

Screening for Psychopathy Among Incarcerated Women: Psychometric Properties and Construct Validity of the Hare P-SCAN

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In this study, we explored the psychometric properties and construct validity of the Hare P-SCAN, as scored by correctional officers for 115 women incarcerated in a maximum-security prison. Using correctional officers' ratings, we present psychometric properties of the P-SCAN and the interrater agreement obtained by paired correctional officers coding the same female inmate. We explored construct validity by examining the correspondence of P-SCAN scores with the Psychopathy Checklist –Revised (PCL-R), the Structured Clinical Interview of Personality Disorders (SCID-II), the Brief Symptom Inventory (BSI), prior criminal history, and institutional infractions. The P-SCAN demonstrated high internal consistency but moderate interrater reliability, a finding related at least in part to the limited training provided to the correctional officers in using the instrument. The P-SCAN did not correspond with psychopathy or psychopathy factor scores as measured by the PCL-R but did relate to other features, namely Cluster A psychopathology and security level. These two aspects of behavior may be of interest to prison officials but relate only indirectly to the psychopathy construct as defined by the Hare PCL-R.

Psychopathy has emerged as a well-established construct in the assessment of adult criminal offenders (Cooke, Forth, & Hare, 1998; Hare, 1996; Hemphill, Templeman, Wong, & Hare, 1998; Warren et al., 2003) and in the prediction of violent behavior among clinical, forensic, and correctional populations (Monahan et al., 2001; Nicholls, Ogloff, & Douglas, 2004; Quinsey, Harris, Rice, & Cormier, 1998; Salekin, Rogers, & Sewell, 1996; Webster, Douglas, Eaves, & Hart, 1997). Given the consistent and powerful predictive potential of psychopathy with respect to violence, Hare and his colleagues observed that psychopathy has become one of the most important clinical constructs in the criminal justice and mental health systems (Hare, Clark, Grann, & Thornton, 2000). Despite some ongoing concerns about misuse and the potential for error in conducting psychopathy assessments (e.g., Edens, 2001; Edens, Petrila, & Buffington-Vollum, 2001; Freedman, 2001), many clinicians have integrated the construct into offender classifications and

forensic evaluations throughout Europe and North America (Otto & Heilbrun, 2002).

Briefly summarized, psychopathy is a distinct personality disorder (though not included in the DSM-IV-TR as such) composed of affective, interpersonal, and behavioral characteristics. As described by Cleckley (1941), the prototypical psychopath is superficially charming but dishonest and manipulative; he or she rarely feels empathy and tends not to form lasting attachments to people or principles. In impulsively pursuing personal pleasure, the psychopath is easily frustrated or provoked and shows a lack of remorse for harm done to others and a failure to learn from prior experience. Not surprisingly, such features clearly place the psychopath at high risk for crime and violence (Hare et al., 2000), and psychopaths are disproportionately represented in the criminal justice system (Hare, 1991). Some evidence also suggests that once incarcerated, psychopathic inmates are at increased risk of violating institutional rules (Edens, Poythress,

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& Lilienfeld, 1999; Kroner & Mills, 2001; Warren et al., 2003).

Although the research upon which psychopathy assessments are based is robust, this research contains two implicit assumptions that only recently have begun to receive more explicit empirical attention. The first relates to gender and the assumption that a construct developed almost entirely on adult, North American, Caucasian males applies equally to women. It is clear that Cleckley (1941), a pioneer in qualitatively describing psychopathy, did not intend to limit his descriptions to men and, in fact, offered two case descriptions of females whom he considered to be prototypically psychopathic. However, the choice of certain discrete items in the development of the PCL-R (e.g., history of juvenile delinquency, criminal versatility) may result in lower scores among women.

A second assumption is related to the methods used to assess psychopathy. By all accounts, the “gold-standard” measure of psychopathy has been Hare’s (1980, 1991, 2003) Psychopathy Checklist instruments (Conoley & Impara, 1995). As with other forms of personality pathology, psychopathy is understood to be chronic, pervasive, and debilitating; it is also difficult to identify without considerable clinical training. Thus, coding of the Psychopathy Checklist instruments is based upon a semi-structured interview that addresses diverse aspects of life history and interpersonal experience. It is also based upon a broad review of information available from multiple sources with third party information taking precedent over information elicited during interview. The deceptively simple coding of 20 items with a score of 0, 1, or 2 can hide the lengthy process involved in this clinical assessment and record review.

Psychopathy in Women

Over the past five years, the literature has begun to explore the prevalence, factor structure, and predictive power of the PCL-R with women. Prior to this point, many applications of the psychopathy construct in research and risk assessment implied that it was non-gendered and equally applicable to women and men. Recent studies, however, suggest the knowledge base surrounding male psychopathy cannot be applied as-is to females.

Salekin, Rogers, and Sewell (1997) administered the PCL-R and measures of antisocial personality features to 103 female jail inmates. Using Hare’s (1991) cutoff score (PCL-R > 29), the authors reported a 15% base rate for psychopathy, somewhat lower than the rates of 15-30% reported among male inmates (Hare, 1991; 1996). After reviewing several—mostly unpublished—studies of diverse female samples, Vitale and Newman (2001) reported that base rates of psychopathy tended to be somewhat lower among women than men, although the range of base rates between the two genders tended to overlap. More recently, Vitale, Smith, Brinkley, and Newman (2002) studied 528 incarcerated women and found that 9% of the women scored at or above 30 on the PCL-R. As Jackson and colleagues (Jackson, Rogers, Neumann, & Lambert, 2002) summarized, these studies suggest that PCL-R scores among female samples average about 4 to 6 points lower than among male samples, although the construct remains consistent in its ability to identify a continuum of similar behavior among women (Vitale & Newman, 2001). Little research has addressed the factor structure of the PCL-R among women. One exploratory factor analysis led the authors to suggest that the factor structure for women differed from that of men (Salekin et al., 1997). Other researchers (Cale & Lilienfeld, 2002; Vitale & Newman, 2001), however, have offered some caveats that temper this conclusion. More recent research (Jackson et al., 2002; Warren et al., 2003) suggests that the three-factor model proposed by Cooke and Michie (2001) for male samples appears to be most appropriate for incarcerated females, while the revised PCL-R manual suggest that a four facet, two factor model best fits large samples of males and females (Hare, 2003). Other psychometric properties such as interrater reliability, item-to-total correlations, and internal consistency appear remarkably similar whether the PCL-R is employed among female or male correctional populations (Vitale & Newman, 2001; Vitale et al., 2002).

With regard to psychopathy and outcome measures among females, Salekin and colleagues (1998) conducted a follow-up study of their original 103 participants and reported that psychopathy scores bore a modest relationship to criminal recidivism (e.g., AUC of .64 for the PCL-R), with the various measures of association being weaker than those

found among men (Salekin et al., 1996). Among 404 incarcerated women receiving substance abuse treatment, psychopathy scores were associated with poor treatment response in terms of program retention, removal for noncompliance, rule violations, and avoiding required urinalysis (Richards, Casey, & Lucente, 2003). Following release from prison, participants with higher psychopathy scores spent less time in the community before receiving new charges (Loucks & Zamble, 2000). Finally, one recent study (Warren et al., 2003) found that PCL-R scores among women corresponded with nonviolent offense history but related poorly to violent offense history, suggesting that psychopathy among women may manifest in a pattern of general criminal behavior rather than violent behavior. Some gender differences have also been observed when using the HCR:20 (which includes psychopathy as one risk factor) with male and female forensic patients (Strand & Belfrage, 2001) and psychiatric patients (Nicholls et al., 2004).

In sum, psychopathy appears to manifest similarly among men and women although the impact of this construct on the behavior of women is less clear. There are several apparent gender differences that require further investigation before the construct of psychopathy can be employed non-specifically with women as it is with men. Indeed, Vitale and Newman (2001) caution against using the PCL-R as the primary basis for making important clinical or legal decisions for women.

Screening for Psychopathy Traits

Hare's (1991, 2003) PCL-R instruments are time and resource-intensive, typically requiring an extensive review of records and a two-hour interview by a trained clinician. Thus, researchers have repeatedly sought more efficient means of measuring, or at least screening for, psychopathy traits. The psychopathy screening device that is most similar to the Psychopathy Checklist is, of course, the Psychopathy Checklist: Screening Version (PCL:SV; Hart, Cox, & Hare, 1995). The PCL:SV corresponds quite closely with the longer PCL-R, both in terms of format, and in that scores from the two measures are highly correlated (Hart et al., 1995). However, because the measure also requires a clinical interview and review of records by a trained evaluator,

researchers have continued to seek less labor-intensive ways of screening for psychopathy traits.

Some researchers have relied upon pre-existing scales in widely used self-report personality inventories (e.g., Edens, Hart, Johnson, Johnson, & Oliver, 2000 on the PAI; Floyd, 1999 on the MMPI-2; and Hart, Forth, & Hare, 1991 on the MCMI-II) while others have attempted to develop stand-alone self-report measures of psychopathy (e.g., Brinkley, Schmitt, Smith, & Newman, 2001; Lilienfeld & Andrews, 1997). Generally, results suggest that the interpersonal/affective traits of Factor 1 psychopathy are particularly difficult to assess via self-report relative to Factor 2 traits. This has led some researchers to suggest that certain aspects of the disorder (e.g., manipulateness and deceitfulness) may make measurement of psychopathy by self-report exceptionally difficult, if not impossible (e.g., Hare, 1985; Hart et al., 1994).

Consequently, a variety of measurement approaches that rely on ratings by informants have been created. For example, the Antisocial Process Screening Device (APSD; Frick & Hare, 2001), an instrument for juveniles, represents an effort to adapt the PCL-R into a checklist for use by parents and teachers. A parent or teacher rates the items based on his or her overall knowledge of the youth, without a formal interview or review of records. Whereas such informant-based measures often correspond with outcomes of interest (e.g., Frick, O'Brien, Wootton, & McBurnett, 1994), it appears that scores on screening measures may bear only a modest correspondence with scores from a psychopathy interview conducted by a trained clinician and augmented by a thorough review of all available records (Murrie & Cornell, 2002).

The P-SCAN

The Hare P-SCAN (Hare & Hervé, 1999) is another screening instrument meant for completion by non-clinicians. The authors report that they designed the instrument to help diverse professionals, such as "prosecutors, judges, law enforcement officers, school counselors, parole and probation counselors, hostage negotiators, nurses" and others (p. 1), identify psychopathic traits in offenders, clients, or patients with whom they work. Hare and Hervé (1999) emphasized that the P-SCAN "is not a

psychological test nor does it provide a clinical diagnosis or an assessment” (p. 1). Rather it constitutes an “‘early warning system,’ a rough screening device that, when properly used, may provide users with important clues or working hypotheses about the nature of an individual of interest” (p.1). The authors explained that the instrument is comprised of specific behavioral descriptions, requiring little inference, which might be relevant in identifying individuals who would warrant a further clinical evaluation using the PCL-R. They also suggest that considering P-SCAN scores could “put a whole new perspective on how to evaluate and deal with an individual” (Hare & Herve, 1999, p.1). They state that “the suggestion—however vague and subjective—that the individual involved might meet many of the criteria for psychopathy, would help [the non-clinician] determine which strategies to use for investigation and interrogation, and for assessing and managing risk for antisocial, criminal, and violent behavior” (p.2).

Other scholars (Edens, Skeem, Cruise, & Cauffman, 2001; Elwood, Poythress, & Douglas, 2004) caution against premature use of such a screening instrument, emphasizing that claims in the P-SCAN manual are not bolstered by any data regarding its psychometric properties or the interpretation of test results. Edens and colleagues (2001) argued that “quantifying a psychological construct and providing interpretive statements regarding the *potential* meaning of obtained scores (Hare & Hervé, 1999) clearly requires the publication of data that addresses the validity and utility of the hypotheses derived from these scores” (p. 65).

Recently, researchers began this process by providing the first data using the P-SCAN. Elwood and colleagues (2004) employed the measure with 50 pairs of undergraduate students. Students completed the P-SCAN on behalf of their “partner” and also completed a self-report measure of psychopathy-like traits (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995) and a self-report measure of antisocial behaviors. The psychometric properties of the P-SCAN appeared strong, with all Cronbach’s- α values greater than .90. Although P-SCAN scores were low overall, the facet scores showed modest to moderate correspondence with the self-report measure of psychopathy-like traits (r ’s of .20

to .37) and the self-report measure of antisocial behavior (r ’s of .23 to .28).

These findings by Elwood and colleagues (2004) offer a valuable first step in evaluating a layperson’s screening instrument for psychopathy. Our study is designed to augment and broaden this inquiry by presenting additional psychometric and validity data on the P-SCAN with regard to one population—prison inmates—with whom it is likely to be used. Specifically, we examine the P-SCAN with 115 women as scored by correctional officers. We report indices of internal reliability and describe external validity in terms of the measure’s correspondence with the “gold-standard” measure of psychopathy, the PCL-R. Further, we examine the relationship of the P-SCAN scores to measures of institutional adjustment and several measures of psychopathology. Our goal is to explore the correspondence of the construct identified by the two measures (i.e., the PCL-R and P-SCAN) when used by two different user groups (i.e., clinicians versus correctional officers) and to offer some preliminary observations concerning the P-SCAN’s correspondence with other forms of psychopathology and its potential relevance to institutional behavior and adjustment.

METHOD

Participants

The sample was comprised of women incarcerated at a maximum-security prison in the mid-eastern area of the United States. Each of the women was part of a larger study that examined the relationships among DSM-IV personality diagnoses, PCL-R scores, criminal history, violent behavior, and prison adjustment. The research sample was slightly younger and had more counts of institutional misconduct than the overall prison population but did not differ from the overall prison population on the variables of race, violent criminal offending, sentence length, or security classification (Warren et al., 2002).

Descriptive statistics for the participants in the current study are presented in Table 1. Reflecting the overall prison population, most (63%) of the participants were of minority status. The mean age of the sample was 36.1 years. Almost all of the

Table 1
Descriptive Statistics

	Frequency	Percent
Age		
18-24	22	19%
25-32	29	25%
33-40	36	31%
41-50	12	10%
Over 50	5	4%
Race		
Non-minority	43	37%
Minority	72	63%
High School Education		
Yes	52	45%
No	61	53%
Ever Married		
Yes	59	51%
No	52	45%
Length of Sentence		
≤ 5 years	41	36%
> 5 years	74	64%
Time Served		
≤ 1 year	12	10%
> 1 year	101	88%
Prior Incarceration		
Yes	31	27%
No	81	70%

Note. $N = 115$. Totals for some variables are < 115 due to missing data.

inmates had been incarcerated for over a year and more than half were serving a sentence of more than five years. Approximately one-half had been married at some point prior to or during their incarceration and approximately half had graduated from high school. In general, high rates of both Axis I and Axis II psychopathology were found among the sample; scores on the Brief Symptom Inventory (BSI; Derogatis, 1993) were comparable to those of hospitalized inpatients and the majority of the women met diagnostic criteria for at least one personality disorder on the SCID-II (First, Gibbon, Spitzer, Williams, & Benjamin, 1995) diagnostic interview (Warren et al., 2002).

Procedures

Institutional Review Boards of the correctional facility and the affiliated University approved this series of research (Warren et al., 2002; Warren et al., 2003). All participants provided written informed consent prior to the initiation of the clinical interviews and record reviews. Assistance was provided to all inmates who reported or demonstrated problems with reading. Institutional rules precluded paying the women for their participation, but they were given small gifts and refreshments during data collection, and the researchers arranged two prison-wide concerts.

To collect P-SCAN data, 30 correctional officers rated the study participants, each coding only those inmates that resided in their particular units. Originally, two officers (one day shift and one night shift) were asked to complete the P-SCAN for each inmate. However, due to schedule constraints, only 204 out of the 261 original inmate sample were coded.

The P-SCAN training offered to the correctional officers was minimal. We addressed collecting information about certain inmates and how they acted and related to others on a day-to-day basis. We did not provide education on the psychopathy construct, because it was not feasible to place additional schedule demands (including assigned reading) on the 30 correctional officers. This degree of orientation clearly falls short of the training recommended in P-SCAN manual. The information contained within the prison and mental health files was also considered confidential and inappropriate for review by front line correctional staff.

The prison had been open for approximately one and a half years when the P-SCAN data were collected. Most of the correctional officers had been employed at the prison since it opened and had been interacting on a daily basis with most of the inmates over this time period. Coding for an inmate was completed only by correctional officers who worked directly with that inmate.

Measures

P-SCAN. The P-SCAN (Hare & Hervé, 1999) is a 90-item rating scale designed for completion by laypersons. It yields scores for each of three key “facets” of psychopathy: Interpersonal, Affective, and Lifestyle. Each facet features 30 statements for raters to score as 0 (item does not apply), 1 (item applies to a certain extent, or information is unclear), or 2 (item applies). The Interpersonal facet items address relationships and interactions with others (e.g., “sexual behavior is trivial or aggressive”); the Affective facet items address feelings and emotions (e.g., “displays of emotion don’t seem genuine, like play-acting”); and the Lifestyle facet items address behaviors reflective of impulsive and irresponsible behavior (e.g., “a ‘rolling stone,’ a drifter through life”).

Scores were computed by summing items to create a score for each facet ranging from 0 to 60. A Total Score can also be calculated by averaging each of these three facet scores; thus total scores can also range from 0 to 60. As outlined in the manual, raters had the option of circling “?” to indicate that they had insufficient information to answer the question.

Several items on the P-SCAN were difficult for the officers to rate, with over 70% of the final 115 P-SCANs containing some missing data on particular aspects of behavior or attitude. These items included information regarding the inmates’ juvenile behavior, relationship to family, and use of alcohol and drugs.¹ As the manual instructs (Hare & Hervé, 1999), P-SCANs containing more than 15 missing items on the total score or more than five missing items within any facet were removed from the analyses ($N=91$), leaving a final sample size of 115. For these 115 remaining P-SCANs, missing data were replaced with a 1, following the guidelines in the P-SCAN manual. The test authors defined high (Total Score over 30), medium (Total Score between 11 and 29), and low (Total Score between 0 and 10) score ranges, which we used for some data analyses.

Of the 115 inmates included in the final sample, 53 were double coded by eleven individual correctional officers. These cases were used for inter-rater reliability correlations. For analyses related to construct validity, we used a single score on each of the 115 cases. For inmates who were double coded, a rating was randomly chosen from the two. The officers rarely filled out the data on familiarity, amount of contact, and degree of confidence; therefore, those variables could not be taken into account for the analyses. The selection criteria for the correctional officers chosen, however, suggest that most correctional officers had similar levels of familiarity with the inmates that they coded.

Psychopathy Checklist-Revised. The PCL-R (Hare, 1991) is a 20-item instrument scored by a clinician following a semi-structured interview and review of institutional files. The clinicians score each item as 0 (does not apply), 1 (maybe or in some respects), or 2 (does apply). Clinician-raters were

¹ A full table featuring item-level responses on all P-SCAN items is available upon request.

PhD students who underwent a six-session training course that involved didactic training as well as coding six videotaped PCL-R interviews. After completing this portion of the training, each of the six interviewers independently completed eight taped reliability interviews. Once the interviewers demonstrated acceptable reliability, they began interviewing prison inmates. Interviewers double-coded (blind) their first five interviews for purposes of measuring inter-rater reliability. File reviews were conducted prior to the PCL-R interviews by a team of six senior-level undergraduate psychology students and summarized on a detailed protocol that the interviewers studied before their contact with the inmates. Intra-class Correlation Coefficients (ICCs) for the interviews were strong, with a reliability of .88 for Factor 1, .99 for Factor 2, and .95 for the PCL-R Total Score (see Warren et al., 2003).

Assessment of Violent Behavior and Criminality: Violent behavior was assessed using three separate measures: (1) incarceration for a violent offense coded according to three categories (described below); (2) institutional infractions for violent or threatening behavior; and (3) security classification in prison. One of the administrative assistants in the mental health unit of the prison, assisted by the lead graduate student on the project, reviewed the institutional record for each participant to ascertain if she was currently incarcerated for a violent offense. The violent offenses included capital murder, homicide, second degree murder, accomplice to murder, attempted homicide, manslaughter, abduction, assault, malicious wounding, felony assault, hurling a missile, simple assault, abuse/cruelty, and child abuse. The analyses regarding conviction for a violent crime were conducted using three dichotomous variables (i.e., any convictions for a violent crime other than homicide, any convictions for a non-violent crime, and any convictions of homicide).

A prison database that contained information on institutional misconduct was used to code the various institutional infractions committed by each inmate. Violent infractions included those that involved some type of threatening or violent behavior and were defined using the institution's criteria for rule violations. Violent offenses included Level One prison infractions (including murder, assault, forced sex, etc.) as well as less severe fighting coded from the Level Two infractions.

Security Classification. The custody level of each inmate was ascertained at the time of her record review and interviews. The prison recognizes three levels of security: low, medium, and high. Security assignments are made by prison staff based upon a multifaceted assessment, which includes factors such as the instant offense, types and frequency of institutional misconduct, time served, and prior violent behavior.

Brief Symptom Inventory. The BSI (Derogatis, 1993) was used to assess features of Axis I psychopathology. The BSI is a self-report 53-item measure of mental health symptom status at a particular point in time. It contains nine sub-scales: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic-anxiety, paranoid ideation, and psychoticism along with a composite score referred to as the Global Severity Index.

The Structured Clinical Interview for DSM-IV Personality Disorders. The SCID-II (First, et al., 1995), a semi-structured interview, was used for diagnosing the ten DSM-IV Personality Disorders. The SCID-II coders were advanced graduate students in psychology who were blind to the PCL-R ratings, which had been conducted by another segment of the research team. Training on the SCID-II involved a series of training sessions, mock interviews using the SCID-II Clinical Interview, and double coding of 10 inmate interviews by each interviewer. The presence of personality pathology was calculated using both a continuous (dimensional) and diagnostic (categorical) scoring. As in much of the research on personality disorders, the reliability of the double coded interviews was strong for the continuous rating with ICCs ranging from .77 to .98 but less strong for the diagnostic scores with ICCs ranging from .45 to .93 (excluding Schizotypal Personality Disorder, which occurred only once; Warren et al., 2002)

Prison Adjustment Questionnaire. The PAQ (Wright, 1985) is a self-report measure designed to assess adjustment in prison as compared to adjustment in the community. Items include discomfort around inmates and correctional officers; feelings of anger; fear; illness and injury; trouble sleeping; physical fights and arguments; and feeling taken advantage of by others. Earlier factor analyses of these same data indicated a two-factor solution comprised of Emotional Distress and Interpersonal

Conflict (see Warren, Hurt, Loper, & Chauhan, 2004). These two factor scores were used in the current study.

RESULTS

Psychometric Properties of the P-SCAN

Scores on the Total P-SCAN ranged from 0 to 55.33 with a mean of 9.53 ($SD = 13.17$), a score that was close to the medium score range. Descriptive statistics for the P-SCAN facet scores were similar, as reported in Table 2. The modal rating for all P-SCAN items was 0, suggesting that the correctional officers endorsed little pathology for the majority of the inmates. This yielded highly skewed data for the total and facet scores. However, since the skewed data appeared to actually represent the correctional officers' inability to gauge variability among the items, we chose not to transform the data before conducting further analyses.

The internal consistency of the various total and facet scores was exceptionally high, with all Cronbach's-alpha values above 0.96. The corrected item-to-total correlations were also generally strong, ranging from 0.31 to 0.84. As summarized in Table 3, correlations among the three facets ranged from a high of 0.97 between the Affective facet and Lifestyle facet to 0.93 between the Interpersonal facet and the Lifestyle facet.

Interrater reliability was assessed using two techniques. First, we examined the bivariate correlations between the two correctional officers on the total and facet scores for each of the 53 inmates who had double-coded P-SCANs. These correlation coefficients were 0.37 ($p < .01$) for the Interpersonal facet, 0.23 ($p = ns$) for the Affective facet, 0.30 ($p < .05$) for the Lifestyle facet, and 0.32 ($p < .05$) for the Total score. In order to examine whether inter-rater reliability decreases as P-SCAN scores increase² (perhaps reflecting the possibility that more psychopathic individuals vary more in their interpersonal presentation than do less psychopathic individuals), we removed high scores (> 30) and reexamined the correlations. The correlation

coefficients were higher: 0.48 ($p < .01$) for the Interpersonal Facet, 0.35 ($p < .05$) for the Affective facet, 0.37 ($p < .05$) for the Lifestyle facet, and 0.35 ($p < .05$) for the Total score.

We also examined interrater reliability using ICCs for the six correctional officers who comprised four distinct pairs ($N = 46$). Pairs included in these analyses coded at least five inmates. The ICCs between the raters for the P-SCAN total score was 0.40, with 0.51 for the Interpersonal facet, 0.32 for the Affective facet, and 0.24 for the Lifestyle facet.

Concurrent Validity

The first set of validity analyses examined the P-SCAN's correlation with the interview-based PCL-R scores. As illustrated in Table 3, the correlation between the PCL-R and the averaged P-SCAN score was not statistically significant. Furthermore, no facet scores correlated significantly with the PCL-R total or factor scores. Using a categorical approach, of the 31 inmates who received a score of greater than 20 on the PCL-R, only 6 (19%) scored high on the P-SCAN.

Correspondence With Measures of Violence and Institutional Misbehavior

Construct validity was also examined by calculating the point biserial correlations between the P-SCAN scores and various measures of criminal history, institutional misbehavior, and security level. As summarized in Table 4, the P-SCAN demonstrated a significant correlation with security level. Specifically, the Interpersonal facet ($r = -0.28$, $p < .01$); the Affective facet ($r = -0.25$, $p < .01$); the Lifestyle Facet ($r = -0.21$, $p < .05$) and the P-SCAN total score ($r = -0.25$, $p < .05$) all corresponded significantly, albeit negatively, with security level.

Correspondence With Measures of Psychopathology and Prison Adjustment

Finally, the P-SCAN's correspondence with other forms of psychopathology was examined using the BSI, presence or absence of personality disorder as measured by the SCID-II, and scores on the PAQ using its two factor scores, Conflict and Distress. Theoretically, the P-SCAN should correspond with

² We thank one anonymous reviewer for this suggestion.

Table 2
Mean and Ranges on the Total and Facets Scores of the P-SCAN

Variable	N	M	SD	Range	Alpha	MIC	CITC Range
Total – 1	115	9.53	13.17	0-55	.99	.80	.53-.81
Interpersonal – 1	115	10.29	13.43	0-57	.97	.66	.68-.87
Affective – 1	115	9.09	13.51	0- 55	.97	.76	.72-.93
Lifestyle – 1	115	9.21	13.20	0-54	.97	.86	.82-.98

Note. MIC=Mean inter-item correlation; CITC=Corrected item-total correlation.
 “1” = first ratings, “2” = second ratings.

those constructs related to psychopathy (convergent validity) and be unrelated or negatively related to those constructs that are not related to psychopathy (discriminant validity). As summarized in Table 5, the P-SCAN Total Score did not correlate with any of the BSI measures or the PAQ subscales. The PCL-R did have a positive correlation ($r = 0.29, p < .05$) with the somatization subscale on the BSI.

In terms of Axis II pathology, the presence of a Cluster A diagnoses was significant for the P-SCAN total ($r = 0.42, p < .01$); the Interpersonal facet ($r = 0.34, p < .05$); the Affective facet ($r = 0.45, p < .01$); and the Lifestyle facet ($r = 0.47, p < .01$). The P-SCAN did not show any correlation with Cluster B diagnoses in general nor with a diagnosis of Antisocial Personality Disorder, which has been theoretically and empirically linked to psychopathy.

DISCUSSION

Although preliminary, these results offer the first available “real-world” validity data of the P-SCAN (Hare & Hervé, 1999), an instrument purported to allow non-clinicians to screen for psychopathic traits. Given that formal mention of psychopathy features may have substantial implications for the way that an inmate is handled both pre- and post-sentence, it is imperative to explore empirically the degree and manner in which an instrument marketed as a psychopathy screening tool corresponds with the gold-standard measure of the construct, the PCL-R. More broadly, these results add another perspective on efforts to screen for psychopathy and to use non-clinical ratings to identify disorders along the Axis

II continuum (Levenson et al., 1995; South, Oltmanns, & Turkheimer, 2003).

To begin, the skewness of the data indicate that the correctional officers had a difficult time gauging the presence of certain items. Items related to childhood activity (e.g., described as hyperactive or unmanageable as an adolescent), drug use (e.g., frequent use of alcohol and drugs), and familial relations (e.g., family or friends fear person) were the most frequently missing items. Although such missing items may have occurred, in part, because correctional officers in our sample received no training, the missing items are probably more likely attributable to the fact that layperson P-SCAN raters are unlikely to use the volume of collateral data sources that a trained clinician scoring the PCL:R might access. As to be expected, the coding by the correctional officers was more consistent on the items that examined inmate’s interpersonal relationships, and less consistent on the items related to affective states and, to a lesser degree, lifestyle.

In our sample, it appeared that the P-SCAN demonstrated solid psychometric properties. Each of the facets demonstrated remarkably high internal consistency, with alphas of at least 0.97 for the three facets and 0.99 for the P-SCAN Total Score. The corrected item-to-facet scores were also robust, all exceeding the 0.30 level accepted as adequate item-to-scale consistency. While high alpha values are partially a function of test length (Schmitt, 1996), they nonetheless suggest that there is cohesiveness in the behaviors identified by the P-SCAN. They may also imply that the same constructs could be identified using fewer individual items.

Table 3
Correlations Between Raw PCL-R Total and Factor Scores and Average of the Double-coded P-SCAN Total and Facet Scores

	P-SCAN Total	Interpersonal	Affective	Behavioral	PCL-R Total	Hare Factor 1	Hare Factor 2	Cooke Factor 1	Cooke Factor 2	Cooke Factor 3
P-SCAN Total	-									
Interpersonal	0.98*	-								
Affective	0.99*	0.96*	-							
Behavioral	0.98*	0.93*	0.97*	-						
PCL-R Total	0.18	0.15	0.16	0.22	-					
Hare Factor 1	0.10	0.09	0.07	0.13	0.71*	-				
Hare Factor 2	0.17	0.13	0.16	0.20	0.80*	0.19	-			
Cooke Factor 1	0.04	0.03	0.03	0.05	0.60*	0.83*	0.14	-		
Cooke Factor 2	0.13	0.13	0.09	0.16	0.61*	0.89*	0.18	0.48*	-	
Cooke Factor 3	0.21	0.17	0.21	0.24	0.72*	0.20	0.87*	0.22	0.14	-

* $p < .001$.

Note. $N = 54$ for PCL-R inter-correlations. $N = 115$ for P-SCAN inter-correlations

Table 4

Point Bi-serial Correlations between P-SCAN Scores and PCL-R Scores with Prison Infractions, Criminal History, and Security Level

	P-SCAN Total	Interpersonal	Affective	Lifestyle	PCL-R Total
<i>Institutional Infractions</i>					
100 – level	0.05	0.04	0.06	0.05	-0.27**
200 – level	-0.14	-0.13	-0.15	-0.14	-0.18
Violent	-0.10	-0.13	-0.09	-0.07	-0.15
Institutional	-0.11	-0.10	-0.12	-0.12	-0.21
Rule	-0.14	-0.14	-0.14	-0.12	0.05
<i>Security Classification</i>					
Security Level	-0.25*	-0.28**	-0.25*	-0.21*	0.11
<i>Criminal History</i>					
Homicide	-0.02	0.05	-0.05	-0.05	-0.25
Violent Crimes	-0.02	-0.03	-0.04	-0.00	0.09
Nonviolent Crimes	0.06	0.02	0.07	0.08	0.30*

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

Note. $N = 54$ for PCL-R correlations. $N = 114$ for P-SCAN correlations.

Correlations among the three facets were high, ranging from 0.97 between the Interpersonal facet and the Lifestyle facet to 0.93 between the Affective facet and the Lifestyle facet. The strength of these correlations suggests substantial over-lap across the instrument and invites some doubt that each facet truly differentiates distinct domains of the construct. The three P-SCAN facets appear to roughly correspond with a three-factor solution identified for the PCL-R (Cooke & Michie, 2001), which may not capture the optimal dimensions for this type of screening measure. The apparent unidimensional nature of the instrument might also reflect a response style wherein correctional officers rated a given inmate as globally high (or low) on all domains due to problematic (or problem-free) behavior. This may reflect a coding bias that is uncorrected in the absence of a formal interview and/or record review as used with the PCL-R. Again, more extensive training for the correctional officers may have led to a different pattern of results.

Contrary to expectations, the P-SCAN total and facet scores did not correlate significantly with PCL-R total and factor scores, measures of personality

disorders in the Cluster B range, or self-report prison adjustment. The only measures that showed a consistent correlation with the P-SCAN total and facet scores were security class and Cluster A psychopathology. Somewhat surprisingly, security class was negatively correlated with the total and facet scores, indicating that those in the higher security level had lower scores on the P-SCAN. This finding is congruent with earlier research using this same sample, which found that women convicted of homicide (and hence, at a higher security level) tended to score lower on the PCL-R than did women with less serious offenses (Warren et al., 2005). The association between the P-SCAN and Cluster A pathology similarly reflects our earlier research that found a relationship between psychopathy as measured by the PCL-R and a diagnosis of Paranoid and Schizotypal Personality Disorders (Warren et al., 2002). However, PCL-R scores corresponded more strongly with Antisocial and Narcissistic Personality Disorder diagnoses (Warren et al., 2002), which was not true of P-SCAN scores in the current study. Given the pattern of P-SCAN correspondence with personality disorders in our sample, it appears that

Table 5
Pearson and Point Bi-Serial Correlations between P-SCAN Scores and PCL-R Scores with Psychopathology, Personality Disorders, and Prison Adjustment

	P-SCAN Total	Interpersonal	Affective	Lifestyle	PCL-R Total
<i>Brief Symptom Inventory</i>					
Anxiety	0.13	0.14	0.10	0.14	0.17
Depression	0.13	0.16	0.11	0.11	0.15
Hostility	-0.04	-0.05	-0.04	-0.03	-0.15
Interpersonal Sensitivity	0.05	0.05	0.05	-0.05	0.09
Obsessive-Compulsive	-0.01	-0.00	-0.03	0.01	0.18
Paranoid	0.03	0.03	0.02	0.05	0.01
Phobic Anxiety	-0.05	-0.08	-0.05	-0.03	0.13
Psychoticism	0.02	0.03	0.01	0.03	0.17
Somatization	0.11	0.10	0.10	0.13	0.29*
Global Severity Index	0.06	0.07	0.05	0.07	0.14
<i>Personality Disorders</i>					
Cluster A PD	0.42**	0.34*	0.45**	0.47**	0.15
Cluster B PD	-0.03	-0.07	-0.04	0.07	0.46**
Antisocial	-0.01	-0.07	-0.03	0.06	0.53**
Borderline	0.09	0.05	0.14	0.08	-0.21
Narcissistic	0.02	0.02	0.00	-0.04	-0.23
Histrionic	-0.09	-0.09	-0.09	-0.15	-0.23
Cluster C PD	0.08	0.08	0.13	0.05	-0.07
<i>Prison Adjustment</i>					
Conflict	-0.09	-0.09	-0.09	-0.09	-0.03
Distress	0.07	0.09	0.05	0.06	0.24

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

the correctional officers were more prone to identify the suspicious or isolative behavior associated with paranoid perceptions rather than the more manipulative and self-aggrandizing behavior of the Cluster B continuum. This may be the result of the limited training offered to the correctional officers or the difficulty of coding life-long patterns of manipulation without access to records that provide cross-situational appraisals of behavior.

With regard to inter-rater reliability, the ICCs on the double coded inmates by the same two correctional officers were 0.40 for the P-SCAN total score, 0.51 for the Interpersonal facet, 0.32 for the Affective facet, and 0.24 for the Lifestyle facet. This degree of congruence is much lower than the ICCs obtained for trained clinicians coding the PCL-R on

the same population (i.e., 0.95 for the PCL-R total score, see Warren et al., 2003). It is not, however, grossly lower than some of the ICCs obtained by trained clinicians coding dichotomous diagnoses of some personality disorders (i.e., 0.45 to 0.93, see Warren et al., 2002).

In reviewing these results, one must consider two key limitations to the study. First, as in the Elwood et al. (2004) study, we did not provide our correctional officer raters with the training that Hare and Hervé (1999) recommended for those using the P-SCAN. The authors recommend that raters “should know something about the clinical construct of psychopathy and its assessment” (p. 2), probably through reading Hare’s (1993) popular-press book on the topic, *Without conscience: The disturbing*

world of psychopaths among us. Given the hectic pace of the prison, the many pre-existing duties for correctional officers, and the many other ways in which prison personnel were helpful to our research, we did not request correctional officers complete this type of “extra-curricular” reading and training. Thus, the reliability of raters in our study cannot be used to estimate the reliability of groups of non-clinicians who might be formally trained to use the P-SCAN regularly as part of their job.

Secondly, we did not provide the correctional officers with extensive collateral information prior to their coding of the P-SCAN. Instead, officers relied exclusively on their day-to-day interactions with the women and their observations of each woman’s interactions and relationships with others. While extensive collateral information had been reviewed and summarized for each inmate as part of the administration of the PCL-R, the information was obtained from the prison and mental health files and stored securely by the research team. Most of this information was considered confidential and inappropriate or illegal for consumption by front line staff, who have considerable authority over the women but limited mental health training. Similar issues might arise any time a screening instrument is administered by non-clinicians who are subject to laws protecting information obtained within the context of a doctor-patient relationship (such as federal HIPAA guidelines in the United States).

Other limitations to the current study are also worth reiterating. In terms of interpretation, results from this sample of female inmates cannot be presumed applicable to a male correctional population. As mentioned in the literature review, results from male and female psychopathy studies are not interchangeable (Warren et al., 2003; Vitale & Newman, 2001) and the interpretation of gender differences may become even more complex when method-variance (clinician-rated PCL-R versus non-clinician-rated P-SCAN) is introduced. Furthermore, even our sample of female inmates is not perfectly representative of the broader female inmate population, in that our group was biased towards those likely to manifest some symptoms of Axis II pathology. That said, such symptoms are quite common among female inmates (Warren et al., 2002) and one could argue that an increased rate of personality pathology would increase the base rate

of psychopathy traits, which should allow for the optimal test of the correspondence between two psychopathy instruments.

In conclusion, these data suggest that within the current sample, the P-SCAN functioned as a means by which correctional officers could identify inmates who are somewhat prone to suspicious behavior within the prison or who seemed unlikely to form social relations with the other inmates. To the extent that the PCL-R construct is a valid measure of psychopathy, however, the P-SCAN did not appear to identify or measure psychopathy per se in our sample. This finding is important because in general there is a strong potential for P-SCAN users to interpret results as quantifying degree of psychopathy traits, which could have significant implications for how users manage and make decisions about the inmates within the correctional setting. Therefore, the perceived benefits of a psychopathy screening process must be carefully gauged against the risks of identifying a construct other than psychopathy.

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