

HISTORICAL AND PERSONALITY CORRELATES TO THE VIOLENCE PATTERNS OF JUVENILES TRIED AS ADULTS

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This study examined the utility of several personality indices for explaining variance in the frequency, variety, and situational correlates of past violence exhibited by imprisoned juveniles after controlling for historical risk factors. One hundred prison inmates ages 16 to 21 who were juveniles at the time of their adjudication completed personality measures assessing overcontrolled hostility and psychopathic traits, and they reported on the number and types of past violence and the situational correlates (e.g., location of violent episodes, victim characteristics, and precipitating events) to their violent behavior. The measure of overcontrolled hostility and the historical risk assessment indices were not significantly associated with the frequency or variety of past violent behavior nor were they significantly associated with the situational correlates to violence. In contrast, a measure of psychopathic traits demonstrated significant incremental validity after controlling for historical data in its association with the frequency, variety, and situational patterns of violent behavior.

Keywords: psychopathy; adolescents; violence; risk assessment; overcontrolled hostility.

Recently, the increasing number of children and adolescents involved in violent criminality has prompted great societal concern and scrutiny (Snyder, Sickmund, & Poe-Yamagata, 1996). There is substantial evidence to indicate that a relatively small subset of violent juveniles commits the majority of violent crimes and continues its

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violent behavior into adulthood (Loeber & Stouthamer-Loeber, 1998). The ability of the juvenile justice system to identify the subpopulation of chronically violent juvenile offenders early in their criminal careers would facilitate appropriate management and intervention approaches. For example, accurate assessments of violence risk would help guide decision making in the juvenile justice contexts of diversion, pretrial detention, postadjudication disposition and placement, and release or parole back to the community. Given the rise of retributive juvenile justice (e.g., Forst, 1995), an increasingly important context of juvenile violence risk assessment is the transfer of juvenile respondents to the "adult" criminal justice system (Grisso, 1998; Kruh & Brodsky, 1997). However, the most valid methods for assessing juvenile violence risk have generated considerable controversy (Cottle, Lee, & Heilbrun, 1999; Hopson, 1987; Krause, 1995; Office of Juvenile Justice and Delinquency Prevention [OJJDP], 1995).

Early research on the prediction of violence in adults found that "dangerousness judgments" based on unstructured clinical impressions were largely inaccurate (see Monahan, 1981, for a review). These studies brought forth a firestorm of criticism against the practice of violence prediction (e.g., Dix, 1977) which, in turn, prompted important methodological trends in violence prediction. For example, the criticism led to a transition from nonsystematic, intuition-based, and potentially biased systems of combining information to make clinical decisions on risk for violence to objective and quantitative actuarial approaches (Cocozza & Steadman, 1978; Monahan, 1981). Such actuarial systems have traditionally focused on historical (e.g., age at first offense) and demographic (e.g., sex and education level) risk factors that were found to be predictive of violent behavior within a given sample (Glueck & Glueck, 1950; OJJDP, 1995). However, an important issue in this research has been how well these actuarial systems predict risk in populations, institutions, and assessment contexts beyond the validation sample from which they were developed. Generalizability is no small issue, because most measures that rely on historical background information are developed using an atheoretical,

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purely empirical method for identifying risk factors, a process that capitalizes on chance relationships and maximizes prediction in the sample in which it is developed (Hart, 1998).

Based on these concerns, developers of several risk assessment instruments, such as the Violence Risk Appraisal Guide (Harris, Rice, & Quinsey, 1993) and the HCR-20 (Webster, Eaves, Douglas, & Wintrup, 1995), have added theoretically derived personality features to the available background information in an effort to make predictions of risk more accurate and generalizable (Loza & Dhaliwahl, 1997; Quinsey, Harris, Rice, & Cormier, 1998). However, this trend of adding personality features to more objective background characteristics is controversial for a number of reasons. First, the assessment of personality tends to be more time-consuming and expensive (e.g., requiring more highly trained assessors). Second, the addition of such measures arguably could reduce the objectivity involved in the assessment process by relying too heavily on clinical impressions or on self-reported information for the assessment of personality traits. Third, and potentially most importantly, the incremental utility of personality traits for predicting violence, once background factors have been taken into account, has not been conclusively shown. For example, personality traits associated with the construct of psychopathy have proven to add to the prediction of violent recidivism over historical data in some studies (Serin 1996; Serin, Peters, & Barbaree, 1990) but not others (Douglas & Webster, 1999). Such demonstrations are critical for justifying the inclusion of personality traits in any risk assessment for violence.

Another important issue in violence risk research has been an increasing focus on predicting specific patterns of violence, such as the type, severity, frequency, and situational correlates of violence rather than focusing solely on dichotomous statements about an individual's likelihood to commit any violent act (Grisso, 1998; Monahan, 1996; Steadman et al., 1993). Potentially, it is the prediction of these specific patterns of violence for which personality variables may show the greatest incremental utility relative to historical data. Specifically, violent behavior is widely accepted to be a product of personality, situational context, and the interaction between the two (Megargee, 1976; Monahan, 1981; Pallone & Hennessey, 1996). Further, as they are based on specific theories, personality factors may be useful in

explaining individual variations in when, why, and how violence occurs. As a result, personality traits may be particularly useful for identifying patterns of violence that only occur under certain situational demands.

The possible utility of personality for predicting specific patterns of violence is exemplified by the research on the construct of “overcontrolled hostility” (Megargee, 1966). Research on the personality profiles of violent offenders consistently differentiated those characterized by denial, repression, and lack of general hostility from those characterized by antisocial tendencies, impulsivity, extroversion, and general hostility (Blackburn, 1971, 1986, 1987; Henderson, 1982; McGurk, 1978; White & Heilbrun, 1995). The former group was labeled “overcontrolled hostile offenders” because they seemed to rely on rigid and broad controls over aggression, as well as repression to manage their anger (Megargee, 1966). Confronted with repeated exposure to anger-producing stimuli, these defenses may occasionally break down causing an outpouring of extreme violence. The utility of overcontrolled hostility for predicting unique patterns of violence has been supported by research showing that offenders with these traits evidence infrequent anger and aggression (Henderson, 1983; Lane, 1977; McGroary, 1991) and rare, but extreme, violence (du Toit & Duckitt, 1990; Lane & Kling, 1979; Lane & Spruill, 1980; White & Heilbrun, 1995). Furthermore, the violence committed by overcontrolled hostile offenders is more likely to be murderous than the violence of other offenders, they are more likely to be violent toward family and friends, and they are more likely to use weapons with homicidal intent during periods of intoxication and interpersonal conflict (Hershorn & Rosenbaum, 1991; McGroary, 1991).

A second personality construct that has been associated with distinct patterns of violence is the construct of psychopathy (see Hare, 1996, for a review). Psychopathic offenders show a syndrome of callousness, shallow emotionality, impulsivity, and criminal versatility. By lacking the empathy, fear of consequences, and remorse that prevent violence in most people, psychopaths simply use violence as one of many behavioral means of goal attainment. As a result, psychopathic offenders tend to show more varied, more frequent, and more severe types of violence than other offenders (Brandt, 1993; Forth, Hart, & Hare, 1990; Forth & Mailloux, 2000; Glover, 1992; Hare,

1981; Hare & Jutai, 1983; Hare & McPherson, 1984; Serin, 1988; 1991; Wong, 1984). Furthermore, psychopathic offenders are at elevated risk for violence motivated by instrumental goals, using verbal and/or weapons-related threats, and victimizing males and strangers (Cornell et al., 1996; Hare & Jutai, 1983; Hare & McPherson, 1984; Serin, 1988, 1991; Williamson, Hare, & Wong, 1987).

Taken together, this research suggests that the constructs of overcontrolled hostility and psychopathy may be associated with distinct violence patterns. Importantly, these associations between personality traits and violence have primarily been studied in adults (see Forth & Mailloux, 2000, for one notable exception). As a result, the relation of these traits with youth violence requires much further testing (Edens, Skeem, Cruise, & Cauffman, 2001). Furthermore, as mentioned previously, it is not clear whether these personality dimensions offer incremental utility in predicting different patterns of violence after historical risk factors are controlled. Drawing on these issues, the current study examined the association of psychopathy and overcontrolled hostility with measures of violence controlling for historical indices of violence risk. These associations were studied in a sample of incarcerated youth in which there was a high rate of violence, thereby increasing the probability that different patterns of violence would be present in the sample in sufficient numbers to detect associations with personality traits. Because the youth were all incarcerated throughout the investigation, the present study focused on the associations with their history of community violence prior to incarceration.

METHOD

PARTICIPANTS

Participants were male inmates who were juveniles at the times of their convictions in criminal court and who were incarcerated by the state department of corrections. Of the 104 inmates who met the study criteria of being between 14 and 21 years of age ($M = 18.37$, $SD = 1.04$) and being convicted for their incarcerated offense before the age of 18, 4 inmates were dropped from the study (1 participant inade-

quately followed directions in completing study questionnaires, 1 participant was transferred from the facility before all data were collected, and 2 participants committed institutional rule infractions during data collection that prevented complete participation).

The final sample ($N = 100$) was predominantly African American (88%); the remaining 12% were Caucasian or Hispanic. Most were from the lower socioeconomic (SES) statuses (Hollingshead SES Typology: $M = 6.59$, $SD = 1.04$; Hollingshead, 1957). Intelligence test scores based on the Revised Beta Examination (Kellogg & Morton, 1978) ranged from 71 to 116 ($M = 90.25$, $SD = 10.58$), and the educational level of the sample ranged from 6th grade to 11th grade ($M = 8.52$, $SD = 1.07$). Eleven percent of the sample had a history of special education placement. Based on a combination of self-report and official records, participants had extensive histories of violence. Nearly all had committed at least one assault (97%), robbery (92%), and assault with murderous intent (81%); however, only a minority had committed rape (10%).

PERSONALITY MEASURES

Overcontrolled Hostility Scale (OH). The OH scale (Megargee, Cook, & Mendelsohn, 1967) is an empirically derived subset of Minnesota Multiphasic Personality Inventory (MMPI) items with 28 of the original 31 items from the OH scale included on recent revision of this scale (the MMPI-2). Each participant completed the MMPI-2 as part of the standard intake procedures to the Department of Corrections and OH scores were obtained via institutional records review. Adequate test-retest reliability and construct validity of the OH scale have been demonstrated (Graham, 2000). Although the applicability of the MMPI-2 OH scale to adolescents has been questioned (Truscott, 1990), several studies have successfully used the measure with adolescents and young adults (e.g., White, 1970). The OH scores of participants with raw MMPI-2 Variable Responding Inconsistency (VRIN) scale scores greater than 19 were excluded from the study (Ben-Porath, 1994). This led to the exclusion of 5 participants from analyses using the OH scale, and OH scores were unavailable for 2 other participants.

Antisocial Process Screening Device (APSD). The APSD (Frick & Hare, 2001) is a 20-item rating scale designed to have a content similar to the Psychopathy Checklist–Revised (PCL-R; Hare, 1991) but with (a) modifications in the content to be appropriate for youth and (b) items placed in rating-scale format (see Frick, Barry, & Bodin, 2000, for a review of its development). Although the APSD was originally designed to be completed by teachers and parents of preadolescent children (Frick & Hare, 2001), a self-report format has proven to be useful in assessing these traits in adolescent offender samples (Caputo, Frick, & Brodsky, 1999; Silverthorn, Frick, & Reynolds, 2001). The use of self-report measures to assess psychopathic traits is not without controversy (Hare, 1996). However, an advantage of the self-report format of the APSD for the specific purposes of this study is that it does not include a record-based review of the person's criminal history for assessing psychopathy, thereby avoiding contamination between the measure of personality and the measures of criminal history, including past acts of violence. The obvious disadvantage of this method of assessment is the susceptibility of self-report to potentially biased responding. To minimize these effects, participants were assured that their responses and scores on the APSD would not be shared with program staff nor would they be kept in their case files. As a result, their scores would not influence their treatment at the institution or release decisions. In addition, the Edwards Social Desirability Scale (Edwards & Clark, 1987) was administered with the APSD and used to control for the effects of socially desirable response sets.

Each item on the APSD is rated as 0 (*not at all true*), 1 (*sometimes true*), or 2 (*definitely true*). Frick, O'Brien, Wootton, and McBurnett (1994) found that the items on the APSD assessed two factors fairly analogous to those measured by the PCL-R.¹The Callous/Unemotional (CU) factor (6 items) includes items such as "You feel bad or guilty when you do something wrong", and the Impulsivity/Conduct Problems (I/CP) factor (10 items) includes items such as "You do not plan ahead or you leave things until the last minute." The four additional items on the scale did not show unique loadings in factor analyses (Frick et al., 1994) and therefore are not included on either subscale; they are, however, included on the total scale. The APSD subscales and total score have demonstrated adequate test-

retest reliability (McBurnett, Tamm, Nowell, Pfiffner, & Frick, 1994) and internal consistency (Wootton, Frick, Shelton, & Silverthorn, 1997) in samples of children and have predicted specific patterns of offending in adolescent samples (Caputo et al., 1999; Silverthorn et al., 2001).

MEASURES OF BACKGROUND CHARACTERISTICS

Rhode Island Juvenile Risk Assessment (RI-Risk). Two background risk measures were chosen because they included a standardized method of assessing historical information that has been associated with violence in past research (OJJDP, 1995). The first measure is the RI-Risk (National Council on Crime and Delinquency [NCCD], 1995), which is an empirically derived, 13-item, records-based rating instrument used to estimate risk for recidivism based on juveniles' social history and their past behavior in the community and institutions (e.g., prior runaways or escapes). Classifications based on total scores have been related to general recidivism (e.g., "high risk" = 82% recidivism vs. "low risk" = 21% recidivism) and, to a much lesser degree, violent recidivism (NCCD, 1995). As a result, the RI-Risk provides a method for assessing historical information that has been tested in previous samples of youth (see Table 1 for items). The measure was scored by one of two research assistants who reviewed the institutional records of each participant. Information required to score two items ("history of abuse or neglect" and "parent incarcerated in last 3 years") was unavailable, and these items were omitted. The assistants were trained to use the rules for coding RI-Risk items provided by the NCCD (1995). The second rater scored 20 randomly selected participants, and interrater agreement on RI-Risk scores using the intraclass correlation coefficient (ICC) was .94, which indicated excellent reliability.

Violence Risk Appraisal Guide—Easily Scored Version (VRAG-ESV). The VRAG is a widely used method of assessing violence risk (Webster, Harris, Rice, Cormier, & Quinsey, 1994). However, the full version of the scale includes personality (e.g., psychopathy scores) and other clinical (e.g., *Diagnostic and Statistical Manual of Mental Disor-*

TABLE 1: Items Used on the Historical Risk Indices

<i>Rhode Island Juvenile Risk Assessment</i>	<i>Violence Risk Assessment Guide—Easily Scored Version (VRAG-ESV)</i>
Prior referrals to intake (includes current)	Age at current offense
Prior referrals for violation of probation/parole	Failure on prior conditional release
Age at first adjudication	Marital status
Prior institutional commitments or placements	Most serious victim injury in current offense
Prior runaways/escapes	Female victim in current offense
Number of offenses in current adjudication	History of alcohol abuse
Prior incidence of assault	Nonviolent offense score (Cormier-Lang Criminal History)
Recent school behavior problems	
Attending or needing special education	
Substance abuse	
Peer relationships	

Note. The items “History of abuse or neglect” and “Parent incarcerated in last 3 years” were eliminated from the Rhode Island Juvenile Risk Assessment.

ders—3rd Edition [DSM-III] Diagnosis of Schizophrenia) items, in addition to historical data. Also, data to score two of the items on the full VRAG (“Lived with parents to age 15” and “elementary school maladjustment”) were not available in the institutional files. Therefore, a shortened version of the scale, the VRAG-ESV, which included 7 of the 12 items, all of which focused on the participant’s history of criminal behavior, (see Webster et al., 1994) was used (see Table 1). The full VRAG has proven valid in the identification of violent recidivists among adult psychiatric and forensic inpatients (Webster et al., 1994) and non-mentally disordered male offenders (Loza & Dhaliwal, 1997). In addition, Webster et al. (1994) reported that the 7-item scale used in the current study, consisting of only the historical factors (i.e., the VRAG-ESV), remained a robust predictor of violence relative to the full VRAG ($r = .36$ versus $r = .45$, respectively). In the current study, one of two research assistants, who were trained using the procedures outlined by Webster et al. (1994), obtained VRAG-ESV scores for each participant through review of institutional records. Based on 20 randomly selected participants whose records were

coded by a second research assistant, interrater agreement on total scores of the VRAG-ESV was at an acceptable level ($ICC = .85$).

Additional demographic variables. Relevant demographic variables not captured by the RI-Risk or the VRAG-ESV were also coded using institutional records. These variables were current age, race, IQ (as measured by the Revised Beta Examination; Kellogg & Morton, 1978), last academic grade completed, history of special education, and SES (Hollingshead, 1957).

Violence Index (VI). A questionnaire format of the Self-Reported Delinquency (SRD; Elliott & Ageton, 1980) Scale was used to assess self-reported juvenile violence history. The SRD has demonstrated adequate test-retest reliability (Elliott, Ageton, Huizinga, Knowles, & Canter, 1983; Elliott, Huizinga, & Morse, 1986; Huizinga & Elliott, 1983), and its validity has been demonstrated by moderate correlations with police reports of delinquency (Elliott et al., 1983; Huizinga & Elliott, 1983). Only items related to violent behavior were used, and four categories of violent behavior were assessed: murder/attempted murder, aggravated assault, robbery, and forcible rape. For each of the four violent crimes, participants reported the number of past times they committed the offense in the community. This number was divided by the number of years each participant was not institutionalized to adjust for differential opportunity to commit offenses resulting from institutionalization. The number of different types of violent crimes committed was summed to provide a measure of violence variety.

Independent and blind to the self-report information, research assistants completed analogous VI forms based on a review of institutional records. The research assistants were trained to identify acts described in the records that were consistent with each of the violent acts assessed on the SRD Scale (e.g., Rape = "Had or tried to have sex with someone against their will"). Both self-report and official records tend to underestimate actual violence (Dunford & Elliott, 1984; Hindelang, Hirschi, & Weiss, 1981; Jensen & Rojek, 1992). Further, there is evidence to suggest that in assessing most forms of childhood psychopathology, considering the highest score from any reasonable source seems to provide an optimal method of combining across

sources of information for most purposes (Kamphaus & Frick, 2001). Therefore, VI scores were based on a combination of information from the self-report and official records so that the more severe rating from both sources of information was used for the VI. Although the primary rationale for this methodology was to increase the validity of the assessment of past violence, an additional advantage of this methodology is that it yields a violence measure that is not reliant on a single source and, hence, would not artificially inflate correlations with risk indices based on a single source. That goal was achieved, as 54% of the violence data points came uniquely from participant self-report, and 46% were not uniquely from self-report (9% from record review and 37% from perfect agreement between self-report and record review). Further, these estimates are consistent with past studies showing that official records tend to underestimate the level of offending when compared to self-reports (Loeber & Stouthamer-Loeber, 1998).

Situational Violence Patterns (SVP). The SVP is a self-report questionnaire developed for the current study that is based on Henderson's (1986) semistructured interview to assess the situational details of individual violent acts. Because detailed data regarding individual violent acts committed by participants was unavailable in the institutional files, self-report was the only method available to code the motivational and situational aspects of participants' violent acts. This assessment included items that were divided into four general dimensions of violence (see Table 4) covering the context of violent acts (e.g., time of day of violence or presence of others), victim characteristics (e.g., male or female victim or relationship to victim), precipitating events (e.g., reasons given for violence, person initiating violence), and details of violent act (e.g., use of weapons or severity of victim injury). Using a checklist format, participants were asked to indicate all details ($n = 54$) that had ever applied to any acts of violence they had committed.

PROCEDURE

Participants were provided an initial description of the study and asked to sign an informed consent form. No inmates meeting criteria for the study refused participation. Participants completed the APSD,

the Edwards Social Desirability Scale, the self-report VI, the SVP, and questions regarding their years of access to the community. Measures were administered in randomized order per group of 15 participants. Three research assistants were present at each data collection session. One assistant read the questionnaires aloud and did not proceed until each participant had completed each item. This format was intended to approximate an individual interview within a group administration context. The two other assistants were available to provide more individualized help with the questionnaires, as well as to help maintain appropriate behavioral control. Participants were permitted to discuss questions and concerns with the researchers.

Within 10 days of the group testing, one of two trained research assistants, blind to the study hypotheses and the self-report data, conducted reviews of institutional files to gather MMPI-2 OH scores, MMPI-2 VRIN scores, and demographic data, as well as to score the RI-Risk, VRAG-ESV, and the VI form.

RESULTS

The correlations among the five predictor² measures (OH, CU, I/CP, RI-Risk, and VRAG-ESV) indicated that as in previous studies, the CU and I/CP scales of the APSD were moderately positively correlated ($r = .54, p < .001$). The two historical risk measures (RI-Risk and VRAG-ESV) were also moderately positively correlated ($r = .53, p < .001$); however, for this latter correlation, item overlap and scoring based on identical records may have inflated this estimate. Also, the OH index from the MMPI-2 and the I/CP scale from the APSD were negatively correlated ($r = -.22, p < .05$). There were no other significant relations among the predictors. The distribution of all study variables and the zero-order correlations among the five predictors and with the VI violence measures are presented in Table 2. Neither the VRAG-ESV nor the RI-Risk was correlated with the VI indices of violence frequency and variety. Similarly, OH scores were not correlated with the violence measures. By contrast, scores from the APSD (CU, I/CP, and total APSD) were significantly correlated with the violence history measures.

TABLE 2: Descriptive Statistics of Personality and Historical Predictors and Correlations With Past Violence

	<i>RI-Risk</i>	<i>VRAG-ESV</i>	<i>OH</i>	<i>CU</i>	<i>I/CP</i>	<i>APSD</i>
Descriptive statistics						
Range	-3-14	-3-14	7-18	0-12	4-18	6-36
<i>M</i> (<i>SD</i>)	5.60 (3.6)	7.24 (3.6)	12.62 (2.2)	4.53 (2.3)	9.03 (6.13)	16.61 (6.13)
Correlations with VI measures						
Frequency	.18	-.02	-.06	.28**	.30**	.38***
Variety	.15	-.07	-.04	.23*	.34**	.36***

Note. Frequency = number of violent incidents per year; Variety = variety of types of violent incidents ever committed (0-4). *RI-Risk* = Rhode Island Risk Assessment; *VR* = Violence Risk Appraisal Guide Easily Scored Version; *OH* = Overcontrolled Hostility Scale; *CU* = Antisocial Process Screening Device Callous/Unemotional Scale; *I/CP* = Antisocial Process Screening Device Impulsivity/Conduct Problems Scale; *APSD* = Antisocial Process Screening Device Total Score; *VI* = Violence Index.

* $p < .05$. ** $p < .01$. *** $p < .001$.

ASSOCIATIONS WITH VIOLENCE FREQUENCY AND VARIETY

Hierarchical multiple regression analyses were conducted, controlling for the order in which the predictors were entered into the regression model. This procedure tested the incremental utility of the personality predictors relative to the historical risk variables in predicting violence history. Because *OH* scores showed no zero-order relation with the *VI* measures, *OH* was dropped from these analyses. Also, the interaction between the two dimensions of *APSD* ($CU \times I/CP$) did not add incrementally to the prediction of any dependent variable, and therefore, a step including this term was also dropped from analyses. Therefore, the *RI-Risk*, the *VRAG-ESV*, and the other demographic variables (age, IQ, last grade completed, SES, race, and special education placement) were entered at the first step. Because Edwards Social Desirability (Edwards) scores were related to *CU* ($r = .40, p < .001$), *I/CP* ($r = -.38, p < .001$), and *APSD* total scores ($r = -.43, p < .001$), Edwards scores were entered at the second step to control for the effect of social desirability on *APSD* self-reports. *CU* was entered at the third step. At the fourth step, *CU* was removed and replaced by *I/CP*. At the fifth step, both *I/CP* and *CU* were included. This design allowed for tests of the incremental contribution of both *APSD* factors individ-

ually, as well as the overall contribution of both dimensions, after controlling for demographic variables and historical risk indices.

The results of these analyses are summarized in Table 3. The overall model accounted for 18% of the variance in both the frequency and variety of violence. None of the demographic variables (i.e., age, intelligence, education level, race, SES, or history of special education placement) contributed to the prediction of any VI measure of violence. Also, neither of the historical risk indices predicted the frequency and variety of violence after controlling for demographic variables. However, the APSD scales, after controlling for social desirability, demographic variables, and historical risk indices, added significantly to the predictions of the VI frequency and variety measures (Step 2 vs. Step 5). It appeared that the I/CP scale was the primary source of the incremental validity in these violence predictions (Step 2 vs. Step 4).

SITUATIONAL CORRELATES OF VIOLENCE

The situational correlates to violence as assessed by the SVP questionnaire (54 binary) were subjected to cluster analysis to determine if there were distinct patterns of violence present in this sample. A hierarchical (or nested) clustering technique was used, with the percentage of comparisons of values resulting in disagreements between two profiles serving as the measure of similarity and Ward's method used for linkage (see Wilkinson, 1990). In this method, participants are placed into disjoint clusters on the basis of the degree of similarity among their endorsements of the SVP items. Appropriate cluster solutions were determined by computing the percentage of participants within each cluster who endorsed each item and then comparing that percentage to the endorsement percentage of that item by the overall sample (see Henderson, 1982). In this way, a two-cluster solution was determined to create the most distinct and theoretically meaningful groups. Item endorsement within each group is presented in Table 4.

The cluster analysis yielded a single-episode provoked violence (SP) group ($n = 51$) and an indiscriminate violence (IV) group ($n = 49$). The IV group was characterized by a relatively high endorsement of most SVP items compared to the SP group. The data within the SP group indicated that most of the violence in that group was character-

TABLE 3: Hierarchical Multiple Regression Analyses in Predicting Violence History

	<i>Standard Beta/R²</i>			
	<i>Frequency</i>	<i>Variety</i>	<i>Frequency</i>	<i>Variety</i>
Step 1 (including demographic variables)				
RI-Risk	.23	.18		
VRAG-ESV	-.14	-.04		
<i>R²</i>	.07	.07		
Step 2 (including demographic variables)				
RI-Risk	.22	.18		
VRAG-ESV	-.13	-.04		
Edwards	-.18	-.08		
<i>R²</i>	.10	.09	Change <i>R²</i> (Step 1 vs. 2)	
			.03	.01
Step 3 (including demographic variables)				
RI-Risk	.17	.13		
VRAG-ESV	-.11	-.02		
Edwards	-.10	.01		
CU	.21	.21		
<i>R²</i>	.14	.11	Change <i>R²</i> (Step 2 vs. 3)	
			.04	.03
Step 4 (including demographic variables)				
RI-Risk	.23	.20		
VRAG-ESV	-.15	-.06		
Edwards	-.06	.07		
I/CP	.29	.36		
<i>R²</i>	.17	.18*	Change <i>R²</i> (Step 2 vs. 4)	
			.07 **	.10**
Step 5				
RI-Risk	.21	.19		
VRAG-ESV	-.14	-.05		
Edwards	-.04	.10		
<i>R²</i>	.10	.05	Change <i>R²</i> (Step 2 vs. 5)	
			.10 **	.11**
CU	.10	.05		
I/CP	.24	.34		
<i>R²</i>	.18	.18	Change <i>R²</i> (Step 3 vs. 5)	
			.04	.07**
			Change <i>R²</i> (Step 4 vs. 5)	
			.01	.00

Note. Frequency = number of violent incidents per year; Variety = variety of types of violent incidents ever committed (0-4). RI-Risk = Rhode Island Risk Assessment; VRAG-ESV = Violence Risk Appraisal Guide—Easily Scored Version; CU = Antisocial Process Screening Device Callous/Unemotional Scale; I/CP = Antisocial Process Screening Device Impulsivity/Conduct Problems Scale.

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

TABLE 4: Results of Cluster Analysis of the Situational Correlates to Violence

<i>Descriptors</i>	<i>Sample %</i>	<i>SP%</i>	<i>IV%</i>
General Dimension 1: Contextual data			
Times of Violence			
Daytime	47	16 ^a	80 ^a
Evening	64	31 ^a	98 ^a
Nighttime	83	71	96
Location of violence			
A home	36	14 ^a	59 ^a
A school	52	29	76
Prison/police cell	27	06 ^a	49 ^a
In or near bar	47	22 ^a	74 ^a
Other public building	42	22	63 ^a
Outside	83	67	100
Others present during violence			
Others who helped	68	51	86
Friends, did not help	38	20	57 ^a
Strangers, did not help	42	18 ^a	67 ^a
No one	49	39	59
General Dimension 2: Victim characteristics			
Victim sex			
Male	92	88	96
Female	36	14 ^a	59 ^a
Victim age			
Young children	4	00 ^a	08 ^a
Adolescents	71	47	96
Adults	88	78	98
Elderly	19	10	29 ^a
Relationship to victim			
Knew very well	30	20	41
Knew pretty well	39	22	57
Did not know	84	71	98
History of violence to victim			
One time only	74	77	71
Multiple incidents	47	24	71 ^a
General Dimension 3: Precipitating events			
Intoxication during violence			
Sober	66	53	80
Drunk	62	41	84
High or stoned	65	43	88
Reasons for violence			
Victim started fight	55	43	67
Victim made me angry	66	45	88
Get something I wanted	29	16	43
See victim suffer	19	02 ^a	37 ^a
Angry at something else	39	18 ^a	61 ^a

(continued)

TABLE 4: (Continued)

<i>Descriptors</i>	<i>Sample %</i>	<i>SP%</i>	<i>IV%</i>
Made first threat			
Subject	65	41	90
Victim	69	67	71
Made first physical contact			
Subject	81	71	92
Victim	53	43	63
General Dimension 4: Details for violence			
Weapons subject used			
Shot a gun	77	61	94
Cut with knife	25	10 ^a	41 ^a
Cut/hit with bottle	40	12 ^a	70 ^a
Used another weapon	43	14 ^a	74 ^a
Used no weapon	53	47	59
Behaviors during violence			
Used weapon	78	59	98
Kicked victim	51	28	76
Choked victim	34	12 ^a	57 ^a
Punched victim	72	49	96
Slapped/pushed victim	69	45	94
Injury to victim			
No injuries	39	33	45
Minor cuts/bruises	62	39	86
Moderate (hospital visit)	46	20 ^a	74 ^a
Serious (hospital stay)	47	28	67
Death	29	20	39

Note. Cluster 1: Single-episode provoked violence (SP) ($n = 51$); Cluster 2: Indiscriminate violence (IV) ($n = 49$)

a. Cluster percentages that are less than .5 or greater than 1.5 times the sample percentage and, therefore, define that cluster; Sample % = percentage of participants within the sample that endorsed that item; SP% = percentage of participants within SP cluster that endorsed that item; IV% = percentage of participants within IV cluster that endorsed that item.

ized by single episode, provoked victimizations of adult, male strangers. Relative to the overall sample, the IV group committed a greater level of violence characterized by victimization of females, multiple victimization of the same individual, use of weapons other than guns, and injuries requiring medical attention. The IV group was also more likely to endorse sadistic (to see the victim suffer) and displaced anger (because they were angry about something else) as motivations for their violence.

TABLE 5: Hierarchical Logistic Regression Analyses of Violence Clusters

	<i>Model Chi- Square</i>	<i>Correct Classification (%)</i>
Step 1: Historical Data (VRAG-ESV, RI-Risk, Demographics)	5.53	57.6
Step 2: Historical Data + Edwards Social Desirability Scale	11.63	62.6
Step 3: Historical Data + Edwards + CU Scale	32.32***	75.8
Step 4: Historical Data + Edwards + I/CP Scale	30.35***	72.7
Step 5: Historical Data + Edwards + CU Scale + I/CP Scale	40.90***	75.8

Note. VRAG-ESV = Violence Risk Assessment Guide – Easily Scored Version; RI-Risk = Rhode Island Risk Assessment; CU = Callous Unemotional Scale of the Antisocial Process Screening Device; I/CP = Impulsivity Conduct Problems Scale of the Antisocial Process Screening Device.

*** $p < .001$.

Using one-way ANOVAs, these violence clusters were evaluated for group differences on the predictor measures. The groups did not differ on either of the historical risk measures or the measure of OH. This latter result is somewhat surprising given that the SP cluster had a number of characteristics that were predicted to be associated with traits assessed by the OH measure. However, the IV group had higher CU, $F(1, 98) = 30.95, p < .001$; I/CP, $F(1, 98) = 31.40, p < .001$; and total APSD, $F(1, 98) = 50.85, p < .001$, scores than the SP group.

To assess whether the APSD scales were associated with cluster membership independent of historical risk measures, a hierarchical logistical regression procedure was conducted that controlled for the order of entry of each set of predictors. As indicated by the model chi-square coefficients and correct classification percentage at each step reported in Table 5, the historical data were unrelated to violence cluster membership and were ineffective at classifying participants into the two clusters. When psychopathy (CU, I/CP, and APSD) scores were added, however, the groups were better distinguished and good classification accuracy was achieved.

PSYCHOPATHIC TRAITS AND SITUATIONAL VIOLENCE PATTERNS

To further investigate whether certain patterns of violence were more strongly related to APSD scores than others, persons showing certain situational aspects of violence were compared on the total

APSD scale. Participants with any history of violence against females had higher APSD total scores ($n = 36$, $M = 19.69$, $SD = 5.84$) than participants with no history of violence against females ($n = 63$, $M = 14.87$, $SD = 5.66$; $t [97] = 4.03$; $p < .001$), and participants with any history of multiple violent incidents against the same victim had higher APSD total scores ($n = 52$, $M = 18.72$, $SD = 6.32$) than participants who never committed violence against the same victim more than once ($n = 47$; $M = 14.73$, $SD = 5.39$; $t [97] = 3.39$, $p < .001$). Also, participants with any history of unprovoked violence had higher APSD total scores ($n = 57$, $M = 18.60$, $SD = 6.55$) than participants who were violent only in response to provocations ($n = 42$, $M = 13.95$, $SD = 4.57$; $t [97] = 3.98$, $p < .001$), as did participants with any history of weapon use ($n = 86$, $M = 17.27$, $SD = 6.09$) compared to participants with no history of weapon use ($n = 13$, $M = 12.38$, $SD = 4.93$; $t [97] = 2.75$, $p < .01$). Finally, participants grouped by the highest severity of injury they had committed (death: $n = 29$, $M = 18.7$, $SD = 7.43$; serious injury: $n = 28$, $M = 16.61$, $SD = 5.51$; minor injury: $n = 42$, $M = 15.19$, $SD = 5.26$) showed a nonsignificant trend toward differing on total APSD scores ($F[2, 96] = 2.94$, $p = .058$). Tukey pairwise comparisons indicated that the latter finding was the result of the group causing death having higher APSD scores than the group causing only minor injuries ($p < .05$).

DISCUSSION

In the current study, we examined whether certain personality traits previously linked to violence in adult samples were associated with the frequency, variety, and situational patterns of past violence committed by juveniles transferred to and convicted within criminal court. Most importantly, the utility of these traits was compared to that of historical indicators of violence risk. In this sample, historical variables (see Table 1) were not associated with violence patterns. Whereas historical risk indicators may distinguish across a range of offenders (Loza & Dhaliwahi, 1997; Quinsey et al., 1998), they failed to do so within this highly violent juvenile sample. In addition, the measure of overcontrolled hostility also was minimally associated with past violence patterns in this sample. The failure to find associa-

tions with the measure of OH was particularly surprising given that one of the violence clusters (SP) that emerged in this sample showed many characteristics theoretically linked to the concept of OH (e.g., relatively infrequent severe violence in specific contexts). The failure to find associations with the OH measure may have been because of the questionable validity of the OH scale in general (see du Toit & Duckitt, 1990, for a review) or its questionable validity with adolescents specifically (see Truscott, 1990, for a discussion). In support of this latter possibility, only 1 of the 100 participants in the current study obtained a score that would be considered a clinical elevation (raw score > 17) in adult samples. Although OH index scores were negatively related to impulsivity and conduct problems, the truncated nature of the OH distribution suggests that there were few true over-controlled hostile offenders in this youthful offender sample.

In contrast to the few associations found for the historical and OH measures, higher levels of psychopathic traits were associated with more frequent and varied violent acts committed by transferred juvenile offenders. This finding replicates results from previous studies with adult (Hare, 1981; Hare & Jutai, 1983; Hare & McPherson, 1984; Serin, 1988, 1991) and young offenders (Forth et al., 1990; Silverthorn et al., 2001). Furthermore, a measure of psychopathic traits showed incremental validity relative to the historical risk assessment instruments in the postdiction of these violence measures. Psychopathic features also were associated with specific patterns of violence. Consistent with Serin's (1988) hypothesis that the violence of psychopaths is less situationally specific than that of nonpsychopaths, psychopathic traits were associated with greater cross-situational diversity in violence. That is, their history of violence was less tied to specific locations, victims, or identifiable precipitating events.

Also, our findings were consistent with studies showing that persons with psychopathic traits commit more instrumentally motivated violence compared to other violent offenders, whereas nonpsychopathic offenders tend to primarily show histories of reactive violence in response to real or perceived provocation (Cornell et al., 1996; Serin, 1988; 1991). A number of other characteristics of the violent acts of persons with psychopathic traits that have been identified in adult populations seemed to generalize to this juvenile population, including greater multiple victimization and overall weapon use. Col-

lectively, previous research and our findings support Hare's (1981) contention that without the inhibiting effects of empathy or fear of punishment, persons with psychopathic traits evidence greater integration of violence into their basic behavioral repertoire than do other individuals.

One finding that diverged from research on adults with psychopathic traits was that in this juvenile sample, psychopathic traits were related to greater victimization of females, whereas psychopathic traits in adults have been associated with greater victimization of males. This finding may reflect the more normative nature of "boy to boy" aggression and stronger cultural prohibitions against "boy to girl" violence in adolescence. As a result, psychopathic traits may be related to forms of aggression that have the strongest cultural prohibitions, and these may change across development (Hare, 1996). Also, it could reflect the fact that much of violence against women in adult samples is related to domestic violence, which may not be specifically related to psychopathic traits and often occurs in the context of high levels of emotional arousal. Whatever future research determines to be the best explanation, this finding highlights the need to continue to examine developmental trends in the violence patterns of offenders with psychopathic traits.

It is also notable that cluster analysis of the types of violence committed by this sample yielded only two separable violence patterns. Although the situational correlates of violence were assessed with the expectation that a number of relevant patterns would be identified, these results are consistent with other research on at least two counts. First, a small subset of juvenile offenders commit most juvenile violence, and most juvenile offenders commit very little violence (OJJDP, 1995). Second, a relatively small subset of violent offenders commits instrumental violence, whereas most violent offenders commit violence when provoked (i.e., "reactive aggression"; Cornell et al., 1996; Serin, 1988; 1991). The fact that the current sample included a relatively large proportion of participants (about 50%) with extensive instrumental violence histories likely reflects the particularly violent nature of this imprisoned juvenile sample. Given clinical risk assessment recommendations to predict violence patterns rather than violence occurrences (e.g., Grisso, 1998), more research examin-

ing violence patterns as an outcome is needed, and the current study provides one useful methodology for doing so.

While the results of this study support the potential utility of psychopathic traits in predicting patterns of violence in youth, future research must address some important methodological limitations of the current study to enhance the clinical application of the results. First, prospective longitudinal studies are critical to evaluate the generalizability of this “postdiction” study to actual clinical risk assessment contexts. That is, this study provided no indication of whether the personality measures would predict future violence but rather demonstrated associations with current and past violent acts. Although postdiction studies such as this one are important to justify more expensive prospective studies, it is important to note that there are many reasons for why variables may be associated with violence history but not predict future violence. Most importantly, there are likely to be persons who show high levels of psychopathic traits but who desist in their violence. These desistors, who would be included in postdiction studies of violent offenders, would decrease the predictive utility of psychopathic traits in a prospective study. This possibility is particularly important to consider in studying personality traits in adolescence and young adulthood when such traits are likely to be more changeable than in older persons (Frick, 2002; Seagrave & Grisso, 2002).

Second, studies of other delinquent subgroups and community adolescent samples are needed to assess the generalizability of the current findings beyond this mainly African American group of transferred juveniles, who evidenced a very high violence base rate and potentially unique violence patterns. For example, the actuarial risk measures using historical information may be more useful for predicting violence risk in less severe samples where the base rate of violence is much lower or in samples that are similar to those used in developing the measures.

Third, limitations in the measures examined in the current study also deserve comment. The two background risk measures, the VRAG-ESV and RI-Risk, were chosen because they included a standardized method of assessing historical information that has been associated with violence in past research. However, because of the purpose of the study (i.e., to compare personality and historical risk

indices), some parts of the assessment procedure recommended for VRAG-ESV were eliminated, and the absence of information in some records forced the omission of several items on both historical risk measures. As a result, this study should not be considered a test of the validity of these specific risk assessment indices but rather as a comparison of different types of assessment information in their association with past violence. Also, alternative measures of psychopathic traits should be tested to evaluate the validity of the self-report psychopathy measure used in the current study. This comparison is particularly important for determining the most useful format for assessing psychopathic traits for different purposes. For example, the self-report APSD proved to be useful for research purposes in this study, whereby the person being assessed is assured that the information will be kept confidential and not used in placement or release decisions. In this context, a self-report measure of psychopathic traits may have utility; however, this validity may not generalize to many applied purposes, such as a clinical forensic evaluation (Hare, 1996).

Fourth, the personality predictors in this study were based on self-report, whereas the historical risk assessments were based on institutional record review. While most of the primary outcome measures of violence used a combination of self-report and record review and therefore did not give either method an advantage because of shared method variance, this methodology did confound method of assessment with type of information used in the risk assessment. Further, the situational correlates to violence were assessed solely by self-report, which could have inflated the correlations with the personality assessment measures. Although this is a difficult issue to remedy because the optimal assessment format varies depending on the construct of interest, the potential influence of assessment method should be considered when interpreting the results. Also, the use of self-report for both the ratings of personality and participant's past behavior also makes substantive alternative explanations possible, such as the possibility that our participants formed a view of their personality based on their past behavior (e.g., Bem, 1967) rather than the view proposed by our theoretical model in which personality traits contributed to the expression of violence in the participants.

In conclusion, the current results suggest that the construct of psychopathy is associated with violent behavior in juvenile offenders.

Further, these results suggest that (a) the association between psychopathic traits and violence can not be solely explained by historical risk factors in the offender's history and that (b) psychopathic traits may be useful for assessing both the risk for violence severity and frequency and for assessing risk for specific patterns of violence. As such, they may help to designate individuals who have unique causal factors underlying their violent behavior, which lead to different patterns of emotional arousal related to violence and different motivations for violent acts (Frick et al., 2000). Further, different subgroups of violent youth may benefit from different approaches to intervention (Frick, 1998, 2001). Clearly, these applications of the construct of psychopathy require much more research to fully evaluate their potential clinical utility in youth (Edens et al., 2001). However, the current study provides a basis for further research into the relation between this personality dimension and violent offending.

NOTES

1. The appropriate number of psychopathic factors is still open to debate (Cooke & Michie, 2001). The two-factor structure reported by Frick, O'Brien, Wootton, and McBurnett (1994) was used in this study since (a) it seems to be the most appropriate for adjudicated samples (Frick, Barry, & Bodin, 2000), and (b) it has been used in past research using the self-report version of the scale in adjudicated adolescent samples (Caputo, Frick, & Brodsky, 1999; Silverthorn, Frick, & Reynolds, 2001).

2. Throughout the results section, the terms *predictor* and *prediction* are used in the statistical sense to describe the ability of a variable or set of variables to account for variance in another variable. These terms are not meant to imply any temporal relation between variables.

REFERENCES

- Bem, D. R. (1967). Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review*, *74*, 185-200.
- Ben-Porath, Y. S. (1994, January 13). *MMPI-2: Assessing protocol validity in forensic evaluations*. Workshop, Atlanta, Georgia.
- Blackburn, R. (1971). Personality types among abnormal homicides. *British Journal of Criminology*, *11*, 14-31.
- Blackburn, R. (1986). Patterns among personality deviation among violent offenders: Replication and extension of an empirical taxonomy. *British Journal of Criminology*, *26*, 254-269.

- Blackburn, R. (1987). Two scales for the assessment of personality disorder in antisocial populations. *Personality and Individual Differences*, 8, 81-93.
- Brandt, J. R. (1993). *Assessment of psychopathy in a population of incarcerated adolescent offenders*. Unpublished doctoral dissertation, Florida State University, Tallahassee.
- Caputo, A. A., Frick, P. J., & Brodsky, S. L. (1999). Family violence and juvenile sex offending: Potential mediating roles of psychopathic traits and negative attitudes toward women. *Criminal Justice and Behavior*, 26, 338-356.
- Cocozza, J., & Steadman, H. (1978). Prediction in psychiatry: An example of misplaced confidence in experts. *Social Problems*, 25, 265-276.
- Cooke, D. J., & Michie, C. (2001). Refining the construct of psychopathy: Towards a hierarchical model. *Psychological Assessment*, 13, 171-188.
- Cornell, D. G., Warren, J., Hawk, G., Stafford, E., Oram, G., & Pine, D. (1996). Psychopathy in instrumental and reactive violent offenders. *Journal of Consulting and Clinical Psychology*, 64, 783-790.
- Cottle, C., Lee, R., & Heilbrun, K. (1999, August). *Juvenile reoffending: A meta-analysis*. Paper presented at the Annual Convention of the American Psychological Association, Boston, MA.
- Dix, G. (1977). The death penalty, "dangerousness," psychiatric testimony, and professional ethics. *American Journal of Criminal Law*, 5, 151-204.
- Douglas, K. S., & Webster, C. D. (1999). The HCR-20 violence risk assessment scheme: Concurrent validity in a sample of incarcerated offenders. *Criminal Justice and Behavior*, 26, 3-19.
- Dunford, F., & Elliott, D. (1984). Identifying career offenders using self-reported data. *Journal of Research in Crime and Delinquency*, 21, 57-86.
- du Toit, L., & Duckitt, J. (1990). Psychological characteristics of over- and undercontrolled violent offenders. *The Journal of Psychology*, 124, 125-141.
- Edens, J. F., Skeem, J. L., Cruise, K. R., & Cauffman, E. (2001). Assessment of "juvenile psychopathy" and its association with violence: A critical review. *Behavioral Sciences and the Law*, 19, 53-80.
- Edwards, A. L., & Clark, C. L. (1987). Social desirability and dispersions for the items in two SD scales: The MMPI SD scale and an experimental SD scale. *Psychological Reports*, 60, 1083-1086.
- Elliott, D. S., & Ageton, S. S. (1980). Reconciling race and class differences in self-reported and official estimates of delinquency. *American Sociological Review*, 45, 95-110.
- Elliott, D. S., Ageton, S. S., Huizinga, D., Knowles, B. A., & Canter, R. J. (1983). *The prevalence and incidence of delinquent behavior: 1976-1980. National estimates of delinquent behavior by sex, race, social class, and other selected variables* (Report No. 26, National Youth Survey). Boulder, CO: Behavioral Research Institute.
- Elliott, D. S., Huizinga, D., & Morse, B. (1986). Self-reported violent offending: A descriptive analysis of juvenile violent offenders and their offending careers. *Journal of Interpersonal Violence*, 1, 472-514.
- Forst, M. L. (1995). *The new juvenile justice*. Chicago: Nelson-Hall.
- Forth, A. E., Hart, S. D., & Hare, R. D. (1990). Assessment of psychopathy in male young offenders. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, 2, 342-344.
- Forth, A. E., & Mailloux, D. L. (2000). Psychopathy in youth: What do we know? In C. B. Gacono (Ed.), *The clinical and forensic assessment of psychopathy* (pp. 25-54). Mahwah, NJ: Lawrence Erlbaum.
- Frick, P. J. (1998). *Conduct disorders and severe antisocial behavior*. New York: Plenum.

- Frick, P. J. (2001). Effective interventions for children and adolescents with conduct disorder. *The Canadian Journal of Psychiatry, 46*, 26-37.
- Frick, P. J. (2002). Juvenile psychopathy from a developmental perspective: Implications for construct development and use in forensic assessments. *Law and Human Behavior, 26*, 247-253.
- Frick, P. J., Barry, C. T., & Bodin, S. D. (2000). Applying the concept of psychopathy to children: Implications for assessment of antisocial children and adolescents. In C. B. Gacono (Ed.), *The clinical and forensic assessment of psychopathy: A practitioner's guide* (pp. 3-24). Mahwah, NJ: Lawrence Erlbaum.
- Frick, P. J., & Hare, R. D. (2001). *The antisocial process screening device*. Toronto, Ontario, Canada: Multi-Health Systems.
- Frick, P. J., O'Brien, B. S., Wootton, J. M., & McBurnett, K. (1994). Psychopathy and conduct problems in children. *Journal of Abnormal Psychology, 103*, 700-707.
- Glover, A. J. J. (1992). *Identification of violent incarcerates using the Test of Criminal Thinking and the Revised Psychopathy Checklist*. Unpublished doctoral dissertation. University of Toronto, Ontario, Canada.
- Glueck, S., & Glueck, E. T. (1950). *Unraveling juvenile delinquency*. Cambridge, MA: Harvard University Press.
- Graham, J. R. (2000). *MMPI-2: Assessing personality and psychopathology* (3rd ed.). New York: Oxford University Press.
- Grisso, T. (1998). *Forensic evaluation of juveniles*. Sarasota, FL: Professional Resource Press.
- Hare, R. D. (1981). Psychopathy and violence. In J. R. Hays, T. K. Roberts, & K. S. Solway (Eds.), *Violence and the violent individual* (pp. 53-74). New York: SP Medical and Scientific Books.
- Hare, R. D. (1991). *The Hare psychopathy checklist-revised*. Toronto: Multi-Health Systems.
- Hare, R. D. (1996). Psychopathy: A clinical construct whose time has come. *Criminal Justice and Behavior, 23*, 25-54.
- Hare, R. D., & Jutai, J. W. (1983). Criminal history of the male psychopath: Some preliminary data. In K. T. Van Dusen & S. A. Mednick (Eds.), *Prospective studies in delinquent and criminal behavior* (pp. 225-236). Boston: Kluwer.
- Hare, R. D., & McPherson, L. M. (1984). Violent and aggressive behavior by criminal psychopaths. *International Journal of Law and Psychiatry, 7*, 35-50.
- Harris, G. T., Rice, M. E., & Quinsey, V. L. (1993). Violent recidivism of mentally disordered offenders: The development of a statistical prediction instrument. *Criminal Justice and Behavior, 20*, 315-335.
- Hart, S. D. (1998). The role of psychopathy in assessing risk for violence: Conceptual and methodological issues. *Legal and Criminological Psychology, 3*, 121-137.
- Henderson, M. (1982). An empirical classification of convicted violent offenders. *British Journal of Criminology, 22*, 1-20.
- Henderson, M. (1983). Self-reported assertion and aggression among offenders with high and low levels of overcontrolled hostility. *Personality and Individual Differences, 4*, 113-115.
- Henderson, M. (1986). An empirical typology of violent incidents reported by prison inmates with convictions for violence. *Aggressive Behavior, 12*, 21-32.
- Hershorn, M., & Rosenbaum, A. (1991). Over- vs. undercontrolled hostility: Application of the construct to the classification of maritally violent men. *Violence and Victims, 6*, 151-158.
- Hindelang, M. J., Hirschi, T., & Weis, J. S. (1981). *Measuring delinquency*. Beverly Hills: Sage.
- Hollingshead, A. B. (1957). *Two factor index of social position*. New Haven, CT: Author.

- Hopson, D. (1987). How well can we predict for juveniles? A review of the literature. In F. N. Dutilleul & C. H. Foust (Eds.), *The prediction of criminal violence* (pp. 161-168). Springfield, IL: Charles C. Thomas.
- Huizinga, D., & Elliott, D. S. (1983). *Self-report measures of delinquency and crime: Methodological issues and comparative findings* (Report No. 30, National Youth Survey). Boulder, CO: Behavioral Research Institute.
- Jensen, G. F., & Rojek, D. G. (1992). *Delinquency and youth crime* (2nd ed.). Prospect Heights, IL: Waveland.
- Kamphaus, R. W., & Frick, P. J. (2001/1996). *Clinical assessment of child and adolescent personality and behavior*. (2nd ed.). Boston: Allyn & Bacon.
- Kellogg, C. E., & Morton, N. W. (1978). *Revised beta examination (BETA-II)*. San Antonio, TX: The Psychological Corporation.
- Krause, M. (1995). *The methodology of risk assessment and clinical decision making*. Paper presented at the biennial conference of the American Psychology-Law Society Conference, Hilton Head, SC.
- Kruh, I. P., & Brodsky, S. L. (1997). Evaluations for transfer of juveniles to criminal court: Current knowledge and future research. *Behavioral Sciences and the Law*, 15, 151-165.
- Lane, P. J. (1977). *A theoretical and empirical analysis of the Overcontrolled Hostility (OH) scale and the overcontrolled personality*. Unpublished master's thesis. Florida State University, Tallahassee.
- Lane, P. J., & Kling, J. S. (1979). Construct validation of the Overcontrolled Hostility scale of the MMPI. *Journal of Consulting and Clinical Psychology*, 47, 781-782.
- Lane, P. J., & Spruill, J. (1980). Validity of the overcontrolled-undercontrolled typology usage in criminal psychiatric patients. *Criminal Justice and Behavior*, 7, 215-228.
- Loeber, R., & Stouthamer-Loeber, M. (1998). Development of juvenile aggression and violence: Some common misconceptions and controversies. *American Psychologist*, 53, 242-259.
- Loza, W., & Dhaliwal, G. K. (1997). Psychometric evaluation of the Risk Assessment Guide: A tool for assessing violent recidivism. *Journal of Interpersonal Violence*, 12, 779-793.
- McBurnett, K., Tamm, L., Nowell, G., Pfiffner, L., & Frick, P. J. (1994, June). *Psychopathy dimensions in normal children*. Paper presented at the Scientific Meeting of the Society for Research in Child and Adolescent Psychopathology, London, England.
- McGrory, J. J. (1991). *Violent young offenders: An investigation of the overcontrolled undercontrolled personality typology*. Unpublished doctoral dissertation, University of Toronto, Ontario, Canada.
- McGurk, B. J. (1978). Personality types among normal homicides. *British Journal of Criminology*, 18, 146-161.
- Megargee, E. I. (1966). Undercontrolled and overcontrolled personality traits in extreme antisocial aggression. *Psychological Monographs* (3. Whole No. 611), 80.
- Megargee, E. I. (1976). The prediction of dangerous behavior. *Criminal Justice and Behavior*, 3, 14-36.
- Megargee, E. I., Cook, P. E., & Mendelsohn, G. A. (1967). The development and validation of an MMPI scale of assaultiveness in overcontrolled individuals. *Journal of Abnormal Psychology*, 72, 519-528.
- Monahan, J. (1981). *Predicting violent behavior*. Beverly Hills, CA: Sage.
- Monahan, J. (1996). Violence prediction: The past twenty and the next twenty years. *Criminal Justice and Behavior*, 23, 107-120.
- National Council on Crime and Delinquency (NCCD). (1995). *Rhode Island juvenile risk assessment findings*. Madison, WI: National Council on Crime and Delinquency.

- Office of Juvenile Justice and Delinquency Prevention (OJJDP). (1995). *Guide for implementing the comprehensive strategy for serious, violent, and chronic juvenile offenders*. Washington, DC: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.
- Pallone, N. J., & Hennessey, J. J. (1996). *Tinder-box criminal aggression*. New Brunswick, NJ: Transaction.
- Quinsey, V. L., Harris, G. T., Rice, M. E., & Cormier, C. A. (1998). *Violent offenders: Appraising and managing risk*. Washington, DC: American Psychological Association.
- Seagrave, D., & Grisso, T. (2002). Adolescent development and the measurement of juvenile psychopathy. *Law and Human Behavior*, 26, 219-239.
- Serin, R. C. (1988). *Psychopathy and violence in prisoners*. Unpublished doctoral dissertation, Queen's University, Kingston, Ontario, Canada.
- Serin, R. C. (1991). Psychopathy and violence in criminals. *Journal of Interpersonal Violence*, 6, 423-431.
- Serin, R. C. (1996). Violent recidivism in criminal psychopaths. *Law and Human Behavior*, 20, 207-217.
- Serin, R. C., Peters, R. D., & Barbaree, H. E. (1990). Predictors of psychopathy and release outcomes in a criminal population. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, 2, 419-422.
- Silverthorn, P., Frick, P. J., & Reynolds, R. (2001). Timing of onset and correlates of severe conduct problems in adjudicated girls and boys. *Journal of Psychopathology and Behavioral Assessment*, 23, 171-181.
- Snyder, H. N., Sickmund, M., & Poe-Yamagata, E. (1996). *Juvenile offenders and victims: 1996 update on violence*. Washington, DC: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.
- Steadman, H. J., Monahan, J., Robbins, P. C., Appelbaum, P., Grisso, T., Klassen, D., et al. (1993). From dangerousness to risk assessment: Implications for appropriate research strategies. In S. Hodgins (Ed.), *Mental disorder and crime* (pp. 297-318). Newbury Park, CA: Sage.
- Truscott, D. (1990). Assessment of overcontrolled hostility in adolescence. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, 2, 145-148.
- Webster, C., Eaves, D., Douglas, K., & Wintrup, A. (1995). *The HCR-20 Scheme: The assessment of dangerousness and risk*. Burnaby, British Columbia, Canada: Simon Fraser University and Forensic Psychiatric Services Commission of British Columbia.
- Webster, C. D., Harris, G. T., Rice, M. E., Cormier, C., & Quinsey, V. L. (1994). *The violence prediction scheme: Assessing dangerousness in high risk men*. Toronto, Ontario, Canada: University of Toronto.
- White, W. C. (1970). Selective modeling in youthful offenders with high and low OH (Overcontrolled Hostility) personality types. *FCI Research Reports* (Vol. 2, pp. 1-31). Tallahassee, FL: Federal Correctional Institution.
- White, A. J., & Heilbrun, K. (1995). The classification of overcontrolled hostility: Comparison of two diagnostic methods. *Criminal Behaviour and Mental Health*, 5, 106-123.
- Wilkinson, L. (1990). *SYSTAT: The system for statistics*. Evanston, IL: SYSTAT.
- Williamson, S., Hare, R. D., & Wong, S. (1987). Violence: Psychopaths and their victims. *Canadian Journal of Behavioural Sciences*, 19, 454-462.
- Wong, S. (1984). *Criminal and institutional behaviors of psychopaths*. Ottawa: Ministry of the Solicitor-General of Canada.
- Wootton, J. M., Frick, P. J., Shelton, K. K., & Silverthorn, P. (1997). Ineffective parenting and childhood conduct problems: The moderating role of callous-unemotional traits. *Journal of Consulting and Clinical Psychology*, 28, 477-482.