Journal of Abnormal Psychology
1990, Vol. 99, No. 3, 250-259

0021-843X/90/$00.75

Evaluating the Construct Validity of Psychopathy in Black and White Male Inmates: Three Preliminary Studies

David S. Kosson, Stevens S. Smith, and Joseph P. Newman
University of Wisconsin–Madison

Although Black inmates represent almost half the population of United States prisons and have been included in several studies of psychopathy, there appear to be no published studies to date addressing the validity of the psychopathy construct in Black inmates. Three studies were conducted to assess the validity of the construct in Black male inmates using Hare's Psychopathy Checklist (PCL). In Study 1, we examined the internal structure of the PCL and the relation of checklist scores to several constructs relevant to psychopathy. We observed differences between Blacks and Whites in the distribution of psychopathy scores, in the relation of psychopathy to measures of impulsivity, and in the congruence of the underlying factor structure of the PCL. In Study 2, Black psychopaths were found to manifest a pattern of passive avoidance deficits similar but not identical to that reported for White psychopaths in Newman and Kosson's study. Study 3 demonstrated that psychopaths of both races receive more criminal charges in a wider variety of offense categories than do nonpsychopaths. The psychopathy construct appears tentatively applicable to Blacks, although its components may be somewhat different than for Whites.

Despite clinical agreement and empirical evidence that psychopathy is an important construct mediating the relation between personality and antisocial behavior (e.g., Hare, 1970), research on psychopathy has long been plagued by a lack of agreement about who the psychopath is and how he or she may be identified (e.g., see Hare & Cox, 1978). Hare and his colleagues have developed a new measure of psychopathy, the Psychopathy Checklist (PCL) (Hare, 1980, 1985b), which appears to permit reliable and valid ratings of psychopathy in incarcerated White males (Schroeder, Schroeder, & Hare, 1983). Subjects selected on the basis of PCL ratings have been shown to display a variety of behaviors associated with psychopathy, including passive avoidance learning deficits in specific situations (Newman & Kosson, 1986), perseveration of dominant responses (Newman, Patterson, & Kosson, 1987), and high levels of violent and nonviolent criminal activity (Hare & McPherson, 1984). The consistency of these findings has helped to build a cumulative framework for understanding psychopathy and for elaborating further predictions of mechanisms underlying psychopathic behavior.

This research was supported by National Institute of Mental Health Predoctoral Fellowship MH09114 to the first author, and Grant MH3771 to the third author.

We are very grateful for extensive help by Sharon Nichols in data collection and analysis of Study 1. We also thank Peter Arnett, Joanne Bachorowski, Randy Busse, Eric Howland, and C. Mark Patterson for their help in collecting data reported here. Finally, we thank Arnold Blahnik, Pam Waddell, Beverly Mares, Deborah March, the staff of Oakhill Correctional Institution, and the Wisconsin Division of Corrections for their consistent cooperation throughout this project.

Correspondence concerning this article should be addressed to David S. Kosson, who is now at the Department of Psychology, 296 Eberhart Building, University of North Carolina at Greensboro, Greensboro, North Carolina 27412.

For some time, researchers in the United States have been applying the psychopathy construct to non-White as well as White populations, usually without addressing the generality of the construct across race. For example, Black inmates have been included as subjects in studies of delay of gratification (Blanchard, Basset, & Koshland, 1977), information-processing deficits (Painting, 1961), and violence proneness (Fagan & Lira, 1980). None of these studies addressed the possibility of Group × Race interactions. In fact, a search of the literature for studies that explicitly examined the validity of the psychopathy/antisocial personality disorder construct in Black inmates located only one relevant study. In that study, Walters (1985) reported no race effects in a comparison of the Psychopathic Deviate scale of the MMPI with a behavioral measure of antisocial personality disorder.

Given that approximately 45% of United States prisoners are Black (Brown, Flanagan, & McLeod, 1984), the investigation of behavioral and personality factors associated with the criminality of Black offenders appears to be an important task. However, there is evidence that the overrepresentation of Blacks in American prisons may reflect, in part, the social and economic inequities that many Blacks suffer (Farrington, 1987) as well as racial discrimination in the criminal justice system (e.g., see Dugger, 1988; Hacker, 1988). As such, personality variables and disorders, including psychopathy, may be less powerful determinants of antisocial behavior among non-Whites. Thus, investigation of the validity of the psychopathy construct in Blacks represents an important step in determining the relative influence of various etiological factors implicated in the development of criminality in this important offender population. It is this question to which the present work is addressed.

Examination of the psychopathy construct in non-White populations is complicated by the fact that most measures of psychopathy have been developed using White inmates as subjects (e.g., Hare, 1980). It is an empirical question whether non-

Whites who are diagnosed as psychopaths with these measures resemble White psychopaths in fundamental ways. In the present investigation, we focus on the PCL primarily because of its demonstrated reliability and validity in White male inmates. In theory, validation of the psychopathy construct in both White and non-White populations should rest upon the observation of predicted relations using several different measures of psychopathy. However, there are at present no other well-validated measures of psychopathy that are independent of PCL ratings.[1] Consequently, in the context of the present study, we address simultaneously validation of the psychopathy construct in Blacks and validation of the PCL as a measure of that construct in Blacks.

The construct of psychopathy is valid in a new population to the extent that examination of the new population yields similar relations between psychopathy (operationalized by a particular measure) and the properties or states with established links to the psychopathy construct. Thus, we examine the validity of the psychopathy construct in Black inmates by comparing their performance on dependent measures linked to psychopathy with that of White inmates. Although it is possible that psychopathy exists in Blacks in the same way it exists in Whites, it may be that no syndrome like psychopathy exists in Blacks at all. It is also possible that psychopathy exists in Black (and other non-White) inmate populations but is manifested somewhat differently than in Whites. For example, cultural differences in socialization and behavior may influence the pattern of features associated with psychopathy in non-White populations. Consequently, the psychopathy construct may reflect a different clustering of the various components, and may even involve more or fewer components in Black than in White inmates.

As part of an ongoing program of psychopathy research at a minimum security prison, we have collected personality and behavioral data on several hundred inmates who were assessed using the PCL. The results of several experiments conducted at this prison have been reported in this journal (Kosson & Newman, 1986; Newman & Kosson, 1986; Newman et al., 1987). In all three of these investigations, only the data for White subjects were reported because the PCL was originally developed using only White inmates (Hare, 1980). The current investigation capitalized on the availability of extensive personality and behavioral data for both White and Black inmates.

To explore the validity and reliability of the psychopathy diagnosis in Black male inmates, we conducted three studies: (a) Study 1 focused on the measurement properties, underlying factor structure, and validity of the PCL in White and Black inmates; (b) Study 2 compared the passive avoidance learning of Black psychopaths and nonpsychopaths with data previously reported for White psychopaths and nonpsychopaths (Newman & Kosson, 1986); and (c) Study 3 compared White and Black psychopaths and nonpsychopaths on the number and type of criminal charges they received.

Approximately one-half of the subjects in the ongoing research program were assessed using the original 22-item PCL (Hare, 1980).[2] The other half were assessed using the 20-item revised PCL (Hare, 1985b). According to Hare (1985b), "the [revised] Psychopathy Checklist and the original 22-item scale are substantively identical and . . . the two versions classify prison inmates in the same way" (p. 2). In the present investigation, all of the subjects in Study 1 were assessed with the 22-item PCL; all of the White subjects and most of the Black subjects in Study 2 were assessed with the 22-item PCL (14 black subjects were assessed with the 20-item revised PCL). Finally, all of the subjects in Study 3 were assessed with the 20-item revised PCL. In sum, the subjects in Study 2 consisted of a subset of the subjects in Study 1 with the exception of 14 Black subjects. These same 14 subjects constitute the only overlap of subjects in Study 2 and Study 3.

Study 1

Our first study was designed to provide information on a wide range of issues relevant to the assessment of psychopathy in Black male inmates. The data provide information within three broad categories. First, we examined the reliability of measurement and distribution of PCL scores in Black and White male inmates. Second, we examined the internal structure of the PCL in several different ways: (a) item-to-total correlations and alpha coefficients for PCL items for White and Black male inmates, and (b) congruence between the factor structure of the PCL (cf. Harpur, Hakstian, & Hare, 1988) for White and Black inmates. Finally, we examined the relationship between psychopathy ratings and scores on a variety of self-report measures that have been reported to be relevant and irrelevant to psychopathy in Whites.

Both the Cleckley (1976) and Hare concepts of psychopathy characterize psychopaths as impulsive. We therefore predicted significant correlations between psychopathy and impulsivity. We also predicted significant correlations between PCL scores and a measure of delinquency proneness, the Socialization scale (Gough, 1960; Hare, 1985a). In addition, we investigated the relation between psychopathy and anxiety using three measures of anxiety/neuroticism commonly used in psychopathy research. However, because different and conflicting claims have been made about this relation (see, e.g., Blackburn, 1971, 1975; Schalling, 1978), we made no predictions regarding group differences. Finally, we investigated the relation between psychopathy and intelligence using a brief self-report IQ test, the Shipley Institute of Living Scale (SILS) (Shipley, 1940; Zachary, 1986). The relation between psychopathy and intelligence is also unclear (e.g., Goodwin & Guze, 1984), although the claims made have been more modest than those for anxiety. As such, no predictions were made for this relationship.

Method

Subjects. Subjects were 232 White and 124 Black inmates at a state correctional facility (minimum security) in southern Wisconsin. Inmates were nominated by selecting every fifth name on the institution roster, screening out those men who were older than 40 or who appeared unsuitable for use in behavioral research (i.e., likely to show

[1] Self-report measures appear vulnerable to self-presentation bias (e.g., lying) and may therefore be inappropriate as sole indicators of psychopathy (Hare, 1985a). Because correspondence with global ratings of psychopathy based on Cleckley's concept of the psychopath was a criterion in the initial development of the PCL, such global ratings do not provide independent evidence for the validity of the checklist.

[2] Subjects in Study 1 include, but are not limited to, subjects in our previous *Journal of Abnormal Psychology* articles (Kosson & Newman, 1986; Newman & Kosson, 1986; Newman et al., 1987).

generalized performance deficits). Thus, inmates were not contacted if they were described as actively psychotic or taking psychotropic medication, of borderline intelligence, or performing below the fourth-grade level on academic achievement tests (i.e., likely to have difficulty understanding our consent form and questionnaires). Interview, file review, and behavioral testing procedures were explained to each inmate, and all who consented were interviewed. After hearing a description of the research project, 27 Whites and 16 Blacks who had been nominated declined to participate.

Measures. The original 22-item version of the PCL (Hare, 1980) was used to assess psychopathy. Each item on the PCL represents a different behavioral or trait disposition related to psychopathy. Together, these items were designed to capture the evidence underlying global judgments of psychopathy that researchers in Hare's laboratory had been making (see Hare, 1980; Hare & Frazelle, 1980, for more information on scale development). Items are scored 0, 2, or 1 to indicate the absence, presence, or partial presence of each disposition, respectively. The items are completed following a semistructured interview of each inmate (described later) and a review of his institution file in accord with an unpublished manual (Hare & Frazelle, 1980).

A variety of personality questionnaires were administered to subsets of the subjects. These questionnaires (and the scales derived from each) included: the Eysenck Personality Questionnaire (EPQ) (Eysenck & Eysenck, 1975) with Extraversion, Neuroticism, Psychoticism, and Lie scales; the Karolinska Scales of Personality (KSP) (Schalling, 1978) with scales of Impulsiveness, Monotony Avoidance, and Detachment; scales from the Multicomponent Anxiety Inventory (Schalling, 1978) consisting of Psychic Anxiety, Somatic Anxiety, and Muscular Tension; the Welsh Anxiety scale of the MMPI (Welsh, 1956); and the Socialization scale from the California Psychological Inventory (Gough, 1960). In addition, most subjects completed the SILS (Shipley, 1940). Zachary (1986) reported that correlations between the SILS and Wechsler Adult Intelligence Scale IQ range from .73 to .90 (median: .79). Relations between psychopathy and the various measures were assessed using correlational analyses.[3]

Procedures. Each subject was assessed via a semistructured interview, a file review, and several paper and pencil questionnaires. The interview, designed for this program of research, was constructed to elicit sufficient information, in conjunction with a review of each inmate's institution file, to permit an interviewer and an observer to rate subjects independently using the 22-item PCL. Modeled on the recommendations of Hare and Frazelle (1980), the interview contained questions about each inmate's school history and family background, as well as parenting, work, sexual, and criminal histories. Interviews typically lasted 50 to 90 minutes.

Interviewers and observers were the first and third authors and two advanced doctoral students in clinical psychology; all four were White. During the interview, an interviewer and one observer were present in the room with the subject. Information elicited from each subject during the interview was written down separately by the interviewer and the observer. Then the interviewer and observer independently read through each subject's institution file to obtain corroborating and additional information. After completing the file review, the interviewer and observer independently rated each subject using the PCL; ratings were made blind to scores on the personality questionnaires (completed by subjects in another room during file review and rating). When possible, subjects were later called back for additional sessions, during which behavioral tasks (see Study 2) and additional self-report questionnaires were administered.

Results

Reliability. The correlation between interviewers' and observers' PCL ratings of White subjects was .85 (N = 232), whereas the correlation for Black subjects was .78 (N = 124). The reliability of ratings for White subjects was similar to, although lower than, values reported by Hare (1980) (r range: .89–.92). A test of the difference between the correlations for White and Black subjects was nonsignificant (z = 1.905, ns).

Table 1
Descriptive Statistics for Psychopathy Checklist Scores in White and Black Inmates

Measure	White inmates	Black inmates
Mean	25.74	28.04
Median	26.50	28.50
Standard deviation	6.88	5.87
Skewness	−.306	−.675
Kurtosis	−.452	.215
Minimum	9.00	10.00
Maximum	40.50	38.50
N	232	124

Note. Scores consist of averaged ratings, that is, the mean of interviewer and observer Psychopathy Checklist ratings.

Distribution. In accord with the informal recommendations of Robert Hare (personal communication, March, 1983), Black and White subjects were classified into three groups on the basis of PCL scores: psychopaths, with scores of 31.5 or greater; nonpsychopaths, with scores of 20 or below; and "middle" subjects, with scores falling between 20 and 31.5. For Whites, 23.7% were diagnosed as psychopaths, 21.6% as nonpsychopaths, and 54.7% as middle subjects. Corresponding percentages for Black subjects were 36.3%, 8.9%, and 54.8%. A chi-square test confirmed a significant association between group membership and race, $\chi^2(2, N = 356) = 12.14$, $p < .01$. This apparent difference in distribution of PCL scores is discussed later.

Table 1 provides descriptive statistics for PCL ratings for White and Black subjects. A one-way analysis of variance (ANOVA) with race as the between-groups factor was computed to test for a mean difference in PCL ratings for Blacks and Whites. Black inmates received significantly higher psychopathy ratings than did White inmates, $F(1, 352) = 10.00$, $p < .01$.[4]

Internal structure. Alpha coefficients were computed for individual raters (interviewer and observers as noted previously) and ranged from .80 to .84 for White subjects and from .76 to .82 for Black subjects. The alpha coefficients based on averaged scores for each item (across raters) were .86 and .81 for White and Black subjects, respectively. Thus, the internal consistency

[3] Between-groups analyses (psychopaths vs. controls) for all dependent measures produced similar results and are available upon request.

[4] One reviewer expressed concern that early drug abuse may contribute more variance to the PCL scores of Black than White inmates. An item in the 22-item PCL is directly relevant to this issue: "Drug or alcohol abuse not direct cause of antisocial behavior." Subjects earn a score of 2 if the "onset of deviant behavior is not preceded by, or a clear result of, alcohol/drug abuse" (p. 15, Hare & Frazelle, 1980). The percentages of Black and White inmates earning a score of 2 were 51.6% and 39.7%, respectively. Thus, relative to Whites, fewer Black subjects displayed significant substance abuse before the onset of deviant behavior.

Table 2
Psychopathy Checklist Corrected Item-to-Total Correlations for Whites and Blacks and z-Test for the Difference Between Independent Correlations

Item	Item-to-total correlations: Whites (n = 230)	Blacks (n = 123)	z
1. Glibness/superficial charm	.37	.18	1.78
2. Previous diagnosis as psychopath	.36	.05	2.84*
3. Egocentricity/grandiose sense of self-worth	.46	.42	0.38
4. Proneness to boredom/low frustration tolerance	.63	.58	0.70
5. Pathological lying and deception	.56	.38	2.12*
6. Conning/lack of sincerity	.45	.42	0.33
7. Lack of remorse or guilt	.54	.45	1.05
8. Lack of affect and emotional depth	.58	.60	−0.27
9. Callous/lack of empathy	.60	.50	1.26
10. Parasitic life-style	.43	.45	−0.11
11. Short tempered/poor behavioral controls	.33	.18	1.47
12. Promiscuous sexual relations	.49	.39	1.10
13. Early behavior problems	.43	.33	0.99
14. Lack of realistic long-term plans	.54	.55	−0.12
15. Impulsivity	.58	.43	1.81
16. Irresponsible behavior as parent	.33	.26	0.64
17. Frequent marital relationships	.41	.48	−0.89
18. Juvenile delinquency	.41	.33	0.82
19. Poor probation or parole risk	.38	.23	1.47
20. Failure to accept responsibility for own actions	.25	.35	−0.97
21. Many types of offenses	.32	.32	0.04
22. Drug or alcohol abuse not direct cause of antisocial behavior	.30	.36	−0.59

* $p < .05$.

of the PCL appeared comparable to, although slightly lower than, the values of .82 to .91 reported by Schroeder et al. (1983).

Corrected PCL item-to-total correlations for Whites and Blacks are presented in Table 2. Examination of these correlations revealed an apparent difference between ratings of Whites and Blacks. For White subjects, all correlations were statistically significant and above .25, replicating Hare's (1980) results. For Black subjects, item-to-total correlations for three items failed to achieve statistical significance or reach the minimum value of .20 reported by Hare (1980): (a) Item 1, glibness/superficial charm ($r = .18$, $p < .10$); (b) Item 2, previous diagnosis as psychopath ($r = .05$, ns); and (c) Item 11, short tempered/poor behavioral controls ($r = .18$, $p < .10$). As shown in Table 2, there were significant differences between Whites and Blacks only for Items 2 and 5 (pathological lying and deception) correlations. Because two of the item-to-total correlations approached significance (Items 1 and 11) and Item 2 has since been eliminated from the PCL (Hare, 1985b), the differences between Whites and Blacks for item-to-total correlations appear to be minimal.

Harpur et al. (1988) reported a robust two-factor structure for the PCL. Factor 1 was labeled "selfish, callous, and remorseless use of others," and Factor 2 was labeled "chronically unstable and antisocial lifestyle" (p. 745). Harpur et al. (1988) examined the congruence of factor solutions across six independent samples (including our White subjects) and found fairly high coefficients of congruence for both factors.[5] In addition, cross-factor congruence coefficients (e.g., Sample 1, Factor 1 with Sample 2, Factor 2) were generally low, indicating good differentiation of the factor structure (see Table 4 in Harpur et al., 1988, p. 744). To examine the factor structure of the PCL in our Black subjects, independent two-factor solutions for our White and Black subjects' PCL data were computed according to the method used by Harpur et al. (1988). Coefficients of congruence between the factor solutions for Black and White subjects were computed to assess similarity of the PCL factor structure in Whites and Blacks.

For Whites' Factor 1 compared with Blacks' Factor 1, the coefficient of congruence (r_c) was .67; for Whites' Factor 2 compared with Blacks' Factor 2, r_c was .93. Whereas r_c for Whites' and Blacks' Factor 2 compares favorably with values reported by Harpur et al. (1988), r_c for Factor 1 failed to meet the most strict criterion of .82 suggested by Schneewind and Cattell (1970, cited in Cattell, 1978). In addition, r_c for White's Factor 1 with Blacks' Factor 2 was .59 and r_c for Whites' Factor 2 with Blacks' Factor 1 was .05.[6] Although the latter coefficient suggests good differentiation, the other coefficient (.59) is unexpectedly high.

Relation to constructs associated with psychopathy. The relation between PCL scores and impulsivity, as assessed by two self-report measures, Impulsiveness and Monotony Avoidance (Schalling, 1978), was examined correlationally. Both correlations were statistically significant for Whites but, for Blacks both correlations were lower and nonsignificant (see Table 3). A z test revealed that the correlations for Blacks and Whites were significantly different only for Impulsiveness. Among both White and Black subjects, there were significant associations between psychopathy ratings and Socialization scores. For Whites, the correlation between PCL scores and Socialization was −.43, $p < .001$; the corresponding correlation for Blacks was −.27, $p < .05$. The correlations for Whites versus Blacks were not significantly different.

Relation to other constructs. Correlations between psychopathy and anxiety/neuroticism were nonsignificant for subjects of both races (see Table 3). In addition, there were no significant

[5] Most of the subjects in the six samples examined by Harpur et al. (1988) were White and Sample 2 consisted of the White subjects in the present study.

[6] One reviewer noted that the lower congruence may be due to the smaller sample size for Blacks. To address this possibility, the two-factor solution for Whites was recomputed on a randomly selected subsample of 124 Whites (matching the sample size of the Black subjects) and the congruence coefficients were recomputed. For Factor 1, the congruence coefficient was .64; for Factor 2, the congruence coefficient was .94. The congruence coefficient for Whites' Factor 1 and Blacks' Factor 2 was .62, while the congruence coefficient for Whites' Factor 2 and Blacks' Factor 1 was .02. Thus, it appears that different sample sizes did not affect the magnitude of the congruence coefficients.

Table 3
Correlations Between Psychopathy Checklist Scores and Questionnaire Measures for Whites and Blacks

	Whites		Blacks		
Measure	*r*	*n*	*r*	*n*	*z*
EPQ extraversion	−.01	166	.22*	89	−1.76
EPQ psychoticism	.34***	166	.04	89	2.36*
EPQ neuroticism	.09	166	−.02	89	0.83
EPQ lie	−.20**	166	−.15	89	−0.39
KSP Impulsiveness	.24*	107	−.13	66	2.36*
KSP Monotony Avoidance	.32**	107	.03	66	1.89
KSP Detachment	.17	107	−.08	66	1.58
KSP Psychic Anxiety	−.04	107	−.03	64	−0.06
KSP Somatic Anxiety	.07	107	−.05	64	0.74
KSP Muscular Tension	.13	107	−.18	64	1.94
Welsh Anxiety Scale	.06	107	−.02	66	0.13
CPI socialization	−.43***	107	−.27*	65	−1.14
Shipley IQ	.04	69	−.03	37	0.05

Note. EPQ = Eysenck Personality Questionnaire; KSP = Karolinska Scales of Personality; CPI = California Psychological Inventory. *Z* tests the difference between correlations for Whites and Blacks.
* $p < .05$. ** $p < .01$. *** $p < .001$.

correlations between psychopathy and IQ as measured by the SILS. There were no significant differences between Blacks and Whites for any of these correlations. Correlations between PCL scores and the remaining scales from the EPQ and Schalling (1978) measures are also presented in Table 3.

Discussion

The present study indicates that the PCL may be used reliably with Black male inmates. However, it also points to apparent differences between PCL ratings of White and Black subjects: in the distribution of PCL scores, in the factor structure underlying psychopathy ratings, and in the strength of the association between psychopathy and impulsivity. These differences will be considered later in the general discussion.

Some other findings of this study merit brief discussion. For example, the replication of the association between psychopathy and socialization (for both Whites and Blacks) provides additional support for theoretical links between these two constructs (Gough, 1960). The significant correlation between the Psychoticism scale of the EPQ and PCL scores for Whites (but not for Blacks) also merits further study. Whereas Hare (1982) reported a small but significant correlation between Psychoticism and PCL scores, Raine (1986) found no significant association. Further research is needed to understand the relation between psychopathy and this construct.

On the other hand, the apparent independence of psychopathy and anxiety fails to support theoretical predictions that psychopaths are less anxious than nonpsychopaths (Gray, 1985; Schalling, 1978). This result also has practical significance. Although Hare and Harpur (1986) asserted that so-called secondary psychopaths (individuals whose antisocial behavior is secondary to underlying emotional conflict) do not receive high PCL scores (p. 150), subjects with high PCL scores frequently obtain anxiety scores that would have been considered indicative of secondary psychopathy in past research. Given the empirical differences between high-anxiety and low-anxiety psychopaths (e.g., Schmauk, 1970; Widom, 1976a, 1976b), researchers using the PCL may want to administer anxiety measures in addition to conducting interviews and file reviews to examine the effects of self-reported anxiety.

Finally, current results suggest that psychopathy and intelligence are also orthogonal, and this independence has practical implications as well. Despite the lack of differences between psychopaths and nonpsychopaths on a variety of performance measures (see Sutker, Archer, & Kilpatrick, 1981), behavioral differences between psychopathic and nonpsychopathic offenders are still commonly misinterpreted as reflecting generalized performance deficits. The apparent independence of PCL ratings and IQ scores augurs well for the use of the PCL for selecting subjects for behavioral research.

Study 2

Whereas the previous study focused on the internal structure of the PCL and on self-report measures, Study 2 examined group differences in a laboratory situation. In particular, we presented Black psychopaths and nonpsychopaths with a passive avoidance learning task that had yielded differences between White psychopaths and nonpsychopaths (Newman & Kosson, 1986). The task itself is described in detail elsewhere (Newman & Kosson, 1986). In brief, it required subjects to learn when to respond (via a button press) to visual stimuli presented on a video monitor and when to inhibit responding. One condition (reward + punishment) provided rewards for correct presses and punishments for incorrect presses. The other condition (punishment only) provided punishments for incorrect responses and incorrect response inhibitions.

Newman and Kosson (1986) argued that the reward + punishment condition serves to establish an initial set to respond for reward, which must then be modified in the light of punishments for inappropriate responding. Newman and Kosson predicted and observed an excess of responding to S− stimuli in White psychopaths compared with nonpsychopaths, which was

attributed to perseveration of an initial attentional focus on earning reward. No group differences were observed in the punishment only condition. If Black male inmates, assessed with the PCL, behave as do White inmates, Black psychopaths and nonpsychopaths may be expected to perform differently in the reward + punishment situation. In particular, we expected Black psychopaths to display the same kind of condition-specific passive avoidance deficit observed in White psychopaths.

Method

Subjects. Subjects were 59 Black male inmates recruited using the procedures described in Study 1. Forty-five of the Black subjects were assessed using the original PCL, and 14 subjects were assessed using the revised 20-item PCL. All 22-item PCL scores were converted to revised PCL scores by multiplying them by 20/22 for the sake of consistency. This method of prorating scores is explicitly recommended in the revised PCL manual (Hare, 1985b). Following the cutting scores suggested by Hare (1985b), 30 subjects with scores of 30 or greater constituted our group of psychopaths and 29 subjects with scores at or below 20 constituted our group of nonpsychopaths.

Procedures. All subjects were initially assessed via interview and file review as described in Study 1. The procedures used in this study, including apparatus and experimenters, were identical to those used in the investigation of White subjects reported by Newman and Kosson (1986). In addition, most Black subjects were tested during the same time period as White subjects. For all subjects, participation in behavioral testing usually occurred several weeks following the initial assessment, and the passive avoidance task was always the first behavioral task administered.

Complete procedural details concerning this task can be found in Newman and Kosson (1986). Briefly, subjects were told that numbers would appear on a computer screen and that some of the numbers were good and some were bad. Subjects were encouraged to earn as much money as possible by learning, through trial and error, when to respond (by pressing a button) and when not to respond. In addition, subjects were informed of the reinforcement contingencies in each of two conditions: In the reward + punishment condition, correct presses were rewarded and incorrect presses were punished; the punishment only condition punished incorrect responses and incorrect inhibitions. Reward consisted of winning 10 cents and punishment consisted of losing 10 cents. Each subject was tested in one condition only.

There were four *S*+s ("good numbers") and four *S*–s ("bad numbers"). The eight different stimulus numbers made up a block and were presented in random order within each block. Each subject received 10 presentations of each stimulus, or 80 trials in all. Each presentation of a stimulus number lasted for 3 s or until a response was made; the intertrial interval was 1 s. Two different sets of stimulus numbers were used, and the presentation and pacing of stimuli were controlled by an Apple II+ computer.

Results

Analyses paralleled those employed by Newman and Kosson (1986). Data for the first 8 trials were not analyzed because subjects could not yet have known to which stimuli to respond. Data from the remaining 72 trials were analyzed using a 2 (Group) × 2 (Conditions) × 2 (Type of Error) ANOVA. Although stimulus set was used as a covariate in the analysis reported for White subjects (Newman & Kosson, 1986), stimulus set was not used in the present analysis because it was unrelated to performance. The type of error factor was treated as a repeated measure and consisted of commission errors (false alarms) and omission errors (misses).

This analysis yielded main effects for condition, $F(1, 55) = 7.76$, $p < .01$, and type of error, $F(1, 55) = 24.40$, $p < .0001$. These effects parallel those obtained with Whites and indicate poorer learning in the punishment only condition and a response bias (across groups) toward more inappropriate responses (false alarms) than inappropriate inhibitions (misses). There were no other significant main effects or interactions, although the Group × Type of Error interaction approached significance, $F(1, 55) = 3.20$, $p < .08$. To test the hypothesis that Black psychopaths, like White psychopaths, would perform more poorly than nonpsychopaths in the reward + punishment condition but not in the punishment condition, planned comparisons were conducted (see Newman & Kosson, 1986). Unlike the analysis for passive avoidance errors reported for White subjects, the difference between Black psychopaths and controls in the reward + punishment condition failed to reach statistical significance, $t(55) = 1.76$, $p = .08$. Similar to the results for Whites, there were no differences in passive avoidance errors in the punishment condition or in omission errors in either condition. Cell means for the two dependent measures, false alarms and misses, are presented in Table 4, along with the unadjusted means for White subjects included in the Newman and Kosson (1986) report.

To examine the effect of race on passive avoidance learning, we conducted an additional analysis in which we combined the data for Whites (previously published in Newman & Kosson, 1986) and Blacks and repeated the ANOVA using race as an additional factor. There were no significant main effects or interactions involving race.[7] Given the absence of significant race effects, we recomputed the planned comparisons testing the difference between psychopaths and controls in the reward + punishment condition collapsing across race. The contrast for false alarms was statistically significant, $t = 2.56$, $p < .02$, while the contrast for misses was nonsignificant, $t = -1.03$. Neither comparison for the punishment only condition was significant.

Discussion

The trend toward a passive avoidance deficit only in condition reward + punishment and the absence of Group × Race interactions suggests that Black inmates receiving psychopathy diagnoses have difficulty learning to inhibit punished responses when those same behaviors are associated with reward. To a limited degree, they corroborate an important learning deficit that has frequently been reported for White psychopaths and suggest a possible link between passive avoidance learning and psychopathy in Black male inmates.

Study 3

In Study 3, we investigated the extent of criminal behavior in White and Black male inmates subgrouped by psychopathy diagnosis. Researchers have suggested that psychopaths commit both a larger number and a wider variety of crimes than

[7] Details of the analysis combining Whites' and Blacks' data are available upon request. This analysis revealed significant effects for condition ($p < .001$) and Group × Type of Error interaction ($p < .05$); the Group × Condition × Type of Error interaction approached significance ($p < .07$).

Table 4
Passive Avoidance Learning in Whites and Blacks by Group and Condition

	Whites				Blacks			
	Controls		Psychopaths		Controls		Psychopaths	
Condition	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Reward + punishment								
False alarms	9.07	8.16	13.80	6.43	11.87	6.88	16.13	8.14
Misses	8.27	6.62	6.73	4.86	8.00	6.12	5.93	5.36
Punishment only								
False alarms	15.60	7.38	14.33	7.99	15.29	6.37	17.13	7.12
Misses	9.67	6.65	9.60	6.97	12.00	6.26	12.07	6.49

Note. Means for Whites are derived from Newman and Kosson (1986) but are not covariate adjusted for stimulus set. With the exception of Black controls in the punishment only condition ($n = 14$), sample sizes for all cells were $n = 15$.

other criminals (e.g., Wilson & Herrnstein, 1985). Hare and McPherson (1984) reported several studies showing that psychopaths are charged with and convicted of a greater number of crimes than nonpsychopaths. In particular, psychopaths were charged with significantly more thefts, robberies, assaults, possessions of a weapon, and escapes per year free (i.e., out of prison) than were nonpsychopaths. Psychopaths were also charged with more violent crimes and more crimes overall. In addition, Hare and McPherson argued that psychopaths appeared especially prone not only to engage in antisocial behavior but also to display violence in the prison setting.

The present study represents an attempt to replicate the general findings reported by Hare and McPherson by examining the criminal offenses of both White and Black offenders. Our criminal offense data were more limited than those of Hare and McPherson in that information concerning offenders' time spent out of prison was not available. This investigation also differed from that of Hare and McPherson in that we used somewhat different categories of criminal activity and included juvenile as well as adult charges, not just those after an inmate's sixteenth birthday. To address the hypotheses that psychopaths engage in more violent and nonviolent criminal offenses compared with nonpsychopaths, we computed the following indexes: (a) two "quantity" indexes of criminality that reflected the number of violent criminal charges and the number of nonviolent criminal charges; and (b) two "versatility" indexes that reflected the number of different types of violent charges and the number of different types of nonviolent charges. In the following sections, we report between-groups analyses in which the main effects and Group (psychopath vs. nonpsychopath) × Race (White vs. Black) interaction are examined.[8]

Method

Subjects. Subjects were 485 male inmates (369 Whites and 116 Blacks) at the same prison where the preceding studies were conducted. This analysis includes all inmates interviewed following our adoption of Hare's 20-item PCL and revised rating manual (Hare, 1985b). To avoid overlap between our measure of selecting subjects and our dependent measures, scores on Item 20, criminal versatility, were subtracted from each subject's PCL total, and PCL scores were prorated to 20 items based on the other 19 items (see Hare & McPherson, 1984). Those with PCL scores at or below 20 were considered nonpsychopaths; those with ratings at or above 30 were considered psychopaths.

Procedure. All subjects in this study were assessed via an interview and file review as described in Study 1; however, psychopathy ratings were made using the revised PCL (Hare, 1985b). Interviewers were the second author and three advanced graduate students. With the implementation of the 20-item revised PCL (Hare, 1985b), the number of charges in several offense categories was tabulated during review of the inmates' social service files. For purposes of the present study, we coded putative robberies, assaults, murders, sexual assaults, and kidnapping as violent offenses. Putative drug offenses, burglaries/thefts, weapons charges, negligence, frauds, escapes, arsons, obstructions of justice, treason, and miscellaneous minor offenses were coded as nonviolent offenses. Thus, we tabulated the total number of charges for violent and nonviolent crimes. Similar criminal versatility indexes for the number of different types of violent and nonviolent charges were also computed.

Results

To examine the number of charges within the composite categories of violent and nonviolent offenses, a 2 (Group) × 2 (Race) multivariate ANOVA (MANOVA) was conducted based on these derived categories. This MANOVA revealed significant main effects for group, $F(2, 295) = 18.01$, $p < .001$, and race, $F(2, 295) = 4.58$, $p < .025$. The Group × Race interaction proved nonsignificant, $F(2, 295) = 1.78$. Univariate F tests revealed that psychopaths were charged with more violent offenses, $F(1, 296) = 13.07$, $p < .001$, and more nonviolent offenses, $F(1, 296) = 24.07$, $p < .001$, than nonpsychopaths, and that Black inmates were charged with more violent offenses than White inmates, $F(1, 296) = 9.18$, $p < .005$. Group means are presented in Table 5.

Next, we examined the number of different offense categories in which subjects were charged with committing crimes (our versatility measure) broken down by violent and nonviolent categories of offenses. A 2 (Group) × 2 (Race) MANOVA

[8] Because of space limitations, only between-groups analyses for the composite indexes are reported. Between-groups analyses for individual offense categories as well as correlational analyses are available upon request.

Table 5
Means for Criminal Activity Indexes in Study 3 by Group and Race

	Whites				Blacks			
	Controls (n = 120)		Psychopaths (n = 110)		Controls (n = 25)		Psychopaths (n = 45)	
Index	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Number of offenses								
Violent	1.23	1.77	1.96	2.18	1.80	1.71	3.09	2.14
Nonviolent	4.08	4.07	9.06	6.68	5.40	4.95	8.00	6.08
Types of offenses								
Violent	0.78	0.81	1.26	1.04	1.32	1.15	1.84	1.24
Nonviolent	1.63	1.12	2.80	1.03	1.92	1.19	2.47	1.36

revealed main effects for both group, $F(2, 296) = 20.26$, $p < .001$, and race, $F(2, 296) = 7.88$, $p < .001$, and no evidence for a Group × Race interaction, $F(2, 296) = 1.90$, ns. Univariate ANOVAs revealed that Blacks were charged with more different types of violent crimes than Whites and that psychopaths were charged with a greater number of different violent and nonviolent crimes than nonpsychopaths. Group means are presented in Table 5.

Finally, to ensure that the aforementioned differences were not a function of psychopaths' being older than nonpsychopaths, we examined the ages of our Black and White subjects. The 2 (Group) × 2 (Race) ANOVA yielded no significant main effects or interactions. The average ages of Black and White psychopaths who participated in this study were 27.4 and 26.5 years, respectively, compared with 26.5 and 27.6 years for Black and White nonpsychopaths, respectively. In view of the fact that Hare and Jutai (1983) reported that their psychopathic subjects spent significantly fewer months out of prison than nonpsychopaths, it is unlikely that the more prolific criminal activity of psychopaths in this study reflects differences in age or amount of time out of prison.

Discussion

For both composite indexes of criminal offenses (quantity and versatility), between-groups analyses revealed that psychopaths were charged with more offenses of both types, violent and nonviolent, compared with nonpsychopaths. In addition, Black subjects were charged with more violent offenses than Whites subjects. The results of this study generally support the findings of Hare and McPherson (1984) despite the fact that there were substantial differences between the studies themselves.

The finding that Black offenders were charged with more violent offenses than White offenders merits discussion. More detailed analyses of race differences for the various types of violent crime that were included in the composite indexes revealed that Black offenders were charged with more robberies than White offenders, $F(1, 295) = 45.56$, $p < .001$. Whereas 15% of the White nonpsychopaths and 18% of White psychopaths were charged with robberies, 40% of the Black nonpsychopaths and 67% of the Black psychopaths were charged with robberies. Thus, the greater number of violent charges for Black subjects appears related to the fact that Black offenders in our sample were charged with proportionately more robberies. Given that others have reported that Blacks commit more robberies than Whites (e.g., Hacker, 1988), this appears to be a finding worthy of further investigation.

General Discussion

It is not possible after three studies to resolve the question of the similarities and differences between the psychopathy construct in White and Black male inmates. Taken together, these studies indicate that psychopathy, as measured by the PCL, does exist in Black male inmates. Indeed, the overall pattern of results contains more parallels than disparities. Ratings of Black subjects, like those of White subjects, proved reliable across raters. Indexes of internal consistency (alpha coefficients and item-to-total correlations) pointed to generally acceptable internal consistency in ratings of Black inmates. Moreover, the pattern of significant correlations between psychopathy and socialization, but not with anxiety or intelligence, replicates that found for White inmates. Also the results for Study 2 suggest that Black psychopaths may manifest passive avoidance deficits similar to White psychopaths. Finally, Black subjects identified as psychopaths by the PCL, like White psychopaths, received an excess number of criminal charges for both violent and nonviolent offense categories, and were charged with a larger number of different types of offenses than were nonpsychopaths.

On the other hand, Study 1 also revealed important differences in the expression of psychopathy among White and Black inmates. First, there were apparent differences in the distribution of psychopathy in Whites and Blacks. Second, psychopathy ratings for Black subjects failed to correlate with two self-report measures of impulsivity ($r = -.13$ for Impulsiveness and $r = .03$ for Monotony Avoidance). Finally, there was little evidence that the PCL items identified by Harpur et al. (1988) as loading on Factor 1 and corresponding to the personality core said to underlie psychopathy clustered in the same way in Black offenders as in White offenders. Furthermore, the items identified by Harpur et al. (1988) as loading on Factor 2 (antisocial life-style) were not associated solely with Factor 2 in Black subjects.

The differences in distribution of psychopathic and nonpsychopathic subjects reported in Study 1 may reflect either bias in the PCL (or in the way it was used) or real differences in the

distribution of psychopathy among White and Black inmates (see Kosson, Nichols, & Newman, 1985). Given that our PCL ratings were made by Whites only, it is especially difficult to evaluate these alternatives. For example, Blacks' higher PCL scores may simply reflect the reduced familiarity of White raters with Black culture. Consequently, researchers may wish to use different cutoffs for non-White populations rather than interpret differences in the distribution of PCL scores as differences in the incidence of psychopathy in various racial groups. Indeed, the cutoffs recommended by Hare have not been empirically validated. Only development of alternative measures of psychopathy will permit convergent validation of estimates of the prevalence of psychopathy in different groups.

Nevertheless, differences in the distribution of PCL ratings appear sufficiently large to place different proportions of Blacks and Whites in the subject groups of researchers who fail to include race as a factor in their designs. That is, unless researchers who use both Black and White subjects address race explicitly, their studies are likely to be confounded by any main effects associated with race.

The observed differences in the relation of psychopathy ratings to measures of impulsivity must also be interpreted cautiously. Clearly, these differences argue against the assumption that psychopathy manifests itself in exactly the same way in White and Black male inmates. However, there are two limitations inherent in these data. First, only self-report measures of impulsivity were administered. Whether weaker correlations among Blacks would also be observed with other measures is uncertain. Second, all the raters in these studies were White. Indeed, our use of White raters limits the generalizability of all findings reported to situations in which White researchers rate psychopathy in White and Black inmate populations.

The lack of congruence between ratings of Blacks and Whites for Factor 1 of the PCL ("selfish, callous, and remorseless use of others") raises questions about the appropriateness of using the PCL with Blacks. Although Harpur et al. (1988) reported that both factors in their two-factor model of PCL scores are necessary for the diagnosis of psychopathy, they emphasized that one factor (Factor 1) "describes a constellation of personality traits that many clinicians consider to be at the core of psychopathy" (p. 745, Harpur et al., 1988). Given that Factor 1 congruence coefficients between our sample of White subjects and five mostly White samples (as reported by Harpur et al., 1988) were relatively high, the lower congruence between our Whites and Blacks subjects for Factor 1 likely resulted from ratings of the Black subjects. In addition, the unexpected degree of congruence between Whites' Factor 1 and Blacks' Factor 2 ($r_c = .59$) suggests that the items tapping antisocial life-style in the Blacks loaded on both PCL factors as delineated in White subjects, thus providing further evidence that the two-factor structure of the PCL is less well differentiated in Blacks.

As noted earlier, the only component of the psychopathic personality examined systematically was impulsivity. The weaker relation between psychopathy and self-report measures of impulsivity among Black subjects might therefore be construed as a possible determinant of the low congruence for Factor 1. However, Harpur et al. indicated that PCL items tapping impulsivity and boredom proneness cluster with their Factor 2 ("chronically unstable and antisocial life-style"). Thus, the possibility of differences in the relation of self-reported impulsivity to psychopathy does not neatly explain the poorer congruence of Factor 1 in Black subjects.

With regard to the low congruence for Factor 1 obtained in Study 1, it is worth bearing in mind that PCL items are simply signs of the putative components of psychopathy. The signs of personality traits such as insincerity, lack of empathy, and superficial charm (Factor 1) may require more inferences than those reflecting a parasitic life-style, boredom proneness, and lack of long-term plans (Factor 2). Along these lines, the lower congruence for Factor 1 in Blacks may reflect that the White interviewers were less able to make these inferences regarding Black subjects, that the same personality traits have different manifestations or signs in Black than in White subjects, or both.

One additional possibility must be considered. Personality factors might have played a smaller role in the PCL scores assigned to Black subjects compared with White subjects because of the relatively greater importance of social factors contributing to PCL scores in Blacks. To the extent that the same social factors contributing to the overrepresentation of Blacks in prisons (Farrington, 1987) influence PCL scores, such scores will tend to reflect those social factors as opposed to individual differences related to psychopathy. The finding that Factor 2 (antisocial life-style factor) in the Blacks was associated both with Whites' Factor 2 ($r_c = .93$) and Whites' Factor 1 ($r_c = .59$) also suggests that personality factors may play a less important role than life-style/social factors in the use of the PCL with Blacks.

Additional research with independent samples in which potential rater bias is reduced (e.g., using Black interviewers) is necessary to further evaluate the robustness of the factor structure reported by Harpur et al. (1988), and its generalizability to non-White groups. Nevertheless, our findings raise the possibility that the personality dynamics of White and Black psychopaths may be somewhat different. If so, then the reasons for the antisocial behavior of White and Black psychopaths may also be different.

The premise of these studies—that we cannot presume that our constructs generalize across race—appears supported by the data. Pending further research on the validity of the psychopathy construct in non-Whites, we strongly advise researchers to include race as a factor in all analyses to allow for the possibility of identifying differences between White and non-White subjects and to begin to develop a research literature that will provide more definitive answers regarding the validity of the psychopathy construct in non-White populations.

References

Blackburn, R. (1971). MMPI dimensions of sociability and impulse control. *Journal of Consulting and Clinical Psychology, 37,* 166.

Blackburn, R. (1975). An empirical classification of psychopathic personality. *British Journal of Psychiatry, 127,* 456–460.

Blanchard, E. B., Basset, J. E., & Koshland, E. (1977). Psychopathy and delay of gratification. *Criminal Justice and Behavior, 4,* 265–271.

Brown, E. J., Flanagan, T. J., & McLeod, M. (1984). *Sourcebook of criminal justice statistics—1983.* Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics.

Cattell, R. B. (1978). *The scientific use of factor analysis in behavioral and life sciences.* New York: Plenum.

Cleckley, H. (1976). *The mask of sanity* (5th ed). St. Louis, MO: Mosby.

Dugger, R. (1988). The numbers on death row prove that blacks who kill whites receive the harshest judgment. *Life, 11,* 89–92.

Eysenck, H. J., & Eysenck, S. B. G. (1975). *Manual for the Eysenck Personality Questionnaire.* San Diego, CA: Educational & Industrial Testing Service.

Fagan, T. J., & Lira, F. T. (1980). The primary and secondary sociopathic personality: Differences in frequency and severity of antisocial behaviors. *Journal of Abnormal Psychology, 89,* 493–496.

Farrington, D. P. (1987). Implications of biological findings for criminological research. In S. A. Mednick, T. E. Moffitt, & S. A. Stack (Eds.), *The causes of crime: New biological approaches* (pp. 42–64). Cambridge, England: Cambridge University Press.

Goodwin, D. W., & Guze, S. B. (1984). *Psychiatric diagnosis* (3rd ed.). New York: Oxford University Press.

Gough, H. G. (1960). Theory and measurement of socialization. *Journal of Consulting Psychology, 24,* 23–30.

Gray, J. A. (1985). Issues in the neuropsychology of anxiety. In A. H. Tuma & J. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 5–26). Hillsdale, NJ: Erlbaum.

Hacker, A. (1988). Black crime, white racism. *The New York review of books, 35,* 36–41.

Hare, R. D. (1970). *Psychopathy: Theory and research.* New York: Wiley.

Hare, R. D. (1980). A research scale for the assessment of psychopathy in criminal populations. *Personality and Individual Differences, 1,* 111–119.

Hare, R. D. (1982). Psychopathy and the personality dimensions of psychoticism, extraversion and neuroticism. *Personality and Individual Differences, 3,* 35–42.

Hare, R. D. (1985a). Comparison of procedures for the assessment of psychopathy. *Journal of Consulting and Clinical Psychology, 53,* 7–16.

Hare, R. D. (1985b). *The Psychopathy Checklist.* Unpublished manuscript, University of British Columbia.

Hare, R. D., & Cox, D. N. (1978). Clinical and empirical conceptions of psychopathy, and the selection of subjects for research. In R. D. Hare & D. Schalling (Eds.), *Psychopathic behaviour: Approaches to research* (pp. 1–21). Chichester, England: Wiley.

Hare, R. D., & Frazelle, J. (1980). *Some preliminary notes on the use of a research scale for the assessment of psychopathy in criminal populations.* Unpublished manuscript, University of British Columbia.

Hare, R. D., & Harpur, T. J. (1986). Weak data, strong conclusions: Some comments on Howard, Bailey and Newman's use of the psychopathy checklist. *Personality and Individual Differences, 7,* 147–151.

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 of crime and delinquency* (pp. 225–236). Boston: Kluwer-Nijhoff.

Hare, R. D., & McPherson, L. M. (1984). Violent and aggressive behavior by criminal psychopaths. *International Journal of Law and Psychiatry, 7,* 35–50.

Harpur, T. J., Hakstian, R., & Hare, R. D. (1988). The factor structure of the psychopathy checklist. *Journal of Consulting and Clinical Psychology, 56,* 741–747.

Kosson, D. S., & Newman, J. P. (1986). Psychopathy and the allocation of attentional capacity in a divided-attention situation. *Journal of Abnormal Psychology, 95,* 257–263.

Kosson, D. S., Nichols, S. L., & Newman, J. P. (1985). *Assessment of psychopathy in a United States prison using Hare's Psychopathy Checklist.* Unpublished manuscript.

Newman, J. P., & Kosson, D. S. (1986). Passive avoidance learning in psychopathic and nonpsychopathic offenders. *Journal of Abnormal Psychology, 95,* 252–256.

Newman, J. P., Patterson, C. M., & Kosson, D. S. (1987). Response perseveration in psychopaths. *Journal of Abnormal Psychology, 96,* 145–148.

Painting, D. H. (1961). The performance of psychopathic individuals under conditions of positive and negative reinforcement. *Journal of Abnormal and Social Psychology, 62,* 352–355.

Raine, A. (1986). Psychopathy, schizoid personality and borderline/schizotypal personality disorders. *Personality and Individual Differences, 7,* 493–502.

Schalling, D. (1978). Psychopathy-related personality variables and the psychophysiology of socialization. In R. D. Hare & D. Schalling (Eds.), *Psychopathic behaviour: Approaches to research* (pp. 85–105). New York: Wiley.

Schmauk, F. J. (1970). Punishment, arousal, and avoidance learning in sociopaths. *Journal of Abnormal Psychology, 76,* 325–335.

Schneewind, K. A., & Cattell, R. B. (1970). A contribution to the problem of factor identification: Distribution and confidence intervals of congruence coefficients as far as objective-analytic tests are concerned. *Psychologische Beitrage, 12,* 214–226.

Schroeder, M. L., Schroeder, K. G., & Hare, R. D. (1983). Generalizability of a checklist for assessment of psychopathy. *Journal of Consulting and Clinical Psychology, 51,* 511–516.

Shipley, W. C. (1940). A self-administering scale for measuring intellectual impairment and deterioration. *Journal of Psychology, 9,* 371–377.

Sutker, P. B., Archer, R. P., & Kilpatrick, D. G. (1981). Sociopathy and antisocial behavior: Theory and treatment. In S. M. Turner, K. S. Calhoun, & H. E. Adams (Eds.), *Handbook of clinical behavior therapy* (pp. 665–712). New York: Wiley.

Walters, G. D. (1985). Scale 4 (Pd) of the MMPI and the diagnosis antisocial personality. *Journal of Personality Assessment, 49,* 474–476.

Welsh, G. S. (1956). Factor dimensions A and R. In G. S. Welsh & W. G. Dahlstrom (Eds.), *Basic readings on the MMPI in psychology and medicine* (pp. 264–281). Minneapolis: University of Minnesota Press.

Widom, C. S. (1976a). Interpersonal conflict and cooperation in psychopaths. *Journal of Abnormal Psychology, 85,* 330–334.

Widom, C. S. (1976b). Interpersonal and personal construct systems in psychopaths. *Journal of Consulting and Clinical Psychology, 44,* 614–623.

Wilson, J. Q., & Herrnstein, R. J. (1985). *Crime and human nature: The definitive study of the causes of crime.* New York: Simon & Schuster.

Zachary, R. A. (1986). *Shipley Institute of Living Scale: Revised manual.* Los Angeles, CA: Western Psychological Services.

Received March 2, 1989
Revision received February 18, 1990
Accepted February 26, 1990 ■