



Age of Onset of Psychopathic Traits in Adolescent Offenders

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Introduction

Psychopathy is an adult personality disorder characterized by a constellation of maladaptive interpersonal, affective, and behavioral traits (Cleckley, 1976; Hare, 2003). Empirical evidence suggests that psychopathic traits are associated with a variety of negative outcomes in youth, such as violence and criminal recidivism (Edens et al., 2001). However, there have been numerous concerns voiced regarding the application of psychopathy to younger samples (e.g., Seagrave & Grisso, 2002). Given the enormity of developmental change during childhood and adolescence, the stability of psychopathic traits at young ages and the validity of a direct downward extension of the adult psychopathy construct to youth have been questioned.

In recent years, researchers have called for a developmental approach to investigating psychopathy (Salekin & Frick, 2006). In this way, theories and methods from the developmental psychology literature can be used to elucidate the etiology, onset, and course of the disorder. One developmental concept of potential importance is age of onset, which has been useful in differentiating subgroups of conduct-disordered youth in terms of etiology, course, and outcome (Moffitt, 1993).

Theorists have long postulated that the roots of psychopathy lie in childhood (e.g., McCord & McCord, 1965). An early onset of behavioral problems is recognized in the assessment of psychopathy (Forth et al., 2003) and there is some evidence that psychopathic traits in youth are related to an early onset of dysfunction (e.g., Corrado et al., 2004). However, surprisingly little is known about the timing of onset of psychopathy, especially the core interpersonal and affective dimensions of the disorder.

The Current Study

The goal of the current study was to comprehensively investigate the age of onset of the interpersonal, affective, and behavioral traits of psychopathy in a sample of adolescent male offenders. The research questions were (1) what are the median ages of onset of the various psychopathic traits? (2) what do the patterns of onset look like across development? and (3) what are high risk developmental periods for the onset of the psychopathic traits?

Method

Participants

Participants were 115 male adolescents incarcerated in British Columbia, Canada. The ages of participants ranged from 13 to 20 ($M = 16.3$, $SD = 1.4$). The ethnic composition of the sample included 50% Caucasian, 41% Aboriginal, and 9% Other. The mean self-reported number of years of education was 9.2 ($SD = 1.2$). Sixty-three percent of youth were incarcerated in maximum security custody and 37% were in an minimum security custody setting. Thirty-four percent of youth were on remand and 66% were sentenced. Forty-two percent were incarcerated for a violent offence. Mean sentence length was 173 days ($SD = 197$).

Materials and Procedure

All youth were administered the Psychopathy Checklist: Youth Version (PCL:YV; Forth et al., 2003), a semi-structured interview and file review which rates adolescents on 20 items indicative of psychopathic traits (0=not present; 1=possibly present; 2=definitely present). Total PCL:YV scores range from 0 to 40. PCL:YV ratings were made by three trained and experienced raters.

According to Cooke and Michie (2003), the three PCL:YV factors include Arrogant and Deceitful Interpersonal Style (Factor 1), Deficient Affective Experience (Factor 2), and Impulsive and Irresponsible Behavioral Style (Factor 3). Mean Total, Factor 1, Factor 2, and Factor 3 scores were 26.8 ($SD = 6.3$), 4.3 ($SD = 1.9$), 4.3 ($SD = 1.6$), and 8.2 ($SD = 1.9$). Interrater reliability was good to excellent for Total and Factor scores ($ICCs = .70$ to $.97$).

Age of onset was assessed by adding queries about the presence and onset of multiple indicators of each psychopathic trait assessed by the PCL:YV interview. In order to judge age of onset for the psychopathic traits, raters made use of information gathered during the interview as well as collateral information gathered during the file review. The minimum age of onset for any item was set at age 5 due to poor file information and recall difficulties for very early ages. The age restriction for Item 12 (serious behavior problems before age 11) was removed. Age of onset was coded for the age the youth reached a score of 1 (first trait appearance) and the age at which the youth reached a score of 2 (full trait manifestation). Interrater reliabilities for age of onset judgments ranged from fair to excellent ($ICCs = .41$ to $.84$).

Median Ages of Onset

Kaplan-Meier survival analysis was used to compute the median ages of onset of the first appearance (score of 1) of the psychopathic traits (Table 1). This method determines the average age by which half of the sample had scored a 1 on the various traits. On average, onset was earliest for affective traits ($M = 9.5$, $SD = 1.7$), followed by behavioral traits ($M = 10.8$, $SD = 1.6$), and latest for interpersonal traits ($M = 11.5$, $SD = 2.1$). In terms of individual traits, the earliest onsets were for the affective traits of Lacks Remorse and Callous/Lacks Empathy whereas the latest onsets were for Impression Management and Lacks Goals.

Patterns of Onset and High Risk Periods for Onset

Survival functions were created in order to observe patterns of onset of the first appearance of the various psychopathic traits. Survival functions start at 1.0 when 100 percent of cases have "survived" or not yet shown onset of a trait and they decrease toward 0 as new cases of trait onset occur at each age. Hazard functions were created in order to examine developmental periods of highest risk for the first appearance of the various psychopathic traits. The magnitude of the hazard function increases at ages when there is elevated risk for trait onset.

Table 1

Median Ages of Onset of Psychopathic Traits

Table with 2 columns: Trait, Median Age Onset

Interpersonal
Impression Management 14
Grandiosity 11
Pathological Lying 9
Manipulation 12

Affective
Lacks Remorse 8
Shallow Affect 11
Callous/Lacks Empathy 8
Failure to Accept Responsibility 11

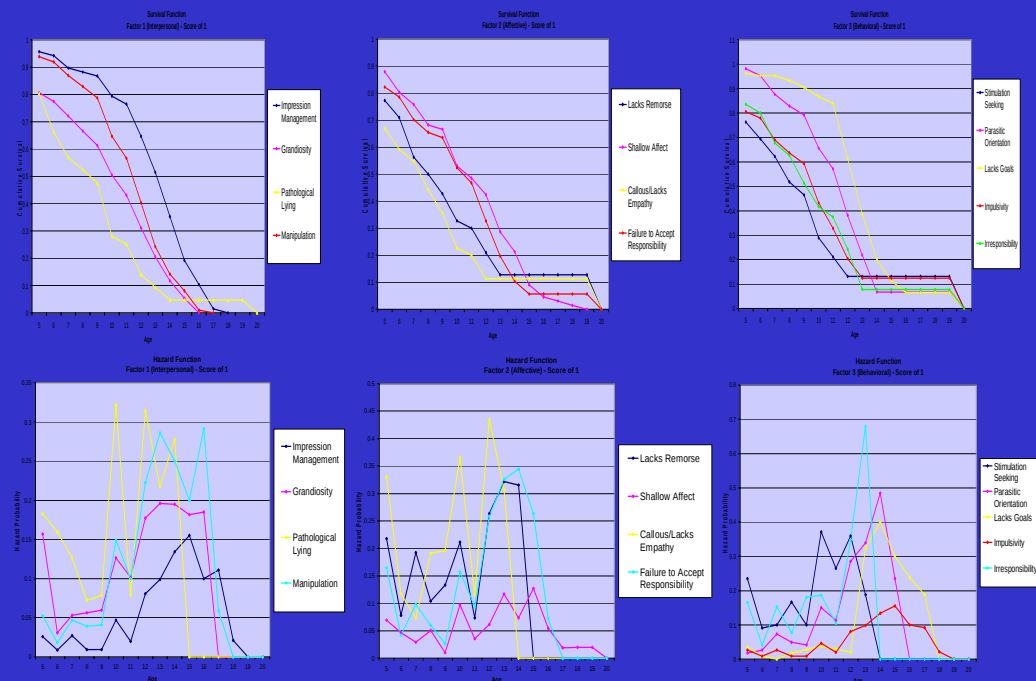
Behavioral
Stimulation Seeking 9
Parasitic Orientation 12
Lacks Goals 13
Impulsivity 10
Irresponsibility 10

Antisocial:
Poor Anger Control 7
Serious Behavior Problems 6
Serious Criminal Behavior: 14
Violations of Conditional Release: 14
Criminal Versatility: 15

Other Traits:
Impersonal Sexual Relationships 13
Unstable Interpersonal Relationships 12

* The Antisocial and Other traits are included in the analysis but are generally considered to be manifestations of psychopathy rather than core personality features of the disorder.
* Median ages of onset for the criminality items are artificially restricted by the minimum legal age for arrest.

Results



Discussion

The goal of the current study was to comprehensively examine the onset of the interpersonal, affective, and behavioral traits of psychopathy in a sample of male adolescent offenders. To this end, median ages of onset for each psychopathic trait were computed, patterns of trait onset across development were examined, and periods of elevated risk for trait onset were identified. On average, psychopathic traits first emerged around age 11 and fully manifested around age 13.5. Affective deficits appeared first developmentally and, within this dimension, the traits of lacking remorse and callousness/lacking empathy were the first to emerge. This is consistent with the theoretical view that these traits comprise in part the core personality dimension of psychopathy (Cleckley, 1976). These traits may also be under genetic control or influenced by environmental factors that occur early in life. Indeed, there is growing evidence from twin studies that the callous-unemotional traits of psychopathy are under strong genetic influence (Rhee & Waldman, 2006; Viding et al., 2005) and a large body of research linking psychopathy to family factors such as poor parenting (Forth & Burke, 1998), disrupted attachment (Kosson et al., 2002; Saltaris, 2002), and child abuse (Campbell et al., 2004; O'Neill et al., 2003). Interpersonal traits emerged last developmentally and the traits of Impression Management and Lacks Goals appeared were the latest of all traits to appear. There are two potential explanations for this finding, each with important measurement implications. First, these traits may appear last because they do not crystallize until later ages and are thus inapplicable in younger samples (e.g., Hart et al., 2002). Second, if these traits do exist at younger ages, their assessment may be limited by a developmentally uninformed measurement tool that precludes the identification of early manifestations of the traits (e.g., Johnstone & Cooke, 2004).

Developmental periods of high risk for the first appearance of psychopathic traits were identified. Some traits demonstrated an acute risk period, such as Irresponsibility at age 13 and Failure to Accept Responsibility at age 14. Other traits showed a more stable level of risk over time, such as Shallow Affect and Impulsivity. Knowledge of key ages at which high-risk youth begin to demonstrate psychopathic traits may aid practitioners in designing timely interventions. Youth with high levels of psychopathic traits tend to fare poorly in treatment programs (e.g., Spain et al., 2004). However, there have been no studies of the treatment of psychopathic traits *per se* in youth samples and Salekin (2002) notes that there is reason to be optimistic about the possibility of treating symptoms of psychopathy in youth samples.

Limitations and Future Research

There are several limitations to the current study. First, the methodology asked youth to retrospectively recall the ages of onset of a variety of behaviors and attitudes. This method has been critiqued for poor reliability and validity (e.g., Henry et al., 1994); however, recent research suggests that adolescents can be accurate informants about the age of onset of symptoms (Silverthorn et al., 2001). Second, setting the minimum age of onset at age 5 may have precluded an accurate measurement of traits that emerge at younger ages. For example, Tremblay et al. (1999) assert that physical aggression peaks at age 2. Third, the generalizability of the findings is limited by the sample characteristics (serious Caucasian and Aboriginal male adolescent offenders) and the instrument used to measure psychopathic traits (PCL:YV). Fourth, this study measured the onset of psychopathic traits, but did not account for the occurrence or age of potential offset of the traits. Finally, an effort was made to develop age-appropriate indicators of psychopathic traits, but it remains unclear what the best indicators of psychopathy are across childhood and adolescence.

Future research aiming to elucidate the onset and course of psychopathy should use longitudinal designs starting with young children as well as multiple methods of assessing psychopathic traits and a variety of different samples (females, community). Researchers should also strive to determine which genetic and environmental factors influence the onset and stability of the expression of psychopathic traits and use the literature on normative developmental theory and processes to clarify the most developmentally informed manifestations of psychopathy across different age ranges.