HHS Public Access

Author manuscript

Law Hum Behav. Author manuscript; available in PMC 2018 April 01.

Published in final edited form as:

Law Hum Behav. 2017 April ; 41(2): 173–179. doi:10.1037/lhb0000226.

Witnessing domestic violence during childhood is associated with psychopathic traits in adult male criminal offenders

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Abstract

While there is growing evidence that suffering physical abuse during childhood is subsequently associated with psychopathic traits in both juvenile and adult offenders, there is considerably less research on whether exposure to domestic violence as a witness, rather than as a direct victim, influences the subsequent presentation of psychopathic traits in adulthood. Accordingly, the current study examined the relationship between witnessing domestic violence during childhood (i.e., witnessing, hearing, or intervening in abuse against a parent/sibling) and psychopathic traits in adulthood in a sample of $n = 127$ incarcerated male offenders. As predicted, witnessing domestic violence was significantly associated with overall level of psychopathy, with a particularly strong relationship to the interpersonal/affective features of psychopathy. Importantly, this relationship held when controlling for the experience of domestic violence as a direct victim. These results add to the growing body of literature linking adverse and traumatic events during childhood with psychopathic traits later in life, and suggest that domestic violence exposure may be one factor contributing to the manipulative, interpersonal style exhibited by individuals high in psychopathy.

Keywords

psychopathy; childhood maltreatment; domestic violence; PCL-R

Psychopathy is a personality disorder afflicting an estimated 1% of the general population and 20% of the incarcerated population (Hart & Hare, 1996). Characterized by a collection of distinct interpersonal/affective traits (e.g., grandiosity, callousness), as well as a disinhibited, antisocial lifestyle (e.g., impulsivity, criminal versatility), psychopathic individuals are significantly more likely to reoffend, both violently and non-violently, than non-psychopathic individuals (Harris, Rice, & Cormier, 1991). They also commit a disproportionate amount of crime (Hemphill, Hare, & Wong, 1998). Identification of risk factors for the development of psychopathy is a key step in developing more effective

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Conflict of interest: All authors declare that they have no conflicts of interest.

methods for preventing and remediating the callous and impulsive behavior that characterizes the disorder.

One risk factor for the development of psychopathic traits is the experience of childhood maltreatment (e.g., physical/emotional abuse and neglect) (Dargis, Newman, & Koenigs, 2015; Graham, Kimonis, Wasserman, & Kline, 2012; Kimonis, Fanti, Isoma, & Donoghue, 2013; Weiler & Widom, 1996). Graham et al. (2012), for example, reported unique associations among facets of psychopathy (e.g., interpersonal/affective/lifestyle/antisocial) and forms of maltreatment. Specifically, the authors reported associations between physical abuse/neglect and the antisocial features of psychopathy, whereas the interpersonal-affective features of psychopathy did not relate to childhood maltreatment history. Similarly, Dargis et al. (2015) showed a unique relationship between the antisocial features of psychopathy and the experience of physical abuse. Despite growing evidence that the direct experience of childhood maltreatment is associated with psychopathic traits in both juvenile (e.g., Tatar, Cauffman, Kimonis, & Skeem, 2012) and adult offenders (Poythress, Skeem, & Lilienfeld, 2006), there is considerably less research on whether exposure to domestic violence as a witness, rather than as a direct victim (i.e., witnessing, hearing, or intervening in abuse against a parent/sibling), influences the subsequent presentation of psychopathic traits later in life. This is a critical gap in the literature given that an estimated 1 in 15 children in the United States witness domestic violence every year (Hamby, Finkelhor, Turner, & Ormrod, 2011). Furthermore, there is a substantial body of work suggesting that witnessing domestic violence, even in the absence of direct victimization, puts children at a greater risk for developing both internalizing and externalizing symptomology (Boeckel, Wagner, & Grassi-Oliveira, 2015; Evans, Davies, & DiLillo, 2008; Osofsky, 2003; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). For example, children witnessing domestic violence are more prone to engage in physical aggression and often have higher levels of behavioral problems (Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006). Similarly, Graham-Bermann and Levendosky (1997) reported that preschoolers with a history of witnessing domestic violence experience higher levels of negative affect, engaged in more problematic and aggressive behavior with peers, and respond less appropriately in social situations when compared to children in nonviolent homes.

More recently, researchers have begun to examine the relationships between psychopathy and exposure to community violence (e.g., witnessing a shooting), but not domestic violence, specifically (Howard, Kimonis, Muñoz, & Frick, 2012; Kimonis, Frick, Munoz, & Aucoin, 2008; Schraft, Kosson, & Mcbride, 2013). Howard et al. (2012) for instance, reported that exposure to community violence is directly correlated with callous-unemotional traits in detained juveniles. Moreover, this violence exposure mediates the relationship between callous-unemotional traits and delinquency, suggesting that witnessing violent acts account for the relationship between callous-unemotional traits and heightened risk for engaging in violent behavior.

Thus, while there are well-documented relationships between psychopathy and childhood maltreatment as well as between domestic violence exposure and externalizing symptomology, and emerging evidence on the relationship between community violence and psychopathy, the link between witnessing domestic violence and psychopathy has not been

directly investigated. This may be an important distinction to make as some authors have suggested that the degree to which exposure to violence affects long-term emotion processing and traumatization may relate not only to the intensity of the violence, but also the relationship the child has with the victim of the violence (Margolin & Gordis, 2004). Furthermore, if there is indeed a relationship between psychopathy and domestic violence exposure, it is important to distinguish which features of psychopathy most strongly relate to domestic violence exposure. There is substantial evidence that divergent relationships emerge among the interpersonal/affective and lifestyle/antisocial traits of psychopathy (e.g., Krueger, Markon, Patrick, & Iacono, 2005). Specifying these relationships may clarify potential mechanisms linking psychopathic traits and domestic violence exposure.

Accordingly, the goals of the current study are threefold: (1) to test the hypothesis that witnessing domestic violence during childhood will relate to higher psychopathy scores in criminal offenders during adulthood, (2) to identify the specific component(s) of psychopathic personality (i.e., interpersonal/affective/lifestyle/antisocial) that witnessing domestic violence most strongly relates to, and (3) to determine whether these relationships maintain after accounting for the relationship between childhood experience of direct physical abuse and psychopathy.

Method

Participants

Participants included $n = 127$ adult males incarcerated at medium-security state prisons in Wisconsin. All participants were selected from a larger database of eligible participants. Individuals were eligible for participation if they were between the ages of 18 and 55, had no documented diagnosis of a psychotic disorder, and were not currently taking psychotropic medications. Additionally, participants were eligible if they had a 4th grade reading level or above and scored a 70 or above on a standardized measure of intelligence (Wechsler, 1981). Individuals meeting inclusion criteria were asked to participate in an ongoing study on the causes of incarceration and informed that participation was completely voluntary and would have no impact on their incarceration status. Three participants were excluded because of outlier data with undue influence on the regression models (Cook, 1977). Descriptive information is included in Table 1.

Procedure

Each eligible participant first completed two interview sessions and a packet of questionnaires which assessed personality, substance use, intelligence, maltreatment and psychological functioning. The first day of interviewing consisted of general screening information and the PCL-R assessment (approximately 1.5-2 hours for PCL-R assessment and .5 hours for PCL-R rating), whereas the second day of interviewing consisted of diagnostic interviewing for mood, substance use, and personality disorders, as well as assessment of reading level and intelligence (approximately 1-2 hours). Participants were reminded at the beginning of each session that their participation was voluntary. All participants provided informed, written consent prior to beginning data collection. All

procedures performed with human subjects were in accordance with the University of Wisconsin-Madison Health Sciences Institutional Review Board.

Psychopathy

The Psychopathy Checklist-Revised (PCL-R) was used to assess psychopathy (Hare, 2003). The PCL-R is a scale of 20 items rated 0, 1, or 2 based on the degree to which the trait is present. The PCL-R can be further broken into a two-Factor and a four-Facet model. Factor 1 comprises the interpersonal-affective features of psychopathy (Facet 1: interpersonal; Facet 2: affective) whereas Factor 2 comprises the lifestyle-antisocial features of psychopathy (Facet 3: lifestyle; Facet 4: antisocial). We computed Factor and Facet scores based on published guidelines (Hare, 2003) (See Table 1 for descriptive information). PCL-R items were omitted from 16 individuals based on an inability to rate (e.g., unable to rate "revocation of condition release" because participant is a first time offender and has never served a term of conditional release). In these cases, PCL-R scores were prorated according to PCL-R manual guidelines (Hare, 2003).

Trained undergraduate students, graduate students, and professional staff completed the PCL-R interviews and ratings. In accordance with PCL-R manual criteria for use of the PCL-R in a research setting, all undergraduate and professional staff were supervised by advanced graduate student(s) in the clinical psychology Ph.D. program). All interviewers were required to complete an intensive training process that included a thorough education of the following: the construct of psychopathy, the development of the PCL-R and PCL-R manual, the Factor structure of the PCL-R, and principles of PCL-R ratings. After this education, new interviewers shadowed experienced interviewers for a minimum of three months until a very high level of reliability was reached (i.e., the trainee and trainer score each interview within 0-3 points of each other). In addition to PCL-R interviews, all interviewers had access to extensive file information on each participant (e.g., description of current offense, work record, education history, cognitive functioning, mental health diagnoses, substance use history, etc.).

IRR analyses were conducted using an absolute agreement model. Six different raters completed these PCL-R assessments as either the primary rater or reliability rater. Three individual raters contributed to only one rating as either the primary or reliability rater, and three individual raters contributed to two ratings. Because participants were selected from a larger sample, inter-rater reliability ratings were available for only $n = 6$ participants. Nonetheless, these analyses yielded a high intraclass correlation ($r = .99$) for PCL-R total scores; Factor scores (Factor 1, $r = .92$; Factor 2, $r = .89$) and Facet scores (Facet 1, $r = .88$; Facet 2, $r = .99$; Facet 3, $r = .80$; Facet 4, $r = .88$). This is consistent with previously reported PCL-R inter-rater reliabilities from our research group (Dargis et al., 2015; Philippi et al., 2015; Wolf et al., 2015). 40% of the current sample met criteria for psychopathy (PCL-R score ≥30).

Domestic Violence Exposure

The Maltreatment and Chronology of Exposure (MACE) scale was used to separately assess childhood exposure to domestic violence as a direct victim and as a witness (Teicher &

Parigger, 2015). The MACE is a 52-item scale comprised of ten subscales which assess different types of trauma experienced during childhood (i.e., 18 years and younger), including witnessing parental domestic violence (e.g., “Saw adults living in household push, slap, or throw something at mother) witnessing domestic violence against a sibling (e.g., “Parents or adults living in house hit your sibling so hard that it left marks), and directly experiencing physical abuse (e.g., “Parent hit you so hard it left marks for more than a few minutes”). The MACE also assesses for experiencing verbal abuse, emotional abuse, emotional neglect, physical neglect, sexual abuse, as well as physical and emotional peer bullying, although these scales were not utilized for the current study. Each subscale is comprised of 4-7 “yes” or “no” questions. A scaled score is then calculated depending on the number of “yes” responses. Accordingly, severity of maltreatment is gauged by the number of experiences a respondent endorses within each scale. For the current study, a composite “witnessing domestic violence” score was computed by combining the exposure to parental and exposure to sibling violence scales.

Socioeconomic Status

Parent's education level (self-report parental education obtained during interviews) was used as a proxy for socioeconomic status (SES). Parent's education was coded as follows: 1 - did not complete junior high school, 2 - completed junior high school but did not enter high school, 3 - completed some high school, 4 - graduated high school, 5 - some college, 6 - completed 4-year college degree, 7 - graduate school (Hollingshead, 1975). Mean scores were imputed for participants with missing SES data, or participants who were unsure of their parents' education. Both parents' education level were included as covariates in all models.

Intelligence

Intelligence was assessed using the Wechsler Adult Intelligence Scale-Revised (Wechsler, 1981; $n = 108$) or the Shipley Institute of Living Scale (Zachary & Shipley, 1986; $n = 19$). The WAIS-R is not the most current version of the WAIS available, however, the WAIS-R was used in the current study in order to maintain consistency with previous studies from our prison research project.

Data Analyses

Using multiple linear regression, we first examined the relationship between PCL-R Total scores and MACE witnessing domestic violence scores. We then examined the relationship between PCL-R Factor and Facet scores and MACE witnessing domestic violence scores. Factor and Facet scores were examined individually in the regression models as well as combined (i.e., Factor 1 and 2 in the same model) to examine potentially differential relationships between unique variance associated with each Factor and Facet (e.g., Hicks & Patrick, 2006). Finally, because there is a high degree of overlap between witnessing domestic violence and experiencing direct physical abuse (Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008; Ross, 1996), we re-ran analyses controlling for severity of physical abuse to investigate whether witnessing domestic violence significantly relates to psychopathy severity over and above the effects of the direct experience of victimization.

Age, race, IQ, and socioeconomic status were included as covariates in all analyses. Zero-order correlations among all predictor variables are included in Table 2.

Results

As hypothesized, PCL-R Total scores were significantly associated with MACE witnessing domestic violence scores, $t(116) = 3.45$, $p < .0001$, partial $\eta^2 = .09$. Similarly, both PCL-R Factor 1 scores $t(116) = 3.50$, $p < .0001$, partial $\eta^2 = .10$ and Factor 2 scores $t(114) = 2.77$, $p < .001$, partial $\eta^2 = .06$ were significantly associated with witnessing domestic violence scores when examined separately. When both Factors were included in the regression model, Factor 1 significantly related to witnessing domestic violence, $t(113) = 2.21$, $p = .03$, partial $\eta^2 = .04$, whereas Factor 2 did not ($p > .2$). When examining each PCL-R Facet individually, all four Facets were significantly associated with witnessing domestic violence; Facet 1, $t(116) = 3.16$, $p < .001$, partial $\eta^2 = .08$; Facet 2, $t(116) = 2.88$, $p < .001$, partial $\eta^2 = .07$; Facet 3, $t(111) = 2.18$, $p = .03$, partial $\eta^2 = .04$; and Facet 4, $t(116) = 2.33$, $p = .02$, partial $\eta^2 = .04$. However, when scores for all four PCL-R Facets were included in the model, none of the facets uniquely related to witnessing domestic violence (p's > .1).

Finally, we examined whether the above relationships remained significant when controlling for severity of directly experienced physical abuse (MACE physical abuse scores). When controlling for physical abuse victimization, PCL-R total scores remained significantly associated with witnessing domestic violence, $t(100) = 2.90$, $p < .001$, partial $\eta^2 = .08$. Similarly, when examined individually, both Factor 1, $t(100) = 2.66$, $p < .001$, partial $\eta^2 = .07$ and Factor 2, $t(98) = 2.25$, $p = .03$, partial $\eta^2 = .05$ remained significantly associated with witnessing domestic violence. When both Factors were included in the regression model, the relationship between Factor 1 and witnessing domestic violence dropped to trend level, $t(97) = 1.68$, $p = 09$, partial $\eta^2 = .03$, and Factor 2 remained non-significant, ($p > .2$). Examination of the individual Facets revealed that the significant relationship between Facet 1, $t(100) = 2.92$, $p < .001$, partial $\eta^2 = .06$ and Facet 3, $t(95) = 2.33$, $p = .02$, partial $\eta^2 = .02$ and witnessing domestic violence remained significant, whereas Facets 2 and 4 no longer significantly related to witnessing domestic violence (p's >.15). When all Facets were included in the model, Facet 1 was significantly associated with witnessing domestic violence, $t(92) = 2.20$, $p = .03$, partial $\eta^2 = .05$. The three other Facets remained non-significant (p's > .1).

Discussion

In a sample of incarcerated male offenders, we have shown a significant association between witnessing domestic violence during childhood and psychopathy in adulthood. More specifically, we found that witnessing domestic violence was individually associated with both Factors and all Facets of the PCL-R, but when controlling for the unique variance of the Factors and Facets, a specific relationship between witnessing domestic violence and the interpersonal/affective features of psychopathy emerged. This relationship was driven predominantly by the relationship between the interpersonal features of psychopathy (Facet 1) and witnessing domestic violence. Finally, we showed that although the effect sizes

decreased, these results largely remained unchanged when controlling for direct experience of physical abuse.

As predicted, psychopathy was significantly associated with witnessing domestic violence. This novel finding adds to the growing body of literature suggesting that individuals high in psychopathy frequently experience adverse and traumatic events during childhood, including direct victimization and exposure to violence (Dargis et al., 2015; Graham et al., 2012; Kimonis et al., 2008; Kolla, Gregory, Attard, Blackwood, & Hodgins, 2014; Weiler & Widom, 1996). Given the consistency of these cross-sectional findings, further longitudinal research is needed in order to better parse how environmental experiences contribute to, or exacerbate, the development of psychopathic traits. A firmer understanding of environmental contributions to severe emotional and behavioral pathology, like psychopathy, would not only provide a better understanding of etiological factors of psychopathy, but would also help guide intervention efforts for children living in violent homes. For example, recent efforts have been made to design randomized, controlled studies to treat children exposed to domestic violence (Sargent, McDonald, Vu, & Jouriles, 2016). It is possible that these specific interventions could influence the presentation or development of psychopathic traits. The current findings also suggest that the presence of psychopathic or callous/unemotional traits should be taken into consideration when developing domestic-violence focused interventions for youth.

Although the association between Factor 1 and domestic violence exposure decreased to trend level when controlling for experienced physical abuse, the association between domestic violence exposure and the interpersonal features of psychopathy, (i.e., pathological lying, superficial charm, manipulation) remained significant. While this might suggest that individuals prone to lying simply over-reported violence exposure, this rationale seems unlikely. First, Schraft et al. (2013) also reported a significant relationship between Facet 1 of psychopathy and exposure to community violence in a sample of juvenile offenders, demonstrating some consistency in this finding. Second, despite a proclivity toward pathological lying, psychopathic individuals appear to complete valid self-report measures (Lilienfeld, Fowler, & Patrick, 2006).

An alternate explanation for the specific relationship between domestic violence exposure and the interpersonal features of psychopathy may be rooted in social learning theory (Bandura & McClelland, 1977), which highlights the role of the environment in shaping children's future behavior. Following this framework, it is possible that witnessing domestic violence in the home models a maladaptive interpersonal style that is then adopted by the abuse-exposed child. Though it may be expected that witnessing violence in the home would more clearly model aggressive behavior (i.e., that the relationship between domestic violence and psychopathy would be strongest for the Factor 2 antisocial features of the disorder), domestic violence is frequently characterized by manipulation and coercion (Hamberger, Lohr, Bonge, & Tolin, 1997; Strauchler et al., 2004). Though the MACE does not directly assess exposure to psychological or emotional abuse, it is possible that children with frequent exposure to domestic violence are more likely to witness manipulative behavior by a caregiver (in the context of domestic violence), and are thus more likely to develop a conning and manipulative interpersonal style. Further research is required to better

understand the mechanisms by which exposure to domestic violence influences later social/interpersonal development.

An alternative possibility regarding the relationship between Facet 1 of psychopathy and domestic violence exposure is that children exposed to violence against their caregiver(s) and sibling(s) may learn to develop a manipulative interpersonal style in an effort to avoid direct victimization. Although further research is needed in order to examine this prospect, researchers have suggested that attentional abnormalities exhibited by maltreated children may be adaptive given the hostile environment in which they are raised. Pollak and colleagues, for example, suggested that the over-allocation of attention to angry faces documented among maltreated children may be adaptive for them, in order to quickly detect the risk of a physically aggressive parent (Pollak, Cicchetti, Hornung, & Reed, 2000; Pollak & Sinha, 2002; Pollak & Tolley-Schell, 2003). Similarly, others have theorized that some individuals may learn to "turn off" their emotions in an effort to effectively cope with traumatic experiences, eventually manifesting in psychopathic personality traits (Porter, 1996). Accordingly, it is conceivable that, in an effort to reduce the likelihood of their own victimization, children exposed to domestic violence adaptively learn to charm and manipulate the perpetrator of the violence.

In any case, the relationship between domestic violence exposure and the interpersonal/affective features of psychopathy is consistent with previous studies examining community violence exposure (Howard et al., 2012; Kimonis et al., 2008; Schraft et al., 2013). This is notable considering that previous studies examining direct childhood maltreatment and psychopathy have reported that environmental influences largely relate to externalizing/antisocial features of psychopathy (e.g., Krueger et al., 2005). Following this evidence, it is possible that the direct experience of childhood abuse contributes to a propensity to engage in aggressive and dysregulated behavior, whereas witnessing violence contributes to the development of callous and manipulative personality traits. This notion is consistent with previous literature identifying divergent relationships between the two Factors of psychopathy (Blonigen et al., 2010; Hicks & Patrick, 2006; Verona, Patrick, & Joiner, 2001), though further research is needed in order to solidify the divergent relationships between experienced maltreatment and exposure to maltreatment among psychopathic individuals. Along these lines, future research should also consider the potentially differential relationships between witnessing maltreatment and other externalizing disorders (e.g., antisocial personality disorder, conduct disorder). It is possible that witnessing violence is a unique risk factor for the development of the interpersonal-affective features of psychopathy, whereas the experience of violence confers risk for the development of more impulsive-antisocial traits, which are shared more broadly among externalizing disorders. Clarifying these distinctions may further elucidate the unique relationship between witnessing violence and the interpersonal features of psychopathy.

The current study has several limitations. A primary limitation of the present study is the use of retrospective self-report data, although the MACE is a well-validated instrument (Teicher & Parigger, 2015) and several previous studies have utilized self-report measures of childhood maltreatment in incarcerated samples (Dargis et al., 2015; Driessen, Schroeder, Widmann, von Schonfeld, & Schneider, 2006; Sarchiapone, Carli, Cuomo, Marchetti, &

Roy, 2009). Relatedly, although a strength of the MACE is the assessment of exposure to violence, the MACE does not directly assess exposure to sexual violence. Accordingly, the current study was not able to examine the potentially unique effects of witnessing sexual violence, in addition to physical violence. An additional limitation of the current study is its cross-sectional design. Because of this, it is not possible to examine the causal impact of domestic violence on psychopathy. Though it is possible that exposure to violence confers risk for the development of psychopathic traits, it is also plausible that children who grow up in violent households are more likely to have antisocial parents and, thus, genetic factors confer risk for the development of psychopathic traits (Harris, Rice, & Lalumière, 2001; Viding & Larsson, 2010). For instance, Taylor, Loney, Bobadilla, Iacono, and McGue (2003) reported a strong genetic influence on the antisocial and emotional-detachment features of psychopathy, suggesting the development of psychopathic traits may occur even in the absence of adverse environmental experiences. Others have reported significant interactions between psychopathy and childhood maltreatment, indicating that abnormalities associated with psychopathy may be exacerbated by the experience of maltreatment (Kolla et al., 2014). Accordingly, it is not yet well understood how environmental factors, such as domestic violence exposure, cause, interact, and/or exacerbate the development of psychopathic traits.

Despite these limitations, the current study demonstrates a novel relationship between domestic violence exposure and psychopathy. These findings suggest that witnessing household violence and aggression has a unique relationship with psychopathic traits, specifically the interpersonal traits of psychopathy, even when direct physical abuse experience is accounted for. Given the prevalence of domestic violence, it is crucial that we gain a better understanding of how exposure to violence affects children's developmental trajectory, and specify potential mechanisms by which exposure to violence contributes to the development of psychopathic traits.

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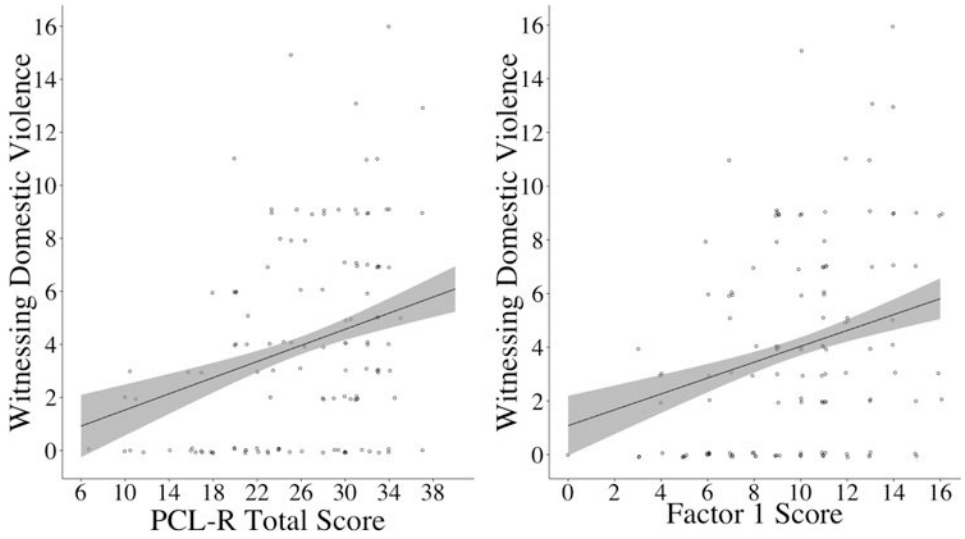

Figure 1.

MACE witnessing domestic violence scores are significantly associated with and PCL-R Total scores (left) and Factor 1 scores (right).

Table 1

Participant Information

	Mean (sd)	95% CI	Range
PCL-R Total	26.15 (6.85)	24.96, 27.34	6.67-37
Factor 1	9.78 (3.28)	9.21, 10.35	0-16
Factor 2	13.93 (3.90)	13.25, 14.61	3-20
MACE Domestic Violence	4.01 (3.83)	3.34, 4.68	0-16
MACE Physical Abuse	6.37 (3.15)	5.82, 6.92	0-10
Age	31.69 (7.67)	30.36, 33.02	19-49
IQ	98.54 (11.85)	96.48, 100.6	72-128
Race (% Cauc, AA, Other)	50/42/5		
Mother Education	12.55 (2.44)	12.13, 12.97	8-20
Father Education	12.52 (2.40)	12.10, 12.94	6-17

Note: Cauc, Caucasian; AA, African-American

Table 2

Regression Results for Witnessing Domestic Violence

1.	***B***	***SE B***	**β**	R^2	ΔR^2	**95% CI**
PCL-R	**.18**	.05	.32	.11	.09	.09, .29
Factor 1	**.27**	.12	.23	.11	.04	.05, .56
Factor 2	.13	.12	.14		.01	-.10, .38
Facet 1	.26	.20	.15		.01	-.14, .66
Facet 2	.28	.28	.12	.08	.008	-.18, .99
Facet 3	.13	.26	.06		.001	-.51, .54
Facet 4	.15	.15	.11		.008	-.11, .50
2.	*B*	*SE B*	β	R^2	ΔR^2	95% CI
PCL-R	**.14**	.05	.25	.34	.06	.07, .27
Factor 1	.18	.11	.15		.02	.02, .47
Factor 2	.12	.11	.13	.33	.009	-.08, .35
Facet 1	**.38**	.17	.20		.03	.07, .79
Facet 2	-.22	.26	-.09	.35	.005	-.70, .39
Facet 3	.38	.25	.18		.02	-.04, .96
Facet 4	.10	.14	.06		.003	-.18, .38

Note: 1. age, race, IQ, SES included as covariates,
2. age, race, IQ, SES, physical abuse included as covariates Bolded $p < .05$

Table 3

Zero-Order Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PCL-R Total		**.85**	**.89**	**.73**	**.76**	**.71**	**.78**	**.22**	-.12	-.05	-.06	**-.23**	**.28**	**.36**
2. Factor 1			**.55**	**.91**	**.83**	**.48**	**.45**	.11	-.10	-.01	-.12	-.07	**.26**	**.34**
3. Factor 2				**.44**	**.54**	**.77**	**.91**	**.31**	-.15	-.03	.01	**-.30**	**.25**	**.32**
4. Facet 1					**.52**	**.38**	**.34**	.13	-.07	.09	-.06	-.04	**.20**	**.29**
5. Facet 2						**.47**	**.46**	.04	-.11	-.14	-.17	-.11	**.26**	**.31**
6. Facet 3							**.43**	**.28**	**-.19**	.07	.05	-.34	.04	**.26**
7. Facet 4								**.25**	-.04	-.11	-.01	**-.20**	**.30**	**.27**
8. Age									.09	**.24**	.05	-.05	**.23**	.08
9. Race										**-.18**	-.02	-.11	.11	-.09
10. IQ											.08	.01	.04	-.06
11. Mother Education												.12	-.12	-.10
12. Father Education													-.01	-.16
13. Physical Abuse														**.44**
14. Domestic Violence														

Note: Bolded $p < .05$