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# Extending the ACEs Framework: Examining the Relations Between Childhood Abuse and Later Victimization and Perpetration with College Men

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Extending the ACEs Framework: Examining the Relations Between Childhood Abuse  
and Later Victimization and Perpetration with College Men

Laura A. Voith, RaeAnn E. Anderson, & Shawn P. Cahill

## **Abstract**

Research has revealed that forms of violence are interconnected, but less work focuses on the interconnection of victimization and perpetration, particularly with men. Subsequently, our understanding of the complexities of violence exposure in men's lives and related policies and treatments remains limited. The present study utilizes a sample of at-risk for violence involvement, college men, to examine the relationships between childhood victimization, adulthood victimization, and adulthood perpetration. Participants are 423 college men receiving course credit who completed a battery of standardized questionnaires via an anonymous Web survey. Logistic regression is used. Results indicate that 27% of the men report polyperpetration (two or more types of perpetration), 43.5% report polyvictimization (two or more types of victimization), and 60% report experiencing both forms of victimization and perpetration in the past year. Childhood physical abuse has predictive power for perpetration (psychological aggression and polyperpetration) and victimization (sexual violence, psychological, and polyvictimization) for the men in the past year. Childhood sexual abuse has strong predictive power for perpetration (physical violence, sexual violence, and polyperpetration) and victimization (physical violence and sexual violence) with the men in the past year. Finally, emotional abuse has predictive power for victimization (physical violence and psychological aggression), but not perpetration, for the men in the past year. Developmental psychopathology and the adverse childhood experiences frameworks are used to posit potential pathways explaining the relation between childhood abuse and the overlap between victimization and perpetration in adulthood for men. Implications of this study include the use of trauma-informed models of care with men and expanding the scope of study to examine experiences of both victimization and perpetration, and various types of violence, among men.

## **Extending the ACEs Framework: Examining the Relations Between Childhood Abuse and Later Victimization and Perpetration with College Men**

Early life experiences have an ongoing impact on health throughout the lifespan. Violence in childhood is particularly concerning because it can have enduring effects into later life, ultimately diminishing children's potential to thrive as adolescents and later as adults (Anda et al., 2006). Prevalence estimates suggest that at least 1 in 4 children will experience some form of maltreatment in their lifetime (Finklehor, Turner, Ormond, & Hamby, 2013). More than 28% of adults in the United States have experienced physical abuse, nearly 21% have experienced sexual abuse, and more than 10% have experienced emotional abuse in childhood (U.S. Department of Human Services, 2016). Researchers discovered that the occurrence and co-occurrence of violence and other forms of adverse childhood experiences (ACEs) lay the pathways to revictimization in later life (Anda et al., 2006; Whitfield, Anda, Dube, & Felitti, 2003). Although researchers have investigated the interconnections of childhood victimization (Dong et al., 2004), few researchers have examined the spectrum of and interconnections among violence exposure in adulthood by way of victimization and perpetration, especially with men (e.g., Gomez, 2011). As a result, our understanding of the scope of men's violence exposure, i.e., any type of violence, including victimization and perpetration, in adulthood is relatively limited, which may affect our ability to design and deliver effective interventions. This study seeks to better understand the interconnections of violence by examining the relations between childhood victimization and adulthood victimization *and* perpetration, including polyvictimization and polyperpetration, in a sample of adult men in college.

### **Adverse Childhood Experiences**

## **Types of ACEs**

Adverse childhood experiences include childhood physical abuse (CPA), childhood sexual abuse (CSA), and childhood emotional abuse (CEA), and forms of household dysfunction (e.g., family member with mental illness, witnessing intimate partner violence, parental incarceration). Originating in the Adverse Childhood Experiences (ACE) Study conducted with a sample of 17,337 mostly White, highly educated adults, researchers uncovered evidence of deleterious behavioral health and chronic disease outcomes related to adversities in childhood (e.g., Felitti et al., 1998). Moreover, researchers found that ACEs are interrelated and can co-occur (Dong et al., 2004); for example, Dong, Anda, Dube, Giles, and Felitti (2003) found that children who experienced CSA had 2.5 and 2.0 increased odds of experiencing CEA and CPA in childhood, respectively. Additionally, ACEs have a cumulative effect, or “dose-response,” on unwanted outcomes in adulthood. For example, Anda and colleagues (2006) found that men and women reporting four or more ACEs had a 5.5-fold increased risk of intimate partner violence (IPV) perpetration.

## **ACEs and Perpetration**

Researchers have identified links between childhood abuse and men’s intimate partner perpetration or sexual offending in adulthood (e.g., Levenson, Willis, & Prescott, 2016; Roberts, McLaughlin, Conron, & Koenen, 2011; Whitfield et al., 2003). In a study using discourse analysis with adult sex offenders ( $n = 54$ ), Abbiati and colleagues (2014) found that 63% of the men had experienced psychological abuse, 61% had experienced CPA, and 33% had experienced CSA. Furthermore, in a study with 740 sexual offenders in treatment, researchers found that CPA, an incarcerated family member, and substance abuse in the home significantly predicted men’s perpetration of sexual violence in adulthood (Levenson & Grady, 2016a).

Researchers have also examined differences in types of offenders based on ACEs (e.g., Levenson & Socia, 2016). Weeks and Widom (1998) conducted a study with 301 randomly selected incarcerated felons in a state prison and found that among the types of offenders (i.e., violent, nonviolent, sexual, nonsexual), differences were found when men reported CSA before the age of 12 and neglect in childhood. Specifically, sexual offenders were more likely to report CSA before age 12, and violent offenders were significantly more likely to have experienced neglect than nonviolent offenders (Weeks & Widom, 1998). Despite this robust body of literature, few studies have examined forms of victimization *and* perpetration in adulthood with men, as if these phenomena do not overlap. Rather, studies investigating these relations with men often focus on perpetration outcomes in adulthood (e.g., Levenson & Grady, 2016b), which is warranted in research designed to inform perpetration interventions. Nevertheless, this approach to research limits our understanding of violence involvement as a holistic phenomenon.

### **ACEs and Victimization**

Research examining the relation between ACEs and victimization has primarily focused on the women's experience of CSA and later victimization (for examples, see Classen, Palash, & Aggarwal, 2005; Littleton & Ullman, 2013). Conversely, investigation into the relation between ACEs and victimization in adulthood with men is comparatively under-studied; nevertheless, some evidence supports this relation. One study found that boys who were victims of teen dating violence were more likely to have experienced CPA compared with nonvictims (Hamby, Finkelhor, & Turner, 2012). Other research found that boys who experienced CSA were significantly more likely to be victims of sexual assault and IPV in adulthood (Aosved, Long, & Voller, 2011). Although much less research has focused on CEA, one study investigated the relation between childhood emotional abuse and victimization and perpetration in late

adolescence, when controlling for sexual and physical child abuse, in college sophomores (Zurbriggen, Gobin, & Freyed, 2010). Gender differences emerged in the study; results indicated that CEA was a significant predictor of sexual victimization in late adolescence for boys, yet it served as a predictor for sexual perpetration in late adolescence for girls (Zurbriggen et al., 2010). While research examining relations between childhood abuse and adult perpetration and victimization with men exists, additional research is warranted in order to more clearly delineate patterns across and overlap among types of violence.

### **Extending the ACEs Framework**

Although this body of research has been useful in examining the etiology, assessment strategies, and treatment protocols related to victimization and perpetration as separate and unique clinical phenomena, two assumptions limit this body of research. First, many studies embody the assumption that childhood abuse predominantly leads to victimization for women and perpetration for men in adulthood. Second, despite research illustrating that ACEs are interrelated (Dong et al., 2004), this phenomenon has yet to be extended to violence exposure in adulthood; rather, researchers design studies with the assumption that types of violent perpetration and victimization in adulthood are isolated phenomena, such as sexual versus physical offenders. These assumptions may limit our understanding of violence exposure in adulthood and ultimately hamper the design of effective prevention and intervention programming. Notably, several studies challenge these assumptions (i.e., Gomez, 2011; McMahon et al., 2015; Zurbriggen, 2010).

Using the National Longitudinal Study of Adolescent Health, Gomez (2011) analyzed the relations between childhood abuse and IPV victimization and perpetration in a sample of 4,191 men and women. Results indicated that child abuse and teen dating violence victimization

independently predicted IPV victimization and perpetration in young adult men, even after controlling for important household factors (i.e., family structure, household income) and neighborhood-level factors (e.g., concentrated disadvantage; Gomez, 2011). As one of few studies examining victimization and perpetration throughout the lifespan among men and women, this study serves as an important step towards extending the ACEs framework to explain violent victimization and perpetration using an interconnected perspective, rather than treating these experiences as isolated phenomena. Notably, only two items were used to measure childhood abuse, limiting the range of violence types and the severity measured in this study (Gomez, 2011).

McMahon and colleagues (2015) improved upon this measurement limitation by examining the shared and specific effects of five child maltreatment types (i.e., CPA, CSA, CEA, emotional and physical neglect) and their relation to victimization, perpetration, and reciprocal violence in adulthood, using a nationally representative sample. Findings indicated that the general maltreatment factor (representing the shared effects of all types of maltreatment) was primarily responsible for the increased risk of victimization, perpetration, and reciprocal violence among adult men and women, and only CSA had an additive effect beyond the general child maltreatment factor for men and women's victimization in adulthood (McMahon et al., 2015). The strengths of this study are many, including extending the ACEs framework to violent victimization, perpetration, and reciprocal violence in adulthood for men and women. However, the authors combined physical and sexual IPV victimization and perpetration in adulthood, potentially masking important nuances among types of violence exposures in adulthood.

### **The Current Study**

The current study adds to the small but important body of literature extending the ACEs

framework to violent perpetration and victimization in adulthood, including polyperpetration and polyvictimization, with a nonclinical sample of men. This study examines the relations between CPA, CSA, and CEA and interpersonal violence in adulthood, namely physical, sexual, and psychological victimization and perpetration. Moreover, this study contributes a more nuanced understanding of how different (physical, sexual, and emotional/psychological) and multiple types (polyvictimization and polyperpetration) of violence interconnect across the lifespan. We extend previous research by measuring violence exposure more comprehensively (e.g., using multiple items to assess multiple types of child maltreatment, measuring victimization *and* perpetration in adulthood) and utilizing a non-clinical sample. In order to be consistent with prior research we utilized similar analytic strategies (e.g., regression analysis).

The long-term harmful effects of adverse childhood experiences, particularly child abuse, explain in part the relation to IPV in adulthood. We draw from the ACEs framework (Anda et al., 2006), developmental psychopathology (Sroufe & Rutter, 1984), and attachment theory (Bowlby, 1969) to explain these relations. Without critical supports, child maltreatment and other traumas can change structural and functional interconnections in the brain (Anda, Butchart, Feletti, & Brown, 2010), such as biochemical changes in parts of the brain that regulate interpersonal and emotion regulation (Maughan & Cicchetti, 2002), stress response (McGowan et al., 2009), and attachment (Beech & Mitchell, 2005). These changes can make victims of child abuse more vulnerable to environmental triggers (e.g., interpersonal conflict), unhealthy coping mechanisms (e.g., alcohol and drug use) and mental illness (e.g., depression, post-traumatic stress disorder), ultimately making victims more prone to violence in intimate relationships. These individual and social mechanisms may affect the condition of adult relationships, explaining in part the overlap between victimization and perpetration (McMahon et al., 2015).

For example, a man who is abused in childhood may suffer from distortions in brain development, leading to poor attachment, underdeveloped emotion regulation, and higher levels of impulsivity. His compromised regulatory systems may lead to unhealthy coping mechanisms in adolescence and adulthood, such as drug and alcohol abuse. These unhealthy coping mechanisms may affect his choice of partner and enhance the risk of victimization and perpetration in his romantic relationships.

Drawing from the ACEs framework, we expected that child abuse would significantly relate to IPV perpetration and victimization for men in adulthood. Considering previous research with women indicating that childhood sexual abuse has a greater capacity to disrupt healthy neurological development in stress sensitivity (Kendler, Kuhn, & Prescott, 2004) and risk prediction (Walsh, DiLillo, & Messman-Moore, 2012), we expected CSA to make men more vulnerable to IPV victimization and perpetration in later life. Moreover, because of the unique nature of CSA, we expected that it would be related to men's report of polyvictimization and polyperpetration in adulthood. Additionally, we expected a significant relation between childhood physical abuse and IPV perpetration to materialize (e.g., Roberts et al., 2011). Finally, considering the little research on CEA in men (Zurbriggen et al., 2010), we hypothesized that CEA would relate to men's victimization in adulthood. Notably, we were uncertain of the relations between childhood abuse and the *types* of perpetration and victimization (i.e., physical, sexual, and psychological) in men's experience in adulthood; thus, these relations were not hypothesized.

## **Method**

### **Participants**

Participants were 423 college men from a large, urban, Midwestern university.

Participants meeting the inclusion criteria comprised men 18 years old or older, who were enrolled in a psychology course permitting extra credit for research participation. Two participants who identified their gender as female were excluded from data analysis. Data collection spanned September 2012 through December 2013. Four hundred and seventeen participants provided complete demographic data with minimal ( $n = 3$ ) to zero missing data across the items. The median age in the sample was 20 years old ( $M = 22.0$ ,  $SD = 5.3$ , range 18–61) and most participants were heterosexual, White men (see Table 1). On average, men in the sample completed 2 years of college (range 0–10) and approximately one quarter of the sample ( $n = 109$ , 25.8%) indicated that their major was psychology.

<Table 1 here>

## Materials

**Dependent variables.** Victimization and perpetration (physical, sexual, and psychological violence), were measured using the Revised Conflict Tactic Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) and the Sexual Experiences Survey–Short Form Victimization (SES-SFV) and Short Form Perpetration (SES-SFP; Koss et al., 2007). Based on prior research (Moreau, Boucher, Hébert, & Lemelin, 2014) and evidence of discordance in this dataset ( $r \approx .2$ ), it appears that the SES and the CTS2 rarely overlap. Given that the SES does not specify the target of the behavior (i.e., relation to perpetrator or victim) and the CTS2 does specify the target as one’s intimate partner, it is possible that these two measures are distinguishing between the victim-perpetrator relationship, for example, stranger/acquaintance versus intimate partner. As a result, we report these measures of sexual violence as separate outcomes. Finally, participants reporting two or more types (physical, sexual-SES, sexual-CTS, or psychological) of victimization or perpetration were considered polyvictims or

polyperpetrators, respectively. We utilized this coding scheme to remain consistent with prior research while incorporating areas that have traditionally been separated (such as victimization vs. perpetration and intimate partner vs. non-intimate partner violence).

**The CTS2.** The CTS2 is a 78-item questionnaire assessing a wide range of caring and coercive behavior between intimate partners, including a variety of subscales, such as sexual aggression, physical aggression, causing injury, and psychological aggression. Participants were not required to be in a relationship to complete the CTS2 given that the behavior assessed on this instrument can also occur in short-term, non-committed romantic relationships. All subscales can be used to assess perpetration and victimization. Probing about the respondent's current or most recent partner, the response items on the CTS2 include: 1 (*once in the past year*), 2 (*twice in the past year*), 3 (*3–5 times in the past year*), 4 (*6–10 times in the past year*), 5 (*11–20 times in the past year*), 6 (*more than 20 times in the past year*), 7 (*not in the past year, but it did happen before*) and 0 (*this have never happened*). Several cell sizes were relatively small for certain item responses; thus, the response items were collapsed and the variables were dichotomized.

Endorsement of any items on the physical aggression, causing injury, sexual aggression, or psychological aggression subscales in the past year were coded 1, or else 0. In other words, men who responded “not in the past year, but it did happen before” or “never happened” were coded 0. Thus, three dichotomous variables representing physical violence (physical aggression and causing injury subscales), sexual violence (sexual aggression subscale), and psychological aggression (psychological aggression subscale) were created, representing men's experience of violent victimization by and perpetration against their intimate partners in the past year. Reports indicate good reliability and validity for the CTS2 in previous research (see Simpson & Christensen, 2005). In this study, the internal consistency of these scales varied for victimization

and perpetration, respectively, ranging from  $\alpha = .80$  to  $.78$  for physical violence,  $\alpha = .73$  to  $.41$  for sexual violence,  $\alpha = .58$  to  $.88$  for causing injury, and  $\alpha = .81$  to  $.76$  for psychological aggression.

**The SES–Short Form Perpetration.** The SES-SFP consists of seven items describing specific sexual acts (e.g., “fondled, kissed, or rubbed up against the private areas of someone’s body,” “had oral sex with someone or made someone have oral sex with me without their consent,” “I put my penis in a woman’s vagina without her consent”) followed by five possible coercive tactics (e.g., “taking advantage when they were too drunk or out of it to stop what was happening,” “threatening to physically harm,” “using force”). For each item, participants indicated the number of times (0, 1, 2, 3+) they engaged in the behavior in the past 12 months. Similar to the CTS2, cell sizes were relatively small for certain item responses; thus, response items were collapsed and the variable was dichotomized. Endorsement of any item in the past year was coded 1, or else 0. This variable represented men’s act of sexual perpetration against another individual (e.g., acquaintance, intimate partner) in the past year. Although limited data is available on the revised version, it appears the SES-SFP has similar properties to the original (Koss & Gidycz, 1985) and has demonstrated validity (Testa, Hoffman, Lucke & Pagnan, 2015).

**The SES–Short Form Victimization.** Mirroring the SES-SFP, the SES-SFV includes five items for male participants to assess sexual victimization (dropping items on vaginal rape). Men’s endorsement of any five items over the previous year were coded 1, all other responses were coded 0. This dichotomous variable reflects men’s experience of sexual victimization by another individual (stranger, acquaintance, or intimate partner) in the past 12 months. Similar to the SES-SFP, little data has been published on the psychometric properties of the SES-SFV, but it appears to have adequate test-retest reliability and validity (Authors, in press, a ).

**Independent variables.** Childhood experiences of physical, sexual, and emotional abuse were measured using the Childhood Trauma Questionnaire–Subscales (CTQ; Bernstein et al., 1994). The CTQ is a well-validated, commonly used brief questionnaire designed to assess childhood trauma in adults. Three subscales from the CTQ, consisting of five items each, were utilized to assess traumatic experiences before age 18, specifically physical (e.g., “I was hit hard enough to leave bruises”), sexual (e.g., “When I was growing up, someone tried to make me do sexual things or watch sexual things”), and emotional (e.g., “When I was growing up, people in my family called me things like stupid or lazy or ugly”) abuse. The items are rated on a 5-point scale ranging from: 1 (*never true*) to 5 (*very often true*); items rated 2 or greater were considered endorsed. Endorsement of any five items in each subscale (i.e., emotional, physical, or sexual abuse) were coded 1, otherwise 0. Cronbach’s alpha for the subscales were physical abuse  $\alpha = .88$ , sexual abuse  $\alpha = .93$ , and emotional abuse  $\alpha = .87$ .

**Covariates.** Based on preliminary analyses and prior research, age (e.g., Stith, Smith, Penn, Ward, & Tritt, 2004) and sexual orientation (e.g., Tyler, 2008) were included as covariates in the model. Age was entered as a continuous variable and sexual orientation was dummy coded in analyses. Racial/ethnic background, a dummy-coded variable, was initially included in the model based on prior research (Breiding, Black, & Ryan, 2008); however, it did not emerge as a significant predictor and, thus, was dropped from the final model to increase statistical power. Social desirability was assessed using the Marlow-Crowne Social Desirability Scale (SDS), which has previously been used in violence research with college men (Crowne & Marlowe, 1960; Gidycz et al., 2007). The SDS consists of 33 true/false items that are rarely universally true such as, “Before voting I thoroughly investigate the qualifications of all the candidates”. Internal consistency was adequate in this sample, Cronbach’s alpha = .77.

## **Procedure**

The surveys were administered anonymously online, increasing privacy and accessibility for participants. After signing up for the study through the Psychology Departmental experiment management system, participants accessed the study through a web-based survey platform. After completing informed consent, participants were granted access to the study survey, in which the questionnaires were administered in a computer-generated randomized order. Participants were compensated with extra credit. Basic quality control checks were conducted prior to analysis.

**Statistical analyses.** Descriptive statistics, including cross-tabulations, were conducted with the study data. Logistic regression is a technique used to measure the relationship between a categorical dependent variable and one or more independent variables (Cohen, Cohen, West, & Aiken, 2003); because the outcome variables were dichotomous, logistic regression was the preferred method to normalize the distribution. Modeling each outcome separately, logistic regression was used to determine if childhood abuse (i.e., physical, sexual, emotional) increased men's risk for revictimization (physical victimization, sexual victimization as measured by the CTS, sexual victimization as measured by the SES, psychological aggression, and polyvictimization) and perpetration (physical perpetration, sexual perpetration as measured by the CTS, sexual perpetration as measured by the SES, psychological aggression, and polyperpetration) in adulthood when controlling for demographic variables. Preliminary analyses, descriptive statistics, cross tabulations, logistic regression, and odds ratios were calculated using SPSS 24. Chi-square statistics are reported in text, the log odds controlling for different forms of childhood abuse and covariates are reported in Tables 2 and 3, and the odds ratios are reported in Figure 1.

The data were checked to ensure that all assumptions of logistic regression were met.

Evaluation of the correlation matrix and the collinearity diagnostics (tolerance  $>.10$  and VIF  $<10.0$ ) indicated that presence of multicollinearity was unlikely. Residuals were checked and no outliers were indicated. Power analyses were calculated using G-power version 3.1 (Faul, Erdfelder, Lang, & Bauchner, 2007). Results of these analyses indicated that each model was well powered, with power ranging from .98 to .99 ( $\alpha = .05$ ), and the effect sizes ranging from small ( $f^2 = .05$ ) to small-medium ( $f^2 = .11$ ).

## **Results**

### **Preliminary Analyses**

To test for the effect of social desirability, regression models were computed in which social desirability was tested as a predictor of SES-SFP, SES-SFV, and CTS2 scores. Social desirability did not significantly predict any of these variables and was, therefore, not included as a covariate in further analyses. Missing data for the dependent variables were minimal ( $< 1\%$ ). In the cases of missing information on the outcome variables, missing data were treated as zeros, resulting in a conservative estimate of violence exposure in adulthood (Cohen, Cohen, West, & Aiken 2003).

### **Descriptive Results**

In childhood, 68.1% ( $n = 288$ ) of the sample reported CEA, 38.5% ( $n = 163$ ) reported CPA, and 7.3% ( $n = 31$ ) reported CSA. In the past year, 23.9% ( $n = 101$ ) of the men reported physical perpetration against an intimate partner, 35.2% ( $n = 149$ ) reported perpetrating sexual violence according to the CTS2, and 11.3% ( $n = 48$ ) according to the SES-SFV, and 62.4% ( $n = 264$ ) reported psychological perpetration against their intimate partner. As for victimization, 27.4% ( $n = 116$ ) of the sample reported some form of physical victimization by their intimate partners, 35.2% ( $n = 149$ ) reported sexual victimization using the CTS2, and 17% ( $n = 72$ ) using

the SES-SFV, and 58.2% ( $n = 246$ ) reported some form of psychological victimization in the past year. In the past year, 27% ( $n = 114$ ) of the men reported at least two types of perpetration (polyperpetration), and 43.5% ( $n = 184$ ) reported at least two types of victimization in the past year (polyvictimization). Finally, 60% of men experienced victimization *and* perpetration.

### **Perpetration in Adulthood**

We expected CPA and CSA to significantly predict men's use of perpetration in adulthood, and these results were partially supported (see Figure 1). We hypothesized that men exposed to CPA in childhood would be more likely to perpetrate violence. In partial support of this hypothesis, our results indicated that when controlling for other types of abuse, men reporting CPA were more likely to perpetrate psychological aggression ( $\chi^2 = 4.62$ ,  $df = 1$ ,  $p = .032$ ) against an intimate partner and report polyperpetration ( $\chi^2 = 4.14$ ,  $df = 1$ ,  $p = .042$ ) in the past year, compared with men who did not report histories of physical abuse (see Table 2). Of men with histories of CPA, 72% perpetrated psychological aggression against an intimate partner in the past year, compared with 56% of men with no history of physical abuse, and 36% of men with histories of CPA used multiple types of perpetration, i.e., polyperpetration, against an intimate partner in the past year, compared with 21% of men with no history of physical abuse.

<Figure 1 here>

<Table 2 here>

We also hypothesized that men reporting histories of CSA would be more likely to perpetrate violence against their partners, and be more likely to use polyperpetration, or multiple forms of violence. Results indicated that, when controlling for other types of abuse, men reporting histories of CSA were more likely to perpetrate physical ( $\chi^2 = 11.75$ ,  $df = 1$ ,  $p = .001$ ) and sexual ( $\chi^2 = 11.64$ ,  $df = 1$ ,  $p = .001$ ) violence and polyperpetration ( $\chi^2 = 7.61$ ,  $df = 1$ ,  $p =$

.006) against their intimate partners in the past year (see Table 2). That is, 55% of men with histories of CSA reported the use of physical perpetration compared with 21% of men without histories of CSA. Of the men with histories of CSA, 26% reported the use of sexual perpetration, according to the CTS2, compared with 6% of men without histories of sexual abuse. Finally, 55% of the men with histories of CSA reported polyperpetration, while 25% of the men without histories of CSA perpetrated multiple types of violence. As expected, emotional abuse in childhood did not significantly predict higher odds of any type of perpetration in adulthood. Neither age nor sexual orientation were significant covariates in any of the perpetration models.

### **Victimization in Adulthood**

The victimization regression results (see Figure 1) partially supported our hypotheses that childhood abuse, particularly sexual and emotional abuse, would increase the odds of victimization in adulthood. Although we did not specifically hypothesize CPA in childhood to increase the odds of victimization, our results indicate that men with histories of physical abuse are more vulnerable to sexual violence ( $\chi^2 = 9.92, df = 1, p = .002$ ) and psychological aggression ( $\chi^2 = 4.35, df = 1, p = .037$ ) in intimate partnerships in the past year, after controlling for other types of abuse (see Table 3). Forty-six percent of the men with histories of CPA reported sexual victimization in the past year, compared with 29% of the men without histories of physical abuse. Also, 69% of the men with histories of CPA reported psychological victimization in an intimate relationship in the past year compared with 52% of the men without histories of physical abuse. Surprisingly, physical abuse, not sexual abuse, was significantly related to polyvictimization in adulthood ( $\chi^2 = 13.11, df = 1, p < .001$ ) (see Table 3). That is, 57% of the men with histories of CPA reported multiple forms of victimization, while 35% of the men without histories of physical abuse reported polyvictimization.

<Table 3 here>

As expected, men reporting CSA were more vulnerable to victimization in adulthood. Specifically, after controlling for other types of childhood abuse, men with histories of CSA were more likely to experience physical victimization in intimate relationships in the past year ( $\chi^2 = 6.04, df = 1, p = .014$ ) and sexual victimization according to the SES-SFV ( $\chi^2 = 7.15, df = 1, p = .007$ ), which may measure experiences outside of intimate relationships (e.g., stranger, acquaintance; see Table 3). Of the men with histories of CSA, 52% were victims of physical IPV in the past year compared with 26% of men who reported no histories of sexual abuse. Of the men with histories of CSA, 39% reported sexual victimization, according to the SES-SFV, whereas 15% of men without histories of CSA reported sexual victimization using the SES-SFV.

Finally, men with histories of CEA had significantly higher odds of physical victimization ( $\chi^2 = 4.14, df = 1, p = .042$ ) and psychological aggression ( $\chi^2 = 5.09, df = 1, p = .024$ ) in intimate relationships in the past year, after controlling for other types of childhood abuse (see Table 3). Among men with histories of CEA, 32% were victims of physical IPV in the past year, compared with 19% of men without histories of CEA. Of the men with histories of CEA, 64% reported psychological victimization in the past year, compared with 46% of men without histories of CEA. These results supported our hypothesis that CEA increases the odds of IPV victimization in adulthood. Age was significant for both models of sexual victimization, indicating that younger men were more likely to experience sexual victimization as measured by the CTS2 ( $\chi^2 = 7.95, df = 1, p = .005$ ) and the SES-SFV ( $\chi^2 = 7.76, df = 1, p = .005$ ).

## **Discussion**

Homing in on men's exposure to violence, this study contributes to the small body of research extending the ACEs framework to the full spectrum of violence men experience in

adulthood, that is, victimization and perpetration. Moreover, this study contributes to the understanding of which violence types are interconnected among men. Research elucidating the spectrum of and interconnections among violence types, particularly with men, has potential to heighten awareness of the overlap between victimization and perpetration with men and inform prevention and intervention efforts targeting dating violence, IPV, and sexual violence.

Boys who experienced physical abuse were significantly more likely to perpetrate psychological violence against their partners and report multiple forms of perpetration, or polyperpetration. Additionally, men exposed to CPA in childhood were at greater risk of sexual and psychological victimization by intimate partners in the past year and were more likely to report polyvictimization in the past year. The effects of physical abuse on a child are considerable. Previous research highlights the strong relations between CPA and a myriad of psychiatric disorders, such as post-traumatic stress disorder (PTSD), anxiety disorders, panic disorders, conduct disorders, and substance misuse, in young adulthood (Norman et al., 2012; Silverman, Reinherz, & Giaconia, 1996). Moreover, a recent meta-analysis indicated that men exposed to CPA in childhood were considerably more at risk for alcohol problem drinking compared with women (Norman et al., 2012). Presence of mental health disorders and co-occurring disorders is bound to influence interpersonal relations, putting young men at greater risk of victimization and perpetration in their young adult intimate relationships. For example, Moore and colleagues (2011) found that men in college were more than seven times more likely to perpetrate psychological aggression in their relationships on drinking days relative to nondrinking days, and women's odds were only slightly increased relative to nondrinking days.

Men exposed to CSA were significantly more likely to perpetrate physical and sexual violence against their partners, and were more likely to report the use of multiple forms of

violence. Researchers examining underlying factors driving the relation between CSA and sexual perpetration in young adulthood found that alcohol use serves as a strong mediator of this relation (Loh & Gidycz, 2006). For example, Davis and colleagues (2012) found that college men with histories of CSA were more likely to perceive a female character in a story to be more sexually aroused and to report greater sexual entitlement cognitions when “highly” intoxicated. In the current study, survivors of CSA were also more likely to be victims of physical IPV and sexual violence, possibly by someone outside of their intimate relationships (SES-SFV). These results corroborate previous research that has uncovered a strong link between CSA and sexual revictimization in men and women, even after controlling for social, family, and individual factors (e.g., Fergusson, Boden, & Horwood, 2008; Lalor & McElvaney, 2010). Mechanisms underlying this relation include psychological symptoms/disorders, such as poor emotion regulation, low self-esteem, and depressive symptoms (Lalor & McElvaney, 2010).

Men exposed to CEA had significantly higher odds of experiencing physical and psychological victimization in their intimate relationships in the past year. Consistent with prior research, CEA appears to be associated with victimization, but not perpetration (Zurbriggen et al., 2010). In other words, men may be more vulnerable to victimization in their adult intimate partnerships if they have experienced emotional abuse as children. Prior research shows that there may be a dose-response with CEA and depression in early adulthood (Norman et al., 2012). That is, men who experience CEA more frequently are more likely to report clinically depressive symptoms in early adulthood, which, in turn, may make them more vulnerable to victimization. Although frequency of CEA was not reported in this study, it is possible that depression is serving as a pathway from emotional abuse to victimization in adulthood with this sample.

Consistent with the developmental psychopathology framework, these results indicate

that ACEs increase, although do not determine, the risk of victimization and perpetration in adulthood. That is, exposure to childhood abuse can result in maladaptive coping mechanisms and distorted internal models of relationships, which, if left unresolved, can arise in adult relationships. These findings underscore the elimination of silos in research and point to the need to identify shared risk factors for violence types, indicating that it may be ineffective to screen for single types of violence (e.g., victims or perpetrators). Given these results, children exposed to various forms of abuse are at risk for both victimization and perpetration as adults, with substantial overlap between the two experiences of violence. These data demonstrate the need for comprehensive, cross-cutting interventions that can reduce multiple forms of violence.

### **Limitations**

Certainly, college students face a number of health risks (American College Health Association, 2009), and research contributing to prevention and intervention is very important. Nevertheless, generalizability of this study is primarily limited to highly-educated, heterosexual, White men. In fact, the rates of violence exposure reported in this study are much higher than those reported in community samples (Breiding et al., 2008), suggesting this is a higher-risk sample. Second, the measurement of ACEs and adult victimization and perpetration was based on self-report, which may bias the results toward underreporting because of social desirability (van de Mortel, 2008). Nevertheless, a measure of social desirability was included in the study, and results indicated that there was no effect on victimization reporting and a very small association ( $r = .1$ ) with perpetration reporting. Additionally, we examined a variety of violence types; however, other lesser-studied forms of violence exposure were not measured (e.g., sexual harassment, stalking), potentially limiting our understanding of interconnections among violence exposure with men. Moreover, the severity of violence exposure in childhood and adulthood

were not accounted for in this study; inclusion of severity measures in future studies may reveal important relations along the spectrum of violence. Finally, important confounding variables, such as mental health, substance use, family environment, or childhood neglect that frequently co-occurs in abusive environments (Finkelhor, Ormrod, Turner & Holt, 2009), or neighborhood environment (e.g., community violence), were not measured, potentially undermining the ACEs and later victimization and perpetration relations with men.

### **Practice Implications**

Two major implications emerge from this study. First, our results contribute to and extend the body of research examining the role of child abuse on later victimization and perpetration for men in adulthood. Subsequently, we recommend that practitioners screen for and address histories of trauma when working with victims and perpetrators in adulthood. It is not enough to know the etiology of harmful behavioral patterns in adulthood; rather, practitioners must systematically address these etiologies before any superficial changes can be made. Grady, Levenson, and Bolder (2016) developed a model tracing ACEs to insecure attachments, which produced criminogenic needs in men, ultimately resulting in offending behavior. Following this model, trauma-informed care can serve as a corrective emotional experience by way of a safe, empowering environment from which participants can develop respectful, trusting relationships with clinicians using therapeutic alliance (Grady et al., 2016). Once men's traumatic histories have begun to be addressed, practitioners can then begin the work of cognitive-based therapies, such as the techniques used in the Good Lives Model (Willis, Yates, Gannon, & Ward, 2012).

Second, our results highlight that college men are at risk for multiple types of victimization and perpetration; nevertheless, interventions with men often neglect targeting victimization risk (e.g., Gondolf, 2012). Many policies, paradigms, and theories for

understanding violence derive from heterosexual, women-as-victims/men-as-perpetrators pattern, which though common, is not inclusive (Turchik, Hebenstreit, & Judson, 2015). Understanding college men's risk for victimization may lead to interventions that reduce their victimization and indirectly contribute to women's reduced risk of victimization. That is, by treating the underlying mechanisms increasing one's risk of victimization (e.g., substance use, unresolved trauma, depression), programs may simultaneously address some of the underlying causes of perpetration. Additionally, programs will have the opportunity to identify perpetrating behaviors along with experiences of victimization and provide supplemental curricula and treatment to address violence perpetration cessation. Programs and practitioners must consider addressing the co-occurrence of perpetration and victimization among young adult men; in doing so, practitioners will indirectly contribute to the reduction of violence against women.

### **Future Directions**

Research examining mechanisms of pathological processes associated with violence is needed. It is likely that childhood abuse and maltreatment change emotional and interpersonal processes in a manner that contributes to both adulthood psychopathology and violence risk; however, how these mechanisms influence victimization and perpetration outcomes is unclear. Potentially, underlying mechanisms driving the relations between ACEs and later violence exposure are similar for victims and perpetrators, and perhaps contextual factors determine one's role in violent circumstances. Additional research must be conducted to test these suppositions.

Due to the common experience of victimization and perpetration in the sample—nearly two-thirds of men had experienced some form of victimization or perpetration and 60% reported an overlap of victimization and perpetration in the past year—future researchers may consider conceptualizing violence exposure holistically rather than investigating solely “victims” or

“perpetrators.” That is, those studying interpersonal violence may consider the interconnection of violence types, such as victimization and perpetration, and forms, such as physical, sexual, and psychological, to more fully capture men’s experience of violence as young adults.

Similarly, we recommend future research utilize advanced quantitative methods such as latent class analysis to examine how victimization and perpetration experience co-occur. This study highlights these interrelationships, but a mixture model approach would allow researchers to better understand latent relationships that are not revealed by predictive statistics. For example, Author et al. (under review) found that none of the three violence involved classes identified were characterized by mostly victimization or mostly perpetration, instead, differences in the severity of both victimization and perpetration emerged. A clearer understanding of men’s experience of violence will better inform intervention programs, ultimately reducing interpersonal violence (Anderson & Whiston, 2005; Chermack et al. 2015).

Finally, the odds of violence outcomes in later life were greatest for young men who were sexually victimized in this study and others (e.g., McMahon et al., 2015). Thus, future research must explore the perceived differences in the experience of CSA (e.g., severity, violation of trust, manipulation) compared with other forms of abuse, such as CPA or CEA, and investigate intervention approaches with sexual abuse survivors. Additionally, CEA was associated with victimization, rather than perpetration. If additional research corroborates this finding, future research must explore how and why this form of childhood victimization relates to victimization and not perpetration in adulthood. Results of this future work may illuminate important nuances in risk pathways.

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Table 1  
*Sample Characteristics (N = 423)*

	<i>n</i>	<i>%</i>
Age, <i>M(SD)</i>	22.0(5.3)	
Sexual orientation		
Heterosexual	363	85.8
Homosexual/Gay	30	7.1
Bisexual	20	4.7
Other	10	2.4
Racial/Ethnic identity**		
African American	31	7.3
Asian American	30	7.1
Caucasian	324	76.6
Native American/ American Indian	9	2.1
Hispanic/Latino	30	7.1
Other	20	4.7
Years in College		
Less than 1	132	31.2
Less than 2	54	12.8
Less than 3	78	18.4
Less than 4	63	14.9
More than 4	96	22.6

\*\*Participants could select more than one race; thus, the numbers sum to an amount greater than the total number of participants.

Table 2. Log Odds and Odds Ratios with Perpetration Outcome Variables

	<i>B</i>	SE	Exp(B)
<b>Psychological Violence</b>			
<i>Intercept</i>	0.70	0.64	2.01
<i>Explanatory Variables</i>			
CPA	0.52	0.24	1.68*
CSA	0.25	0.44	1.29
CEA	0.45	0.24	1.57†
<i>Covariates</i>			
Age	-0.01	0.02	0.99
Sexual Orientation	-0.23	0.22	0.80
<b>Polyperpetration</b>			
<i>Intercept</i>	-0.82	0.76	0.44
<i>Explanatory Variables</i>			
CPA	0.52	0.26	1.68**
CSA	1.11	0.40	3.03**
CEA	0.40	0.29	1.49
<i>Covariates</i>			
Age	-0.04	0.03	0.96
Sexual Orientation	0.01	0.25	1.01
<b>Physical Violence</b>			
<i>Intercept</i>	-0.78	0.79	0.46
<i>Explanatory Variables</i>			
CPA	0.32	0.27	1.37
CSA	1.39	0.41	4.01**
CEA	0.37	0.30	1.45
<i>Covariates</i>			
Age	-0.04	0.03	0.96
Sexual Orientation	-0.06	0.26	0.94
<b>Sexual Violence, CTS2</b>			
<i>Intercept</i>	-3.44	1.10	0.03**
<i>Explanatory Variables</i>			
CPA	-0.03	0.45	0.97**
CSA	1.76	0.51	5.78**
CEA	-0.21	0.48	0.81
<i>Covariates</i>			
Age	0.01	0.03	1.01
Sexual Orientation	0.27	0.38	1.31
<b>Sexual Violence, SES-SFP</b>			

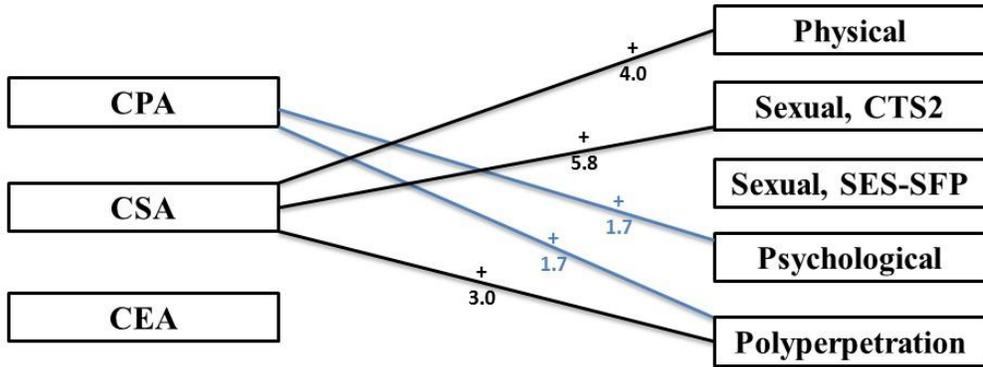
<i>Intercept</i>	-1.57	1.13	0.21
<i>Explanatory Variables</i>			
CPA	0.60	0.35	1.82
CSA	0.63	0.49	1.88
CEA	0.80	0.46	2.23
<i>Covariates</i>			
Age	-0.06	0.04	0.95
Sexual Orientation	-0.12	0.35	0.89

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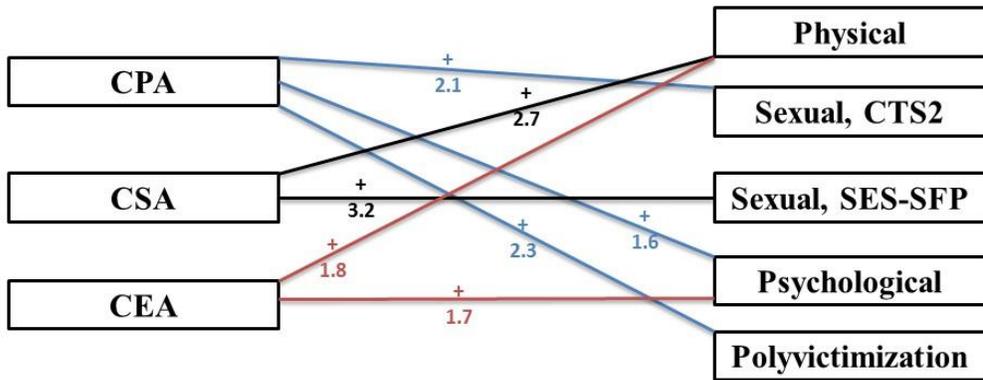
Notes. \*\* < .01, \* < .05, † < .06; CPA = Childhood Physical Abuse; CSA = Childhood Sexual Abuse; CEA = Childhood Emotional Abuse

### Childhood Abuse

### Adult Perpetration



### Adult Victimization



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