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Troubled or Traumatized Youth? The Relations Between Psychopathy, Violence Exposure, Posttraumatic Stress Disorder, and Antisocial Behavior Among Juvenile Offenders

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Abstract

The current study examined how psychopathy, exposure to violence, and posttraumatic stress disorder (PTSD) are associated with antisocial behavior among 1,354 serious delinquent adolescents from the Pathways to Desistance study. Results showed that psychopathy, violence exposure, and PTSD are independently linked to self-reported involvement of delinquency, even after controlling for respondents' demographic characteristics. However, the effect of PTSD on antisocial behavior was small. Differential associations were observed between the 2 factors of psychopathy, interpersonal/affective and social deviance, and PTSD symptoms. Specifically, the effect of social deviance characteristics on delinquency was above and beyond that of interpersonal/affective features. In addition, exposure to violence as a victim or witness were uniquely associated with increased delinquent behavior. Findings clarified the relations among psychopathy, violence exposure, PTSD, and antisocial behavior, and highlighted the differential links between psychopathy factors and delinquency.

Keywords

Delinquency; posttraumatic stress disorder; psychopathy; self-report offending; violence exposure

In the past decade, there has been decline in delinquent offenses committed by adolescents in the United States. However, juveniles are estimated to be responsible for about 12% of violent crimes and 18% of property crimes (Puzzanchera & Kang, 2014). In 2014, juvenile courts handled close to one million delinquency cases (Hockenberry & Puzzanchera, 2017). As such, there is continued interest in examining individual characteristics and environmental risk factors associated with adolescent delinquent behaviors.

Psychopathy is an individual difference that has been consistently found to be associated with antisocial and violent behaviors among adolescents, especially boys. The psychopathy construct is characterized by a constellation of maladaptive traits, such as grandiosity, lack of guilt or remorse, callousness, and superficial charm (Cleckley, 1941). Studies have shown that adolescent boys with more psychopathic characteristics are more likely to have participated in a wide range of criminal activities (Kosson, Cyterski, Steuerwald, Neumann,

& Walker-Matthews, 2002) and engaged in more institutional violent misconduct (Murrie, Cornell, Kaplan, McConville, & Levy-Elkon, 2004; Shaffer, McCuish, Corrado, Behnken, & DeLisi, 2015). There is evidence suggesting linking psychopathy with recidivism among youth offenders (Edens & Campbell, 2007; Edens, Campbell, & Weir, 2007; Forth, Hart, & Hare, 1990; Skeem & Cauffman, 2003), although the long-term predictive power of psychopathy remains inconsistent (Cauffman, Kimonis, Dmitrieva, & Monahan, 2009; Edens & Cahill, 2007; Gretton, McBride, Hare, O'Shaughnessy, & Kumka, 2001).

In addition to youths' psychopathic traits, there is evidence suggesting that exposure to violence and/or traumatic experiences in early life may be associated with subsequent antisocial behaviors, a mechanism known as the cycle of violence (DeLisi et al., 2009). Among youth offenders, early life exposure to violence and victimization have been linked to subsequent antisocial behavior, such as chronic weapon carrying (Vaughn, Howard, & Harper-Chang, 2006), generalized criminal behavior (Becker, Kerig, Lim, & Ezechukwu, 2014; Cottle, Lee, & Heilbrun, 2001; Mulder, Brand, Bullens, & Van Marle, 2010; Vaughn, Freedenthal, Jenson, & Howard, 2007), and institutional misconduct (DeLisi et al., 2009). Becker and Kerig (2011) also found posttraumatic stress disorder (PTSD) to be associated with the frequency and severity of antisocial behavior.

Of note, studies have shown that violence/trauma exposure in early life may be risk factors for psychopathic tendencies among adolescents. For example, elevated psychopathic traits among delinquent youths is associated with childhood abuse and neglect (Campbell, Porter, & Santor, 2004; Weiler & Widom, 1996), early traumatic exposure (Krischer & Sevecke, 2008; Tatar, Cauffman, Kimonis, & Skeem, 2014), and exposure to community violence (Kimonis, Frick, Munoz, & Aucoin, 2008; Schraft, Kosson, & McBride, 2013). Weak to moderate correlations were found between psychopathic traits and PTSD among adults (Blackburn, Logan, Donnelly, & Renwick, 2011; Blonigen, Sullivan, Hicks, & Patrick, 2012) and adolescents (Kubak & Salekin, 2009). Taken together, it is possible that both psychopathy and violence/trauma exposure are related to adolescent delinquency. A recent study showed that violence exposure is associated with subsequent violent offending, with some degree of reciprocity over time. In addition, the link between violence exposure and later violent offending is mediated by youths' psychopathic traits (Baskin-Sommers & Baskin, 2016). However, whether psychopathic traits, violence exposure, and PTSD symptoms are uniquely associated with antisocial behavior among juvenile offenders remains unclear. Furthermore, whether different components of the psychopathy construct (i.e., interpersonal/affective and social deviance features) and varying degree of violence exposure (as a victim vs. as a witness) are differentially associated with subsequent offending behavior has not been explored.

The present study

The primary goal of the current study was to examine the extent to which delinquent behavior is related to psychopathy, violence exposure, and PTSD among a large sample of serious juvenile offenders. Consistent with prior research, it is hypothesized that psychopathy, exposure to violence, and PTSD are associated with increased offending behavior. It is further hypothesized that psychopathy, violence exposure, and PTSD would

be uniquely associated with delinquency. A secondary objective was to explore whether (a) the two factors of psychopathy (interpersonal/affective and social deviance features) and (b) exposure to violence as victims and witnesses are independently correlated with criminal behavior. It is expected that the psychopathy factors and exposure to violence as victims and witnesses would have unique correlations with offending behavior.

Method

Participants

Data for the current investigation was obtained from the baseline interviews of the Pathways to Desistance project ("Pathways"). "Pathways" is a large, longitudinal study of serious adolescent offenders from Maricopa County, Arizona, and Philadelphia County, Pennsylvania (Mulvey et al., 2004). Across both sites, 1,354 juveniles who were under 18 years old at the time of the study index offense and found guilty of a serious offense were enrolled between November 2000 and January 2003. Enrollment of delinquent boys was limited to 15% drug offenders, whereas all eligible girls and all juveniles whose cases were being considered for trial in the adult system were approached.

Demographic characteristics of the participants are presented in Table 1. Details regarding recruitment and a complete description of the full sample and the study methodology are discussed in Schubert et al. (2004).

Measures

Psychopathy

The 20-item Psychopathy Checklist: Youth Version (PCL:YV; Forth, Kosson, & Hare, 2003) was used to assess psychopathic tendencies. The PCL:YV was completed by trained researchers based on a semi-structured interview with the youths and a review of available official court documents. All items are rated on a 3-point ordinal scale (0 = *does not apply*; 1 = *applies to a certain extent*; 2 = *definitely applies*). The total PCL:YV score (sum of all 20 items; range = 0 to 40) represents an individual's overall psychopathic tendency. Two factor scores assessing interpersonal/affective features (F1: sum of eight items) and social deviance characteristics (F2: sum of nine items) are also available. Excellent inter-rater reliability (ICC = .91) was reported during training on the PCL:YV (Tsang, Piquero, & Cauffman, 2014).

Exposure to violence

A 13-item, modified version of the Exposure to Violence Inventory (ETV; Selner-O'Hagan, Kindlon, Buka, Raudenbush, & Earls, 1998), was used to assess participants' prior violence exposure in this study. Youths were asked to indicate (yes/no) whether they have ever experienced (six items) and observed (seven items) different types of violent incidents. A total amount of exposure to violence (ETV total) was computed by summing the number of violent incidents in which the respondent was a victim (ETV victim) and the number of witnessed (ETV witness) violent events. Adequate internal consistency was reported for the ETV victim ($\alpha = .62$), ETV witness ($\alpha = .78$), and ETV total ($\alpha = .67$).

PTSD

Diagnosis of PTSD was determined using the Composite International Diagnostic Interview (World Health Organization, 1990), a comprehensive, structured interview designed to assess mental disorders. Respondents who met the criteria of PTSD were asked additional questions to establish whether the PTSD symptoms were present over the lifetime.

Delinquency

Antisocial behavior was assessed using 22 dichotomous self-report offending (SRO; Huizinga, Esbensen, & Weiher, 1991) items. Individuals indicated whether or not they had been involved in the 22 different types of crimes ever in their lives. The types of criminal acts include drug-related offenses, aggressive offending (e.g., killed someone), and income offending (e.g., shoplifting). A total number of self-report offending behavior was computed by summing the number of criminal acts the youths reported ever having participated in.

Data analysis

Associations between psychopathy and violence exposure were examined using Pearson's correlations, whereas logistic regressions were used to investigate the relations between psychopathy and PTSD diagnosis. A series of multiple regression models were used to examine the associations between adolescents' self-report offending behavior, psychopathy, violence, and PTSD. Model 1 first addressed the proportion of variance in SRO as explained by youths' demographic variables (gender, age, ethnicity). The next parallel set of three models examined the associations between SRO and psychopathy (Model 2a), violence exposure (Model 2b), and PTSD (Model 2c), controlling for demographic variables. Considering the well-established relation between psychopathy and SRO, whether violence exposure and PTSD can each explain additional variance of SRO is examined in Models 3a and 3b, respectively, controlling for youths' demographics and psychopathy levels. Psychopathy, violence exposure, and PTSD are simultaneously included in Model 4 to examine whether they are uniquely associated with SRO.

A parallel set of two models were used to investigate whether the two factors of psychopathy are correlated with SRO (Models 5a and 5b, respectively). The two factors are simultaneously included in Model 6 to examine whether the psychopathy factors are uniquely correlated with SRO. Next, a parallel set of two models were used to explore the extent to which ETV victim and ETV witness are related to SRO (Models 7a and 7b, respectively). The two factors of psychopathy, ETV victim, ETV witness, and PTSD were simultaneously included in Model 8 to investigate whether these variables are uniquely associated with SRO.

Results

Descriptive statistics of the PCL:YV, ETV, PTSD diagnosis, and SRO are presented in Table 1. The average PCL:YV score is within the normal range of 9 to 28 among juvenile offenders (Edens et al., 2007), though lower than the means reported in other studies (Cauffman et al., 2009). Among this sample of serious adolescent offenders, the majority (94.82%) reported having been exposed to at least one violent event. Further, 67.28%

reported having been a victim of at least one violent incident, whereas 93.12% have witnessed at least one violent event. A small proportion (6.43%) of youth offenders met the diagnosis criteria of PTSD. As expected among this sample of serious offending youths, most (90.92%) reported having endorsed at least one type of criminal act before the baseline interview.

The correlations between psychopathy, exposure to violence, and PTSD diagnosis are presented in Table 2. PCL:YV total, F1, and F2 were all positively associated with ETV total ($r_s = 0.40, 0.24, \text{ and } 0.40$, respectively, all $p_s < .001$), meaning that youths with higher levels of psychopathy reported more incidences of violence exposure. Similar results were observed for ETV victim ($r_s = 0.37, 0.24, \text{ and } 0.36$, respectively, all $p_s < .001$) and ETV witness ($r_s = 0.34, 0.19, \text{ and } 0.34$, respectively, all $p_s < .001$). PTSD was positively associated with PCL:YV total and F2, but not F1, scores. The odds of having symptoms that meet the diagnostic criteria of PTSD were higher for adolescents with higher overall psychopathy levels ($OR = 1.03, p = .02$) and stronger endorsement of social deviance characteristics ($OR = 1.08, p = .009$). Positive associations were also observed between PTSD and ETV ($ORs = 1.77, 1.65, \text{ and } 1.43$ for ETV victim, witness, and total, respectively; all $p_s < .001$). Youths who reported more frequent exposure to violence (as victims or as witnesses) were more likely to meet diagnostic criteria of PTSD.

The multivariate associations between adolescents' self-report offending behavior, psychopathy, violence, and PTSD were explored in a series of multiple regression models (Table 3). Model 1 examined the relations between SRO and adolescents' demographic characteristics. On average, female juvenile offenders reported less offending behavior than male juvenile offenders ($b = -2.10, SE = .36, p < .001$), whereas older adolescents reported having taken part in more illegal activities than younger youths ($b = .74, SE = .11, p < .001$). Compared to youths who self-identified as White, those who self-identified as Black reported less offending behavior ($b = -.84, SE = .34, p = 0.013$).

Models 2a, 2b, and 2c, respectively, included PCL:YV total, ETV total, and PTSD diagnosis to Model 1. PCL:YV total, ETV total, and PTSD diagnosis were each positively associated with self-report offending behavior ($b = .32, .94, \text{ and } 1.76$, respectively; all $p_s < .001$), after controlling for demographic characteristics. Adolescents with higher psychopathy levels, more exposure to violence, or were diagnosed with PTSD were likely to engage in more offending behavior. Compared to Model 1, Models 2a and 2b explained substantially more variance in SRO ($R^2 = .29 \text{ and } .36$, respectively; all $p_s < .001$; $\eta_p^2 = .31 \text{ and } .39$, respectively), whereas the addition of PTSD diagnosis had a minimal effect ($R^2 = .009, p < .001$; $\eta_p^2 = .010$).

Models 3a and 3b showed that, after controlling for youths' demographic characteristics and psychopathy levels, ETV total ($b = .73, SE = .03, p < .001$) and PTSD ($b = 1.13, SE = .42, p < .001$) remained independently related with self-reported offending behavior. Compared to the model in which only psychopathy levels was included (Model 2a), the addition of ETV total (Model 3a) explained significantly more SRO variance ($R^2 = .18, p < .001$; $\eta_p^2 = .28$). On the other hand, minimal additional variance in self-report offending behavior was explained by including PTSD diagnosis in Model 3b ($R^2 = .004, p = .007, \eta_p^2 = .006$).

Model 4 showed there was no additional relation between PTSD diagnosis and SRO after controlling for their psychopathy levels and exposure to violence ($R^2 < .001$, $p = .55$, $\eta_p^2 < .001$).

A set of supplementary multiple regression models (psychopathy $\times$ ETV total, psychopathy $\times$ PTSD, ETV total $\times$ PTSD) were conducted to investigate whether the interactions between psychopathy, ETV, and PTSD would account for the variance in SRO. The psychopathy $\times$ ETV total ($R^2 = .007$, $p < .001$, $\eta_p^2 = .02$) and the psychopathy $\times$ PTSD ($R^2 = .001$, $p = .04$, $\eta_p^2 = .003$) were both statistically significant, the interaction terms have minimal effect in accounting for the variance in SRO. There was no statistically significant interaction between ETV total and PTSD ($R^2 < .001$, $p = .50$, $\eta_p^2 < .001$).

Next, the extent to which self-report offending behavior was associated with the two factors of psychopathy and different types of exposure to violence were examined (Table 4). Results in Models 5a and 5b showed the PCL:YV F1 ($b = .28$, $SE = .03$, $p < .001$) and F2 ($b = .42$, $SE = .02$, $p < .001$) were each positively associated with SRO. When both PCL:YV F1 and F2 were included simultaneously into Model 6, the association between PCL:YV F2, but not F1, and SRO remained statistically significant ($b = .39$, $SE = .03$, $p < .001$). Models 7a and 7b showed ETV victim ($b = 1.33$, $SE = .07$, $p < .001$) and ETV witness ($b = .93$, $SE = .05$, $p < .001$) were each positively correlated with SRO. Results in Model 8 showed that PCL:YV F2 ($b = .40$, $SE = .03$, $p < .001$), ETV victim ($b = .96$, $SE = .08$, $p < .001$), and ETV witness ($b = .59$, $SE = .06$, $p < .001$) were all uniquely associated with SRO. However, self-report offending behavior was not statistically significantly associated with PCL:YV F1 scores in this model ($b = .04$, $SE = .03$, $p = .25$).

Discussion

The present study investigated the associations between antisocial behavior, psychopathic tendencies, exposure to violence, and PTSD symptoms among a large sample of serious adolescent offenders. Results showed youths with higher psychopathy levels are more likely to report having engaged in more offending behavior, similar to findings in other studies (Kosson et al., 2002). Adolescents who encountered more violent incidents (either as a victim or a witness) are more likely to engage in more illegal activities, providing further indirect support for the cycle of violence hypothesis (DeLisi et al., 2009). Adolescents who met the PTSD diagnostic criteria reported having engaged in more offending behavior than those who did not, replicating a previous finding (Becker & Kerig, 2011). However, the effect of PTSD on offending behavior was small, especially after accounting for the influences of psychopathy levels and violence exposure. Findings suggest that the negative effect of psychopathy and violence exposure on delinquency may be stronger, and that the influence of PTSD on delinquency may be mediated by psychopathic tendencies and violence exposure in serious youth offenders.

The interrelations between psychopathy, violence exposure, and PTSD among this sample of juvenile offenders are consistent with those in prior studies. As expected from existing research (Krischer & Sevecke, 2008; Schraft et al., 2013; Tatar et al., 2014), the current study showed that violence exposure is associated with stronger overall psychopathy traits

among juvenile offenders. Results further illustrated a stronger link between exposure to violence and the social deviance characteristics than interpersonal/affective features of psychopathy, with similar findings for victims or witnesses of violence incidents. The differential associations between the two psychopathy factors and PTSD are consistent with previous research illustrating positive associations between antisocial features of psychopathy and PTSD symptoms among adult (Blonigen et al., 2012; Hicks, Vaidyanathan, & Patrick, 2010) and adolescent (Tatar et al., 2014) offenders, as well as the negative to no correlation between interpersonal/affective features and PTSD symptoms among adults (Blonigen et al., 2012; Pham, 2012; Willemsen, De Ganck, & Verhaeghe, 2011). Taken together, these findings suggest that the interrelations between psychopathy, violence exposure, and PTSD symptoms may be similar among adults and adolescents involved in the criminal justice system.

Results also showed that social deviance features are more strongly associated with delinquency than interpersonal/affective characteristics of psychopathy. Considering that the PCL:YV Factor 2 assesses features relating to antisocial behavior, such as criminal versatility and juvenile delinquency, it is reasonable to observe strong correlations between social deviance characteristics and adolescents' self-report delinquent behavior, a finding that is consistent with previous meta-analyses (Leistico, Salekin, DeCoster, & Rogers, 2008). It is worth noting, however, that there is no additional effect of interpersonal/affective features on delinquency, after taking into account the influence of social deviance features. Findings suggest that core personality features of psychopathy, such as superficial charm, lack of remorse, and callousness, may not be strong indicators of criminality involvement. In fact, the association between psychopathy and antisocial behavior may be largely attributed to the overlapping construct between social deviance features of psychopathy (e.g., impulsivity, criminal versatility) and delinquency.

The robust link between violence exposure and antisociality is further illustrated by the strong associations between exposure to violence as victims and witnesses and delinquency. Violence exposure, as a victim and as a witness, are both uniquely related to involvement in criminal activities, even after taking into account other psychosocial characteristics. These results expand upon previous research examining the correlation between violence exposure and delinquency by demonstrating that the detrimental impact of violence exposure is not limited to being victimized in violent incidence, but generalizes to witnessing violent events.

Limitations

There are a few limitations in this study. First, the data on violence exposure was retrospective in nature and was not validated by collateral or observation information. Second, self-report offending behavior was operationalized as the number of different types of criminal activities, which accounted for the variety of offending acts, but not how often youths participated in each illegal activity. Strong correlation was previously found between offending frequency and variety (Monahan & Piquero, 2009), suggesting that offending variety may serve as a reasonable indicator of criminal involvement in this sample. Nonetheless, additional studies are warranted to replicate the current findings with offending frequency and official arrest records to better understand the interrelations between the

frequency and severity of antisocial behavior, psychopathy, violence exposure, and PTSD. Third, the proportion of individuals with symptoms that met the diagnostic criteria for PTSD was rather small, and event(s) that may have contributed to the PTSD symptoms were not known. It is unclear how much the current findings can be generalized to samples with higher rates of PTSD and/or those with specific types of traumatic experience. An additional limitation is that the current study only included data from the Pathways baseline interviews; the effects of psychopathy, violence exposure, and PTSD on delinquency were correlational. Using Pathways' longitudinal data, Baskin-Sommers and Baskin (2016) found that violence exposure and violent offending have reciprocal effects over time, and that this link is mediated by psychopathic traits. However, the roles of PTSD and the two factors of psychopathy on subsequent delinquent behavior remain unknown.

Due to the nature of the data available, the current study was unable to examine potential differential associations between alternative factors of psychopathy (e.g., Cooke and Michie's (2001) three-factor model; Hare's (2003) two-factor, four-facet model) and delinquency. This provides opportunities for future research. For example, the current findings showed that social deviance characteristics were more strongly associated with violence exposure, PTSD symptoms, and delinquency. Would the same associations hold for the impulsive and irresponsible lifestyle? Would we find differential connections between the two facets of interpersonal/affective characteristics, arrogant and deceitful personality style and deficient affective experience, as well? Researchers may also further investigate if the link between violence exposure and delinquency pertains to any violence exposure, or if the relation differs as a function of the frequency and severity of violence exposure.

Conclusions

In summary, this study showed that psychopathy traits, exposure to violence, and PTSD are uniquely related to antisocial behavior among serious offending adolescents. However, the effect of PTSD on antisocial behavior is small, especially after taking into account the influences of psychopathy and violence exposure. Of note, the association between social deviance features of psychopathy and delinquency is above and beyond that of interpersonal/affective characteristics. Even after taking into account the association between psychopathy and delinquency, unique links remain between violence exposure, both as a victim and a witness, and antisocial behavior. These findings highlight the differential connections between psychopathy factors and delinquency, and further increased our understanding of the relation between different types of traumatic experiences and antisocial behavior. The current study indicates that intervention techniques developed to deter youth from delinquency should not only target those with high psychopathic tendencies, but also those with high prior exposure to violence.

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Table 1

Descriptive statistics of demographic and psychological characteristics of serious juvenile offenders.

		Philadelphia	Phoenix	Total
		<i>n</i> = 700	<i>n</i> = 654	<i>N</i> = 1,354
Gender (%)	Male	605 (86.43%)	565 (86.39%)	1,170 (86.41%)
	Female	95 (13.57%)	89 (13.61%)	184 (13.59%)
Age ^a		16.1 (1.2)	16.0 (1.1)	16.0 (1.1)
Ethnicity (%)	White	72 (10.29%)	202 (30.89%)	274 (20.24%)
	Black	502 (71.71%)	59 (9.02%)	561 (41.43%)
	Hispanic	107 (15.29%)	347 (53.06%)	454 (33.53%)
	Other	19 (2.71%)	46 (7.03%)	65 (4.80%)
PCL:YV ^a	Total	15.55 (7.81)	16.31 (7.65)	15.91 (7.74)
	Factor 1	4.79 (3.46)	5.31 (3.50)	5.04 (3.49)
	Factor 2	8.14 (3.89)	8.54 (3.84)	8.33 (3.87)
ETV ^a	Victim	1.43 (1.37)	1.74 (1.53)	1.58 (1.46)
	Witness	4.11 (1.79)	3.40 (2.06)	3.77 (1.96)
	Total	5.54 (2.72)	5.13 (3.25)	5.34 (2.99)
PTSD (%)	Lifetime	40 (5.71%)	47 (7.19%)	87 (6.43%)
SRO ^a		6.46 (4.19)	7.94 (4.93)	7.18 (4.62)

Note: PCL:YV = Psychopathy Checklist: Youth Version; ETV = Exposure to violence; PTSD = Posttraumatic stress disorder; SRO = Self-report offending.

^aDescriptive statistics are presented as mean (standard deviation).

Table 2

Correlations between PCL:YV, exposure to violence, and PTSD among juvenile offenders.

	PCL:YV Total	PCL:YV Factor 1	PCL:YV Factor 2	ETV: Victim	ETV: Witness	ETV: Total
PCL:YV Factor 1 ^a	0.86 ***					
PCL:YV Factor 2 ^a	0.91 ***	0.61 ***				
ETV: Victim ^a	0.37 ***	0.24 ***	0.36 ***			
ETV: Witness ^a	0.34 ***	0.19 ***	0.34 ***	0.53 ***		
ETV: Total ^a	0.40 ***	0.24 ***	0.40 ***	0.83 ***	0.91 ***	
PTSD ^b	1.03 *	1.04	1.08 **	1.53 ***	1.37 ***	1.27 ***

Note: PCL:YV = Psychopathy Checklist: Youth Version; ETV = Exposure to violence; PTSD = Posttraumatic stress disorder diagnosis.

^a Pearson's correlation coefficients are presented.

^b Odds ratios are presented as PTSD is a dichotomous variable.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 3

Multiple regression models examining the associations between self-report offending behavior, psychopathy, violence exposure, and PTSD among juvenile offenders.

	Model 1		Model 2a		Model 2b		Model 2c		Model 3a		Model 3b		Model 4	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Intercept	-4.27	(1.75)*	-5.73	(1.45)***	-1.62	(1.37)	-3.97	(1.74)*	-3.22	(1.24)**	-5.53	(1.45)***	-3.24	(1.24)**
Gender														
Female	-2.10	(0.36)***	-1.59	(0.30)***	-1.17	(0.29)***	-2.24	(0.36)***	-1.04	(0.26)***	-1.69	(0.30)***	-1.02	(0.26)***
Age	0.74	(0.11)***	0.50	(0.09)***	0.28	(0.09)**	0.71	(0.11)***	0.23	(0.08)**	0.48	(0.09)***	0.23	(0.08)**
Ethnicity														
Black	-0.84	(0.34)*	-0.63	(0.28)*	-1.48	(0.26)***	-0.80	(0.33)*	-1.19	(0.24)***	-0.61	(0.28)*	-1.20	(0.24)***
Hispanic	0.52	(0.35)	0.64	(0.29)*	-0.07	(0.27)	0.50	(0.35)	0.15	(0.25)	0.62	(0.29)*	0.15	(0.25)
Other	0.22	(0.64)	0.03	(0.53)	-0.20	(0.50)	0.15	(0.63)	-0.24	(0.45)	-0.02	(0.55)	-0.23	(0.45)
PCL:YV			0.32	(0.01)***					0.22	(0.01)***	0.32	(0.01)***	0.22	(0.01)***
ETV					0.94	(0.03)***			0.73	(0.03)***			0.73	(0.03)***
PTSD							1.76	(0.50)***			1.13	(0.42)**	-0.21	(0.36)
<i>R</i> ²	0.07		0.36		0.43		0.08		0.54		0.36		0.54	

Note: *b* = unstandardized regression coefficients; *SE* = standard error; PCL:YV = Psychopathy Checklist: Youth Version; ETV = Exposure to violence; PTSD = Posttraumatic stress disorder diagnosis.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 4

Multiple regression models examining the associations between self-report offending behavior, the two factors of psychopathy, violence exposure as victims and witnesses, and PTSD among juvenile offenders.

	Model 5a		Model 5b		Model 6		Model 7a		Model 7b		Model 8	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Intercept	-2.93	(1.33)*	-3.43	(1.25)**	-3.52	(1.25)**	-3.22	(1.30)*	-4.80	(1.32)***	-3.25	(1.25)**
Gender												
Female	-1.12	(0.28)***	-1.01	(0.26)***	-1.01	(0.26)***	-1.09	(0.27)***	-1.25	(0.28)***	-0.99	(0.26)***
Age	0.29	(0.08)***	0.23	(0.08)**	0.24	(0.08)**	0.27	(0.08)***	0.33	(0.08)***	0.23	(0.08)**
Ethnicity												
Black	-1.33	(0.25)***	-1.13	(0.24)***	-1.13	(0.24)***	-0.14	(0.25)	-1.54	(0.26)***	-0.90	(0.25)***
Hispanic	0.11	(0.26)	0.05	(0.25)	0.07	(0.25)	0.47	(0.26)	-0.01	(0.26)	0.15	(0.25)
Other	-0.25	(0.48)	-0.22	(0.45)	-0.23	(0.45)	0.11	(0.47)	-0.37	(0.48)	-0.15	(0.45)
PCL:YV												
Factor 1	0.28	(0.03)***			0.04	(0.03)	0.02	(0.03)	0.06	(0.03)	0.04	(0.03)
Factor 2			0.42	(0.02)***	0.39	(0.03)***	0.45	(0.03)***	0.44	(0.03)***	0.40	(0.03)***
ETV							1.33	(0.07)***			0.96	(0.08)***
Witness									0.93	(0.05)***	0.59	(0.06)***
Total	0.87	(0.03)***	0.74	(0.03)***	0.74	(0.03)***						
PTSD	-0.21	(0.38)	-0.28	(0.36)	-0.27	(0.36)	-0.05	(0.37)	-0.16	(0.38)	-0.31	(0.36)
<i>R</i> ²	0.48		0.54		0.54		0.50		0.48		0.54	

Note: *b* = unstandardized regression coefficients; *SE* = standard error; PCL:YV = Psychopathy Checklist: Youth Version; ETV = Exposure to violence; PTSD = Posttraumatic stress disorder diagnosis.

* $p < .05$.

** $p < .01$.

*** $p < .001$.