

# The Concurrent Validity of the Psychopathic Personality Inventory and its Relative Association with Past Violence in a Sample of Insanity Acquittes

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*The Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) is a reliable and valid self-report measure of psychopathy that may be useful in conducting violence risk assessments with insanity acquittes. We examined the relations among the PPI, the Psychopathy Checklist: Screening Version (PCL:SV; Hart, Cox, & Hare, 1995), and measures of violence (officially recorded and self-reported). PPI Total and several Subscale Scores were significantly correlated with PCL:SV Total, Factor 1, and Factor 2 Scores, demonstrating concurrent validity of the PPI with insanity acquittes. PPI Total Scores predicted past violence about as well as PCL:SV Factor 2 Scores and the PPI and PCL:SV performed similarly in hierarchical multiple regression analyses predicting past violence. Implications for the relation between the PPI and PCL and implications for violence risk assessments with insanity acquittes are discussed.*

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Violence risk assessments are a critical element of dispositional decisions with individuals adjudicated Not Guilty by Reason of Insanity (Shah, 1978). Given societal perceptions that mentally ill individuals are particularly dangerous (Bonta, Law, & Hanson, 1998), it is not surprising that careful scrutiny is given to individuals who are mentally ill and have already committed criminal acts. Mental health professionals are asked to accurately differentiate insanity acquittes who are likely to be violent in the community from those who are safe to be returned to the community (*Foucha v. Louisiana*, 1992). Further, these professionals are often asked to identify the patterns of expected violence (type, density, variety, circumstances, etc.) so that appropriate risk management plans may be developed. However, violence research focused on insanity acquittes has been limited, and reliable, valid violence risk assessment methodologies for this specialized population are not well defined. Foundational research is needed to begin the process of developing such methodologies. Historically, studies of risk factors for future violence have often been based upon earlier studies of risk factors for past violence (e.g., Quinsey, Harris, Rice, & Cormier, 1998).

## Psychopathy, Violence, & General Offenders

Hare (1980, 1991) developed the Psychopathy Checklist (PCL) and the Psychopathy Checklist - Revised (PCL-R) to assess the psychopathic personality. A briefer screening version of the measure was also later developed (PCL:SV; Hart, Cox, & Hare, 1995). Psychopaths identified by high PCL scores have histories of more varied, more frequent, and more severe types of violence both in the community and, to a lesser degree, in institutional settings (Glover, 1992; Hare, 1981; Hare & Jutai, 1983; Hare & McPherson, 1984; Serin, 1991; Wong, 1984). In relation to specific types of violent crime, PCL scores are consistently related to the density (also called 'frequency') of past assaults, may be related to the density of past robberies, and are not related to the density of past murders or rapes in general offender populations (Hare & Jutai, 1983; Hare & McPherson, 1984). A meta-analysis of 18 studies found that PCL scores have yielded moderate to strong effect sizes in the prospective prediction of violence (Salekin, Rogers, & Sewell, 1996). Further, psychopaths commit more frequent and more severe violence than non-psychopaths (Hart, 1996).

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Controversy about defining psychopathy as a personality based disorder or a behaviorally based disorder continues (Lilienfeld, 1994). Two moderately correlated PCL dimensions that roughly correspond to each of those definitions have been empirically identified in offenders (Harpur, Hare, & Hakstian, 1989; Hare et al., 1990). Specifically, the emotional/interpersonal factor (Factor 1) includes “a selfish, remorseless, and exploitive use of others (Harpur et al., 1989, p. 6),” whereas a behavioral dimension (Factor 2) includes acts consistent with an antisocial lifestyle. The relative predictive validity of the two PCL factors has not been fully explicated. However, there is evidence that PCL total scores are better predictors than either independent factor score alone (Salekin et al., 1996) and Factor 1 items may be more pathognomonic for psychopathy.

Recently, Cooke and Michie (2001) found robust evidence for a three-factor conceptualization of the PCL (Arrogant and Deceitful Interpersonal Style, Deficient Affective Experience, and Impulsive and Irresponsible Behavioral Style) that isolated core personality traits from behavioral expressions of the personality. Skeem, Mulvey, and Grisso (2003) also report that the three-factor solution fits the MacArthur PCL:SV data better than a two-factor solution. Notably, the PCL-R 2nd edition (Hare, 2003) promotes a four-factor model of the PCL, as supported by Hare and Neumann (2005).

### **Psychopathy, Violence, and Mentally Ill Offenders**

A meta-analysis demonstrated that the major predictors of violent recidivism in mentally ill offender populations are much the same as those for non-disordered offenders (Bonta et al., 1998). Therefore, it is not surprising that psychopathy has been shown in several studies to also predict violent recidivism in mentally ill offender populations (e.g., Monahan et al., 2001). Consequently, psychopathy, as measured by the PCL measures, may be considered an essential element of risk assessments with mentally ill offenders, including insanity acquittees.

### **The Psychopathic Personality Inventory**

A limitation of the PCL is that the measures can require a lengthy and laborious administration

process (Poythress, Edens, & Lilienfeld, 1998). A clinically useful PCL, based on a full clinical interview and a detailed record review, may require 1.5 to 2 hours (PCL:SV) to 2.5 to 3 hours (PCL-R). Under certain circumstances, the assessment process may take much longer (e.g., interviewees are less than cooperative; records are voluminous or difficult to obtain). Particularly time intensive to score, Factor 1 items require information about interpersonal style and emotional functioning. Institutional records tend to be behavior based and, therefore, better suited to scoring Factor 2 items. Further, examinees often have limited insight into their emotional and interpersonal style. Therefore, lengthy interactions and clinical judgment by assessors are needed to assess these characteristics.

A more economical approach to assessing psychopathy is examinee self-report. However, psychopathy self-report measures built into traditional personality inventories (e.g., Pd & Ma scales of the MMPI-2) and a self-report version of the PCL are only moderately correlated with PCL scores, and are much less effective at predicting Factor 1 (Hare, 1985; Harpur et al., 1989). The Psychopathic Personality Inventory (PPI), however, is a self-report measure that was developed to uniquely assess personality traits associated with psychopathy, assess eight empirically identified sub-factors of the psychopathic personality, minimize socially desirable response sets by using normatively phrased items, and incorporate validity scales to identify subjects who malingering, engage in positive impression management, or respond inconsistently (Lilienfeld & Andrews, 1996; Poythress et al., 1998).

The reliability and validity of the PPI was initially established using college student samples (Lilienfeld & Andrews, 1996). However, Poythress et al. (1998) found that the PPI total scores of imprisoned youthful offenders (with one outlying subject dropped from the analyses) were moderately correlated with PCL-R Total scores ( $r = .62$ ) and PCL-R Factor 1 scores ( $r = .61$ ), but less strongly correlated with PCL-R Factor 2 scores ( $r = .48$ ). They also found that PPI total scores were related to PCL Factor 1 scores when Factor 2 scores were statistically controlled for, but not vice versa. Examining the relations among PPI subscales and PCL-R scores, all three PCL-R scores (Total, Factor 1, and Factor 2) were correlated with the Machiavellian Ego-

centricity subscale of the PPI ( $r = .40 - .54$ ). In addition, the Social Potency, Coldheartedness, and Impulsive Nonconformity subscales were correlated with the PCL-R Total and Factor 1 scores ( $r = .28 - .37$ ), but not Factor 2 scores. PPI Total scores, as well as PCL-R Total and Factor scores were negligibly to moderately correlated with measures of inmate institutional disciplinary infractions ( $r = .02 - .30$ ).

Based upon the review above, it is evident that the PPI may be a useful measure of psychopathy with insanity acquittee populations and, therefore, may be a risk factor that warrants consideration in violence risk assessments with insanity acquittees. However, little is known about the relations among the PPI, the PCL, and violence in this specialized population. In the current study, we sought to begin the process of examining the utility of the PPI in this context in two ways. First, we examined the convergent validity of the PPI by assessing its relation to one of the PCL measures (the PCL:SV), which are typically thought of as the closest thing available to a “gold standard” in measuring psychopathy. Second, we compared the relation between the PPI and measures of past violence to the relation between the PCL:SV and the same measures of past violence. Whereas past violence differs from the ultimate criterion of interest—future violence—studying the former is a reasonable first step for at least two reasons. First, past violence has proven easier to “postdict” than future violence is to predict and the inability of a measure to postdict violence may suggest that more expensive prospective studies are not warranted. Second, the long-held notion that past violence is an important predictor of future violence continues to be supported (Webster, Douglas, Eaves, & Hart, 1997) and suggests that measures associated with past violence may be particularly promising in predicting future violence.

## METHOD

### Participants

Participants were recruited from the population of insanity acquittees who had been institutionalized for at least one month at a state forensic hospital

between January 1999 and December 1999. A multi-level screening, notification, and informed consent procedure approved by an institutional review board was employed. Of 120 potential participants, 59 declined to participate and 11 were deemed ineligible by treatment team members due to the severity of their illness, their poor cognitive functioning, and/or their use of English as a second language. Participants and a non-random subset of non-participants who had received the PCL:SV as part of a newly initiated admission and discharge risk assessment protocol at the hospital ( $n = 43$ ) did not differ on PCL:SV scores,  $F(1, 82) = .225, p = .67$ .

The study sample ( $n = 50$ ) was 72% male and 87% white (11% African American, 2% Asian American), with a mean age of 44 ( $SD = 10.13$ ). Few participants (11%) were married (55% never married, 30% divorced, and 4% widowed). The average participant had completed a 12th-grade education ( $SD = 2.90$ ) and had been hospitalized on their current acquittal for eight years ( $SD = 6.67$ ).

### Measures

*Psychopathic Personality Inventory* (Lilienfeld & Andrews, 1996). The PPI is a 187-item self-report measure of psychopathy. Participants rate themselves on each item (e.g., “With one smile, I can often make someone I’ve just met interested in getting to know me better.”) using a scale from 1 (False) to 4 (True). The measure yields a Total score and eight Subscale scores. In several college undergraduate samples, PPI Total and Factor scores have demonstrated adequate internal consistency, test-retest reliability and positive correlations with self-report, structured interview, and peer-rating indices of psychopathy and antisocial behavior (Lilienfeld & Andrews, 1996). Construct validity has been demonstrated in a correctional sample through positive associations with low empathy, aggression, and borderline personality functioning, although not work ethic (Sandoval, Hancock, Poythress, Edens, & Lilienfeld, 2000). Within a community sample, the PPI subscales have evidenced two factors that are similar to the two PCL factors (Benning, Patrick, Hicks, Blonigen, & Krueger, 2003).

Although PPI Total scores are only slightly negatively correlated with measures of social desirability (Lilienfeld & Andrews, 1996), a social

desirability scale (Unlikely Virtues Scale; Tellegen, 1978) is embedded in the PPI and was used to assess its shared variance with the PPI scores. However, the Unlikely Virtues Scale may not effectively identify individuals “faking good” on the PPI (Edens, Buffington, Tomicic, & Riley, 2001). The PPI also includes two further validity scales (Variable Response Inconsistency and Deviant Responding) that allow for the identification of participants completing the PPI in an invalid manner (e.g., Edens, Buffington, & Tomicic, 2000). However, no invalid protocols were identified in the current study.

In the current study, the internal consistency (Cronbach’s alpha) of the PPI total score was .95. This is consistent with studies of undergraduate samples (.90 to .93; Lilienfeld & Andrews, 1996) and prisoners (.91; Poythress et al., 1998). In the current study, alpha values for the PPI subscales ranged from .85 (Coldheartedness) to .55 (Stress Immunity). Alphas for three scales fell below the lowest alphas for PPI subscales from its development studies (.70; Lilienfeld & Andrews, 1996), including Fearlessness (.63), Social Potency (.61), and Stress Immunity (.55).

*Psychopathy Checklist: Screening Version* (Hart, Cox, & Hare, 1995). The PCL:SV is a 12-item short form of the PCL-R. The measure yields a Total score and two Factor scores. Based on clinical interview and records review, participants were rated on each item (e.g., Poor Behavioral Controls) using a scale from 0 (Does Not Apply) to 2 (Does Apply). Hart, Hare, and Forth (1994) found for PCL:SV Total scores adequate internal consistency and interrater reliability. The PCL:SV’s predictive efficiency relative to the PCL-R was also judged to be adequate and indicated that the PCL:SV made false positive classification errors, but very few false negative errors (Hart et al., 1994).

In the current study, adequate internal consistency was found for the PCL:SV total score (Cronbach Alpha = .86), Factor 1 (Cronbach Alpha = .84), and Factor 2 (Cronbach Alpha = .78). With a subset of 15 participants, inter-rater reliability was also adequate (ICC = .92). The mean PCL:SV Total Score was 9.90 ( $SD= 5.37$ ) and five participants would have been classified as psychopaths using the suggested cut-off score of 18. Generally consistent with previous research, the two PCL:SV Factors were moderately correlated ( $r = .55$ ).

## Criterion Measures

*Officially Recorded Violence History.* Reviews of participants’ official National Crime Information Center (NCIC) criminal histories were conducted to obtain officially recorded history of violent behavior prior to hospital admission. Within each of five types of violent crimes (Kidnapping, Robbery, Homicide, Assault, Sexual Assault), convictions and insanity acquittals were used to compute the variety of violent crimes committed in the community (0-5).<sup>1</sup> A violence severity score for each type of violent crime was computed using the Cormier-Lang system for quantifying criminal history (Quinsey et al., 1998), in which weights are assigned to each violent crime based upon the type of the offense. The Cormier-Lang system “can be used to quantify an offender’s past criminal offenses, a current or index offense, or a particular subgroup of offenses (such as violent or property offenses)...The system can be used when only official police “rap sheet” information is available, but when possible, police reports from investigating officers and witnesses should also be used to clarify details...This system is based on the Criminal Code of Canada, which itself is based on British Common Law, as are the criminal statutes throughout the English-speaking world. Thus, the Canadian Criminal Code is very similar to the statutes in individual states in the United States (Quinsey et al., 1998; pp. 250-251).” A violence density (or frequency) score for each type of violent crime was computed by dividing the number of violent crimes by the pre-hospitalization time period (i.e., participants’ age at time of current hospital admission). Unlike other studies (e.g., Monahan et al., 2001), the density scores were not controlled for other periods of institutionalization because individuals remain at risk for violent crimes, albeit perhaps lower risk, while institutionalized; it is one of a very large number of environmental factors that affects violence risk, all of which can never be controlled for. In this manner, official records-based measures of the variety, severity, and density of violent crimes were computed.

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<sup>1</sup> The variety of the violence committed was assessed because (1) it may provide some index of the complexity of the risk management plan that will be needed for a given acquittee; and (2) because psychopathy is associated with committing a greater diversity of violence types (Hare & Jutai, 1983).

*Self-Reported Violence History.* Participants were interviewed to obtain their self-reported history of violent criminal acts prior to their current hospital admission. Self-reported violence yields more violent incidents than official records, yet is similar to the report of family members and friends (Steadman et al., 1998). Participants were asked to disclose their involvement in such acts across the entirety of their lifetime, regardless of whether or not they were arrested or incarcerated for them. Participants were asked if they had ever committed the act, and if so, how many times they had committed that act, and the year in which they committed each act. These data were used to construct measures of self-reported violence that directly parallel those computed for Officially Recorded Violence History (i.e., variety, severity, and density).

In consideration of computing aggregate measures of violence, the relations between corresponding officially recorded and self-reported violence measures were examined. Whereas all of the corresponding variables were significantly correlated ( $p < .05$ ), the correlations were moderate ranging from .33 (variety) to .55 (density). These moderate correlations suggest that the corresponding measures shared significant variance, yet also contained much unique variance. Therefore, the outcome variables were analyzed independently – as officially recorded and self-report indices.

## Procedure

After providing informed consent, participants completed the PPI in groups of five. They later completed the violence history interview individually. Finally, record reviews were conducted to obtain demographic data and recorded violence history. The violence history interviews were conducted independent of the recorded violence history so, for example, participants were not confronted with inconsistencies between their self-report and the records. PCL:SVs are semi-routinely collected by trained clinicians at the forensic hospital for clinical purposes. PCL:SV scores for consenting participants were obtained from the hospital database. For a subset of 15 participants, a second rater scored the PCL:SV by observing the interview conducted by the primary rater and completing an independent records review.

## RESULTS

### Concurrent Validity

Correlation coefficients were computed relating PPI Total and Subscale Scores and PCL:SV Total and Factor Scores (see Table 1). The PPI Total Score correlated moderately with each of the PCL:SV scores. Four PPI Subscale Scores were correlated with the PCL:SV Total Score. Further, three PPI Subscale Scores were significantly correlated with both PCL:SV Factor Scores, and two additional PPI Subscale Scores were significantly correlated with PCL:SV Factor 2 Scores. PPI validity scales were not correlated with any PCL:SV Scores.

Most of the unique variance in PPI Total Scores was associated with PCL:SV Factor 2 Scores and not PCL:SV Factor 1 Scores. When Factor 2 Scores were controlled for, the partial correlation between Factor 1 Scores and PPI Total Scores was not significant ( $pr = .13$ ,  $p = .753$ ). However, the correlation between Factor 2 Scores and PPI Total Scores remained significant even after controlling for Factor 1 Scores ( $pr = .55$ ,  $p < .001$ ).

### Relative Association with Past Violence

Six outcome measures of past violence aggregated across types of violent offenses were analyzed. These violence history measures included the variety, severity, and density of past violence measured both from official records and self-report. Each self-report measure was moderately correlated with its corresponding records-based measure ( $r = .33 - .55$ ); therefore, as discussed above, the self-report and records-based measures were not combined into aggregate measures. Correlation coefficients were calculated relating PPI (Total) and PCL:SV<sup>2</sup> (Total, Factor 1, and Factor 2) to each of the violence measures. Descriptive statistics for these violence measures are presented in Table 2. PPI Total Scores predicted past violence about as well as PCL:SV Factor 2 Scores, yielding consistently

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<sup>2</sup> For “postdicting” violence history to assess criterion-oriented validity 3 PCL:SV items were omitted (8: Poor Behavioral Controls; 11: Adolescent Antisocial Behavior; & 12: Adult Antisocial Behavior) from the PCL:SV scores to avoid criterion contamination. Adjusted PCL:SV Total and Factor 2 scores reflecting these omissions were used in these analyses.

Table 1  
*Correlations among PPI Scores and PCL:SV Scores*

	PCL:SV Total	PCL:SV F1	PCL:SV F2
PPI Total	.62**	.45**	.65**
PPI Subscales			
Social Potency	.57**	.54**	.47**
Machiavellian Egocentricity	.55**	.39**	.59**
Impulsive Nonconformity	.51**	.39**	.50**
Blame Externalization	.31*	.17	.37**
Fearlessness	.27	.16	.32*
Carefree Nonplanfulness	.08	-.07	.21
Stress Immunity	-.08	.02	-.16
Coldheartedness	-.08	-.08	-.06
PPI Validity Scales			
Deviant Responding	.00	-.02	.02
Unlikely Virtues	.17	.13	.18
Variable Rspns. Inconsistency	.07	.06	.06

Note: \* =  $p < .05$ ; \*\* =  $p < .01$

significant correlations with self-reported violence, but lower correlations with officially recorded violence (see Table 3).

To better assess the incremental predictive validity of the PPI and PCL:SV relative to one another, hierarchical multiple regression analyses were conducted. First, PPI Total Scores were compared to PCL:SV Total scores. Findings showed that the two measures performed quite similarly, with the PPI demonstrating incremental validity in the prediction of the density of self-reported violence and the PCL:SV demonstrating incremental validity in the prediction of the density of officially recorded violence (see Table 4). Next, PPI Total Scores were compared to PCL:SV Factor scores. Again, the findings showed that the two measures performed similarly. The PPI Total score demonstrated incremental validity relative to PCL:SV Factor 1 in the prediction of the severity and density of self-reported past violence, whereas PCL:SV Factor 1 demonstrated incremental validity relative to the PPI Total score in the prediction of the density of officially recorded past violence (see Table 5).

## DISCUSSION

### Concurrent Validity

The obtained correlations among the PPI and PCL:SV Scores generally support the concurrent validity of the PPI in a population of insanity acquittees. Further, levels of psychopathy were uncorrelated with any of the PPI validity scales (see Table 1) and even the more psychopathic participants in this sample did not produce invalid PPI protocols, suggesting that individuals higher in psychopathy may be no more likely than individuals lower in psychopathy to provide invalid PPI results. The PPI, unlike previously studied psychopathy self-report measures, seems to be measuring the psychopathy construct in a manner similar to the PCL:SV, yet is not associated with scores on validity indices. These findings support the assertion of Poythress et al. (1998) that the PPI may be a uniquely useful self-report measure for the assessment of psychopathy for individuals with histories of antisocial behavior or high levels of trait psychopathy.

Table 2  
*Descriptive Statistics for Violence Outcome Measures*

	Self-Report - Mean(SD)	Official Records – Mean(SD)
Robbery		
Number	00.9800(02.9450)	00.1000(00.3642)
Density	03.5700(00.1136)	00.0032(00.0116)
Severity	04.6400(14.4318)	00.4600(01.7404)
Kidnapping		
Number	00.0040(00.1979)	00.0600(00.2399)
Density	00.0011(00.0055)	00.0015(00.0061)
Severity	00.2400(01.1877)	00.3600(01.4394)
Homicide		
Number	00.5200(00.6773)	00.4000(00.6061)
Density	00.0172(00.0256)	00.0127(00.0022)
Severity	12.0400(15.9399)	10.7800(16.0754)
Assault		
Number	01.6400(02.8483)	00.5000(00.7354)
Density	00.0552(00.1012)	00.0016(00.0025)
Severity	07.1400(11.6602)	02.4400(03.7967)
Sexual Assault		
Number	00.7400(02.9472)	00.1000(00.3030)
Density	00.0269(00.1096)	00.0034(00.0106)
Severity	05.5800(20.0348)	01.0000(03.1102)
Overall Violence		
Number	03.8600(06.2401)	01.1600(00.8889)
Density	00.1337(00.2391)	00.0364(00.0034)
Severity	29.2200(34.6830)	15.0400(14.8034)
Variety	01.4000(00.9689)	00.9600(00.5700)

Note: Results are reported to four decimal points to allow distinctions between Density scores to be observed.

The relations among PPI Subscales and PCL:SV Total Scores may help to identify the domains of greatest and least overlap between the PPI and the PCL:SV. The Social Potency, Machiavellian Egocentricity, and Impulsive Nonconformity Subscales were moderately related to the PCL:SV Total Scores, but Carefree Nonplanfulness, Stress Immunity, and Coldheartedness shared little variance with the PCL:SV Total Scores. Our findings generally replicate similar findings reported by Poythress et al. (1998), although they found Coldheartedness to be more closely related to PCL scores than did we.

Unlike the previous study comparing these measures with imprisoned youthful offenders, in our

sample of mentally ill offenders, the PPI did not seem to be uniquely related to PCL Factor 1 as would be predicted by the approach to the construction of the PPI (Lilienfeld & Andrews, 1996). Instead, in the current study, the PPI was more uniquely related to PCL Factor 2. Further research may clarify whether these discrepant findings are in some manner related to one or both of these atypical offender samples (i.e., imprisoned youthful offenders; NGRI inpatients). Alternatively, the discrepancy could be due to other differences between the samples (e.g., geographic differences; criminal history differences). Given that the two PCL Factors are moderately correlated (Hare et al, 1990), it may be also be the case that PPI Total Scores are mainly related to the

Table 3

*Correlations Among Psychopathy Predictors and Violence Outcomes*

	PPI Total	PCL:SV Total	PCL:SV Factor 1	PCL:SV Factor 2
Self-Report Variety	.34*	.31*	.19	.42**
Self-Report Severity	.38**	.29*	.22	.32*
Self-Report Density	.44**	.24	.13	.35*
Official Variety	.21	.37**	.37**	.26
Official Severity	.04	.22	.28	.05
Official Density	.26	.42**	.40**	.33*

Note: \* =  $p < .05$ ; \*\* =  $p < .01$ 

Table 4

*Change in R-Squared between PPI and PCL:SV Total Scores in Predicting Past Violence*

	PPI over PCL:SV	PCL:SV over PPI
Self-Report Variety	.04	.02
Self-Report Severity	.07	.01
Self-Report Density	.13*	.00
Official Variety	.00	.09
Official Severity	.01	.06
Official Density	.00	.11*

Note: \* =  $p < .05$ ; \*\* =  $p < .01$ 

Table 5

*Change in R-Squared between PPI and PCL:SV Factor Scores in Predicting Past Violence*

	PPI over PCL:SV F1	PPI over PCL:SV F2	PCL:SV F1 over PPI	PCL:SV F2 over PPI
Self-Report Variety	.08	.01	.00	.07
Self-Report Severity	.10*	.05	.00	.01
Self-Report Density	.18**	.08	.01	.01
Official Variety	.00	.00	.09	.03
Official Severity	.01	.00	.08	.00
Official Density	.01	.00	.10*	.05

Note: \*  $p < .05$ ; \*\*  $p < .01$

shared variance between PCL Factors 1 and 2 and do not effectively discriminate between the two. It will be important, through future research, to clarify whether the PPI is a better measure of PCL Factor 1, PCL Factor 2, or whether it is equally correlated with both.

### Relative Association with Past Violence

As found in previous studies (e.g., Monahan, et al., 2001), we found that a greater number of violent crimes were reported by participants than were documented in their records. Also, it is notable that Skeem and Mulvey (2001) have reported that PCL:SV Factor 2, but not Factor 1, was positively correlated with self-reported violence in psychiatric patients that were part of the MacArthur Violence Risk Assessment Study. Overall, in our study the PPI accounted for violence variance in a manner very similar to PCL:SV Total and Factor 2 scores. However, both the PPI and the PCL:SV Factor 2 scores were poor predictors of the severity of officially recorded violence. Whereas this may reflect a chance finding, weaknesses in our measure of violence severity may explain the discrepancy. That measure was based on a classification of the listed conviction/insanity adjudication in subjects' NCIC criminal history database. First, listed charges can misrepresent the actual violent behavior due to prosecutorial charging discretion, plea agreements, and other criminal justice factors. Second, the Cormier-Lang weighting system is a less finely tuned severity measure when the behavior must be gauged based on the charge rather than a detailed account of the behavior, as is available with self-reports. The general conclusion from the hierarchical multiple regression analyses is that the PPI and PCL:SV accounted for about the same amount variance in the violence outcome measures. If future predictive research also demonstrates comparable predictions of future violence, the PPI may prove to be a reasonable substitute for the PCL when it is used narrowly to forecast violence risk.

A generally non-significant (but significant in the case of violence density) trend toward each psychopathy measure accounting for more violence variance when the measurement approaches overlapped is notable. That is, the PPI (a self-report measure) tended to better predict self-reported

violence and the PCL:SV (a measure heavily dependent upon records data) tended to better predict officially recorded violence. This is most readily explained by the phenomenon of shared method variance. Because most research with the PCL measures has employed officially recorded recidivism outcomes, the possibility of artificially inflated results warrants further attention. Given that both officially recorded and self-reported violence measures are likely to underestimate true violence (Dunford & Elliott, 1984; Hindelang, Hirschi, & Weis, 1981), it is important for future studies to employ both types of outcome data so that discrepancies can be assessed and the relation between psychopathy and violence more accurately understood.

Because most studies of PCL measures and past violence, including the current study, have included the scoring and subsequent omission of PCL items assessing past criminal behavior when investigating the association between PCL scores and criminal history, it is still possible that knowledge of the criminal history influences the scoring of other PCL items, creating what Guilford (1954) termed *logical errors*. This is not to mention the larger problem of logical errors with the PCL-R. That is, it is reasonable to consider that raters are unable to score any single PCL-R item independent of the influence of any items the rater has already scored. As we are aware of no studies systematically examining the magnitude of these logical errors with the PCL, we recommend that such studies be conducted.

### Conclusions

A number of methodological limitations of the current study should be considered when interpreting our findings. First, the sample size was relatively small, reducing power and raising the possibility that meaningful results were not detected. Second, the high percentage of potential participants who refused to participate may have resulted in a self-selection bias. It will be critical to replicate these findings in contexts in which a design of random selection can be fully implemented. Unfortunately, this is difficult to accomplish with potentially vulnerable populations, such as the insanity acquittees targeted in this study. Third, the PCL:SV is a less robust and less comprehensive measure of psychopathy than the

PCL-R. Because the PCL-R is more commonly used in risk assessment contexts, future studies should assess the generalizability of the current findings to the PCL-R. Fourth, participants may have had difficulty accurately recalling their full history of violent behavior, potentially compromising the validity of the self-reported violence measures.

Future research might also help clarify the PPI/PCL relation in a number of ways. First, given the discrepancy between our findings and those of Poythress et al. (1998), it is not yet clear if the PPI is more closely associated with PCL Factor 1, PCL Factor 2, or equally with each. Although the PPI was designed to measure the personality components of psychopathy, as opposed to the behavioral components (Lilienfeld & Andrews, 1996), other aspects of its construction may help to explain its relation with PCL Factor 2. For example, the PPI includes a measure of low anxiety, which the PCL Factor 1 does not. However, PCL Factor 2 includes items assessing impulsivity and some theorists (e.g., Fowles, 1988) have proposed that impulsive antisocial behavior may be the consequence of reduced conditioned anxiety. Further, the PPI/PCL relation may be better clarified when the three-factor PCL model (Cooke & Michie, 2001) has been more fully examined.

Second, it also should be noted that a pattern of association between PPI Subscales and PCL scores is beginning to emerge, warranting further replication and investigation of the basis of those associations (e.g., the relations between fearlessness and psychopathy). Third, Item Response Theory (IRT) studies of the PPI with the PCL employing larger samples than was available for the current study might determine whether the PPI or some of its subscales measure a shared latent trait. For example, IRT analyses have demonstrated a single latent trait in the PCL-R (Cooke & Michie, 1997) that is in common with a latent trait in the PCL:SV (Cooke, Michie, Hart & Hare, 1999).

Whereas the current study further supports the assertion of Poythress et al. (1998) that the PPI, developed using college student samples, “may be useful in the differential diagnosis of psychopathy in offender samples and other samples characterized by high levels of antisocial behavior,” (p. 429) the use of the PPI in violence risk assessment practice is not yet adequately supported. First and foremost, assessment of the relative predictive utility of the

PPI and PCL in truly prospective study designs are needed to better examine the relative utility of these instruments in clinical risk assessment contexts. If the current findings hold true in such studies, it may become reasonable to conclude that the PPI is an appropriate and less expensive substitution for the PCL. Further, because current practice recommendations are that psychopathy scores be integrated into more comprehensive measures of violence risk, such as the Violence Risk Appraisal Guide (VRAG; Webster et al., 1994) and the HCR-20 (Webster et al., 1997), it will be important to determine the impact upon the utility of such risk measures of substituting PPI data for PCL data.

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