

Commentary: Predictors of Adolescent Psychopathy—More to Learn?

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In “Predictors of Adolescent Psychopathy: The Role of Impulsivity, Hyperactivity, and Sensation Seeking,” Vitacco and Rogers¹ continue some previous lines of research on the development of psychopathic features in youths and extend them to seriously delinquent adolescents. In their study, they explored two primary subjects: the relationship of various indicators of behavioral dysregulation to psychopathy, and Lynam’s hypothesis that it is the combination of hyperactive-impulsive-attention (HIA) problems and conduct disorder (CD) problems, rather than the presence of either problem alone, that is the strongest precursor of psychopathic features in youths.^{2,3} Standard measures of behavioral dysregulation constructs (e.g., sensation seeking, impulsivity) and HIA-CD symptoms were obtained in a sample of 79 adolescent males who had been placed in a maximum-security facility as a result of adjudication. Hierarchical regression analyses were used to explore the relationships of these predictor variables to scores on the Psychopathy Checklist: Screening Version (PCL-SV).⁴ These analyses revealed that among indicators of behavioral dysregulation, only impulsivity was independently associated with psychopathy ($R^2 = .15$). A collateral analysis revealed that impulsivity accounted for the lion’s share ($R^2 = .36$) of variance explained in a measure of CD, with symptoms of attention-deficit/hyperactivity disorder (ADHD; $R^2 = .04$) and sensation seeking ($R^2 = .03$) making additional but minor contributions. Regarding Lynam’s theory, Vitacco and Rogers found that only CD, not HIA symptoms, significantly predicted

PCL-SV scores ($R^2 = .28$). Collectively, these findings led the authors to design a two-stage model wherein behavioral dysregulation (primarily impulsivity) contributes to the development of conduct problems, and conduct problems in turn contribute to the development of adolescent psychopathy.

Heterogeneity of Psychopathy: More to be Learned from this Study?

The measures, design, and analyses used by Vitacco and Rogers are reasonable, given the objectives of their study, and the authors note several limitations and suggest directions for future research. Given that the PCL:SV is not recommended for use in individuals younger than 16 (Ref. 4, p 17), future investigators may opt for one of several measures designed specifically to assess psychopathic features in youths and adolescents. These include the Child Psychopathy Scale (CPS),⁵ the Antisocial Process Screening Device (APSD),⁶ (previously the Psychopathy Screening Device⁷), and the Hare Psychopathy Checklist: Youth Version (PCL:YV).⁸ I suggest that there may be more to be learned from this data set than the authors have presented in their report.

In association with developing theories regarding the etiology of antisocial behavior, in recent years there has been a revival of the interest in “subtypes,” which recognizes the potential heterogeneity of individuals who appear similar on some omnibus index of psychopathy.⁹ Briefly, “primary” psychopathy is thought to be associated with a constitutional deficit in temperament, such that the individual is less sensitive to cues of punishment and anticipatory nonreward (behavioral inhibition system (BIS) deficit), whereas “secondary” psychopathy may result from a different temperament defect marked by increased sensitivity and reactivity to appetitive cues or antici-

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patory reward (behavioral activation system (BAS) defect).¹⁰ In terms of measurement using psychopathy instruments developed in the Hare tradition (i.e., the Hare PCL-revised (PCL-R) and its derivatives), primary psychopathy is thought to be associated more with the core affective (e.g., callous/unemotional, shallow affect, lack of empathy) and interpersonal (e.g., pathological lying; conning/manipulative) features, whereas secondary psychopathy is thought to be associated more with deviant lifestyle (e.g., impulsivity, parasitic lifestyle) features.¹⁰ Consequently, investigators have begun to explore relationships between constructs of interest not only with the total scores on psychopathy measures (the method used by Vitacco and Rogers), but also with the separate factor scores for these various measures. Factor 1 on the PCL-R and PCL:YV and Part 1 of the PCL:SV assess core affective and interpersonal features, whereas Factor 2 and Part 2 assess social deviancy features. Levenson *et al.*¹¹ developed separate primary psychopathy (modeled after PCL-R Factor 1) and secondary psychopathy (modeled after PCL-R Factor 2) measures. In initial studies using Frick's and Hare's APSD (formerly the Psychopathy Screening Device (PSD)),⁶ factor analysis also yielded two factors labeled Callous/Unemotional (CU), which corresponds to PCL-R Factor 1, and Impulsivity/Conduct Problems (I/CP), which corresponds to PCL-R Factor 2.

Investigators have found in some instances that potential predictors of psychopathy may be differentially associated with (predictive of) these various facets of psychopathy. For example, Colledge and Blair¹² examined the relationships of the impulsivity and inattention components of ADHD with the CU and I/CP factor scores of Frick's and Hare's youth psychopathy measure⁶ in 71 male adolescents with emotional and behavioral difficulties. Using simple zero-order correlations, both the CU and I/CP factor scores of the PSD were highly correlated with both the inattention and impulsivity components of ADHD. Using partial correlations, however, they found that it is the impulsivity component of ADHD that is more substantially related to psychopathic features. When inattention was controlled for, impulsivity was still significantly related to both CU ($r = .286$) and I/CP ($r = .407$), whereas controlling for impulsivity resulted in nonsignificant correlations for inattention with CU ($r = .002$) and I/CP ($r = .02$).

At first blush, these results support the finding of Vitacco and Rogers that impulsivity, but not attention deficits, is associated with the development of psychopathic features generally. However, Colledge and Blair also used partial correlations to control for the relationship between the PSD factors themselves. It is worthwhile to review the work by McHoskey *et al.*¹³ and Frick *et al.*¹⁴ on the importance of partial correlations in controlling for covariance in psychopathy factor scores. In the context of the foregoing discussion regarding heterogeneity of psychopathy, an interesting pattern of results emerged. Controlling for I/CP reduced to nonsignificance the associations between CU and impulsivity ($r = .099$) and inattention ($r = .074$), whereas I/CP remained significantly correlated with both impulsivity ($r = .569$) and inattention ($r = .503$), when controlling for CU traits. These results suggest that impulsivity may contribute strongly to variants or subtypes of psychopathy manifest mainly by deviant lifestyle features, but may be relatively unimportant in our understanding of the development of primary psychopathy, which is associated more strongly with the core personality features identified by Cleckley.¹⁵

Similar findings were obtained by Frick *et al.*,¹⁶ who used partial correlations to examine the associations among oppositional defiant disorder (ODD), CD, and ADHD symptoms with psychopathic features in a clinical sample ($n = 160$) of youths. These DSM-III-R symptom indices were significantly correlated with all facets of youth psychopathy when zero-order correlations were obtained. However, the significant correlations of CU with ODD ($r = .42$), CD ($r = .38$), and ADHD ($r = .27$) were all reduced to nonsignificance ($r = .07, .07, -.09$, respectively) when partial correlations were used to control for other facets (impulsivity, narcissism) of youth psychopathy, whereas partial correlations between these symptom indices and the impulsivity and narcissism facets remained significant. Again, these findings permit a different impression concerning the importance of DSM symptom indices for understanding psychopathy, including CD symptoms, than is obtained from the unidimensional analysis reported by Vitacco and Rogers—that is, CD symptoms may be important in the development of some facets of psychopathy, but they are perhaps less important in our understanding of the development of the core affective features that are thought to typify primary psychopathy. (See also O'Brien and Frick,¹⁷ who found

that presence or absence of conduct problems was unrelated to a youth's performance on a passive avoidance (reward dominance) task thought to identify individuals with a behavioral inhibition deficit; youth with high CU scores performed more poorly, regardless of the presence of conduct problems.)

The results reported by Vitacco and Rogers regarding dysregulation behaviors are interesting, and they draw reasonable inferences from them for treatment recommendations. However, this brief review suggests that, at least for purposes of understanding better the development of psychopathic features in youths if not also for treatment-planning purposes, some additional insights may be available from alternative analyses of their data. In addition to the use of the partial correlations described earlier, some recent investigators have also found cluster analyses useful in examining the features of youth with varying patterns of psychopathic (and other) features.¹⁶

HIA-CP and Psychopathic Features in Youths

Vitacco and Rogers found little support for Lynam's HIA-CD hypothesis, as did Frick *et al.*¹⁶ before them. However, these investigators used different research methods (e.g., Lynam used secondary data analysis), different populations (i.e., research sample versus clinic sample versus juvenile justice sample), and different measures of psychopathic features in youth (i.e., CPS, Lynam; APSD, Frick *et al.*; PCL:SV, Vitacco and Rogers). Given the potential array of factors that may have contributed to inconsistent outcomes, further research is needed to explore Lynam's hypothesis regarding the relationship, if any, of currently accepted diagnostic entities (e.g., ADHD, CD) to psychopathic features in youth.

A Cautionary Note on Terminology and Labeling

Investigating the causes and correlates of psychopathic features in youths and adolescents is currently one of the more active and exciting areas of research. It is a logical downward extension from the adult psychopathy literature, in light of current theories that hypothesize constitutional deficits of one ilk or another to be important etiologic factors. However, the excitement of opening this new area of research and preliminarily informative findings notwithstanding, it is still premature, in my opinion, in any

clinical or forensic context, to attach the label of psychopath to youths or adolescents who are assessed with any of the putative youth psychopathy measures developed to date. There are some data to suggest that the various youth psychopathy measures correlate poorly with one another,¹⁸ and there may be little basis, other than authority, to select among them for those who would diagnose psychopathy in youth for either clinical or forensic applications.

As Vitacco and Rogers noted, concerns have been raised about the stability of psychopathy scores in adolescents,¹⁹ and longitudinal research is needed to clarify the numerous areas of concern that remain. As such, these authors' suggestion that youths or adolescents may be classified as psychopaths using the PCL:SV seems ill-advised. The manual for the PCL:SV indicates that those with high scores on this measure should be further evaluated with the PCL-R (Ref. 4, p 22). There is no suggestion that the screening version should be used to diagnose psychopathy, even in adults. As noted, there are other considerations that may militate specifically against the use of the PCL:SV for diagnosing psychopathy in youths. Until a considerably stronger research basis for diagnosis is available, it is recommended that both research and clinical discourse (if any) use psychopathic features, callous/unemotional features, or similar such characterizations that stop short of categorical labels.

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