Journal of Child & Adolescent Trauma
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/wcat20

Victimization History and Posttraumatic Stress: An Analysis of Psychopathy Variants in Male Juvenile Offenders

Joseph R. Tatar II [a], Elizabeth Cauffman [a], Eva R. Kimonis [b] & Jennifer L. Skeem [a]
[a] University of California, Irvine
[b] University of South Florida
Version of record first published: 08 May 2012.

To cite this article: Joseph R. Tatar II , Elizabeth Cauffman , Eva R. Kimonis & Jennifer L. Skeem (2012): Victimization History and Posttraumatic Stress: An Analysis of Psychopathy Variants in Male Juvenile Offenders, Journal of Child & Adolescent Trauma, 5:2, 102-113

To link to this article: http://dx.doi.org/10.1080/19361521.2012.671794

Journal of Child & Adolescent Trauma, 5:102–113, 2012

ISSN: 1936-1521 print / 1936-153X online
DOI: 10.1080/19361521.2012.671794

Routledge
Taylor & Francis Group

Victimization History and Posttraumatic Stress: An Analysis of Psychopathy Variants in Male Juvenile Offenders

JOSEPH R. TATAR II,[1] ELIZABETH CAUFFMAN,[1]
EVA R. KIMONIS,[2] AND JENNIFER L. SKEEM[1]

[1]University of California, Irvine
[2]University of South Florida

Theory and empirical research suggest that psychopathy may be disaggregated into primary and secondary variants. In practice, individuals with high scores on psychopathy measures are treated as a homogenous group. In this study, interviewers recruited 355 incarcerated youth to assess potential differences in trauma history, posttraumatic stress disorder (PTSD) symptoms, and dissociative symptoms among high-anxious (secondary) and low-anxious (primary) variants of psychopathy. Results indicate that youth with secondary psychopathy report a greater history of traumatic experiences and past PTSD symptoms—but not dissociative symptoms—than primary variants. These results suggest that youth with high scores on measures of psychopathy are a heterogeneous group, necessitating nuanced assessment and treatment practices.

Keywords juvenile psychopathy, psychopathy variants, posttraumatic stress disorder, dissociation, trauma, violence exposure

Psychopathy is as a personality disorder characterized by superficial charm, pathologic egocentricity, untruthfulness and insincerity, and lack of remorse or shame (Cleckley, 1941). Although typically studied among adult criminal offenders, researchers have begun to examine psychopathy among adolescents (see Frick, 1995; Lynam, 1996). Concerns have been raised about using measures of psychopathy to inform legal decision making about youth, as the stability of psychopathic traits from childhood to adulthood has yet to be firmly established in longitudinal studies, and some features of psychopathy (e.g., impulsivity, irresponsibility, poor behavioral control, need for stimulation) may be normative and temporary features of adolescence (Hart, Watt, & Vincent, 2002; Seagrave & Grisso, 2002). The present study sets this debate aside to focus on heterogeneity among youth who score highly on measures of psychopathy. Evidence of construct heterogeneity is commonly found in adolescent research; for example, delinquent behavior (adolescent-limited vs. life-course persistent offending; Moffitt, 1993) and attention-deficit/hyperactivity disorder (Todd et al., 2002). It stands to reason that diversity in psychopathy may also be observed within the adolescent population. To the extent that juvenile psychopathy is a valid construct, theory suggests there are multiple developmental pathways toward, and

Submitted May 2, 2010; revised June 9, 2010; accepted June 10, 2010.
Address correspondence to Joseph R. Tatar II, Department of Psychology and Social Behavior, University of California, Irvine, 4201 Social & Behavioral Sciences Gateway, Irvine, CA 92697. E-mail: tatarj@uci.edu

expressions of, this disorder (Karpman, 1948, 1955; Porter, 1996). Because psychopathy is overrepresented in the justice system (Cooke & Michie, 1999; Forth & Burke, 1998), this study examines characteristics of psychopathy variants among adolescent offenders.

Psychopathy Variants and Trauma

Karpman (1948, 1955) and Porter (1996) distinguished between primary and secondary psychopathy, postulating that adults exhibiting "primary" psychopathy are born with emotional deficits, whereas those with "secondary" psychopathy acquire these deficits through adverse environments. However, these theorists differ in their descriptions of the characteristics of these environmental factors. For example, Karpman focused on the role of parents, citing parental rejection, harsh punishment, and abuse in the development of secondary psychopathy, whereas Porter believed the origin of secondary psychopathy is the experience of a generalized childhood trauma. Beyond this minor distinction, both theorists highlight negative childhood experiences as the key environmental factor in the development of secondary psychopathy.

Given high rates of abuse and trauma experiences among juvenile offenders (Burton, Foy, Bwanausi, Johnson, & Moore, 1994; Kerig, this issue; Smith & Thornberry, 1995), understanding Porter's assertion that trauma represents the origin of secondary psychopathy is especially relevant. Research links reports of childhood abuse and neglect to scores on psychopathy measures (Forth & Burke, 1998; Krischer & Sevecke, 2008; Weiler & Widom, 1996), with stronger associations with general antisocial deviance rather than emotional detachment (Krischer & Sevecke, 2008; Poythress, Skeem, & Lilienfeld, 2006). The studies that compare trauma and maltreatment histories among psychopathy variants are consistent with this conceptualization, but limited to adult populations (see Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003). In one of the few studies with juvenile offenders, Vaughn, Edens, Howard, and Smith (2009) used cluster-analytic techniques to identify psychopathy variants and found a higher prevalence of trauma among the secondary variant. However, one limitation is that the researchers entered traumatic experiences into their cluster analysis to identify variants. Therefore, they were unable to disentangle the relation between trauma and secondary psychopathy; an independent test of this association is warranted.

Psychopathy Variants, Neurosis, Dissociation, and PTSD

Karpman (1948, 1955) and Porter (1996) theorized that the secondary variant of psychopathy manifests an emotional deficit, but with the capacity for a range of emotional experiences. To Karpman, individuals with secondary psychopathy acquire their symptoms through rejection or abuse that reflect neurosis, where hostility and emotional reactivity disturb the functioning of an otherwise intact conscience. For Karpman, one might frame neurosis or anxiety as the key marker for secondary psychopathy. There is support for this notion, as anxiety has proven important for disaggregating variants on measures like the PCL-R (Kosson & Newman, 1995; Skeem, Johansson, Andershed, Kerr, & Eno Louden, 2007). In contrast, Porter (1996) believed secondary psychopathy reflects a dissociative response that inhibits affective functioning and fuels negative behavior. The "capacity for empathetic responding . . . is 'turned off' with repeated disillusionment of the child through physical or sexual abuse or other mistreatment . . . with the child's emotion being dissociated from or unconnected with cognition and behavior over time" (Porter, 1996, p. 183). However, there is limited empirical support for Porter's conceptualization. A study

by Poythress, Skeem, et al. (2006) examined the associations between childhood abuse, dissociation, and psychopathy in an incarcerated sample of male adults. The researchers found that whereas abuse was moderately associated with the impulsive and irresponsible lifestyle features of psychopathy, dissociation did not play a role in this relation.

Key characteristics referenced by each of these theories overlap with symptoms of posttraumatic stress disorder (PTSD). Traumatic experiences, either personally or by proxy, are necessary for a diagnosis of PTSD (American Psychiatric Association [APA], 2000). Further, PTSD is linked with anger and hostility (Orth & Wieland, 2006). Additionally, although dissociative symptoms are not specifically mentioned in the DSM-IV diagnostic criteria, some call for the reclassification of PTSD as a dissociative disorder (see Brett, 1996), and research has shown that dissociative symptoms are strongly associated with later PTSD (Marshall & Schell, 2002; Murray, Ehlers, & Mayou, 2002; Silvern & Griese, this issue). PTSD is also highly prevalent among incarcerated youth (Cauffman, Feldman, Waterman, & Steiner, 1998; Kerig, Vanderzee, Becker, & Ward, this issue). Nevertheless, no empirical study has examined the connection between secondary psychopathy and PTSD.

The Present Study

The present study focused on psychopathy variants among a group of adolescent offenders with high scores on a measure of psychopathy and high- or low-scores on a measure of anxiety. We use model-based cluster analysis to discriminate subtypes of psychopathy to determine whether secondary or high-anxious variants:

a. report greater histories of trauma/abuse, and
b. manifest more symptoms of PTSD and dissociation than primary or low-anxious variants (including a "nonpsychopathic" comparison group).

Method

Participants

The sample includes 373 adolescent male offenders, ages 14 to 17 ($M = 16.42$, $SD = .80$), incarcerated at a juvenile facility in California. Consistent with youth in similar juvenile justice facilities in California (California Department of Justice, 2002), the sample was 53% Hispanic, 29% African American, 6.2% Caucasian, and 11.8% of primarily biracial origin. Seventy percent of the sample was adjudicated on a violent committing offense, 12% with a property offense, 7% public order, 3.5% weapon or drug charge, and 5% unclassified. Because the measures of psychopathy and anxiety were used to identify variants, offenders without valid data on either of these measures were excluded from analyses ($n = 18$). Excluded participants showed no differences on any demographic characteristics compared to those included. The final sample consisted of 355 juvenile offenders.

Procedures

Youth newly admitted to the facility during data collection were eligible for enrollment in the study. Ninety-seven percent of parents contacted gave consent for their child's participation and all youth provided assent. To guarantee privacy, a Certificate of Confidentiality was obtained from the Department of Health and Human Services. Participants were

administered a baseline interview within 48 hours of arrival at the facility and completed four more interviews: two weeks, three weeks, one month, and two months after the baseline interview. The interviews lasted 1–2 hours, were conducted individually, and included a series of behavioral, attitudinal, and environmental measures. Institutional records were also gathered to serve as collateral reports.

Measures

Demographic Information. Participants self-reported age, race/ethnicity, and whether they had been to the facility before.

Clustering Variables.

Psychopathy. The Youth Psychopathic Traits Inventory (YPI; Andershed, Kerr, Stattin, & Levander, 2002) is a 50-item self-report measure of psychopathic traits administered at the week 3 assessment. The YPI includes 10 scales that map onto three factors: Grandiose-Manipulative (GM; i.e., interpersonal traits: dishonest charm, grandiosity, lying, manipulation), Callous-Unemotional (CU; affective traits: remorselessness, callousness, unemotionality), and Impulsive-Irresponsible (II; lifestyle traits: impulsiveness, irresponsibility, thrill seeking; Andershed et al., 2002; Poythress, Dembo, Wareham, & Greenbaum, 2006). The YPI correlates significantly with the PCL:YV (Cauffman, Kimonis, Dmitrieva, & Monahan, 2009), with low to moderate correlations with self-reported conduct problems, supporting convergent validity. In this sample, the YPI total and factor scores demonstrated adequate internal consistency (total score $\alpha = .90$; factors ranging from .71 [CU] to .89 [GM]).

Anxiety. The Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985/2000) is a 37-item self-report measure standardized for youth ages 6 to 19. In this study, we used the measure's total ($\alpha = .85$) and three subscale scores assessed week 3: Physiological Anxiety (10 items, $\alpha = .64$), Worry/Oversensitivity (11 items, $\alpha = .76$), and Social Concerns/Concentration (7 items, $\alpha = .68$). The RCMAS possesses moderate test–retest reliability over a 9-month period ($r = .63$; Reynolds, 1982), and its construct validity is supported (e.g., Muris, Merckelbach, Ollendick, King, & Bogie, 2002).

Validation Variables.

Traumatic experiences. Youths' histories of trauma and victimization were measured using an adaption of the Stressful Life Events scale (SLE; Gil-Rivas, 2003). This includes 32 items assessing stressful life events including sexual and physical abuse, neglect, parental divorce, close family member deaths, natural disasters, and other traumatic events. Participants responses to each item were recorded dichotomously as having experienced one of these events (1) or not (0). The scale assesses these events across a person's lifetime and in the past six months. Internal consistency was good for both lifetime and "most recent six months" scales ($\alpha = .84$ and .71, respectively). Sums of affirmative responses were completed separately for lifetime and last six month experiences, with higher scores indicative of a greater variety of trauma.

Symptoms of posttraumatic stress and dissociation. Symptoms of PTSD were derived from the PTSD screen and supplement of the Schedule for Affective Disorders and

Schizophrenia for School-Age Children–Present and Lifetime version (K-SADS-PL; Kauffman, et al., 1997). The K-SADS-PL is a semistructured diagnostic interview that assesses current and past episodes of psychopathology among youth using DSM-III-R and DSM-IV criteria. K-SADS-PL interviewers were graduate students who completed an extensive training prior to administering the diagnostic interview. The interviewers also completed a rating of a tape-recorded interview by an experienced clinician to assess interrater agreement. Results revealed excellent agreement between the raters ($\kappa = .80$, $p < .001$). The K-SADS-PL is a valid indicator of PTSD symptomatology in clinical settings (i.e., Cohen, Deblinger, Mannarino, & Steer, 2004) and shows good interrater and test–retest reliability (Kaufman et al., 1997).

Past and present diagnoses and symptoms were recorded and analyzed separately. The PTSD screen (5 items) and supplement (15 items) are used to make a diagnosis of PTSD. From these questions, several variables were created. First, clinical diagnoses of PTSD (both past and present) were recorded. Second, affirmative responses to the questions on the screen and supplement were summed to derive a total PTSD symptom count. Finally, responses to a single question about dissociative experiences ("*Do people say you daydream a lot? Look spaced out?"*) were analyzed. In this study, the percentage of youth meeting DSM-IV (APA, 2000) diagnostic criteria for PTSD on the K-SADS-PL was 8.5% for a current diagnosis, 7.4% for past diagnosis, and 11.7% for ever being diagnosed.

Plan of Analysis

Several analytic strategies were used. First, correlations were conducted to test the degree of overlap between the main study variables. Next, model-based cluster analysis was applied to psychopathy and anxiety scores to classify youth scoring high on psychopathy into variants. To examine group differences on the criterion variables (PTSD, dissociation, and trauma history) several analyses were used, depending on data distribution. Group differences in PTSD symptom counts were examined using zero-inflated Poisson, as the distribution contained a large number of zero-values (Lambert, 1992). For trauma history, negative binomial regression was used because of data overdispersion (i.e., variance greater than the mean) without many zero-values (O'Hara & Kotze, 2010). Finally, logistic regression was used to test group differences on PTSD diagnosis and dissociation.

Results

Correlations were conducted to determine the association between variables in the present study. As noted in Table 1, there were positive correlations between psychopathy total scores and anxiety ($r = .25$, $p < .01$), trauma history (ever, $r = .17$, $p < .01$; last 6 months, $r = .13$, $p < .05$), and past symptoms of PTSD ($r = .11$, $p < .05$) suggesting that those scoring high on the YPI were more likely to be anxious, had experienced a trauma, and exhibited prior symptoms of PTSD. As these correlations were run using the entire sample, it was necessary to determine whether these associations reflected differences between variants of psychopathy.

Identifying Psychopathy Variants

Youth were grouped into variants of psychopathy using model-based cluster analysis (MBC) from the Mclust software package (Fraley & Raftery, 2006) of S-PLUS. Youth scoring greater than 121.5 on the YPI ($n = 165$) were chosen for analysis, as prior research has

Table 1
Intercorrelations among Main Study Variables

	YPI Total	RCMAS Total	Stressful Life Events (Ever)	Stressful Life Events (6 Months)	PTSD Symptom Count (Present)	PTSD Symptom Count (Past)
YPI Total		.25**	.14*	.09	.07	.13*
RCMAS Total			.33**	.24**	.13*	.15**
Stressful Life Events (Ever)				.68**	.16**	.15**
Stressful Life Events (6 Months)					.12*	.03
PTSD Symptom Count (Present)						.46**
Mean	118.14	6.85	11.02	3.43	3.24	3.62
(Standard Deviation)	−20.26	−5.18	−6.15	−3.08	−4.25	−4.54

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

demonstrated this score corresponds to a PCL:YV score of 30 (Cauffman et al., 2009), the traditional cut-off to "diagnose" psychopathy (Forth, Kosson, & Hare, 2003). The remaining youths ($n = 190$) were excluded from cluster analysis and served as a nonpsychopathic comparison group for the remaining analyses. Consistent with methods by Kosson and Newman (1995), MBC was applied to the three factors of the YPI (Callous-Unemotional, Grandiose-Manipulative, and Impulsive-Irresponsible) and three factors of the RCMAS (Physiological, Worry, Social). The Mclust program determines strength of model fit using the Bayesian information criterion (BIC), with the lowest absolute score representing best relative fit. Models fitting a single factor were comparatively poorer (average BIC increase of 256) than multigroup solutions, implying different variants with distinct traits. The best fitting model was a two-factor solution (BIC = 5236) with posterior probabilities for each of the subgroups above .99, suggesting high confidence (over 99%) in group assignment accuracy. A second cluster analysis using Mplus statistical software suggested a similar conclusion. The two-group solution was selected because it represented the better fit, was more parsimonious and robust across software packages, and is consistent with prevailing theoretical perspectives on psychopathy subtypes (Karpman, 1955; Porter, 1996).

The cluster analysis produced separate profiles appearing consistent with primary ($n = 122$) and secondary ($n = 43$) psychopathy. The psychopathy group showing the lowest mean levels of anxiety was labeled as "primary" and the high anxiety group labeled "secondary." Means and standard deviations for each variant on the clustering and validation variables in this study are reported in Table 2.

Table 2
Means and Standard Deviations for Test Variables

	Total Sample ($n = 355$)	Primary ($n = 122$)	Secondary ($n = 43$)	Comparison ($n = 190$)
YPI				
Affective	42.25 (10.50)	49.58 (7.49)[c]	51.62 (8.44)[b]	35.43 (7.30)
Interpersonal	35.24 (6.43)	39.39 (4.91)[c]	39.63 (5.75)[b]	31.59 (5.08)
Lifestyle	40.65 (7.64)	44.72 (5.16)[c]	47.81 (5.11)[a,b]	36.42 (6.80)
Total	118.14 (20.26)	133.70 (10.58)[c]	139.02 (12.16)[a,b]	103.44 (13.84)
RCMAS				
Physiological	2.47 (1.96)	2.22 (1.60)	4.81 (2.00)[a,b]	2.09 (1.81)
Worry	2.30 (2.33)	1.57 (1.51)	5.33 (1.69)[a,b]	2.09 (2.37)[d]
Social	2.08 (1.81)	1.64 (1.25)	4.30 (1.39)[a,b]	1.85 (1.84)
Total	6.84 (5.12)	5.43 (2.86)	14.44 (3.34)[a,b]	6.04 (5.24)
SLE				
Ever	11.02 (6.15)	11.49 (5.64)	13.84 (4.75)[a,b]	11.13 (5.96)
6 Months	3.43 (3.08)	3.60 (3.05)	4.23 (2.73)	3.46 (3.12)
K-SADS				
PTSD Symptom Total (Present)	3.24 (4.25)	3.35 (4.21)	4.02 (5.05)	3.14 (4.17)
PTSD Symptom Total (Past)	3.62 (4.54)	3.69 (4.82)	4.98 (5.06)[b,d]	3.22 (4.12)

Note. Significance values derived from ANOVA, which assumes normal distribution of data.
[a]Significant difference, secondary over primary, at least $p < .05$.
[b]Significant difference, secondary over comparison, at least $p < .05$.
[c]Significant difference, primary over comparison, at least $p < .05$.
[d]Trend-level difference, secondary over primary, $p < .10$.

Demographic Characteristics for Control

Next, chi-square and ANOVA tests were conducted to examine group differences in age, ethnicity, and previous incarceration at the present facility to determine necessary control variables. Although the groups did not differ age [$F(2,352) = .70$, $p > .05$] or prior incarceration [$\chi^2(2) = 2.64$, $p > .05$], there were differences in ethnicity [$\chi^2(2) = 18.78$, $p < .01$]. The secondary group had a smaller proportion of Caucasian (0%) members and a larger proportion of Hispanic (69.8%) members than the primary and comparison groups (Averages: Caucasian = 6.8%; Hispanic = 50.6%). There was also group variability in African American composition, with the primary group consisting of the highest proportion (36.9%), followed by the comparison (27.4%) and secondary groups (14.0%). Therefore, the remainder of the analyses were conducted twice; with and without ethnic composition entered as a covariate to examine if demographic differences affected the results. The same basic pattern was observed across groups. Results with ethnic composition as a covariate in analyses are reported here.

Aim 1: Do Secondary Variants Report Greater Trauma Histories?

Negative binomial regressions were conducted to examine group differences between psychopathy variants in trauma histories. For lifetime traumatic experiences, results

revealed that the secondary group reported a greater history of trauma than either primary ($\beta = .24$, $p < .01$, Incidence Rate Ratio [IRR] = 1.27) or comparison youth ($\beta = .28$, $p = .001$, IRR = 1.32). The rate of traumatic events was 30% higher among secondary variants than primary variants or nonpsychopathic comparison youth (IRR = 1.30, $CI = 1.115 - 1.525$). A likelihood-ratio test indicated a significant improvement of the negative binomial model over standard Poisson, $L\text{-}R\ \chi^2 = 334.90$, $p < .001$. No differences in trauma history were observed between primary variants and comparison youth and no significant group differences emerged for trauma within the past six months.

Aim 2: Do Secondary Variants of Psychopathy Report Greater Symptoms of PTSD and Dissociation?

To examine differences in PTSD symptom prevalence across psychopathy variants, several methods were used. Differences in the prevalence of a DSM-IV diagnosis of PTSD on the K-SADS-PL (past or present) were tested using logistic regression. Results indicated no significant differences between any of the groups on either past or present PTSD diagnoses. Responses on the aggregate PTSD symptom count were compared using a zero-inflated Poisson regression model. Whereas no differences between groups were observed on present PTSD symptoms, secondary variants had a greater likelihood of past PTSD symptoms than primary variants ($\beta = .21$, $p < .05$, IRR = 1.23) and comparison youth ($\beta = .28$, $p = .001$, IRR = 1.32). On average, IRRs revealed that the secondary group had a 28% higher rate of past PTSD symptoms than the other groups (IRR = 1.28, $CI = 1.092 - 1.502$), suggesting a greater association of prior PTSD symptoms to secondary psychopathy. No differences in likelihood were observed between primaries and nonpsychopathic comparison youth. A Vuong test (Vuong, 1989) indicated that the zero-inflated Poisson model was an improvement over standard Poisson ($Z = 12.31$, $p < .001$).

Finally, to test Porter's (1996) theory regarding secondary psychopathy and dissociation, logistic regression was applied to K-SADS-PL question assessing dissociative experiences. The secondary group was nearly 2.5 times more likely to report a past dissociative experience than comparison youth ($OR = 2.44$, $p < .05$), but not more than primary youth ($OR = 1.40$, $p > .05$). No other differences in the likelihood of dissociative experiences were observed.

Discussion

The results of this study revealed three main findings. First, for male juvenile offenders with high scores on a measure of psychopathy, there were meaningful subgroups with high and low levels of anxiety. Second, youth with secondary (high-anxious) psychopathy reported a greater incidence of prior trauma than those with primary (low-anxious) psychopathy. Third, youth with secondary psychopathy manifested more past symptoms of PTSD than those with primary psychopathy. However, no differences were observed in present PTSD symptoms, PTSD diagnosis, or dissociation. Together, the present findings support the presence of psychopathy variants within adolescent offenders that show measureable differences in terms of negative life experiences and, to a lesser extent, in PTSD symptomatology.

Subtype Discrimination

The successful discrimination of psychopathy variants suggests that juvenile psychopathy shows heterogeneity. This is consistent with a growing body of research with adults

(Hicks, Markon, Patrick, Krueger, & Newman, 2004; Kosson & Newman, 1995; Skeem et al., 2007) and adolescent offenders (Vaughn et al., 2009), highlighting the importance of anxiety for differentiating psychopathy variants. This has important implications for the construct, as Cleckley's (1941) original conceptualization listed the absence of "nervousness" or psychoneurotic manifestations in his clinical description of psychopathy. The observation that some high-scoring "psychopaths" can score highly on measures of anxiety is an area of concern. Indeed, Karpman (1948, 1955) suggested that these high-anxious "psychopaths" are misdiagnosed with [primary] psychopathy due to similarities in irresponsibility and antisocial/hostile behavior.

Trauma History

These results suggest that youth scoring high on measures of psychopathy and anxiety report the greatest rates of childhood trauma compared with other youth. These findings are consistent with research in adults (see Skeem et al., 2003) and adolescents (Vaughn et al., 2009) that provide indirect support that traumatic life experiences provide an alternate pathway to the development of traits mimicking psychopathy (Karpman, 1948, 1955; Porter, 1996). These findings also extend the literature by going beyond poor and abusive parenting—as would be extrapolated from Karpman (1948)—and extending to more generalized types of childhood trauma; consistent with Porter's (1996) conceptualization. In other words, the origins of secondary psychopathy may not rest solely in parent–child relationships. This expands our understanding of the possible etiological mechanisms underlying secondary psychopathy.

When traits of psychopathy are considered among adolescent offenders in practice, little attention is placed on adverse environmental experiences. Instead, the focus rests on personal responsibility and dismissal of the adolescent as a "bad seed" meriting exclusion from therapeutic assistance (Jones & Cauffman, 2008; Seagrave & Grisso, 2002). These findings call such perceptions into question by highlighting the role of traumatic experiences in the backgrounds and associated pathological characteristics of adolescents scoring high in psychopathy, particularly for the secondary variant. Future research should consider traumatic experiences in the development of psychopathic personality traits.

Posttraumatic Stress and Dissociation

Contrary to expectations, secondary variants did not evince more current symptoms of PTSD and were no more likely to receive a current or past PTSD diagnosis than other groups. Nevertheless, there were group differences in past PTSD symptomatology; the highest levels attributed to the secondary variant. Although generalized anxiety and neuroticism may be the strongest markers of secondary psychopathy, as Karpman (1948, 1955) suggested, past PTSD symptomatology may also be an indicator. Both Karpman (1948) and Porter (1996) posited early negative experiences in the development of secondary psychopathy, arising from difficulties in adjusting to such history. However, the development of PTSD reflects another feature of maladjustment in the wake of traumatic experiences and may give insight into alternative pathological features of secondary psychopathy.

Also breaking expectations, secondary youth were no more likely to experience dissociation than primary youth. Although one might argue that a single-question measure of dissociative symptomatology is insufficient to test Porter's (1996) conceptualization, these are consistent with Poythress, Skeem, et al.'s (2006) finding that a better-validated measure of dissociation did not mediate the relation between abuse and psychopathy in

adult offenders. Although further research would be helpful, these two studies provide little support for a narrow construal of Porter's (1996) hypothesis featuring dissociative symptoms.

Limitations

Though the present study highlights several key factors of psychopathic heterogeneity in adolescence, there are limitations that must be acknowledged. First, as this is a cross-sectional study, it is impossible to make causal inferences. Nevertheless, some outcomes, namely trauma and past posttraumatic symptomatology, targeted preincarceration experiences, providing evidence of historical differences between psychopathy variants. Additionally, features of the study design may have introduced method bias. Because most of the variables were derived from self-report, it is possible that youth presenting with features of secondary psychopathy were simply more likely to comprehensively report more problems than the other groups. In no instance did members of the secondary group report lower levels of difficulty than primaries or comparison youth. Finally, significant correlations were observed between the variables used in the cluster analysis (particularly anxiety) and several of the validation variables used in later analyses (e.g., PTSD). It is possible that the differences observed between groups may be attributed to those variables used to define the groups rather than core variant characteristics, per se. However, observed correlations (overlap) between the clustering variables and the main variables of interest (i.e., PTSD symptoms) were small, suggesting that these variables indeed measured distinct constructs.

Conclusion

These findings challenge the prevailing conceptualization of psychopathy as a unitary construct (see Karpman, 1955; Porter, 1996; Skeem et al., 2003) and call upon practitioners to adopt a nuanced approach when relying upon measures of psychopathy to make legal decisions about youth (i.e., transfer to adult court, exclusion from treatment, etc.). Evidence of heterogeneity within psychopathy for adolescents suggests that present practices may be mislabeling a substantial portion of youth scoring high on these measures. To the extent that one believes psychopathy is not an expression of negative life experiences and not marked by neurotic features, one may not view these individuals as "psychopathic" at all. Practitioners should consider supplementing psychopathy assessments with information on offender histories of trauma, as such events may play a key role in secondary psychopathy. This information may offer insight into the experiential factors leading to the offender's present difficulties and may help tailor treatment. Diagnostic interviews should also be conducted to examine the presence or absence of difficulties with anxiety, PTSD, and possibly dissociation, as these elements may help practitioners distinguish psychopathy variants. A nuanced approach may diminish the harmful potential of the psychopathy label to influence legal decision-making (Jones & Cauffman, 2008; Vidal & Skeem, 2007) by enhancing sensitivity toward psychopathy variants and yielding more informed judgments regarding treatment and institutional management.

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Andershed, H., Kerr, M., Stattin, H., & Levander, S. (2002). Psychopathic traits in non-referred youths: A new assessment tool. In E. Blaauw & L. Sheridan (Eds.), *Psychopaths: Current international perspectives* (pp. 131–158). The Hague, Netherlands: Elsevier.

Brett, E. A. (1996). The classification of posttraumatic stress disorder. In B. A. van der Kolk, A. C. McFarlane, & L. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society* (pp. 117–128). New York: The Guilford Press.

Burton, D., Foy, D., Bwanausi, C., Johnson, J., & Moore, L. (1994). The relationship between traumatic exposure, family dysfunction, and post-traumatic stress symptoms in male juvenile offenders. *Journal of Traumatic Stress*, *7*, 83–93.

California Department of Justice. (2002). *Juvenile justice in California: 2002*. Sacramento: Division of California Justice Information Services.

Cauffman, E., Feldman, S., Waterman, J., & Steiner, H. (1998). Posttraumatic stress disorder among incarcerated females. *Journal of the American Academy of Child & Adolescent Psychiatry*, *37*, 1209–1216.

Cauffman, E., Kimonis, E. R., Dmitrieva, J., & Monahan, K. (2009). A multi-method assessment of juvenile psychopathy: Comparing the predictive utility of the PCL:YV, YPI, and NEO-PRI. *Psychological Assessment*, *21*, 528–542.

Cleckley, H. (1941). *The mask of sanity*. St. Louis: C.V. Mosby.

Cohen, J. A., Deblinger, E., Mannarino, A. P., & Steer, R. A. (2004). A multisite randomized controlled trial for children with sexual abuse-related PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry*, *43*, 393–402.

Cooke, D. J., & Michie, C. (1999). Psychopathy across cultures: North American and Scotland compared. *Journal of Abnormal Psychology*, *108*, 58–68.

Forth, A. E., & Burke, H. C. (1998). Psychopathy in adolescence: Assessment, violence and developmental precursors. In D. Cooke, A. Forth, & R. Hare (Eds.), *Psychopathy: Theory, research and implications for society* (pp. 205–230). Dordrecht, Netherlands: Kluwer.

Forth, A. E., Kosson, D. S., & Hare, R. D. (2003). *The Hare Psychopathy Checklist: Youth version*. North Tonawanda, NY: Multi-Health Systems.

Fraley, C., & Raftery, A. E. (2006). *MCLUST version 3 for R: Normal mixture modeling and model-based clustering*. Technical Report no. 504, Department of Statistics, University of Washington.

Frick, P. J. (1995). Callous-unemotional traits and conduct problems: A two-factor model of psychopathy in children. *Issues in Criminological & Legal Psychology*, *24*, 47–51.

Gil-Rivas, V. (2003). *Parental contributions to adolescents´ psychological adjustment following the terrorist attacks of September 11, 2001* (Unpublished doctoral dissertation). University of California, Irvine, CA.

Hart, S. D., Watt, K. A., & Vincent, G. M. (2002). Commentary on Seagrave and Grisso: Impressions of the state of the art. *Law and Human Behavior*, *26*, 241–245.

Hicks, B., Markon, K., Patrick, C. J., Krueger, R., & Newman, J. P. (2004). Identifying psychopathy subtypes on the basis of personality structure. *Psychological Assessment*, *16*, 276–288.

Jones, S., & Cauffman, E. (2008). Juvenile psychopathy and judicial decision making: An empirical analysis of an ethical dilemma. *Behavioral Sciences and the Law*, *26*, 151–165.

Karpman, B. (1948). Conscience in the psychopath: Another version. *American Journal of Orthopsychiatry*, *18*, 455–491.

Karpman, B. (1955). Criminal psychodynamics: A platform. *Archives of Criminal Psychodynamics*, *1*, 3–100.

Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., et al. (1997). Schedule for affective disorders and schizophrenia for school-age children-present version and lifetime version (K-SADS-PL): Initial reliability and validity data. *Journal of the American Academy of Child and Adolescent Psychology*, *36*, 980–988.

Kosson, D., & Newman, J. (1995). An evaluation of Mealey's hypotheses based on Psychopathy Checklist identified groups. *Behavioral and Brain Sciences*, *18*, 562–563.

Krischer, M. K., & Sevecke, K. (2008). Early traumatization and psychopathy in female and male juvenile offenders. *International Journal of Law and Psychiatry*, *31*(3), 253–262.

Lambert, D. (1992). Zero-inflated Poisson regression, with an application to defects in manufacturing. *Technometrics*, *34*, 1–14.

Lynam, D. R. (1996). The early identification of chronic offenders: Who is the fledgling psychopath? *Psychological Bulletin*, *120*, 209–234.

Marshall, G. N., & Schell, T. L. (2002). Reappraising the link between peritraumatic dissociation and PTSD symptom severity: Evidence from a longitudinal study of community violence survivors. *Journal of Abnormal Psychology*, *111*, 626–636.

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, *100*, 674–701.

Muris, P., Merckelbach, H., Ollendick, T. H., King, N. J., & Bogie, N. (2002). Three traditional and three new childhood anxiety questionnaires: Their reliability and validity in a normal adolescent sample. *Behaviour Research and Therapy*, *40*, 753–772.

Murray, J., Ehlers, A., & Mayou, R. A. (2002). Dissociation and post-traumatic stress disorder: Two prospective studies of road traffic accident survivors. *The British Journal of Psychiatry*, *180*, 363–368.

O'Hara, R. B., & Kotze, D. J. (2010). Do not log-transform count data. *Methods in Ecology and Evolution*, *1*(2), 118–122.

Orth, U., & Wieland, E. (2006). Anger, hostility, and posttraumatic stress disorder in trauma-exposed adults: A meta-analysis. *Journal of Consulting and Clinical Psychology*, *74*, 698–706.

Porter, S. (1996). Without conscience or without active conscience? The etiology of psychopathy revisited. *Aggression and Violent Behavior*, *1*, 179–189.

Poythress, N. G., Dembo, R., Wareham, J., & Greenbaum, P. (2006). Construct validity of the Youth Psychopathic traits Inventory (YPI) and the Antisocial Process Screening Device (APSD) with justice involved adolescents. *Criminal Justice and Behavior*, *33*, 26–55.

Poythress, N. G., Skeem, J. L., & Lilienfeld, S. O. (2006). Associations among early abuse, dissociation, and psychopathy in an offender sample. *Journal of Abnormal Psychology*, *115*, 288–297.

Reynolds, C. R. (1982). Convergent and divergent validity of the Revised Children's Manifest Anxiety Scale. *Educational and Psychological Measurement*, *42*, 1205–1212.

Reynolds, C. R., & Richmond, B. O. (2000). *Revised Children's Manifest Anxiety Scale (RCMAS) manual*. Los Angeles: Western Psychological Services. (Originally published 1985)

Seagrave, D., & Grisso, T. (2002). Adolescent development and the measurement of juvenile psychopathy. *Law and Human Behavior*, *26*, 219–239.

Skeem, J. L., Johansson, P., Andershed, H., Kerr, M., & Eno Louden, J. (2007). Two subtypes of psychopathic violent offenders that parallel primary and secondary variants. *Journal of Abnormal Psychology*, *116*, 395–409.

Skeem, J. L., Poythress, N., Edens, J. F., Lilienfeld, S. O., & Cale, E. M. (2003). Psychopathic personality or personalities? Exploring potential variants of psychopathy and their implications for risk assessment. *Aggression and Violent Behavior*, *8*, 513–546.

Smith, C., & Thornberry, T. P. (1995). The relationship between childhood maltreatment and adolescent involvement in delinquency. *Criminology*, *33*, 451–481.

Todd, R. D., Sitdhiraksa, N., Reich, W., Ji, T. H., Joyner, C. A., Heath, A. C., et al. (2002). Discrimination of DSM-IV and latent class attention-deficit/hyperactivity disorder subtypes by educational and cognitive performance in a population-based sample of child and adolescent twins. *Journal of the American Academy of Child and Adolescent Psychiatry*, *41*, 820–828.

Vaughn, M. G., Edens, J. F., Howard, M. O., & Smith, S. T. (2009). An investigation of primary and secondary psychopathy in a statewide sample of incarcerated youth. *Youth Violence and Juvenile Justice*, *7*, 172–188.

Vidal, S., & Skeem, J. L. (2007). Effect of psychopathy, abuse, and ethnicity on juvenile probation officers' decision-making and supervision strategies. *Law and Human Behavior*, *31*, 479–498.

Vuong, Q. H. (1989). Likelihood ratio tests for model selection and non-nested hypotheses. *Econometrica*, *57*, 307–333.

Weiler, B. L., & Widom, C. S. (1996). Psychopathy and violent behavior in abused and neglected young adults. *Criminal Behavior and Mental Health*, *6*, 253–271.