	1.3	4.9	88.8	5.4	2.2	3.5	87.2	6.4	2.9	3.5
Slap	86.0	6.0	3.3	4.7	84.1	6.4	3.0	6.4	81.2	7.0	5.8	6.1	84.7	4.8	4.5	6.1
Bit	94.0	2.4	0.9	2.7	95.4	1.8	0.6	2.2	93.3	3.2	1.9	1.6	93.6	1.6	2.2	2.6
Hit minor object	85.7	6.6	2.7	5.1	87.8	4.9	2.4	4.9	86.9	5.4	3.8	2.8	90.4	3.8	2.6	3.2
Threw object	87.2	5.6	2.2	5.0	87.0	4.9	1.9	6.2	87.9	4.8	2.6	4.8	90.4	4.2	2.6	2.9
Punch	92.3	3.8	1.5	2.1	89.6	3.4	2.1	5.0	89.8	4.8	1.3	4.2	92.3	2.9	2.2	2.6
Kicked	93.2	2.7	1.6	2.6	91.7	3.0	1.5	3.8	92.0	3.8	1.3	2.9	92.7	2.9	1.6	2.9
Chocked	95.7	1.6	1.0	1.7	91.4	2.9	1.2	4.5	95.2	1.6	0.6	2.6	92.7	2.6	1.9	2.9
Hit major object	93.6	2.6	1.3	2.6	93.1	2.9	1.2	2.8	91.7	4.2	1.9	2.2	60.7	21.4	13.4	4.5
Burn	53.4	18.0	10.0	7.2	97.2	1.2	0.4	1.2	65.2	16.9	12.1	5.8	77.3	11.5	5.8	5.4
Threat weapon	83.6	8.5	4.0	3.9	92.5	2.1	1.9	3.5	83.4	8.3	4.5	8.3	75.4	12.5	5.8	6.4
Use a weapon	81.5	10.0	3.5	5.0	96.6	1.2	0.6	1.6	79.2	11.2	4.2	5.4	83.2	9.7	1.5	5.6
Sexually assault	89.4	6.3	2.8	1.5	96.4	1.5	0.5	1.7	89.8	5.6	0.5	4.1	87.2	6.4	2.9	3.5

*Note.* 0 = This never occurred; 1 = I was gone when this happened but heard about it later; 2 = I was close by and heard this happen but did not see it; 3 = I was in the room or area and saw this happen. \**n* = 413 missing values in the sample of women.

## WITNESSING PARENTAL VIOLENCE AND CYBER IPV

Table 3

*Correlations between Witnessing Parental Violence, Childhood Maltreatment, Attitudes Towards IPV and Cyber IPV Perpetration Subtypes among Hispanic Men (n = 313) and Women (n = 823).*

<i>Variable</i>	1	2	3	4	5	6	7	8
1. Mother-to-father WPV	1	<b>.756**</b>	<b>.397**</b>	<b>.257**</b>	<b>.313**</b>	<b>.437**</b>	<b>.255**</b>	<b>.172**</b>
2. Father-to-mother WPV	.802**	1	<b>.381**</b>	<b>.198**</b>	<b>.298**</b>	<b>.385**</b>	<b>.255**</b>	<b>.197**</b>
3. Childhood maltreatment	.301**	.359**	1	<b>.260**</b>	<b>.219**</b>	<b>.260**</b>	<b>.140**</b>	<b>.123**</b>
4. Attitudes towards violence	.198**	.172**	.439**	1	<b>.166**</b>	<b>.309**</b>	<b>.214**</b>	<b>.084*</b>
5. Psychological cyber IPV	.213**	.253**	.288**	.238**	1	<b>.445**</b>	<b>.551**</b>	<b>.387</b>
6. Sexual cyber IPV	.258**	.254**	.407**	.299**	.739**	1	<b>.381**</b>	<b>.108**</b>
7. Stalking cyber IPV	.248**	.274**	.260**	.200**	.729**	.609**	1	<b>.419**</b>
8. Face-to-face IPV perpetration	.247**	.247**	.116**	.100	.382**	.250**	.450**	1

*Note.* The correlation values in boldface (above the diagonal) are for women and the correlation values below the diagonal are for men. WPV = Witnessing parental violence. IPV = Intimate partner perpetration during adulthood. \* $p < .05$ , \*\* $p < .01$ .

## WITNESSING PARENTAL VIOLENCE AND CYBER IPV

Table 4

*Indirect Effects of Attitudes towards IPV in the Association of Witnessing Parental Violence (mother-to-father and father-to-mother) and Subtypes of Cyber Perpetration in Women and Men.*

<i>Pathways</i>	<i>B</i>	<i>SE</i>	$\beta$	<i>95% CI (B)</i>	<i>95% CI (<math>\beta</math>)</i>
<i>Women (n = 823)</i>					
M-F→ATV→ Psychological cyber IPV	.005	.002	.016*	.001 to .011	.004 to .035
M-F→ATV→ Sexual cyber IPV	.006	.002	.036**	.002 to .011	.016 to .063
M-F→ATV→ Stalking cyber IPV	.013	.005	.021**	.005 to .024	.008 to .040
F-M→ATV→ Psychological cyber IPV	-.001	.001	-.004	-.006 to .001	-.015 to .004
F-M→ATV→ Sexual cyber IPV	-.001	.001	-.008	-.004 to .002	-.029 to .012
F-M→ATV→ Stalking cyber IPV	-.003	.003	-.005	-.010 to .004	-.017 to .007
<i>Men (n = 313)</i>					
M-F→ATV→ Psychological cyber IPV	.005	.002	.016*	.001 to .011	.005 to .037
M-F→ATV→ Sexual cyber IPV	.006	.002	.024**	.002 to .011	.011 to .050
M-F→ATV→ Stalking cyber IPV	.013	.005	.024**	.005 to .024	.010 to .047
F-M→ATV→ Psychological cyber IPV	-.001	.001	-.003	-.004 to .001	-.014 to .004
F-M→ATV→ Sexual cyber IPV	-.001	.001	-.005	-.004 to .002	-.020 to .007
F-M→ATV→ Stalking cyber IPV	-.003	.003	-.005	-.010 to .004	-.020 to .007

*Note.* Unstandardized regression coefficients (*B*) and standardized regression coefficients ( $\beta$ ) are reported. M-F = Witnessing mother-to-father violence. F-M = Witnessing father-to-mother violence. ATV = Attitudes towards violence intimate partner violence. IPV = Intimate partner perpetration during adulthood. \* $p < .05$ . \*\* $p < .01$ .