

Psychopathy: Assessment and Forensic Implications

Robert D Hare, PhD¹; Craig S Neumann, PhD²

Psychopathy is commonly viewed as a personality disorder defined by a cluster of interpersonal, affective, lifestyle, and antisocial traits and behaviours, including grandiosity, egocentricity, deceptiveness, shallow emotions, lack of empathy or remorse, irresponsibility, impulsivity, and a tendency to violate social norms. In our article, we outline standard methods for the assessment of psychopathy, its association with antisocial personality disorder (ASPD), and its implications for clinical and forensic issues, including crime and violence, risk assessment, and treatment options.

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Highlights

- Psychopathy is a clinical construct defined by a constellation of interpersonal, affective, lifestyle, and antisocial traits and behaviours. The most widely used instruments for its measurement are the Psychopathy Checklist—Revised and its derivatives.
- Psychopathy is conceptually similar to ASPD; however, at the measurement level, the former places more emphasis on interpersonal and affective features and their links to broad antisocial tendencies, while the latter emphasizes overt antisocial behaviours. The empirical association between psychopathy and ASPD is asymmetric; most people with psychopathy meet the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, diagnostic criteria for ASPD, but the converse is not true.
- Psychopathy is associated with an increased risk for antisocial behaviour, crime, and violence, and presents the mental health and criminal justice systems with a formidable therapeutic challenge.

Key Words: *psychopathy, antisocial personality disorder, assessment, violence risk, treatment*

Psychopathy was the first personality disorder to be recognized in psychiatry. The concept has a long historical and clinical tradition, and in the last decade a growing body of research has supported its validity.^{1, p 28}

In the decade following this 1998 statement, the theoretical and empirical literature on psychopathy has expanded virtually at an exponential rate, with the addition of well over 500 scientific publications and many books and edited volumes. Much of this literature examines and evaluates the application of psychopathy to the mental health and criminal justice systems,^{2–4} where it has been described as “the most important

and useful psychological construct yet discovered for criminal justice policies”^{5, p 231} and as “what may be the most important forensic concept of the early 21st century.”^{6, book jacket} However, the past few years have also seen a dramatic increase in basic research based on the theories and methodologies from basic science including, but certainly not limited to, behavioural genetics, developmental psychopathology, cognitive–affective neuroscience, biochemistry, general personality theory,⁷ and organizational psychology.⁸ In 2004, the SSSP was established as a vehicle for the exchange of ideas and research findings among international investigators. Because psychopathy is associated with so much social and personal damage and distress, the basic and applied research endeavours are now

supplemented by the provision of forums for victims to discuss their problems.

In some respects, attempts to understand and deal with psychopathy, and to communicate research findings to professionals and the public, are impeded by confusion and disagreements about what is meant by the term. For this reason, we begin with a brief discussion of the traditional construct of psychopathy and its measurement, followed by a few comments about the conceptually related ASPD, described in the DSM-IV.⁹ We then summarize recent aspects of the empirical literature on the association of psychopathy with crime and violence, and its implications for the assessment of risk, management, and treatability. Recent findings on the development and neurobiology of psychopathy are reviewed in this issue.^{10,11}

Psychopathy

Detailed outlines of the historical evolution of the construct are available elsewhere.^{1,12–15} Briefly, psychopathy is commonly considered a PD that includes a cluster of interpersonal, affective, lifestyle, and antisocial traits and behaviours. On the interpersonal level, people with psychopathy are grandiose, deceptive, dominant, superficial, and manipulative. Affectively, they are shallow, unable to form strong emotional bonds with others, and lack empathy, guilt, or remorse. The interpersonal and affective features are fundamentally

tied to a socially deviant (not necessarily criminal) lifestyle that includes irresponsible and impulsive behaviour, and a tendency to ignore or violate social conventions and mores. A common genetic factor appears to account for substantial variance in these psychopathy domains,^{16,17} evidence that they are part of the superordinate construct of psychopathy.^{18,19}

PCL-R Assessment of Psychopathy

Because of space limitations, we focus on the most widely accepted measure of psychopathy, the PCL-R,^{14,20} described in the Buros Mental Measurements Yearbook as “state of the art”^{21, p 177} and as “the gold standard for the assessment of psychopathy.”^{22, p 430} Only brief reference is made to its direct derivatives, the PCL:SV²³ and the PCL:YV,²⁴ both supported by extensive evidence for their reliability and validity. We note that these scales were designed to measure the clinical construct of psychopathy; however, because of their demonstrated ability to predict recidivism, violence, and treatment outcome, they routinely are used in forensic assessments, either on their own or, more appropriately, as part of a battery of variables and factors relevant to forensic psychology and psychiatry (discussed below). An extensive discussion of the issues associated with the use and potential misuse of the PCL-R and PCL:YV has been provided by Book et al.²⁵

Recent reviews of the development and psychometric and structural properties of the PCL-R and its derivatives are available elsewhere, and provide the basis for much of the discussion in this article.^{20,25–28} Briefly, the PCL-R is a 20-item clinical construct rating scale that uses a semi-structured interview, case history information, and specific scoring criteria to rate each item on a 3-point scale (0, 1, 2) according to the extent to which it applies to a given person. In some cases, this standard procedure (interview plus file information) is replaced by a nonstandard procedure, in which only file information is used to score the items. The items and the factors they comprise (discussed below) are listed in Table 1. Total scores can range from 0 to 40 and reflect the degree to which the person matches the prototypical psychopathic person, in line with recent evidence that, at the measurement level, the construct underlying the PCL-R (and its derivatives) is dimensional in nature rather than taxonic.^{29–31} This dimensionality poses a problem for diagnosing or categorizing a person as a psychopath, a problem shared by other clinical disorders (for example, ASPD^{32,33}) that are described and treated as categorical but in fact may be dimensional. Nonetheless, public and scientific discourse is replete with, and facilitated by, terms that refer to extremes of human physical and psychological dimensions (for example, obese, genius, hypertensive, and introvert). Further, the dimensionality of a PD does not preclude the use

Abbreviations used in this article

APSD	Antisocial Process Screening Device
ASPD	antisocial personality disorder
CPS	Childhood Psychopathy Scale
DSM	Diagnostic and Statistical Manual of Mental Disorders
DVRAG	Domestic Risk Appraisal Guide
F1	PCL-R Factor 1
F2	PCL-R Factor 2
HCR-20	Historical Clinical Risk Management
IRT	item response theory
P1	PCL: SV Part 1
P2	PCL: SV Part 2
PCL-R	Psychopathy Checklist—Revised
PCL:SV	Psychopathy Checklist: Screening Version
PCL:YV	Psychopathy Checklist: Youth Version
PD	personality disorder
SEM	Structural Equation Modelling
SORAG	Sex Offender Risk Appraisal Guide
SSSP	Society for the Scientific Study of Psychopathy
SVR-20	Sexual Violence Risk—20
VRAG	Violent Risk Appraisal Guide

Table 1 Items and factors in the Hare PCL scales

PCL-R	PCL:YV	PCL:SV
F1		P1
Interpersonal	Interpersonal	Interpersonal
1. Glibness—superficial charm	1. Impression management	1. Superficial
2. Grandiose sense of self-worth	2. Grandiose sense of self-worth	2. Grandiose
4. Pathological lying	4. Pathological lying	3. Deceitful
5. Conning—manipulative	5. Manipulation for personal gain	
Affective	Affective	Affective
6. Lack of remorse or guilt	6. Lack of remorse	4. Lacks remorse
7. Shallow affect	7. Shallow affect	5. Lacks empathy
8. Callous—lack of empathy	8. Callous—lack of empathy	6. Does not accept responsibility
16. Failure to accept responsibility	16. Failure to accept responsibility	
F2		P2
Lifestyle	Behavioural	Lifestyle
3. Need for stimulation	3. Stimulation seeking	7. Impulsive
9. Parasitic lifestyle	9. Parasitic orientation	9. Lacks goals
13. Lack of realistic, long-term goals	13. Lack of goals	10. Irresponsibility
14. Impulsivity	14. Impulsivity	
15. Irresponsibility	15. Irresponsibility	
Antisocial	Antisocial	Antisocial
10. Poor behavioural controls	10. Poor anger control	8. Poor behavioural controls
12. Early behavioural problems	12. Early behaviour problems	11. Adolescent antisocial behaviour
18. Juvenile delinquency	18. Serious criminal behaviour	12. Adult antisocial behaviour
19. Revocation of conditional release	19. Serious violations of release	
20. Criminal versatility	20. Criminal versatility	

The PCL-R, PCL:YV, and PCL:SV items are from Hare,^{14,20} Forth et al,²⁴ and Hart et al,²³ respectively. Reprinted by permission of the copyright holders, RD Hare and Multi-Health Systems. Note that the item titles cannot be scored without reference to the formal criteria contained in the published manuals. PCL-R items 11, Promiscuous sexual behaviour, and 17, Many short-term marital relationships, contribute to the total score but do not load on any factors. PCL:YV items 11, Impersonal sexual behaviour, and 17, Unstable interpersonal relationships, contribute to the total score but do not load on any factor. F1 and F2 are the original PCL-R factors, but with the addition of item 20. Parts 1 and 2 (P1 and P2) are described in the PCL:SV Manual.²³

of diagnostic thresholds for making clinical decisions.³³ Regarding psychopathy, a PCL-R cut-off score of 30 has proven useful for classifying people for research and applied purposes as psychopathic, although some investigators and commentators have used other cut-off scores for psychopathy (for example, 25 in some European studies). IRT analyses indicate that PCL-R scores in the upper range (around 30) appear to reflect much the same level of psychopathy in North American male offenders as they do in female offenders, male forensic psychiatric patients, male offenders assessed from file reviews, and European male offenders and forensic psychiatric patients.^{34–36} Similarly, IRT analyses³⁷ and a meta-analytic review³⁸ indicate that the PCL-R total scores function similarly in African-American and Caucasian offenders and patients. For these reasons the term psychopathic in our article refers to people with a PCL-R score of at

least 30, an extreme score obtained by about 15% of the male offenders, and 10% of the female offenders, described by Hare.²⁰ Nonetheless, we note that there are ethnic and sex differences in the functioning of individual PCL-R items^{34–37} and in the external correlates of the PCL-R and other measures of psychopathy.^{4,7,20,39} The patterning and significance of these differences are the subject of much of the current empirical research on psychopathy.

Internal consistency and interrater reliability of the PCL-R and its derivatives are generally high in basic and applied research contexts. This does not ensure that an individual clinical or forensic assessment will be reliable or valid. In a research context, misuse of these instruments will have few negative consequences for the person tested. However, when the scores are used in clinical and criminal justice contexts

the implications of misuse are potentially very serious, especially if the scores are used to guide treatment or adjudication decisions.^{20,40,41} Moreover, there is a possibility of rater bias in assessments completed by clinicians involved in adversarial proceedings.⁴² It is important when conducting an assessment to use all information available to provide a complete picture of the person. In each case, the PCL-R must be used properly and in accordance with the highest ethical and professional standards. The items must be scored in accordance with the criteria listed in the manual or not scored at all. Clinicians who use the PCL-R or its derivatives must be prepared to outline the information used to score the items and to explain and justify the manner in which they scored the items. They must take into account measurement error²⁰ and the probabilistic nature of risk assessments. They should also be aware that many prosecutors and defence attorneys are familiar with the PCL-R, its uses, and its limitations.²⁵

There are no exclusion criteria for use of the PCL-R or its derivatives, which can be administered to offenders and patients with various psychiatric disorders. Therefore, it is possible to have symptom covariation between psychopathy, as measured by the PCL scales, and other psychiatric disorders (for example, delusions of grandeur in psychotic disorders, inflated self-importance in narcissistic PD, and grandiose self-worth in psychopathy).

Factor Structure

There is an extensive empirical literature indicating that, in various forensic populations, the items in the PCL-R measure a unitary construct.^{18,20,35,43} Early exploratory factor analyses indicated that the items could be organized into 2 broad correlated clusters or factors. As shown in Table 1, F1 reflected the interpersonal and affective components of the disorder, whereas F2 was more closely allied with a socially deviant lifestyle (the lifestyle and antisocial factors in Table 1). Recent confirmatory factor analyses of very large data sets^{18,20,44} clearly indicate that a 4-factor model consisting of 18 items fits the data well. Two items (that is, promiscuous sexual behaviour and many short-term relationships) do not load on any factor but contribute to the total PCL-R score. The 4 psychopathy factors are significantly interrelated, and thus can be comprehensively explained by a single superordinate (that is, psychopathy) factor.^{18,45} The pattern of correlations among the 4 factors, as well as confirmatory factor analyses^{20,27} also confirm the presence of 2 broad factors, 1 identical with the original F1 and the other the same as the original F2, but with the addition of 1 item (that is, criminal versatility). A 3-factor model based on a selective set of 13 PCL-R items also fits the data well.³⁶ The rationale for this model (which consists of the interpersonal, affective, and lifestyle factors in Table 1) is the dubious argument that items reflecting antisociality should not be part of the psychopathy

construct, and that the retained items (for example, pathological lying and irresponsibility) are less antisocial than some excluded items (for example, early behaviour problems and poor behavioural controls). These and related issues, including our view that the 3-factor model is untenable on conceptual, statistical, and empirical grounds, are discussed in detail elsewhere.^{18,26,27}

The identification of separate factors in the PCL-R has resulted in a considerable amount of research on the differential correlates of the factors, primarily the original F1 and F2. In some cases, partial correlations have been used to isolate the association between one factor and an outcome variable (for example, violence) by statistically removing the effects of the other factor. Some investigators then treat the factors as if they identify 2 separate constructs, for example, inappropriately referring to F1 as psychopathy and F2 as akin to ASPD (see Hare and Neumann⁴⁶ for a discussion of this issue). However, F1 and F2 (as well as the factors in the 4-factor model) are highly correlated (even more so at the latent than at the manifest variable level⁴⁷) and statistically removing the effects of one psychopathy factor (for example, F2) to study the residual effects of another factor (for example, F1) makes it difficult to know what is being studied, the original construct or the residual effects of a psychopathy factor (for example, F1 in this case), an issue discussed in detail by Lynam et al.⁴⁸

Because the PCL-R factors are substantially correlated, it is important to examine the combined effects of elevations on both of these factors. Put in more clinical terms, a syndrome of psychopathy is likely typified by a person who chronically presents with elevated scores on both factors, not just one of these factors. Consistent with this idea, initial research by Harpur and Hare⁴⁹ found that the interaction of F1 and F2 was critical for predicting offenders' violent behaviour, weapons use, and violent and aggressive behaviour in prison. Similarly, research with the PCL:SV has also found that the interaction among psychopathy factors predicted presence or absence of violent behaviour during a 1-year follow-up in civil psychiatric patients.⁵⁰ More recently, Walsh and Kosson⁵¹ replicated the importance of factor interactions in the prediction of violence, using both cross-sectional and prospective data. A key finding in this study was that the predictive effects of F2 were attenuated at lower levels of F1, in line with our proposal that high scores on both psychopathy factors are what represents a case of psychopathy and that the combination of these 2 factors is what puts people at heightened risk for violence. Simple comparisons of the predictive validity of the PCL factors should be tempered by consideration of the interactive effects of these factors.

Direct Derivatives of the PCL-R

The PCL:SV

The PCL:SV consists of 12 items (Table 1) derived from the PCL-R, each scored on a 3-point scale (0, 1, 2) on the basis of interview and collateral information that is less extensive than that required for scoring the PCL-R. Total scores can vary from 0 to 24. It is conceptually and empirically related to the PCL-R,^{52,53} and can be used as an effective screen for psychopathy in forensic populations⁵³ or as a stand-alone instrument for research with noncriminals, including civil psychiatric patients^{54,55} and community samples.^{56,57} Its psychometric and structural properties are much the same as those of the PCL-R.⁵⁷⁻⁵⁹ Like the PCL-R, a 2-factor solution originally was described (P1 and P2 in Table 1). More recent confirmatory factor analyses reveal a 4-factor structure similar to that of the PCL-R (Table 1). There is rapidly accumulating evidence for the construct validity of the PCL:SV, including its ability to predict aggression and violence in offenders and in both forensic and civil psychiatric patients (discussed below). In this respect, the correlates of the PCL:SV are much the same as those of the PCL-R. A PCL:SV score of 18 is about equivalent to a PCL-R score of 30. Less than 1% of the people in the MacArthur community sample analyzed by Neumann and Hare⁵⁷ had a PCL:SV score this high.

The PCL:YV

The PCL:YV is an age-appropriate modification of the PCL-R intended for use with adolescents. Like the PCL-R, it consists of 20 items underpinned by 3 or 4 factors.^{45,60} The items and factors are presented in Table 1. It has much the same psychometric properties and correlates as its adult counterpart^{25,61,62} and appears to generalize well across ethnic groups and countries.^{25,63-65} Although there is little doubt about the reliability and validity of the PCL:YV, concerns arise about its use in the criminal justice system. The main issues have to do with: the dangers of labelling an adolescent as a psychopath; the implications of the PCL:YV for classification, sentencing, and treatment; the possibility that some features measured by the PCL:YV are found in normally developing youth; and, the degree of stability of psychopathy-related traits from late childhood to early adulthood. Extensive discussions of these issues are available elsewhere.^{25,66-71} Briefly, although psychopathy and its features do not suddenly emerge in early adulthood, the PCL:YV nonetheless should not be used to diagnose adolescents as psychopathic. Although some adolescents may exhibit some features of psychopathy in certain contexts or, for a limited time, a high score on the PCL:YV requires evidence that the traits and behaviours are extreme and that they are manifested across social contexts and over substantial time periods.

Lynam and Gudonis,⁶⁹ following their review of the literature, commented that:

psychopathy in juveniles looks much like psychopathy in adults. The same traits characterize these individuals at different developmental time points. Additionally, juvenile psychopathy acts like adult psychopathy. Like their adult counterparts, [juveniles with psychopathic traits] are serious and stable offenders. They are prone to externalizing disorders . . . as far as has been observed juvenile psychopathy appears quite stable across adolescence. All of these findings replicate those observed in studies using psychopathic adults.^{p 401-402}

Related Instruments

There are several well-validated downward extensions of the PCL-R constructed for use with children and adolescents, including the APSD^{10,72} and the CPS,⁶⁹ each of which uses teacher-parent ratings but also can be used as a self-report scale. They play an important role in delineating early precursors of psychopathy and evaluating their stability into adulthood.^{10,73}

Self-report psychopathy scales are beginning to broaden the repertoire of available assessment tools, and show promise of helping us to understand better the construct they purport to measure.⁷⁴⁻⁷⁶ Limitations of self-report scales are that they are subject to impression management, are not particularly good at assessing the interpersonal and affective features of psychopathy, and are only moderately correlated with the PCL instruments.⁷⁷ Nonetheless, these scales have low-to-moderate predictive validity for various antisocial and criminal behaviours.⁷⁸⁻⁸⁵

Antisocial Personality Disorder

The DSM-IV states that ASPD “has also been referred to as psychopathy, sociopathy, or dissocial personality disorder,”^{9, p 645} a statement repeated in the DSM-IV-TR.⁸⁶ This apparent equating of ASPD with the traditional construct of psychopathy has generated a considerable amount of discussion among clinicians and researchers.^{20,26,28,87-92}

While it is true that psychopathy, as measured by the PCL-R, and ASPD have several (mostly antisocial) features in common, they are not synonymous terms or constructs, at least not at the measurement level. When introduced by DSM-III⁹³ in 1980 the intention was to provide a reliable means of measuring the traditional construct of psychopathy by focusing on easily measured antisocial behaviours,^{91, p 157-159; 94, p 79} albeit at the expense of inferred personality traits fundamental to psychopathy, which were considered too difficult to measure reliably.⁹⁵ This intention is reflected in later editions of the DSM. For example, the Associated Features and

Disorders section for ASPD in DSM-IV⁹, p 647 clearly describes ASPD by personality features that are an essential part of the psychopathy construct. However, use of the formal diagnostic criteria does not require that these personality features be present for making a diagnosis of ASPD, resulting in a curious disconnect between the conceptualization of ASPD and its diagnosis, with the latter based on rather low thresholds (before and after age 15 years) for the presence of ASPD. The result is a prevalence of ASPD in civil and forensic populations that is at least 3 times the prevalence of psychopathy (based on the PCL-R and PCL:SV cut-off scores described above). The association between ASPD and psychopathy is generally asymmetric: most people with ASPD are not psychopathic, whereas most of those who are psychopathic meet the diagnostic criteria for ASPD.^{2,89,96,97} The reason for this asymmetry is hardly surprising: ASPD is much more strongly associated with the lifestyle–antisocial, than with the interpersonal–affective, features measured by the PCL-R, a differential association that holds both when ASPD and psychopathy are treated as categorical variables and when they are treated as continuous variables.²⁰

These issues were well known before the publication of DSM-IV, and the supposition that personality traits could not be measured reliably was invalidated by the results of the ASPD Field Trial for DSM-IV.⁹² At the International Conference on Personality Disorders held at Harvard University in 1993, Dr Hare gave an address on the nature and measurement of psychopathy. As described elsewhere,^{98, p 8–9} at the end of the presentation the Chair for DSM-III and DSM-III-R⁹⁹ asked why psychopathy was not to be more influential in the forthcoming DSM-IV. Dr Hare said that he did not know the answer, whereupon the Director of the DSM-IV Field Trial for ASPD opined that, had they started from scratch, the ASPD criteria, in large part, would be based on the 10-item psychopathy set derived from the PCL-R and PCL:SV for use in the Field Trial.^{92,100} The next day, Dr Hare discussed the matter with John Gunderson, Chair of the DSM-IV Personality Disorders Work Group. In a recent article in *The New Yorker*,¹⁰¹ Gunderson recalled the conversation, and was reported as having said that Dr Hare had intellectually “won the battle” but that the use of psychopathy in DSM-IV as a synonym for ASPD was a “function of institutional inertia.”^{p 71}

We mention these exchanges because even after an additional 15 years of theory, research, and discussion, confusion between ASPD and the traditional construct of psychopathy remains. Rogers et al⁹⁰ had this to say about the situation: “DSM-IV does considerable disservice to diagnostic clarity in its equating of [ASPD] to psychopathy.”^{p 236–237} Or, as Lykken⁸⁸ put it, “Identifying someone as ‘having’ [ASPD] is about as nonspecific and scientifically unhelpful as

diagnosing a sick patient as having a fever or an infectious or a neurological disorder.”^{p 4}

Currently, work is under way on the development of DSM-V, although little is known about the direction it will take regarding ASPD.³³ Perhaps personality will be brought back into the picture, and ASPD will in fact become synonymous with psychopathy, conceptually and diagnostically. As expressed by Westen and Weinberger¹⁰²:

The psychopathy construct is currently experiencing a renaissance (and a likely return in some form to a future DSM) because it tends to be more predictive of outcomes than the antisocial diagnosis, which focuses more on antisocial behaviours and less on underlying personality dispositions.^{p 599}

Similarly, Livesley and Jang¹⁰³ have stated that:

The occurrence of a general genetic factor underlying both psychopathy and antisocial behavior justifies further integration of these constructs with an emphasis on the interpersonal components as opposed to the DSM-III emphasis on social deviance.^{p 254}

Psychopathy and Crime

In the past few years there has been a dramatic change in the perceived and actual role played by psychopathy in the criminal justice system. Formerly, a prevailing view was that clinical diagnoses such as psychopathy were of little value in understanding and predicting criminal behaviours. More recently, the importance of psychopathy, particularly as measured by the PCL-R and its derivatives, is widely recognized, both by forensic clinicians^{104,105} and by the courts.^{106–108} This is not surprising, given that many of the characteristics important for inhibiting antisocial and violent behaviour—empathy, close emotional bonds, fear of punishment, guilt—are lacking or seriously deficient in psychopathic people. Moreover, their egocentricity, grandiosity, sense of entitlement, impulsivity, general lack of behavioural inhibitions, and need for power and control constitute what may be described as a prescription for the commission of antisocial and criminal acts.^{20,109} This would help to explain why psychopathic offenders are disproportionately represented in the criminal justice system. It also would explain why they find it so easy to victimize the vulnerable and to use intimidation and violence as tools to achieve power and control over others. Their impulsivity and poor behavioural controls may result in reactive forms of aggression or violence, but other features (for example, lack of empathy and shallow emotions) also make it relatively easy for them to engage in aggression and violence that is more predatory, premeditated, instrumental, or cold-blooded in nature.^{20,110–114}

Assessment of Risk

Extensive discussions of the theories and methodologies of risk assessment are provided elsewhere.^{115–117} The latest generation of risk assessment instruments largely has dispelled the belief that useful predictions cannot be made about criminal behaviour.^{116,118} There is debate about the relative effectiveness of actuarial risk instruments and structured clinical assessments, but the empirical evidence indicates that they perform about equally well. The former are empirically derived sets of static (primarily criminal history and demographic) risk factors, and include the VRAG,¹¹⁷ the SORAG,¹¹⁹ and the DVRAG,¹²⁰ instruments that improve considerably on unstructured clinical judgments or impressions. Procedures that include structured clinical decisions based on specific criteria are also proving to be useful. For example, the HCR-20¹²¹ assesses 10 historical (H) variables, 5 clinical (C) variables, and 5 risk management (R) variables. Because of its importance in the assessment of risk, psychopathy, as measured by the PCL-R or the PCL:SV, is included in the VRAG, SORAG, DVRAG, and HCR-20, as well as in the SVR-20.¹²² We note that the PCL-R and its derivatives reflect relatively static risk factors and are properly used as supplements to more general risk evaluations. In addition to the instruments described above, there is increasing interest in the role of dynamic (changeable) risk factors in risk assessment.¹²³

A detailed account of psychopathy as a risk for recidivism and violence is beyond the scope of this article. However, its significance as a robust risk factor for institutional problems, for recidivism in general, and for violence in particular, is now well established (see the large-scale meta-analysis by Leistico et al¹²⁴). The predictive value of psychopathy applies not only to adult male offenders but also to adult female offenders^{125,126}; adolescent offenders^{24,127,128}; forensic psychiatric patients, including those with schizophrenia^{129–137}; offenders with intellectual difficulties¹³⁸; and civil psychiatric patients.⁵⁵ Psychopathy is also increasingly seen as an important factor in explaining domestic violence,^{139,140} with the PCL-R an integral component in the DVRAG.¹²⁰ In some cases, the predictive utility of the PCL-R and PCL:SV is at least as good as the purpose-built instruments, including those of which they are a part.^{20,129,141–148} For example, in the MacArthur Risk Study,¹¹⁶ the VRAG predicted violence in civil psychiatric patients, but the effect was due entirely to the inclusion in the VRAG of the PCL:SV.¹⁴⁷

The last few years have seen a sharp increase in public and professional attention paid to sex offenders, particularly those who commit a new offence following release from a treatment program or prison. It has long been recognized that psychopathic sex offenders present special problems for therapists and the criminal justice system. In general, the prevalence of

psychopathy, as measured by the PCL-R, is lower in child molesters than in rapists or mixed offenders.^{20,149,150} However, child molesters with high PCL-R scores are at increased risk for sexual reoffending.¹⁵⁰ Quinsey et al¹¹⁹ concluded from their extensive research that psychopathy functions as a general predictor of sexual and violent recidivism. Although psychopathy appears to be more predictive of general violence than sexual violence,^{20,150} its relation with the latter may be underestimated because many sexually motivated violent offences are officially recorded as nonsexual violent offences.¹⁵¹ Not only are the offences of psychopathic sex offenders likely to be more violent than those of other sex offenders, they tend to be more sadistic.^{20,152,153} In extreme cases—for example, among serial killers—comorbidity of psychopathy and sadistic personality is very high.^{154–157} In their PCL-R study of murderers, Porter et al¹⁵³ concluded that “not only are psychopathic offenders disproportionately more likely to engage in sexual homicide (than are other murderers), but, when they do, they use significantly more gratuitous and sadistic violence.”^{p 467}

Psychopathy, as measured by the PCL-R, is commonly used in preventative detention proceedings for sex offenders,^{158,159} and for other dangerous offenders.^{107,108} Concurrently, there is evidence that psychopathic sex offenders are more likely to obtain early release from prison than are other sex offenders, presumably because they are adept at impression management.¹⁵⁰

One of the most potent combinations to emerge from the recent research on sex offenders is psychopathy coupled with evidence of deviant sexual arousal. Rice and Harris¹⁶⁰ reported that sexual recidivism was strongly predicted by a combination of a high PCL-R score and deviant sexual arousal, defined by phallometric evidence of a preference for deviant stimuli, such as children, rape cues, or nonsexual violence cues. Several studies indicate that psychopathy, in association with behavioural or structured clinical evidence of deviant sexual arousal, also is a strong predictor of sexual violence.^{161–163} Gretton et al¹⁶⁴ found that this combination was highly predictive of general and violent reoffending in adolescent sex offenders. Recently, Harris et al¹⁵² reported that in a large sample study involving 4 sites the psychopathy–sexual deviance combination was predictive of violent recidivism in general, both sexual and nonsexual. The authors commented, “Because of the robustness of this interaction [between psychopathy and sexual deviance] and its prognostic significance, its inclusion in the next generation of actuarial instruments for sex offenders should increase predictive accuracy”^{152, p 421} of general violent recidivism. Deviant fantasies no doubt play an important role in facilitating this psychopathy–deviance pattern.^{85,165}

SEM and Violence Risk

The literature on psychopathy and violence is compelling, but the emphasis has been on classical psychometric approaches (that is, not formally accounting for measurement error), likely underestimating the role of psychopathy in violence. Modern model-based approaches, including SEM, are beginning to prove fruitful in elucidating the associations between the PCL scales and violence. For instance, based on a sample of male psychiatric patients ($n = 149$) within a maximum security forensic state hospital, Hill et al⁵⁸ found that the 4-factor model accounted for 31% of the variance in patients' aggression across a 6-month follow-up. The interpersonal (0.56) and antisocial (0.35) factors were the strongest predictors. Similarly, using a very large sample ($n = 840$) of civil psychiatric outpatients, Vitacco et al⁵⁹ found that the 4-factor model accounted for 21% of violent and aggressive behaviour within the community at 20-week follow-up. In the same study,⁵⁹ both the affective (0.41) and the antisocial (0.40) factors were the strongest predictors. Noteworthy is that these and other studies^{28,46} indicate that each of the PCL dimensions plays an important role in the prediction of aggression and violence.

Based on these previous studies, as well as information about the distribution of psychopathic features within the general community,^{56,57} we recently examined whether the 4-factor (PCL:SV-based) model of psychopathy could be used to adequately describe a large sample ($n = 514$) of people from the general community, as well as predict future violent behaviour.⁵⁷ The results provided excellent support for the model and indicate that the superordinate psychopathy factor was able to account for 17% of the variance in future violent behaviour in a community sample. Community studies of this sort are particularly advantageous for examining the biological and psychosocial factors linked with the development and expression of psychopathic traits, uncontaminated by the effects of institutionalization and psychiatric morbidity.

As discussed previously, taking into account the type of violence involved—that is, reactive, compared with instrumental—facilitates understanding the link between psychopathy and violent behaviour. A more general issue concerns the severity and temporal aspects of the violence. We have begun to use modern statistical methods of growth modelling to provide a better sense of how psychopathy may be associated with violent behaviour over time. This approach has the advantage of separating the level of some phenomenon (violence) at any given time from the rate of change or growth of the phenomenon over time.¹⁶⁶ Neumann and Vitacco,¹⁶⁷ using a latent growth model, found that the absolute level of violence was primarily explained by the antisocial psychopathy factor and a psychotic symptom factor in a sample of civil psychiatric outpatients. In contrast, the

interpersonal psychopathy factor predicted the growth in violent acts during a 30-week follow-up. This latent growth modelling research is notably different from previous prediction research, which has been primarily concerned with predicting a single event (for example, the first violent act after release from custody). A more dynamic picture can be provided by modelling the growth of a phenomenon over time, rather than simply trying to predict a single event.

Treatment

Unlike most other offenders, people with psychopathy appear to suffer little personal distress, see little wrong with their attitudes and behaviour, and seek treatment only when it is in their best interests to do so, such as when seeking probation or parole. They appear to derive little benefit from prison treatment programs that are emotion-based, involve talk therapy, are psychodynamic or insight-oriented, or are aimed at the development of empathy, conscience, and interpersonal skills.^{168–172} This is hardly surprising, given recent findings from behavioural genetics, developmental psychopathology, and neurobiology^{5,10,11,16,17,168,173,174} that psychopathy is characterized by personality and behavioural propensities that are strongly entrenched and presumably difficult to change. Some authors recently have argued for programs primarily geared toward a reduction in risk for recidivism and violence. Wong and colleagues^{170,174,175} have proposed that such risk management and harm reduction programs should involve an integration of relapse-prevention techniques and risk-needs-responsivity principles^{176,177} with elements of the best available cognitive-behavioural correctional programs. The programs should be less concerned with developing empathy and conscience or effecting changes in personality than with convincing participants that they alone are responsible for their behaviour, and that there are more prosocial ways of using their strengths and abilities to satisfy their needs and wants. Early indications are that such programs may help to reduce the seriousness of postrelease offending.¹⁷⁵ There also is some recent evidence that therapeutic progress in cognitive-behavioural programs,^{178–180} as well as successful completion of such programs,^{180–183} may be predictive of reduced recidivism rates among adolescent and adult offenders, including some with many psychopathic features.

Conclusions

There is a substantial amount of empirical evidence that psychopathy, as measured by the PCL-R and its derivatives, is a predictor of recidivism and violence in prison, forensic psychiatric, and civil psychiatric populations. Indeed, psychopathy is one of the most generalizable of the risk factors identified thus far, and, for this reason, PCL scales are included in various actuarial and structured-clinical risk

assessment procedures. Although psychopathy is not the only risk factor for recidivism and violence, it is unusually pervasive (“by all odds the prime criminogenic personality trait”^{184, p 198}) and too important to ignore, particularly regarding violence. Treatment and management are difficult, time-consuming, and expensive; however, new initiatives based on current theory and research on psychopathy and the most effective correctional philosophies may help to reduce the harm done by people with psychopathy.

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References

- Millon T, Simonsen E, Birket-Smith M, et al, editors. *Psychopathy: antisocial, criminal, and violent behaviour*. New York (NY): Guilford Press; 1998.
- Felthous AR, Sass H, editors. *International handbook on psychopathic disorders and the law*. New York (NY): John Wiley & Sons, Inc; 2007.
- Gacono CB, editor. *The clinical and forensic assessment of psychopathy: a practitioner’s guide*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2000.
- Hervé H, Yuille J, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007.
- Harris GT, Skilling TA, Rice ME. The construct of psychopathy. *Crime Justice*. 2001;28:197–264.
- Monahan J. [Comments on book jacket]. In: Patrick CJ, editor. *Handbook of psychopathy*. New York (NY): Guilford Press; 2006.
- Patrick CJ, editor. *Handbook of psychopathy*. New York (NY): Guilford Press; 2006.
- Babiak P, Hare RD. *Snakes in suits: when psychopaths go to work*. New York (NY): HarperCollins; 2006.
- American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 4th ed. Washington (DC): APA; 1994.
- Frick PJ. Extending the construct of psychopathy to youth: implications for understanding, diagnosing, and treating antisocial children and adolescents. *Can J Psychiatry*. 2009;54(12):803–812.
- Gao Y, Glenn AL, Schug RA, et al. The neurobiology of psychopathy: a neurodevelopmental perspective. *Can J Psychiatry*. 2009;54(12):813–823.
- Berrios GE. *The history of mental symptoms: descriptive psychopathology since the nineteenth century*. Cambridge (GB): Cambridge University Press; 1996.
- Cleckley H. *The mask of sanity*. 5th ed. St. Louis (MO): Mosby; 1976.
- Hare RD. *The Hare Psychopathy Checklist—Revised*. Toronto (ON): Multi-Health Systems, Inc; 1991.
- Hervé H. Psychopathy across the ages: a history of the Hare psychopath. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 31–55.
- Larsson H, Viding E, Plomin R. Callous-unemotional traits and antisocial behavior: genetic, environmental, and early parenting characteristics. *Crim Justice Behav*. 2008;35:197–211.
- Viding E, Frick PJ, Plomin R. Aetiology of the relationship between callous-unemotional traits and conduct problems in childhood. *Br J Psychiatry Suppl*. 2007;49:S33–S38.
- Neumann CS, Hare RD, Newman JP. The super-ordinate nature of the psychopathy checklist-revised. *J Pers Disord*. 2007;21:102–117.
- Neumann CS, Vitacco MJ, Hare RD, et al. Reconstructing the “reconstruction” of psychopathy: a comment on Cooke, Michie, Hart, and Clark. *J Pers Disord*. 2005;19:624–640.
- Hare RD. *The Hare Psychopathy Checklist—Revised*. 2nd ed. Toronto (ON): Multi-Health Systems, Inc; 2003.
- Fulero S. Review of the Hare Psychopathy Checklist—Revised. In: Conoley JC, Impara, JC, editors. *Twelfth mental measurements yearbook*. Lincoln (NE): Buros Institute of Mental Measurements; 1995. p 453–454.
- Acheson SK. Review of the Hare Psychopathy Checklist—Revised. 2nd ed. In: Spies RA, Plake BS, editors. *The sixteenth mental measurements yearbook*. Lincoln (NE): Buros Institute of Mental Measurements; 2005. p 429–431.
- Hart SD, Cox DN, Hare RD. *Manual for the Psychopathy Checklist: Screening Version (PCL:SV)*. Toronto (ON): Multi-Health Systems, Inc; 1995.
- Forth AE, Kosson D, Hare RD. *The Hare PCL: Youth Version*. Toronto (ON): Multi-Health Systems, Inc; 2003.
- Book A, Clark H, Forth AE, et al. *The Psychopathy Checklist-Revised and the Psychopathy Checklist: Youth Version*. In: Archer R, editor. *Forensic uses of clinical assessment instruments*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2006. p 147–179.
- Hare RD, Neumann CN. The PCL-R assessment of psychopathy: development, structural properties, and new directions. In: Patrick C, editor. *Handbook of psychopathy*. New York (NY): Guilford Press; 2006. p 58–88.
- Hare RD, Neumann CS. Psychopathy as a clinical and empirical construct. *Annu Rev Clin Psychol*. 2008;4:217–246.
- Hare RD, Neumann CS. Psychopathy. In: Blaney P, Millon T, editors. *Oxford textbook of psychopathology*. 2nd ed. New York (NY): Oxford University Press; 2009. p 622–650.
- Edens JF, Marcus DK, Lilienfeld SO, et al. Psychopathic, not psychopath: taxometric evidence for the dimensional structure of psychopathy. *J Abnorm Psychol*. 2006;115:131–144.
- Guay JP, Ruscio J, Knight RA, et al. A taxometric analysis of the latent structure of psychopathy: evidence for dimensionality. *J Abnorm Psychol*. 2007;116:701–716.
- Walters GD, Gray NS, Jackson RL, et al. A taxometric analysis of the Psychopathy Checklist: Screening Version (PCL:SV): further evidence of dimensionality. *Psychol Assess*. 2007;19:330–339.
- Marcus DK, Lilienfeld SO, Edens JF, et al. Is antisocial personality disorder continuous or categorical? A taxometric analysis. *Psychol Med*. 2006;36:1571–1581.
- Widiger TA, Mullins-Sweatt SN. Five-factor model of personality disorder: a proposal for DSM-V. *Annu Rev Clin Psychol*. 2009;5:197–220.
- Bolt DM, Hare RD, Neumann CS. Score Metric Equivalence of the Psychopathy Checklist-Revised (PCL-R) across criminal offenders in North America and the United Kingdom: a critique of Cooke, Michie, Hart, and Clark (2005) and new analyses. *Assessment*. 2007;14:44–56.
- Bolt DM, Hare RD, Vitale JE, et al. A multigroup item response theory analysis of the psychopathy checklist—revised. *Psychol Assess*. 2004;16:155–168.
- Cooke DJ, Michie C, Hart SD, et al. Assessing psychopathy in the UK: concerns about cross-cultural generalisability. *Br J Psychiatry*. 2005;186:335–341.
- Cooke DJ, Kosson DS, Michie C. Psychopathy and ethnicity: structural, item, and test generalizability of the Psychopathy Checklist—Revised (PCL-R) in Caucasian and African American participants. *Psychol Assess*. 2001;13:531–542.
- Skeem JL, Edens JF, Camp J, et al. Are there ethnic differences in levels of psychopathy? A meta-analysis. *Law Hum Behav*. 2004;28:505–527.
- Sullivan EA, Abramowitz CS, Lopez M, et al. Reliability and construct validity of the psychopathy checklist—revised for Latino, European American, and African American male inmates. *Psychol Assess*. 2006;18:382–392.
- Edens JF. Misuses of the Hare Psychopathy Checklist—Revised in court: two case examples. *J Interpers Violence*. 2001;16:1082–1093.
- Hare RD. The Hare PCL-R: some issues concerning its use and misuse. *Leg Criminol Psychol*. 1998;3:101–122.
- Murrie DC, Boccaccini MT, Johnson JT, et al. Does interrater (dis)agreement on Psychopathy Checklist score in sexually violent predator trials suggest partisan allegiance in forensic evaluations? *Law Hum Behav*. 2008;32:352–362.
- Cooke DJ, Michie C. An item response theory analysis of the Hare Psychopathy Checklist. *Psychol Assess*. 1997;9:3–13.
- Neumann CS. Psychopathy. *Br J Psychiatry*. 2007;191:357–358.
- Neumann CS, Kosson DS, Forth AE, et al. Factor structure of the Hare Psychopathy Checklist: Youth Version in incarcerated adolescents. *Psychol Assess*. 2006;18:142–154.
- Hare RD, Neumann CS. The role of antisociality in the psychopathy construct: comment on Skeem & Cooke (2009). *Psychol Assess*. Forthcoming 2009.
- Neumann CS, Kosson DS, Salekin RT. Exploratory and confirmatory factor analysis of the psychopathy construct: methodological and conceptual issues. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 79–104.
- Lynam DR, Hoyle RH, Newman JP. The perils of partialling: cautionary tales from aggression and psychopathy. *Assessment*. 2006;13:328–341.
- Harpur TJ, Hare RD. Psychopathy and violent behaviour: two factors are better than one. Paper presented at the 99th annual meeting of the American Psychological Association; 1991 August; San Francisco (CA).
- Skeem JL, Mulvey EP, Grisso T. Applicability of traditional and revised models of psychopathy to the Psychopathy Checklist: Screening Version. *Psychol Assess*. 2003;15:41–55.

51. Walsh Z, Kosson DS. Psychopathy and violence: the importance of factor level interactions. *Psychol Assess*. 2008;20:114–120.
52. Cooke DJ, Michie C, Hart SD, et al. Evaluating the Screening Version of the Hare Psychopathy Checklist-Revised (PCL:SV): an item response theory analysis. *Psychol Assess*. 1999;11:3–13.
53. Guy LS, Douglas KS. Examining the utility of the PCL:SV as a screening measure using competing factor models of psychopathy. *Psychol Assess*. 2006;18:225–230.
54. De Oliveira-Souza R, Ignácio FA, Moll J, et al. Psychopathy in a civil psychiatric outpatient sample. *Crim Justice Behav*. 2008;35:427–437.
55. Steadman HJ, Silver E, Monahan J, et al. A classification tree approach to the development of actuarial violence risk assessment tools. *Law Hum Behav*. 2000;24:83–100.
56. Coid J, Ullrich S, Yang M, et al. Psychopathy in the household population of Great Britain. *Int J Law Psychiatry*. 2009;32:134–141.
57. Neumann CS, Hare RD. Psychopathic traits in a large community sample: links to violence, alcohol use, and intelligence. *J Consult Clin Psychol*. 2008;76:893–899.
58. Hill C, Neumann CS, Rogers R. Confirmatory factor analysis of the psychopathy checklist: screening version in offenders with Axis I disorders. *Psychol Assess*. 2004;16:90–95.
59. Vitacco MJ, Neumann CS, Jackson R. Testing a four-factor model of psychopathy and its association with ethnicity, gender, intelligence, and violence. *J Consult Clin Psychol*. 2005;73:466–476.
60. Jones S, Cauffman E, Miller JD, et al. Investigating different factor structures of the psychopathy checklist: youth version: confirmatory factor analytic findings. *Psychol Assess*. 2006;18:33–48.
61. Salekin RT, Neumann CS, Leistico AM, et al. Psychopathy and comorbidity in a young offender sample: taking a closer look at psychopathy's potential importance over disruptive behavior disorders. *J Abnorm Psychol*. 2004;113:416–427.
62. Vitacco MJ, Neumann CS, Caldwell MF, et al. Testing factor models of the Psychopathy Checklist: Youth Version and their association with instrumental aggression. *J Pers Assess*. 2006;87:74–83.
63. Dolan MC, Rennie CE. Reliability and validity of the Psychopathy Checklist: Youth Version in a UK sample of conduct disordered boys. *Pers Individ Dif*. 2006;40:65–75.
64. McCoy WK, Edens JF. Do black and white youths differ in levels of psychopathic traits? A meta-analysis of the Psychopathy Checklist Measures. *J Consult Clin Psychol*. 2006;74:386–392.
65. Schrum CL, Salekin RT. Psychopathy in adolescent female offenders: an item response theory analysis of the Psychopathy Checklist: Youth Version. *Behav Sci Law*. 2006;24:39–63.
66. Forth AE, Book AS. Psychopathy in youth: a valid construct. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 369–387.
67. Frick PJ. Using the construct of psychopathy to understand antisocial and violent youth. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 343–367.
68. Frick PJ, Marsee MA. Psychopathy and developmental pathways to antisocial behavior in youth. In: Patrick CJ, editor. *Handbook of psychopathy*. New York (NY): Guilford Press; 2006. p 353–374.
69. Lynam DR, Gudonis L. The development of psychopathy. *Annu Rev Clin Psychol*. 2005;1:381–407.
70. Salekin RT. Psychopathy in children and adolescents. In: Patrick CJ, editor. *Handbook of psychopathy*. New York (NY): Guilford Press; 2006. p 389–414.
71. Vitacco MJ, Vincent GM. Understanding the downward extension of psychopathy to youth: implications for risk assessment and juvenile justice. *Int J Forensic Ment Health*. 2006;5:29–38.
72. Frick PJ, Hare RD. *The antisocial process screening device*. Toronto (ON): Multi-Health Systems, Inc; 2001.
73. Lynam DR, Derefinko KJ, Caspi A, et al. The content validity of juvenile psychopathy: an empirical examination. *Psychol Assess*. 2007;19:363–367.
74. Lilienfeld SO, Andrews BP. Development and preliminary validation of a self-report measure of psychopathic personality traits in noncriminal populations. *J Pers Assess*. 1996;66:488–524.
75. Andershed H, Kerr M, Stattin H, et al. Psychopathic traits in non-referred youths: a new assessment tool. In: Blauw E, Sheridan L, editors. *Psychopaths: current international perspectives*. The Hague (NL): Elsevier; 2002. p 131–158.
76. Williams KM, Paulhus DL, Hare RD. Capturing the four-factor structure of psychopathy in college students via self-report. *J Pers Assess*. 2007;88:205–219.
77. Lilienfeld SO, Fowler KA. The self-report assessment of psychopathy: problems, pitfalls, and promises. In: Patrick CJ, editor. *Handbook of psychopathy*. New York (NY): Guilford Press; 2006. p 107–132.
78. Nathanson C, Paulhus DL, Williams KM. Personality and misconduct correlates of body modification and other cultural deviance markers. *J Res Pers*. 2006;40:779–802.
79. Boccaccini MT, Epstein M, Poythress N, et al. Self-report measures of child and adolescent psychopathy as predictors of offending in four samples of justice-involved youth. *Assessment*. 2007;14:361–374.
80. Malterer MB, Lilienfeld SO, Neumann CS, et al. Concurrent validity of the Psychopathic Personality Inventory with offender and community samples. *Assessment*. Forthcoming 2009.
81. Neumann CS, Malterer MB, Newman JP. Factor structure of the Psychopathic Personality Inventory (PPI): findings from a large incarcerated sample. *Psychol Assess*. 2008;20:169–174.
82. Neumann CS, Declercq F. Latent variable models of the Self-report of Psychopathy-III (SRP-III) Scale across three large diverse samples and replication in an offender sample. Paper presented at the biennial conference of the Society for the Scientific Study of Psychopathy; 2009 April; New Orleans (LA).
83. Paulhus DL. Laboratory studies with the Self-Report Psychopathy Scale. Paper presented at the biennial conference of the Society for the Scientific Study of Psychopathy; 2009 April; New Orleans (LA).
84. Schmitt DP. Self-reported psychopathy and human mating strategies across 58 nations: patterns and universals across genders, cultures, and local ecologies. Paper presented at the biennial conference of the Society for the Scientific Study of Psychopathy; 2009 April; New Orleans (LA).
85. Williams KM, Cooper BS, Howell TM, et al. Inferring sexually deviant behavior from corresponding fantasies. *Crim Justice Behav*. 2009;36:198–222.
86. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 4th ed. Text revision. Washington (DC): APA; 2000.
87. Hare RD, Hart SD. Commentary on antisocial personality disorder: the DSM-IV field trial. In: Livesley WJ, editor. *The DSM-IV personality disorders*. New York (NY): Guilford Press; 1995. p 127–134.
88. Lykken DT. Psychopathic personality: the scope of the problem. In: Patrick C, editor. *Handbook of psychopathy*. New York (NY): Guilford Press; 2006. p 3–13.
89. Ogloff JRP. Psychopathy/antisocial personality disorder conundrum. *Aust N Z J Psychiatry*. 2006;40:519–528.
90. Rogers R, Salekin RT, Sewell KW, et al. Prototypical analysis of antisocial personality disorder: a study of inmate samples. *Crim Justice Behav*. 2000;27:234–255.
91. Widiger TA. Psychopathy and DSM-IV psychopathology. In: Patrick CJ, editor. *Handbook of psychopathy*. New York (NY): Guilford Press; 2006. p 156–171.
92. Widiger TA, Cadoret R, Hare R, et al. DSM-IV antisocial personality disorder field trial. *J Abnorm Psychol*. 1996;105:3–16.
93. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 3rd ed. Washington (DC): APA; 1980.
94. Robins LN. *Deviant children grown up*. Baltimore (MD): Williams & Wilkins; 1966.
95. Robins LN. Aetiological implications in studies of childhood histories relating to antisocial personality. In: Hare RD, Schalling D, editors. *Psychopathic behavior: approaches to research*. Chichester (GB): John Wiley & Sons, Inc; 1978. p 255–271.
96. Hare RD. Psychopathy and antisocial personality disorder: a case of diagnostic confusion. *Psychiatr Times*. 1996;13:39–40.
97. Warren JI, South SC. Comparing the constructs of antisocial personality disorder and psychopathy in a sample of incarcerated women. *Behav Sci Law*. 2006;24:1–20.
98. Hare RD. Forty years are not enough: recollections, random musings, and prognostications. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 3–29.
99. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 3rd ed. Revision. Washington (DC): APA; 1987.
100. Hare RD, Hart SD, Harpur TJ. Psychopathy and the DSM-IV criteria for antisocial personality disorder. *J Abnorm Psychol*. 1991;100:391–398.
101. Seabrook J. *Suffering souls: the search for the roots of psychopathy*. The New Yorker. 2008 Nov 10.
102. Westen D, Wienberger J. When clinical description becomes statistical prediction. *Am Psychol*. 2004;59:595–613.
103. Livesley WJ, Jang KL. The behavioral genetics of personality disorder. *Annu Rev Clin Psychol*. 2008;4:247–274.
104. Archer RP, Buffington-Vollum JK, Stredny RV, et al. A survey of psychological test use patterns among forensic psychologists. *J Pers Assess*. 2006;87:84–94.
105. Lally SJ. What tests are acceptable for use in forensic evaluations? A survey of experts. *Prof Psychol Res Pr*. 2003;34:491–498.
106. Walsh T, Walsh Z. The evidentiary introduction of Psychopathy Checklist-Revised assessed psychopathy in US courts: extent and appropriateness. *Law Hum Behav*. 2006;30:493–507.
107. de Boer J, Whyte S, Maden T. Compulsory treatment of dangerous offenders with severe personality disorders: a comparison of the English DSPD and Dutch TBS systems. *J Forensic Psychiatr Psychol*. 2008;19:148–163.
108. Zinger I, Forth AE. Psychopathy and Canadian criminal proceedings: the potential for human rights abuses. *Can J Criminol*. 1998;40:237–276.
109. Porter S, Porter S. Psychopathy and violent crime. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 287–300.
110. Cornell DG, Warren J, Hawk G, et al. Psychopathy in instrumental and reactive violent offenders. *J Consult Clin Psychol*. 1996;64:783–790.

111. Meloy JR. The "polymorphously perverse" psychopath: understanding a strong empirical relationship. *Bull Menninger Clin.* 2002;66:273–290.
112. Porter S, Woodworth M. Psychopathy and aggression. In: Patrick CJ, editor. *Handbook of psychopathy.* New York (NY): Guilford Press; 2006. p 481–494.
113. Williamson SE, Hare RD, Wong S. Violence: criminal psychopaths and their victims. *Can J Behav Sci.* 1987;19:454–462.
114. Woodworth M, Porter S. In cold blood: characteristics of criminal homicides as a function of psychopathy. *J Abnorm Psychol.* 2002;111:436–445.
115. Monahan J, Steadman HJ. *Violence and mental disorder: developments in risk assessment.* Chicago (IL): University of Chicago Press; 1994.
116. Monahan J, Steadman HJ, Silver E, et al. *Rethinking risk assessment: the McArthur study of mental disorder and violence.* New York (NY): Oxford University Press; 2001.
117. Quinsey VL, Harris GE, Rice ME, et al. *Violent offenders: appraising and managing risk.* 2nd ed. Washington (DC): American Psychological Association; 2006.
118. Harris GT, Rice ME. Characterizing the value of actuarial violence risk assessments. *Crim Justice Behav.* 2007;34:1638–1658.
119. Quinsey VL, Rice ME, Harris GT. Actuarial prediction of sexual recidivism. *J Interpers Violence.* 1995;10:85–105.
120. Hilton NZ, Harris GT, Rice ME, et al. An indepth actuarial assessment for wife assault recidivism: the Domestic Violence Risk Appraisal Guide. *Law Hum Behav.* 2008;32:150–163.
121. Webster C, Douglas K, Eaves D, et al. *HCR-20 assessing risk for violence: version II.* Burnaby (BC): Mental Health, Law & Policy Institute, Simon Fraser University; 1997.
122. Boer DP, Hart SD, Kropp PR, et al. *Manual for the sexual violence risk—20. Professional guidelines for assessing risk of sexual violence.* Vancouver (BC): British Columbia Institute on Family Violence; 1997.
123. Quinsey VL, Jones GB, Book AS, et al. The dynamic prediction of antisocial behavior among forensic psychiatric patients. *J Interpers Violence.* 2006;21:1539–1565.
124. Leistico AM, Salekin RT, DeCoster J, et al. A meta-analysis relating the Hare measures of psychopathy to antisocial conduct. *Law Hum Behav.* 2008;32:2–45.
125. Jackson RL, Richards HJ. Psychopathy and the five-factor model: self and therapist perceptions of psychopathic personality. *Pers Individ Dif.* 2007;43:1711–1721.
126. Verona E, Vitale J. Psychopathy in women: assessment, manifestations, and etiology. In: Patrick CJ, editor. *Handbook of psychopathy.* New York (NY): Guilford Press; 2006. p 415–436.
127. Gretton H, Hare RD, Catchpole R. Psychopathy and offending from adolescence to adulthood: a ten-year follow-up. *J Consult Clin Psychol.* 2004;72:636–645.
128. Stafford E, Cornell D. Psychopathy scores predict adolescent inpatient aggression. *Assessment.* 2003;10:102–112.
129. Dolan M, Davies G. Psychopathy and institutional outcome in patients with schizophrenia in forensic settings in the UK. *Schizophr Res.* 2006;81:277–281.
130. Doyle M, Dolan M, McGovern J. The validity of North American risk assessment tools in predicting in-patient violent behaviour in England. *Legal Criminol Psychol.* 2002;7:141–154.
131. Heilbrun K, Hart SD, Hare RD, et al. Inpatient and post-discharge aggression in mentally disordered offenders: the role of psychopathy. *J Interpers Violence.* 1998;13:514–527.
132. Hill CD, Rogers R, Bickford ME. Predicting aggressive and socially disruptive behavior in a maximum security forensic psychiatric hospital. *J Forensic Sci.* 1996;41:56–59.
133. Lincoln TM, Hodgins S. Is lack of insight associated with physically aggressive behavior among people with schizophrenia living in the community? *J Nerv Ment Dis.* 2008;196:62–66.
134. Rice ME, Harris GT. A comparison of criminal recidivism among schizophrenic and nonschizophrenic offenders. *Int J Law Psychiatry.* 1992;15:397–408.
135. Tengström A, Grann M, Långström N, et al. Psychopathy (PCL-R) as a predictor of violent recidivism among criminal offenders with schizophrenia. *Law Hum Behav.* 2000;24:45–58.
136. Tengström A, Hodgins S, Grann M, et al. Schizophrenia and criminal offending: the role of psychopathy and substance use disorders. *Crim Justice Behav.* 2004;31:367–391.
137. Tengström A, Hodgins S, Müller-Isberner R, et al. Predicting violent and antisocial behavior in hospital using the HCR-20: the effect of diagnoses on predictive accuracy. *Int J Forensic Ment Health.* 2006;5:39–53.
138. Gray NS, Fitzgerald S, Taylor J, et al. Predicting future reconviction in offenders with intellectual disabilities: the predictive efficacy of VRAG, PCL:SV and the HCR-20. *Psychol Assess.* 2007;19:474–479.
139. Swogger MT, Walsh Z, Kosson DS. Domestic violence and psychopathic traits: distinguishing the antisocial batterer from other antisocial offenders. *Aggress Behav.* 2007;33:1–8.
140. Spidel A, Vincent G, Huss MT, et al. The psychopathic batterer: subtyping perpetrators of domestic violence. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice.* Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 327–340.
141. Kroner DG, Mills JF, Reddon JR. A coffee can, factor analysis, and prediction of antisocial behavior: the structure of criminal risk. *Int J Law Psychiatry.* 2005;28:360–374.
142. Cooke DJ, Michie C, Ryan J. Evaluating risk for violence: a preliminary study of the HCR-20, PCL-R and VRAG in a Scottish prison population. *Scott Prison Serv Occas Pap Ser.* 2001;5.
143. Dahle KP. Strengths and limitations of actuarial prediction of criminal reoffence in a German prison sample: a comparative study of LSI-R, HCR-20 and PCL-R. *Int J Law Psychiatry.* 2006;29:431–442.
144. Doyle M, Dolan M, McGovern J. The validity of North American risk assessment tools in predicting in-patient violent behaviour in England. *Leg Criminol Psychol.* 2002;7:141–154.
145. Pham TH, Ducro C, Maghem B, et al. Évaluation du risque de récidive au sein d'une population de délinquants incarcérés ou internés en Belgique francophone [Prediction of recidivism among prison inmates and forensic patients in Belgium]. *Ann Med Psychol (Paris).* 2005;163:842–845.
146. Sjöstedt G, Långström N. Assessment of risk for criminal recidivism among rapists: a comparison of four different measures. *Psychol Crime Law.* 2002;8:25–40.
147. Edens JF, Skeem JL, Douglas KS. Incremental validity analyses of the Violence Risk Appraisal Guide and the Psychopathy Checklist: Screening Version in a civil psychiatric sample. *Assessment.* 2006;13:368–374.
148. Tengström A. Long-term predictive validity of historical factors in two risk assessment instruments in a group of violent offenders with schizophrenia. *Nord J Psychol.* 2001;55:243–249.
149. Porter S, Fairweather D, Drugge J, et al. Profiles of psychopathy in incarcerated sexual offenders. *Crim Justice Behav.* 2000;27:216–233.
150. Porter S, ten Brinke L, Wilson K. Crime profiles and conditional release performance of psychopathic and non-psychopathic sexual offenders. *Leg Criminol Psychol.* 2009;14:109–118.
151. Rice ME, Harris GT, Lang C, et al. Violent sex offenses: how are they best measured from official records? *Law Hum Behav.* 2006;30:525–541.
152. Harris GT, Rice ME, Quinsey VL, et al. A multisite comparison of actuarial risk instruments for sex offenders. *Psychol Assess.* 2003;15:413–425.
153. Porter S, Woodworth M, Earle J, et al. Characteristics of sexual homicides committed by psychopathic and non-psychopathic offenders. *Law Hum Behav.* 2003;27:459–470.
154. Hare RD, Cooke DJ, Hart SD. *Psychopathy and sadistic personality disorder.* In: Millon T, Blaney PH, Davis RD, editors. *Oxford textbook of psychopathology.* New York (NY): Oxford University Press; 1999. p 555–584.
155. Ochberg FM, Brantley AC, Hare RD, et al. Lethal predators: psychopathic, sadistic, and sane. *Int J Emerg Ment Health.* 2003;5:121–136.
156. Stone MH. The personalities of murderers: the importance of psychopathy and sadism. In: Skodol AE, editor. *Psychopathology and violent crime: a review of psychiatry.* Washington (DC): American Psychiatric Press; 1998. p 29–52.
157. Stone MH, Butler JR, Young KM. *Sadistic personality disorder.* In: Blaney P, Millon T, editors. *Oxford textbook of psychopathology.* 2nd ed. New York (NY): Oxford University Press; 2009. p 651–670.
158. Jackson RL, Hess DT. Evaluation for civil commitment of sex offenders: a survey of experts. *Sex Abuse.* 2007;19:425–448.
159. Mercado CC, Oglloff JRP. Risk and the preventive detention of sex offenders in Australia and the United States. *Int J Law Psychiatry.* 2007;30:49–59.
160. Rice ME, Harris GT. Cross-validation and extension of the Violence Risk Appraisal Guide for child molesters and rapists. *Law Hum Behav.* 1997;21:231–241.
161. Harris AJR, Hanson RK. Supervising the psychopathic sex deviant in the community. Paper presented at the 17th Annual Research and Treatment Conference, The Association for the Treatment of Sexual Abusers; 1998 October; Vancouver (BC).
162. Hildebrand M, de Ruiter C, de Vogel V. Psychopathy and sexual deviance in treated rapists: association with sexual and non-sexual recidivism. *Sex Abuse.* 2004;16:1–24.
163. Serin RC, Mailloux DL, Malcolm PB. Psychopathy, deviant sexual arousal, and recidivism among sexual offenders. *J Interpers Violence.* 2001;16:234–246.
164. Gretton H, McBride M, Hare RD, et al. Psychopathy and recidivism in adolescent sex offenders. *Crim Justice Behav.* 2001;28:427–449.
165. Logan M, Hare RD. *Criminal psychopathy: an introduction for police.* In: St-Yves M, Tanguay M, editors. *Psychology of criminal investigation.* Cowansville (QC): Editions syvonblais; 2008. p 393–442.
166. Muthén LK, Muthén BO. *Mplus user's guide.* 5th ed. Los Angeles (CA): Muthén & Muthén; 2007.
167. Neumann CS, Vitacco MJ. Psychopathy and symptoms of psychopathology in the prediction of latent variable growth in violence. Paper presented at the Society for Research in Psychopathology; 2004 October; St Louis (MO).
168. Harris GT, Rice ME. Treatment of psychopathy: a review of empirical findings. In: Patrick CJ, editor. *Handbook of psychopathy.* New York (NY): Guilford Press; 2006. p 555–572.
169. Harris GT, Rice ME. Psychopathy research at Oak Ridge: skepticism overcome. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice.* Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 57–76.
170. Wong S, Burt G. The heterogeneity of incarcerated psychopaths: differences in risk, need, recidivism, and management approaches. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice.* Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 461–484.

171. Thornton D, Blud L. The influence of psychopathic traits on response to treatment. In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 505–539.
172. Blair RJR. The cognitive neuroscience of psychopathy and implications for judgments of responsibility. *Neuroethics*. 2008;1:149–157.
173. Kiehl KA. A cognitive neuroscience perspective on psychopathy: evidence for paralimbic system dysfunction. *Psychiatry Res*. 2006;142:107–128.
174. Wong S, Hare RD. Guidelines for a psychopathy treatment program. Toronto (ON): Multi-Health Systems, Inc; 2005.
175. Wong SC, Gordon A, Gu D. Assessment and treatment of violence-prone forensic clients: an integrated approach. *Br J Psychiatry Suppl*. 2007;49:S66–S74.
176. Andrews DA, Bonta J. *The psychology of criminal conduct*. 3rd ed. Cincinnati (OH): Anderson; 2003.
177. Attrill G. The development and implementation of a treatment programme for violent psychopathic offenders. Paper presented at the Bergen International Conference on the Treatment of Psychopathy; 2004 November; Bergen (NO).
178. Langton CM, Barbaree HE, Harkins L, et al. Sex offenders' response to treatment and its association with recidivism as a function of psychopathy. *Sex Abuse*. 2006;18:99–120.
179. Doren DM, Yates PM. Effectiveness of sex offender treatment for psychopathic sexual offenders. *Int J Offender Ther Comp Criminol*. 2008;52:234–245.
180. Olver ME, Wong SC. Therapeutic responses of psychopathic sexual offenders: treatment attrition, therapeutic change, and long-term recidivism. *J Consult Clin Psychol*. 2009;77:328–336.
181. Caldwell MF, Skeem J, Salekin R, et al. Treatment response of adolescent offenders with psychopathy features: a 2-year follow-up. *Crim Justice Behav*. 2006;33:571–596.
182. Forth AE, Book AS. Psychopathy in youth: a valid construct? In: Hervé H, Yuille JC, editors. *The psychopath: theory, research, and practice*. Mahwah (NJ): Lawrence Erlbaum Associates, Inc; 2007. p 369–387.
183. Catchpole REH, Gretton HM. The predictive validity of risk assessment with violent young offenders: a 1-year examination of criminal outcome. *Crim Justice Behav*. 2003;30:688–708.
184. Wilson JQ, Herrnstein RJ. *Crime and human nature*. New York (NY): Simon & Schuster; 1985. p 198.

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¹Professor Emeritus, University of British Columbia, Vancouver, British Columbia; President, Darkstone Research Group, South Surrey, British Columbia.

²Professor, University of North Texas, Denton, Texas.

Address for correspondence: Dr RD Hare, 2136 West Mall, University of British Columbia, Vancouver, BC V6T 1Z4; rhare@interchange.ubc.ca; or, Dr CS Neumann, Psychology, 1155 Union Circle #311280, Denton, TX 76203; craig.neumann@unt.edu

Résumé : Psychopathie : évaluation et implications de médico-légales

La psychopathie est vue communément comme étant un trouble de la personnalité défini par un groupe de traits et de comportements interpersonnels, affectifs, liés au mode de vie, et antisociaux, notamment la mégalomanie, l'égocentricité, la tromperie, les émotions superficielles, l'absence d'empathie ou de remords, l'irresponsabilité, l'impulsivité, et une tendance à transgresser les normes sociales. Dans notre article, nous présentons les méthodes régulières d'évaluation de la psychopathie, son association avec le trouble de la personnalité antisociale (TPA), et les implications pour les questions cliniques et de médico-légales, dont le crime et la violence, l'évaluation des risques, et les options thérapeutiques.