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CONSTRUCT VALIDITY OF THE YOUTH PSYCHOPATHIC TRAITS INVENTORY (YPI) AND THE ANTISOCIAL PROCESS SCREENING DEVICE (APSD) WITH JUSTICE-INVOLVED ADOLESCENTS

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Two measures of psychopathic features in youths, the self-report version of the Antisocial Process Screening Device (APSD) and the Youth Psychopathic traits Inventory (YPI) were administered to 165 youths in a juvenile diversion program. For both measures, internal consistency was poor for the scales that assess the affective domain of psychopathic features; otherwise, internal consistency was excellent for the YPI and generally superior to that of the APSD. However, the published three-factor models for both measures did not replicate when examined using confirmatory factor analysis. Both measures obtained the expected correlations with measures of a variety of criminal justice (e.g., age of delinquency onset, past year delinquent behavior) and psychological constructs (e.g., internalizing and externalizing behavior), providing evidence of construct validity for both measures. The YPI appears to be the better measure for exploring the construct of psychopathy in adolescents. Recommendations are made concerning revisions to the APSD.

Keywords: psychopathy; delinquency; adolescent substance abuse

In the past quarter century, psychopathy has become an important construct in the adult personality and forensic psychology literature. Contemporary conceptualizations of psychopathy date to

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Cleckley's (1941) *The Mask of Sanity*, which delineated affective (e.g., callous, unemotional), interpersonal (e.g., glib, manipulative), and deviant behavioral features (e.g., irresponsibility, proneness to boredom) that characterize psychopathic individuals. Cleckley's characterization has become the conceptual cornerstone of most efforts to devise instruments to assess psychopathic features in offender (e.g., Hare, 1991, 2003) and noninstitutional populations (Levenson, Kiehl, & Fitzpatrick, 1995; Lilienfeld & Andrews, 1996). Studies with adults have revealed important differences among individuals who differ in terms of psychopathic features (see, generally, Cooke, Forth, & Hare, 1998; Millon, Simonsen, Birket-Smith, & Davis, 1998; Stoff, Breiling, & Maser, 1997). Of particular interest to policy makers is the growing body of evidence that psychopathy is associated with increased risk for recidivism (Hemphill, Hare, & Wong, 1998; Salekin, Rogers, & Sewell, 1996) and with poor treatment outcomes (e.g., Hare, Clark, Grann, & Thornton, 2000; Hill, Rogers, & Bickford, 1996; Ogloff, Wong, & Greenwood, 1990; but see Salekin, 2002) in offender samples.

Recent investigators have extended this construct downward in an effort to identify psychopathic features in children and adolescents. Longitudinal studies reveal that many adolescents participate in some level of delinquent behavior. The majority of youths participate in offending of the relatively minor variety and their delinquent behavior is of limited duration. For these adolescent limited offenders, delinquent behavior desists and the youths move on to satisfactory adjustment in adulthood. However, a minority of youths exhibit extensive criminal behavior throughout adolescence and go on to extensive criminal careers as adults (Moffitt, 1993). It is this subgroup of life-course persistent delinquent youths that poses the greatest long-term risks to society. The construct of psychopathy offers one potential

probe for differentiating adolescents limited from life-course persistent adolescent offenders.

Certain findings in the adult literature suggest that such efforts may prove fruitful. Adults with higher psychopathy scores begin offending at an earlier age (Hart & Hare, 1997), and age of onset is a strong predictor of delinquency among adolescents (Tolan, 1987). Further, as a parallel to the literature indicating that life-course persistent delinquents account for a disproportionate amount of criminal behavior (Moffitt, 1993), the adult literature reveals that a small cadre of offenders with higher psychopathy scores accounts for a disproportionate amount of criminal and violent offending (Hart & Hare, 1997). These findings suggest that psychopathic features may be potential markers for youths at relatively higher risk for serious and prolonged antisocial behavior. The early identification of such risk markers may inform efforts to develop preventive interventions that may be used with selected youths before their antisocial behavior patterns become extensively developed and crystallized.

There are also potential risks involved in extending the psychopathy construct to adolescents. Noting that some putative features of psychopathy (e.g., lack of empathy, impulsivity, irresponsibility) may appear as transient features during the course of maturation, developmental psychologists have warned against the premature labeling of adolescents as fledgling psychopaths (e.g., Seagrave & Grisso, 2002; Steinberg, 2001). Longitudinal research to establish the stability of supposedly psychopathic features in youths is needed to prevent inappropriate application of this pejorative label.

Further, the validity of youth psychopathy measures for predicting treatment responsiveness and recidivism cannot be assumed from the findings with adult offenders, and only a few published studies to date have demonstrated positive associations between psychopathic features in youths and recidivism or treatment compliance/outcomes (e.g., Falkenbach, Poythress, & Heide, 2003; O'Neill, Lidz, & Heilbrun, 2003; Rogers, Johansen, Chang, & Salekin, 1997). Yet, research suggests that decision makers may develop negative attitudes toward adolescents labeled psychopathic and come to view such individuals as less appropriate for treatment and deserving of more severe punishments (Edens, Guy, & Fernandez, 2003). That these issues are at the heart of important decisions concerning the legal dispositions of youths

charged with serious crimes (e.g., waiver to criminal court, sentencing) makes it imperative that the reliability and validity of measures of psychopathic features in youths be well established before these instruments are applied in forensic practice.

This study provides new data on the reliability and construct validity of two measures of psychopathic features in justice-involved adolescents: the self-report version (Caputo, Frick, & Brodsky, 1999) of the Antisocial Process Screening Device (APSD; Frick & Hare, 2001) and the Youth Psychopathic traits Inventory (YPI; Andershed, Kerr, Stattin, & Levander, 2002).

The APSD is a 20-item measure whose items map onto many of the dimensions of psychopathy in Hare's (1991) Psychopathy Checklist–Revised (PCL-R). For example, "He/she is concerned about the feelings of others" (reverse scored) relates to the PCL-R item that assesses callousness/lack of empathy; "He/she lies skillfully and easily" maps onto the pathological lying item; "He/she engages in illegal activities" maps onto the juvenile delinquency dimension. Because it was designed for youths aged 6 to 13, the APSD ratings are obtained from responsible adults (e.g., parent, teacher) who know the youths well. Item ratings on the APSD are either 0 (*not at all true*), 1 (*sometimes true*), or 2 (*definitely true*).

Ample research supports the construct validity of the APSD as a research measure (Frick, in press; Frick & Hare, 2001). For example, youths with higher APSD scores show reduced physiological reactivity to visual threat cues (Blair, 1999), deficits in moral reasoning (Blair, Monson, & Frederickson, 2001), predicted lack of response facilitation for recognition of negative words (Loney, Frick, Clements, Ellis, & Kerlin, 2003), and reward dominance in a passive-avoidance learning task (O'Brien & Frick, 1996).

For use with older youths (i.e., ages 12 to 18), a self-report version of the APSD (Caputo et al., 1999) has been devised by creating second-person stems for each item (e.g., "You lie skillfully and easily"). Frick, Barry, and Bodin (2000) noted, "Self-report becomes more reliable and valid as a child enters adolescence, especially for assessing antisocial tendencies and attitudes that may not be observable to parents and other significant adults" (p. 13). Further, in forensic contexts, parents or teachers may often not be interested in, or available for providing ratings on, arrested youths. Thus, although not designed specifi-

cally for use with justice-involved youths, it is important to evaluate the self-report APSD with this population.

Recently, Andershed et al. (2002) developed the YPI, a 50-item self-report measure for evaluating features of psychopathy in nonreferred (community) youths age 12 and older. These authors noted limitations in the APSD, including that the instrument was not developed for self-report and that "the items are straightforward measures of traits that are obviously negative, and this will likely increase response biases" (p. 133). They further noted that the APSD provided only one item per PCL-R trait, which would make it difficult to use the measure for research at the trait level.[1]

In constructing the YPI, Andershed et al. (2002) wrote multiple items representing each of the major core personality domains of psychopathy that are represented in Cooke and Michie's (2001) three-factor model of the PCL-R. Within the interpersonal domain, multiple items were written for Dishonest Charm (e.g., "I have the ability to con people by using my charm and smile"), Grandiosity (e.g., "I am better than everyone on almost everything"), Lying (e.g., "Sometimes I lie for no reason, other than because it's fun"), and Manipulation (e.g., "I can get almost anyone to believe anything"). Within the affective domain, multiple items were written for Callousness (e.g., "I often become sad or moved by watching sad things on TV or film," reverse scored), Unemotionality (e.g., "I usually feel calm when other people are scared"), and Remorselessness (e.g., "To feel guilty and remorseful about things you have done that have hurt other people is a sign of weakness"). For the impulsive/irresponsibility domain, multiple items were written for Impulsivity (e.g., "I prefer to spend my money right away than to save it"), Thrill-Seeking (e.g., "I get bored quickly by doing the same thing over"), and Irresponsibility (e.g., "I have cut class more often than most other people").

As a precaution against psychopathic individuals' lack of insight and propensity to lie, the investigators aspired to reduce face validity by writing items "that tapped the various traits indirectly, . . . that people with psychopathic traits would see as positive or admirable, but that other people would not, . . . [and that] framed the psychopathic features as abilities" (Andershed et al., 2002, p. 134). Each item is rated on a 4-point scale, with ratings indicating that the item *does not apply at all*, *does not apply well*, *applies fairly well*, or *applies very well*.

The YPI was developed for use with nonreferred (i.e., community) samples, and the authors note that "it remains an empirical question whether the YPI will work with institutionalised youth offenders" (Andershed et al., 2002, p. 153). Thus, this study represents an extension of the YPI with justice-involved youths.

This study examined the psychometric properties of the APSD and YPI. The associations between the APSD and YPI with measures of other constructs having practical or theoretical relevance to psychopathy—prior offending, illegal substance use and other externalizing problems, and internalizing problems—were also examined. Hypotheses concerning the relationship of psychopathy to these constructs were derived from the personality features ascribed to psychopathic individuals as well as from previous empirical studies of psychopathy with adult and youth samples.

It was hypothesized that scores on the APSD and YPI would be positively and significantly associated with prior delinquent behavior. Studies with adults have indicated that offenders with more psychopathic features have more extensive criminal histories than their less psychopathic counterparts (Hart & Hare, 1997). Similar findings have been reported in some studies with adolescent samples (Andershed et al., 2002; Kosson, Cyterski, Steuerwald, Neumann, & Walker-Mathews, 2002), although Skeem and Cauffman (2003) found no association between scores on youth psychopathy measures and indices of past antisocial behavior coded from youths' records. As noted above, earlier onset of offending is associated with higher psychopathy scores in adult offenders. Therefore, it was expected that APSD and YPI scores would correlate negatively with age of onset for delinquent behavior.

It was also hypothesized that APSD and YPI scores would correlate positively with indices of externalizing behaviors. Items on Hare's PCL-R include "need for stimulation," "poor behavior controls," and "promiscuous sexual behavior." Numerous studies with adults (for a review, see Benning, Patrick, Hicks, Blonigen, & Krueger, in press) have demonstrated positive associations between psychopathy and a variety of externalizing behaviors, particularly for the impulsive and deviant lifestyle aspects of psychopathy. Andershed et al. (2002) reported positive correlations between the YPI and various self-report indices of externalizing behavior (e.g., illicit drug use, poor behavior

control) in their adolescent sample. Thus, it was hypothesized that total scores on the APSD and YPI, and specifically their scales that assess impulsive and irresponsible behavior, would correlate positively with measures of externalizing behavior.

Some psychopathic individuals may also be at risk to experience internalizing problems. In adults, somatization problems (Lilienfeld & Hess, 2001; Wilson, Frick, & Clements, 1999) and suicidal behavior (Verona, Patrick, & Joiner, 2001) have been uniquely associated with the deviant lifestyle facet of psychopathy. Benning et al. (in press) reported positive correlations between the Impulsive/Deviant Lifestyle factor of the Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) and measures of stress reaction and negative emotionality on a general psychological inventory. However, negative correlations between these internalizing measures and the PPI factor associated with affective and interpersonal features were reported. Internalizing problems are also common in youths with conduct disorder (Lambert, Wahler, Andrade, & Bickman, 2001), a diagnosis commonly associated with psychopathic features in youths. Therefore, it was predicted that APSD and YPI total scores would be positively associated with an index of internalizing problems and that these associations would be accounted for primarily by the APSD Impulsivity and the YPI Impulsive-Irresponsible scales.

METHOD

PARTICIPANTS

Study participants were adolescents referred to the Juvenile Arbitration (JA) program in Tampa, Florida (Hillsborough County). Between June 3, 2002, and June 19, 2003, 359 families were approached at the time of their initial appointment at JA and invited to participate in the study; 165 families (46%) enrolled in the study. The youths' age ranged from 11 to 18, with a mean age of 14.36 years ($SD = 1.71$); all but seven participants were between the ages of 14 and 17. The majority of participants identified themselves as European American (61%) or African American (33%), and 52% were male. The demographic features of this sample are highly similar to those of the population of

youths referred to JA (60% male, 65% European American, 34% African American). Statistical analyses revealed no differences in demographic features between the youths enrolled in the study and those youths whose families declined to participate.

PROGRAM

JA provides an alternative to adjudication for youths who have been arrested, usually for the first time, for a relatively minor offense (e.g., shoplifting). Youths who opt to enter the program are assigned an arbitrator who designates a set of mandatory sanctions. These sanctions fall under several categories including restitution (e.g., community service, financial restitution to the victim), psychoeducational (e.g., group interventions tailored to the type of offense for which the youth was arrested), and drug treatment (including group activities and mandatory urine screens). Youths are monitored by the arbitration counselors for satisfactory progress toward completion of all assignments.

MEASURES

The measures described here were part of a baseline protocol that was administered to youths whose families participated in a clinical trial of a family-based intervention. Only the measures relevant to the evaluation of the APSD and YPI are described here.

Antisocial Process Screening Device. As described above, the APSD includes 20 brief items. The youth circles a number indicating whether the item is *not at all true* (0), *sometimes true* (1), or *definitely true* (2). The sum of these items yields a total score for the APSD and factor scores for factors labeled Narcissism (NAR; 7 items), Callous/ Unemotional (CU; 6 items), and Impulsivity (IMP; 5 items) that represent the interpersonal, affective, and social deviance features of psychopathy, respectively (Frick, Bodin, & Barry, 2000).

In studies with justice-involved youths (Cruise, Rogers, Neumann, & Sewell, 2000; Falkenbach et al., 2003; Lee, Vincent, Hart, & Corrado, 2003; Murrie & Cornell, 2002; Pardini, Lochman, & Frick, 2003), internal consistency for the APSD total score has usually been

satisfactory, with alphas ranging from .72 to .82 (*Mdn* = .76), except for the study by Rogers et al. (2002), which obtained an alpha of .58.[2] In these same studies, internal consistency has been modest to weak for the factor scores: range = .56 to .72 for NAR (*Mdn* = .68), range = .36 to .56 for CU (*Mdn* = .52), and range = .44 to .60 for IMP (*Mdn* = .56).

Only one published study has examined the factor structure of the self-report APSD with justice-involved youths. Combining two samples of delinquent youth (*N* = 155), Vitacco, Rogers, and Neumann (2003) reported that the original two-factor model fit their data poorly; however, they reported a "very good fit" (p. 146) for the three-factor model.

Youth Psychopathic traits Inventory. As described above, the YPI is a 50-item measure that assesses psychopathic features on 10 subscales that map onto three domains: interpersonal (Grandiose-Manipulative), affective (Callous-Unemotional), and behavioral (Impulsive-Irresponsible). The response format uses a 4-point Likert-type scale (1 = *does not apply at all*, 2 = *does not apply well*, 3 = *applies fairly well*, 4 = *applies very well*).

In the YPI developmental study using an adolescent community sample (Andershed et al., 2002), Cronbach's alpha was .88 for the YPI total score; alphas of .84, .74, and .78 were obtained for the Grandiose-Manipulative, Callous-Unemotional, and Impulsive-Irresponsible domains, respectively. Acceptable internal consistency was also demonstrated for all 10 of the five-item subscales (α range = .66 to .82). Factor analyses yielded a three-factor model that was the same in both male and female samples. As evidence of construct validity, low to moderate correlations with a variety of self-report conduct problem indices (e.g., various types of criminal activity, use of illegal drugs, history of police contact) were obtained for both male (*n* = 471) and female (*n* = 553) students.

In the only study to date to use the YPI with a delinquent sample, Skeem and Cauffman (2003) reported excellent internal consistency for the YPI total score (α = .92), and its three-factor scores (Grandiose-Manipulative, α = .90; Callous-Unemotional, α = .77; and Impulsive-Irresponsible, α = .83). For the 10 five-item scales, alphas were satisfactory (range = .61 to .85) except for Callousness

(α = .49). Concurrent validity was demonstrated by positive and significant correlations with the Psychopathy Checklist–Youth Version (PCL-YV; Forth, Kosson, & Hare, 2003), and the YPI obtained the expected significant and negative correlation with Reynolds and Richmond's (1985) Revised Children's Manifest Anxiety Scale.

Self-Report Delinquency (SRD). To obtain indices of recent delinquent behavior, an interview version of the SRD (Elliott, Ageton, Huizinga, Knowles, & Canter, 1983) was administered to each youth. For each of 23 delinquent behaviors, the youth reported whether he or she had committed that act in the prior year. Each youth also reported the age at which he or she had first committed any offense that he or she admitted having done in the prior year.

Four dichotomous variables were created and coded whether each youth admitted to each of the following offense types: general theft (e.g., stole a motor vehicle, stole something worth more than $50, bought stolen goods), crimes against persons (e.g., aggravated assault, gang fights, used undue force against peers, parents, or teachers), index crimes (e.g., sexual assault, stole a motor vehicle), and drug sales (e.g., sales of marijuana, cocaine, or other hard drugs). A continuous variable, the total delinquency index, was created to reflect the sum of the reported past year frequency of participation in all 23 SRD offenses.

Substance use. Youths were asked whether they had used any of the following: tobacco, over-the-counter drugs, alcohol, marijuana, cocaine, amphetamines, barbiturates/sedatives, inhalants, hallucinogenics, opiates, and other recreational drugs. An ordinal drug use severity scale was created to categorize each youth in terms of past year drug use. On this scale, 0 = *no drug use*, 1 = *used tobacco and/or alcohol only*, 2 = *used marijuana* (may have used tobacco and/or alcohol), but no hard drug, and 3 = *used any hard drug*.

Internalizing and externalizing problems. The Comprehensive Adolescent Severity Inventory (CASI; Meyers, McDermott, Webb, & Hagan, in press; Meyers et al., 1999) is an interview measure made up of separate modules that focus on distinct areas of adolescent adjustment (e.g., stressful life events, education, drug/alcohol use, peer rela-

tionships, family/household members, mental health). These modules contain 13 subscales that have been shown to retain appreciable internal consistency and to form four reliable and valid construct dimensions.

For this study, two subscales from the CASI mental health module were selected for analysis. The Externalizing Problems subscale is created by summing dichotomous responses to five items that relate to experiencing significant periods of (a) motor restlessness, (b) impulsive (acting without thinking) or risky (doing something dangerous for the thrill of it) behavior, (c) oppositional behavior (intentionally refusing requests, purposefully annoying others or being spiteful), (d) angry, resentful behavior, and (e) loss of control (sudden and excessive outbursts, hostile/violent behavior that was difficult to control). The items on this subscale map onto various constructs (e.g., hyperactivity, oppositional-defiant behavior, sensation seeking) that have been positively associated with psychopathic features in prior research (e.g., Frick, O'Brien, Wootton, & McBurnett, 1994; Lynam, 1996; Rogers et al., 1997).

The CASI Internalizing Problems subscale is created by summing dichotomous responses to seven items that relate to experiencing significant periods of (a) low self-esteem (having thoughts of failure, lacking confidence), (b) withdrawal (feeling self-conscious, easily intimidated), (c) anxiety (feeling worried or having somatic symptoms), (d) preoccupation with food or weight, (e) worrisome recurring thoughts or compulsive behaviors, (f) depression (sadness, hopelessness), and (g) fatigue or loss of interest in things that were once important.

PROCEDURE

Prior to the beginning of enrollment and data collection, research staff received training in procedures for obtaining informed consent and in the administration of the research protocol. This training included didactic presentation, discussion, role-playing, and practice protocol administrations with voluntary adolescents from a program for delinquent youth.

Families were approached by the first or second author when they arrived for their initial appointment at JA. A brief description of the study was provided, and for families who expressed an interest in par-

ticipating, arrangements were made for a home visit at which formal enrollment, using informed consent procedures approved by the University of South Florida Institutional Review Board, was conducted. Informed consent was obtained from a parent, and assent was obtained from the adolescent. After a brief interview was conducted with the parent to obtain information needed for the clinical trial portion of the research, baseline data were collected from the adolescent in a quiet, private place in the family home. The CASI interview was administered first, followed by the APSD and YPI self-report measures. Adolescents who demonstrated that they could read adequately completed the APSD and YPI using paper and pencil (otherwise, these were administered orally by the researcher).

RESULTS

Preliminary analyses using MANOVA indicated no significant main or interaction effects for gender and race (European American versus African American) on the APSD and YPI total scores (Fs < 1, ps > .40). There were also no significant effects for these variables on APSD scale scores, although the mean difference on the CU scale approached significance ($p = .052$). For the YPI, a significant multivariate effect was obtained for race, $F(1, 141) = 2.76$, $p < .004$, but not for gender or the Race × Gender interaction. Univariate tests revealed that African Americans scored significantly higher than European American males on Grandiosity, $F(1, 141) = 9.13$, $p = .003$, and Callousness, $F(1, 141) = 5.57$, $p = .02$. Given the few differences for race, and no differences for gender, all participants were included for most analyses. Findings with regard to the psychometric properties of the measures (including the results of confirmatory factor analyses) are presented first, followed by the correlations with external variables relevant to the construct validity of these measures.

Psychometric properties of the APSD. Internal consistency indices (mean interitem correlation, MIC; mean corrected item-to-total correlation, mean CITC; Cronbach's alpha, Alpha) for the APSD are shown in the upper portion of Table 1. Although the alpha values indicate satisfactory internal consistency for the APSD total score, the

TABLE 1: Internal Consistency of the APSD and YPI

Measure/Scale/Subscale	MIC	Mean CITC	Alpha
APSD total score	.13	.32	.76
Narcissism	.17	.32	.61
Callous–Unemotional	.12	.22	.45
Impulsivity	.22	.33	.57
YPI total score	.20	.43	.92
YPI Grandiose-Manipulative	.33	.55	.91
Dishonest Charm	.45	.59	.80
Grandiosity	.32	.46	.69
Lying	.38	.52	.75
Manipulation	.49	.62	.82
YPI Callous–Unemotional	.09	.21	.57
Remorselessness	.27	.40	.64
Unemotionality	.26	.39	.64
Callousness	.09	.18	.36
YPI Impulsive–Irresponsible	.23	.43	.82
Thrill-Seeking	.29	.43	.68
Impulsiveness	.27	.40	.65
Irresponsibility	.27	.40	.65

NOTE: APSD = self-report version of the Antisocial Process Screening Device; YPI = Youth Psychopathic traits Inventory; MIC = mean interitem correlation; CITC = corrected item-to-total correlation.

alpha values for the subscales are all below the conventionally recommended criterion value of .70 (Nunnally & Bernstein, 1994, p. 265). For the NAR and IMP subscales, the mean CITCs were above the conventionally recommended value of .30 (Nunnally & Bernstein, 1994, p. 304). Item-level analyses for the CU scale revealed that item 19 ("You hide your feelings and emotions from others"), in particular, performed poorly (e.g., CITC = .05). Excluding this item would increase the CU scale MIC to .17, mean CITC to .29, and α to .51.

Confirmatory factor analysis using Mplus version 2.14 (Muthén & Muthén, 2001) was used to examine the fit of the correlated three-factor APSD model (Frick, Bodin, & Barry, 2000). Mplus is a versatile, multivariate statistical modeling program enabling one to estimate a variety of models for continuous and categorical observed, as well as continuous and categorical latent, variables. As the APSD and YPI items are on a categorical scale (i.e., four or fewer points), the categorical estimator (WLSMV) as recommended by Muthén and Muthén (2001) was used for all CFAs. In these analyses, a χ^2 test is used to test

the fit of the models to the data, with lack of significance indicating an acceptable model fit. Mplus also provides a number of descriptive fit measures to assess the closeness of fit of the model to the data. Three fit indices were used to evaluate the model fit, using the following criteria as indicating an adequate fit: (a) the Tucker-Lewis coefficient (TLI; Tucker & Lewis, 1973), (b) the Comparative Fit Index (CFI; Bentler, 1990), and (c) root mean square error of approximation (RMSEA; Steiger & Lind, 1980). The typical range for both TLI and CFI is between 0 and 1 (although TLI can exceed 1.0), with values greater than .90 indicating an acceptable fit (Arbuckle & Wothke, 1999; Browne & Cudeck, 1993). For RMSEA, values at .05 or less indicate a close model fit, and values between .05 and .08 indicate an adequate model fit (Browne & Cudeck, 1993).

The fit indices indicated a poor fit for the data, $\chi^2(48, N = 165) = 106.78$, $p < .001$, TLI = .783, CFI = .763, RMSEA = .086. In contemplating revisions to the model, both the first-order derivatives provided in the Mplus output as well as prior research findings were considered. An examination of the derivatives suggested that items 19 ("You hide your feelings from others") and 20 ("You keep the same friends") might be accounting for the poor fit of the model to the data. Items 19 and 20 have had poor performance characteristics in several prior studies (Poythress et al., 2004), and in Vitacco et al. (2003), items 19 and 20 had lower than conventionally accepted loadings (< .30) despite the overall satisfactory model fit. Similarly, CFA results obtained by Douglas et al. (2004) indicated that acceptable fit indices for the three-factor model could be obtained only with modifications—specifically, the exclusion of items 19 and 20.

Repeating the CFA excluding items 19 and 20 resulted in a satisfactory fit for the data, $\chi^2(40, N = 165) = 54.92$, $p = .06$, TLI = .936, CFI = .935, RMSEA = .048. Factor loadings for the 18 items retained in the self-report APSD are shown in Table 2. As Table 2 reveals, most items load significantly on their respective factors, although the loadings for items 5 and 7 are below the conventionally accepted value of .30. Further, the Narcissism and Impulsivity factors are significantly related to one another.

Psychometric properties of the YPI. The lower portion of Table 1 presents internal consistency indicators for the YPI. Excellent reli-

TABLE 2:   Results of Final Confirmatory Factor Analysis of the Antisocial Process Screening Device (APSD)[a]

APSD Scale/Item	Unstandardized Estimate	Standard Error	Critical Ratio	Standardized Loading
Narcissism				
5. Emotions seem shallow	1.00[b]	—	—	.23
8. Brags excessively	2.46	1.24	1.98	.58
10. Uses or "cons" others	2.75	1.38	1.99	.64
11. Teases others	2.37	1.20	1.98	.56
14. Can be charming	2.03	.98	2.08	.48
15. Becomes angry when corrected	2.82	1.36	2.07	.66
16. Thinks self more important	2.78	1.37	2.03	.65
Impulsivity				
1. Blames others for mistakes	1.00[b]	—	—	.63
4. Acts without thinking	.92	.19	4.74	.58
9. Gets bored easily	.74	.16	4.67	.47
13. Engages in risky activities	.76	.19	4.03	.48
17. Does not plan ahead	.93	.18	5.02	.58
Callous-Unemotional				
3. Is concerned about school work	1.00[b]	—	—	.66
7. Keeps promises	.32	.19	1.70	.21
12. Feels bad or guilty	1.10	.29	3.86	.72
18. Is concerned for others' feelings	1.02	.23	4.49	.67
Narcissism with Callous-Unemotional	.04	.02	1.52	.23
Narcissism with Impulsivity	.13	.06	2.04	.87
Callous-Unemotional with Impulsivity	.10	.06	1.82	.25

a. Revised model that deletes items 19 and 20 from the CU scale (see text).
b. Fixed value to identify the model.

ability is indicated for the YPI total score and for the scales that assess the interpersonal (Grandiose-Manipulative) and deviant lifestyle (Impulsive-Irresponsible) domains. Coefficient alphas for the five-item subscales contained within Grandiose-Manipulative and Impulsive-Irresponsible scales range from .65 to .82 (*Mdn* α = .69), indicating generally satisfactory internal consistency at the trait level.

However, in the domain of affective features, reliability indicators are poor for the Callous-Unemotional scale (mean CITC = .21, α = .57). At the subscale level, Callousness was particularly weak (α =

.36), and at the item level, item 39 ("I don't understand how people can be touched enough to cry by looking at things on TV or movie"), which is located in the Unemotionality subscale, had a CITC value of –.39. Excluding item 39 from the measure would increase α for Callous-Unemotional from .57 to .66.

Confirmatory factor analysis using Mplus version 2.14 (Muthén & Muthén, 2001) was used to examine the fit of the three-factor YPI model (Andershed et al., 2002). Because the YPI subscale scores were interval level, maximum-likelihood (ML) was used as the estimator. The results indicated a marginal fit for the data, $\chi^2(32, N = 163) = 78.19$, $p < .001$, TLI = .910, CFI = .936, RMSEA = .094.

An examination of the modification indices provided by the program revealed that the Lying subscale was not associated uniquely with the Grandiose-Manipulative factor, but was associated also with the Impulsive-Irresponsible factor. In addition, the fit of the model could be improved by permitting the error terms to correlate for (a) Thrill-Seeking and Unemotionality and (b) Callousness and Unemotionality subscales. We excluded the Lying subscale from the model[3] and then repeated the CFA with allowance for these two correlated error terms. These modifications resulted in a satisfactory model fit, $\chi^2(22, N = 163) = 31.022$, $p = .10$, TLI = .976, CFI = .985, RMSEA = .05. Factor loadings for the revised model are shown in Table 3. As can be seen, each of the subscales loads significantly on its respective factor, and each of the factors is significantly correlated with the others.

Convergent validity. As both the APSD and YPI purport to measure psychopathic features in adolescents, they should correlate positively and strongly with one another. Correlations among these measures' total and scale scores are shown in Table 4. As anticipated, the APSD and YPI total scores were highly correlated. For both measures, their scales assessing the interpersonal and deviant lifestyle domains exhibited convergent validity, having their highest cross-measure correlations with the counterpart scale in the other measure. This was not true, however, for the scale assessing affective features of psychopathy. The Callous-Unemotional scale from each measure had higher correlations with the other instrument's scales that measure the interpersonal and deviant lifestyle (impulsive) domains.

TABLE 3:   Results of Final Confirmatory Factor Analysis of the Youth Psycho-pathic traits Inventory (YPI)[a]

YPI Domain/Scale	Unstandardized Estimate	Standard Error	Critical Ratio	Standardized Loading
Grandiose-Manipulative				
Dishonest Charm	1.00[b]	—	—	.90
Grandiosity	.66	.07	8.95	.63
Manipulation	.92	.06	14.53	.89
Impulsive-Irresponsible				
Thrill-Seeking	1.00[b]	—	—	.72
Impulsivity	1.10	.13	8.47	.80
Irresponsibility	.83	.12	7.15	.64
Callous-Unemotional				
Remorselessness	1.00[b]	—	—	.95
Unemotional	.56	.10	5.49	.50
Callousness	.26	.08	3.25	.28
Grandiose-Manipulative with				
Callous-Unemotional	6.77	1.00	6.78	.72
Grandiose-Manipulative with				
Impulsive-Irresponsible	5.31	.93	5.70	.70
Callous-Unemotional with				
Impulsive-Irresponsible	5.341	.91	5.88	.72
Thrill with Unemotional	2.542	.64	3.97	.22
Callousness with Unemotional	1.551	.62	2.50	.16

a. Revised model excludes the Lying subscale and permits correlated error terms for Thrill and Callousness with Unemotional (see text).
b. Fixed value to identify the model.

TABLE 4:   Correlations Among YPI and APSD Scores

		APSD Scale		
YPI Scale	Total	NAR	CU	IMP
Total	.76[a]	.71	.40	.55
Grandiose-Manipulative	.67	.71[a]	.30	.43
Callous-Unemotional	.53	.50	.24[a]	.40
Impulsive-Irresponsible	.73	.36	.38	.67[a]

NOTE: n = 163. APSD = self-report version of the Antisocial Process Screening Device; NAR = Narcissism; CU = Callous-Unemotional; IMP = Impulsive; YPI = Youth Psycho-pathic traits Inventory.
a. Correlations indicate convergent validity between measures. All correlations are significant at $p < .01$ (one-tailed).

Associations with delinquency indicators. It was hypothesized that the APSD and YPI would correlate positively and significantly with historical measures of criminal behavior. Using the summary categories from the Self-Report Delinquency interview, dichotomous variables were created to indicate whether each participant admitted to committing a theft offense, a crime against person, an index offense, or drug sales during the year preceding the interview. A separate dichotomous variable was created to indicate whether the adolescent admitted to any SRD crime during the same time period. Point-biserial correlations between APSD and YPI scores (continuous) with these dichotomous variables are shown in the first five columns of Table 5. The total number of SRD offenses which each youth admitted committing in the prior year was computed. As this continuous variable was highly skewed, a logarithmic transformation was performed prior to computing correlations with the APSD and YPI scores (last column of Table 5). To eliminate criterion contamination, scores on APSD item 2 ("You engage in illegal activities") were subtracted from the APSD total score prior to computing correlations with delinquency indices.

Inspection of Table 5 reveals that both the APSD and YPI total and scale scores were positively and significantly associated with indices of past year delinquency in most instances. Low ($r = .21$) to moderate ($r = .48$) correlations with the log transformed continuous variable for the total number of past year offenses were obtained. The correlations suggest that the two measures are highly similar in terms of their associations with indices of past year offending.

Several other delinquency risk factors assessed by the CASI also correlated significantly with the log transformed variable for SRD past year offenses, including the youths' report of (a) prior gang involvement ($r = .29$, $p < .001$), (b) ever being abused or maltreated ($r = .26$, $p < .001$), (c) past year internalizing symptoms ($r = .23$, $p < .002$), (d) past year externalizing symptoms ($r = .46$, $p < .001$), and (e) severity of past year drug use ($r = .25$, $p < .001$; all tests one-tailed). Therefore, hierarchical linear regression was used to test the incremental validity of the YPI and APSD in predicting our log-transformed index of prior year delinquency.

In each of two regressions, scores for this group of five risk factors were entered as a block at the first step, resulting in a significant multi-

TABLE 5: Correlations of APSD and YPI Scales With Past Year Delinquent Behavior

Measure/Scale	Theft	Person	Index	Drug Sale	Any Crime	Log Total
			Type of Past Year Delinquent Behavior/Indicator[a]			
APSD total score[b]	.15*	.32**	.32**	.30**	.25**	.44**
Narcissism	.16*	.25**	.35**	.21**	.23**	.36**
Callous-Unemotional	−.04	.18*	.15*	.10	.07	.21**
Impulsivity	.16*	.30**	.21**	.31**	.24**	.37**
YPI total score	.20**	.30**	.35**	.38**	.26**	.44**
Grandiose-Manipulative	.22**	.22**	.36**	.35**	.25**	.40**
Callous-Unemotional	.11	.16*	.24**	.27**	.12	.23**
Impulsive-Irresponsible	.21**	.36**	.29**	.35**	.30**	.48**

NOTE: n = 165 for APSD, n = 163 for YPI. APSD = self-report version of the Antisocial Process Screening Device; YPI = Youth Psychopathic traits Inventory.
a. For all crime/delinquency categories except Log Total, each participant was coded 1 (*did report*) or 0 (*did not report*) for commission of that category of offense in the prior year. Correlations for these variables are therefore point-biserial correlations. Log Total is logarithmic transformation of the total number of crimes that the adolescent admitted committing in the prior year. See description of Self-Report Delinquency scale in Measures section for full description of theft, crimes against person, index, and drug sale crimes.
b. To eliminate criterion contamination, scores on APSD item 2 ("You engage in illegal activities") were subtracted from the APSD total score (item 2 does not contribute to any APSD scale score).
* p < .05. ** p < .01 (all tests one-tailed).

ple R = .505, adjusted R^2 = .23, $F(5, 156)$ = 10.675, p < .001. Entering the APSD total score[4] at the second step resulted in a multiple R = .534 and a significant increase in R^2; ΔR^2 = .031, $F(1, 155)$ = 6.629, p < .05. However, when the YPI total score was entered at the third step, ΔR^2 = .009 was not significant. For the second regression, entering the YPI total score at the second step resulted in a significant increase in R^2; R = .537, ΔR^2 = .034, $F(1, 155)$ = 7.407, p < .01. Entering the APSD total at step three resulted in a nonsignificant increase in R^2 (ΔR^2 = .006, n.s.).

Association with age of onset. Age of delinquency onset, as measured by the earliest reported age for any SRD offense, was inversely associated with APSD total scores (r = −.29, p < .01, one-tailed) and YPI total scores (r = −.28, p < .01, one-tailed). This association

TABLE 6:   Zero-Order and Partial Correlations Between APSD and YPI Scores and Indices of Externalizing and Internalizing Problems

| Measure/Scale | CASI | | | | | |
| | Drug Use Severity | | Externalizing | | Internalizing | |
	Zero-Order	Partial	Zero-Order	Partial	Zero-Order	Partial
APSD total score	.24**		.59**		.25**	
Narcissism	.10	−.08	.43**	.19**	.18**	.04
Callous-Unemotional	−.00	−.09	.38**	.27**	.08	−.00
Impulsivity	.31**	.32**	.51**	.33**	.29**	.23**
YPI total score	.20**		.56**		.23**	
Grandiose-Manipulative	.14*	−.04	.48**	.18*	.16*	−.09
Callous-Unemotional	.13*	−.03	.31**	−.17*	.21**	.04
Impulsive-Irresponsible	.28**	.25**	.62**	.49**	.34**	.29**

NOTE: *n* = 165 for APSD, *n* = 163 for YPI. APSD = self-report version of the Antisocial Process Screening Device; YPI = Youth Psychopathic traits Inventory; CASI = Comprehensive Adolescent Severity Inventory.
* $p < .05$. ** $p < .01$ (all tests one-tailed).

between psychopathic features and age of delinquency onset was found for both male and female participants when the data were analyzed separately by gender.

Associations with internalizing and externalizing variables. It was also hypothesized that the APSD and YPI, and specifically the scales that assess features of impulsivity/deviant lifestyle (APSD Impulsivity, YPI Impulsive-Irresponsible) would be positively and significantly associated with measures of externalizing and internalizing behavior. Externalizing indicators included an index of severity of prior drug/alcohol use and a composite self-report externalizing scale from the CASI. A second composite CASI scale served as an index of internalizing behaviors. Associations between the APSD and YPI scores with these indices are shown in Table 6.[5]

Consistent with hypotheses, total scores on both measures of psychopathic features in youths correlated positively and significantly with an index of drug use severity and with composite self-report externalization and internalization scores from the CASI. Although multiple APSD and YPI scales correlated with these measures in most instances, in each case, the strongest association was found with the

scale that measures the impulsivity/deviant lifestyle aspects of psychopathy. Partial correlations revealed that, for both measures, all three scales had independent associations with the CASI Externalizing subscale; it is interesting that the Callous-Emotional scale from the YPI had a significant negative association with the Externalizing measure. For drug use severity and CASI Internalizing, only the APSD and YPI scales from the impulsivity domain had significant independent associations.

STRUCTURAL MODELS PREDICTING RELATIONSHIPS TO DELINQUENCY AND DRUG USE BEHAVIOR

Prediction models were constructed to examine the relationships between the APSD measurement model (see Table 2) and YPI measurement model (see Table 3) developed earlier with self-reported delinquency in the past year and severity of past year drug use. The structural model analyses were completed using Mplus version 2.14 (Muthén & Muthén, 2001).

The univariate relationships between each APSD latent factor were examined (Narcissism, Callous-Unemotional, Impulsivity) separately with the delinquency and drug use measures to build the APSD prediction model. A significant association was found between the APSD Impulsivity latent factor and both past year delinquency and past year drug use severity. The univariate associations between Narcissism and Callous-Unemotional with these indicators were not significant. Based on these univariate results, a multivariate structural model involving the full APSD measurement model shown in Table 2 was tested, with additional paths from the APSD Impulsivity factor to each of the problem behavior indicators. Indicators concerning the model fit were mixed. A significant chi-square was obtained, $\chi^2(47, N = 165) = 70.38$, $p < .02$, indicating a poor fit of the model to the data, although the other fit indices indicated a satisfactory fit (CFI = .904, TLI = .912, RMSEA = .055). In this model, path coefficients were significant for the association between Impulsivity with past year delinquency (.488) and past year drug use severity (.321).[6]

A similar strategy was employed to build the YPI model. The univariate relationships between each YPI latent factor (Grandiose-
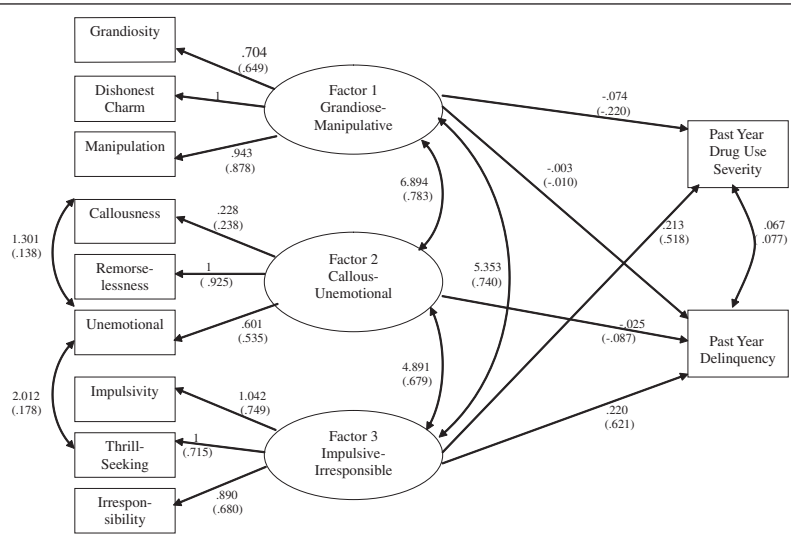
Figure 1:   YPI Measurement Model
NOTE: This is the revised YPI model, described in the text, which excludes the Lying subscale.
*All factor loadings are statistically significant (p .05). All relationships are statistically significant (*p* .05) with the exception of the effect of (1) Grandiose-Manipulative on Past Year Drug Use Severity, (2) Grandiose-Manipulative and Callous-Unemotional on Past Year Delinquency, and (3) the relationship between Past Year Drug Use Severity and Past Year Delinquency.

Manipulative, Callous-Unemotional, Impulsive-Irresponsible) separately with the delinquency and drug use measures were examined first. A significant association between the YPI latent factor and the problem behavior index was obtained in each instance, except for a nonsignificant relationship between latent factor 2 (Callous-Unemotional) and past year drug severity.[7]

Based on these univariate results, a multivariate structural model involving the full YPI measurement model shown in Table 3 was tested. In this model, each YPI latent factor was hypothesized to influence past year delinquency; YPI Factors 1 (Grandiose-Manipulative) and 3 (Impulsive-Irresponsible), but not Factor 2 (Callous-Unemotional), were hypothesized to influence past year drug use severity. This model, depicted in Figure 1, showed a good fit to the data, $\chi^2(19, N = 163) = 28.39$, $p = .076$, TLI = .996, CFI = .92, RMSEA = .055. In this final model, only YPI Factor 3, Impulsive-Irresponsible, was significantly associated with either of the two problem behavior indicators.

DISCUSSION

This study examined the psychometric properties of the APSD and YPI in a sample of 165 youths in a juvenile diversion program. The comparison of these two particular measures of psychopathic features in youth is important, in part, because the YPI was designed specifically to overcome perceived problems in item and scale construction for the self-report APSD. Further, these measures were originally designed for different uses. The APSD was designed to examine psychopathic-like features in children (ages 6 to 12) using parent- and teacher-ratings, and the YPI was designed to examine psychopathic features in unreferred (community) samples.

An examination of internal consistency indicators revealed poor reliability for the scales from both measures that purport to assess Callous-Unemotional features of psychopathy. Cronbach's alphas for these scales were .45 (APSD) and .57 (YPI). For the YPI, the difficulty lay primarily with the subscale designed to assess Callousness ($\alpha = .36$). Alpha was respectable for the subscales that assess Remorselessness and Unemotionality ($\alpha = .64$ for both subscales), given scale length of only five items. In the only other study to examine the internal consistency of the YPI in a delinquent sample, Skeem and Cauffman (2003) reported a satisfactory alpha for the affective domain ($\alpha = .77$); as in this study, however, internal consistency specifically for the Callousness subscale ($\alpha = .49$) was poor. Similarly, the mean CITCs for the APSD Callous-Unemotional scale ($r = .22$) and the YPI Callousness subscale ($r = .18$) were well below the minimum recommended value (.30) for adequate scale reliability. Together with the findings of Skeem and Cauffman, serious questions are raised about the adequacy with which either measure assesses Callous features in justice involved youths.

Otherwise, internal consistency indices were excellent for the YPI and better than those obtained for the APSD. Alpha was higher for YPI total score (.92 versus .76) and for scale scores measuring the interpersonal (.91 versus .61) and impulsivity (.82 versus .57) domains of psychopathy. In most instances, MICs and CITCs were higher for the YPI (Table 1). Except for the Callousness subscale, alphas for the five-item YPI subscales of the YPI, which assess specific traits within psychopathy domains, were higher than the alphas for the APSD scales.

For neither measure did the published three-factor model replicate when examined using confirmatory factor analysis. For the APSD, a satisfactory model fit was obtained after excluding two items that performed poorly in this and in numerous prior studies. For the YPI, a satisfactory fit was obtained only after excluding the Lying subscale and permitting correlated error terms for Callousness and Thrill-Seeking with Unemotionality. Both measures, it appears, assess psychopathic features somewhat differently in justice-involved samples than in their original community samples. Given the problems discussed above with the Callousness scale, an alternative would be to assess the structure of the YPI excluding Callousness. Because of the centrality of callousness to the psychopathy construct, a decision was made not to exclude the scale. If this scale continues to perform poorly in further studies of the YPI with justice-involved youths, consideration will need to be given to revising or deleting that scale.

Associations with a variety of external variables provided evidence supporting the construct validity for the APSD and YPI, and the associations were strikingly similar for both measures. Correlations with self-reported age of delinquency onset were nearly identical for the two measures: $r = -.29$ (APSD) and $r = -.28$ (YPI). Associations with a variety of self-reported delinquent behaviors for the prior year ranged from $r = .15$ to .44 for the APSD, and from $r = .20$ to .44 for the YPI. As Table 5 reveals, even at the primary scale level, associations with the various delinquency indicators were highly similar in magnitude. When compared with several other risk factors (e.g., gang history, maltreatment or abuse history, past year drug use) using regression analyses, both the APSD and YPI demonstrated incremental validity by explaining an additional 3% of variance in the number of prior year delinquent acts (log transformed), although neither of these measures explained significant variance beyond that explained by the other in these models. Structural equation modeling confirmed that the revised YPI factor model was significantly associated with drug and delinquency indicators, with the Impulsive-Irresponsible factor primarily accounting for this relationship. The structural equation model for the APSD, however, did not show a good fit to the data, although as with the YPI, only the predictive paths from Impulsivity were significantly associated with problem behavior indicators.

Also for both measures, hypotheses were confirmed with regard to expected relationships between psychopathic features and indices of internalizing and externalizing behavior. Whereas various psychopathic features were associated with externalizing behavior, as in prior studies, the associations with drug use and internalizing behavior were accounted for primarily by scales that assess features in the impulsivity domain of psychopathy.

In summary, the findings suggest that the YPI is superior to the self-report version of the APSD in terms of reliable measurement of psychopathic features in justice-involved adolescents insofar as indicators from classical test theory are involved, although neither measure appears to reliably assess the Callousness trait. Also, only for the YPI did the structural model predicting problem behavior adequately fit the data. Another potential advantage of the YPI, although not one specifically examined in this study, is that it includes multi-item subscales that may facilitate further investigation of psychopathic features at the trait level (YPI trait subscales were as reliable as APSD scale scores in this sample). Our findings that APSD items 19 and 20 perform poorly also replicate what numerous other investigations have revealed (Poythress et al., 2004) in studies with justice-involved samples. A revision of this measure that replaces these poor-performing items and includes additional items (so as to create longer scales and increase reliability) appears to be in order.

Limitations of this study include that primarily self-report measures were used, thus some of the associations obtained (e.g., between the YPI and APSD, Table 4) may be attributable to common measurement method. Different results might have been obtained using a measure such as the Psychopathy Checklist–Youth Version (Forth et al., 2003), with which the APSD and YPI have correlated only modestly in prior studies (e.g., Murrie & Cornell, 2002; Skeem & Cauffman, 2003; Spain, Douglas, Poythress, & Epstein, 2004). Also, the associations between the APSD and YPI with delinquency variables were predictive only in the statistical sense—the criterion measures were not obtained prospectively, and the correlations are really postdictive. However, prospective follow-up data are currently being collected with regard to treatment outcomes and recidivism for this sample; a future report will provide findings concerning the (truly) predictive utility of these measures. Finally, the sample size ($N = 165$) was some-

what smaller than conventionally recommended for attempting structural model replication using confirmatory factor analyses. Thus, the results concerning the measures' structures should be considered tentative and this issue should be revisited in further studies with larger research samples.

Although these results are generally encouraging, considerably more is needed. As noted above, some revision of the self-report APSD is needed to improve the reliability of its component factor scores. This is only the second study using the YPI with justice-involved youths and its reliability and predictive validity need to be replicated in samples similar to this one and investigated de novo with other youth samples (e.g., more seriously delinquent adolescents). Furthermore, this study did not examine the stability of psychopathic features over time and thus is not responsive to the concerns of developmental psychologists (Seagrave & Grisso, 2002; Steinberg, 2001) that such cross-sectional assessments may index transient, maturational features rather than stable personality traits. Until ample research explores these issues, it would be premature to use these measures in applied (clinical or forensic) settings.

NOTES

1. The APSD item-to-PCL-R map provided by Falkenbach et al. (2003; see Table 1) indicates that 10 PCL-R features are represented by only one APSD item, 5 are represented by two items, and 5 features are not represented on the APSD.

2. R. Rogers, personal communication, May 2003. This alpha value was not reported in the original manuscript.

3. We also tested an alternative model that permitted the Lying subscale to cross-load on the Grandiose-Manipulative and Impulsive-Irresponsible factors and that included the correlated error terms. This model also resulted in a satisfactory fit: $\chi^2 (22, N = 163) = 39.358, p = .10$; TLI = .978, CFI = .986, RMSEA = .047. We selected the model described in the text because it is more parsimonious and avoids the ambiguities in interpretation of a model with cross-loading subscales.

4. As in earlier analyses, the score for item 2 ("You engage in illegal activities") was removed from the APSD total score to minimize criterion contamination.

5. The correlations in Table 6 reflect associations with participants' reports of *ever* experiencing significant periods of externalizing or internalizing symptoms. The results were highly similar in analyses that used past year responses to the same sets of questions.

6. Because the significant χ^2 indicates a poor model fit, a table depicting the prediction model is not presented.

7. Details concerning these preliminary analyses may be requested from the second author.

REFERENCES

Andershed, H., Kerr, M., Stattin, H., & Levander, S. (2002). Psychopathic traits in non-referred youths: Initial test of a new assessment tool. In E. Blaauw & L. Sheridan (Eds.), *Psychopaths: Current international perspectives* (pp. 131-158). The Hague: Elsevier.

Arbuckle, J. L., & Wothke, W. (1999). *AMOS 4.0 user's guide*. Chicago: SPSS, Inc.

Benning, S. D., Patrick, C. J., Hicks, B. M., Blonigen, D. M., & Krueger, R. F. (in press). Factor structure of the Psychopathic Personality Inventory: Validity and implications for clinical assessment. *Psychological Assessment*.

Bentler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin*, *107*, 238-246.

Blair, R.J.R. (1999). Responsiveness to distress cues in the child with psychopathic tendencies. *Personality and Individual Differences*, *27*, 135-145.

Blair, R.J.R., Monson, J., & Frederickson, N. (2001). Moral reasoning and conduct problems in children with emotional and behavioural difficulties. *Personality and Individual Differences*, *31*, 799-811.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.

Caputo, A. A., Frick, P. J., & Brodsky, S. L. (1999). Family violence and juvenile sex offending: The potential mediating role of psychopathic traits and negative attitudes toward women. *Criminal Justice and Behavior*, *26*, 338-356.

Cleckley, H. (1941). *The mask of sanity*. St. Louis: Mosby.

Cooke, D. J., Forth, A. E., & Hare, R. D. (1998). *Psychopathy: Theory, research, and implications for society*. Dordrecht: Kluwer.

Cooke, D. J., & Michie, C. (2001). Refining the construct of psychopathy: Towards a hierarchical model. *Psychological Assessment*, *13*, 171-188.

Cruise, K., Rogers, R., Neumann, C. S., & Sewell, K. W. (2000, March). *Measurement of adolescent psychopathy: Testing the two-factor model in juvenile offenders*. Paper presented at the biennial conference of the American Psychology-Law Society, New Orleans.

Douglas, K., Greenbaum, P. E., Poythress, N. G., Falkenbach, D., Cruise, K., Lee, Z., et al. (2004, March). The Antisocial Process Screening Device self-report version: A multi-sample factor analytic evaluation among delinquent youth. In N. G. Poythress (Chair), *Critique of the self-report APSD in at-risk populations*. Symposium conducted at the meeting of the American Psychology-Law Society, Scottsdale, AZ.

Edens, J. F., Guy, L. S., & Fernandez, K. (2003). Psychopathic traits predict attitudes toward a juvenile capital murderer. *Behavioral Sciences and the Law*, *21*, 807-828.

Elliott, D. S., Ageton, S. S., Huizinga, D., Knowles, B. A., & Canter, R. J. (1983). *The prevalence and incidence of delinquent behavior: 1976-1980*. Boulder, CO: Behavioral Research Institute.

Falkenbach, D. M., Poythress, N. G., & Heide, K. M. (2003). Psychopathic features in a juvenile diversion population: Reliability and predictive validity of two self-report measures. *Behavioral Sciences and the Law*, *21*, 787-806.

Forth, A. E., Kosson, D. S., & Hare, R. D. (2003). *The Hare PCL:YV*. Toronto: Multi-Health Systems.

Frick, P. J. (in press). Using the construct of psychopathy to understand antisocial and violent youth. In J. Yuille & H. Hughes (Eds.), Psychopathy in the third millennium: Theory and research. New York: Academic Press.

Frick, P. J., Barry, C. T., & Bodin, S. D. (2000). Applying the concept of psychopathy to children: Implications for the assessment of antisocial youth. In C. B. Gacono (Ed.), *The clinical and forensic assessment of psychopathy: A practitioner's guide* (pp. 3-24). Mahwah, NJ: Lawrence Erlbaum.

Frick, P. J., Bodin, S. D., & Barry, C. T. (2000). Psychopathic traits and conduct problems in community and clinic-referred samples of children: Further development of the Psychopathy Screening Device. *Psychological Assessment*, *12*, 382-393.

Frick, P., & Hare, R. D. (2001). *The Antisocial Process Screening Device*. Toronto: Multi-Health Systems.

Frick, P. J., O'Brien, B. S., Wootton, J. M., & McBurnett, K. (1994). Psychopathy and conduct problems in children. *Journal of Abnormal Psychology*, *103*, 700-707.

Hare, R. D. (1991). *The Hare Psychopathy Checklist–Revised*. Toronto: Multi-Health Systems.

Hare, R. D. (2003). *The Hare Psychopathy Checklist–Revised* (2nd ed.). Toronto: Multi-Health Systems.

Hare, R. D., Clark, D., Grann, M., & Thornton, D. (2000). Psychopathy and the predictive validity of the PCL-R: An international perspective. *Behavioral Sciences and the Law*, *18*, 623-645.

Hart, S. D., & Hare, R. D. (1997). Psychopathy: Assessment and association with criminal conduct. In D. M. Stoff, J. Breiling, & J. D. Maser (Eds.), *Handbook of antisocial behavior* (pp. 22-35). New York: Wiley.

Hemphill, J. F., Hare, R. D., & Wong, S. (1998). Psychopathy and recidivism: A review. *Legal and Criminological Psychology*, *3*, 139-170.

Hill, C. D., Rogers, R., & Bickford, M. E. (1996). Predicting aggressive and socially disruptive behavior in a maximum security forensic psychiatric hospital. *Journal of Forensic Sciences*, *41*, 56-59.

Kosson, D. S., Cyterski, T. D., Steuerwald, B. L., Neumann, C. S., & Walker-Mathews, S. (2002). The reliability and validity of the Psychopathy Checklist: Youth Version (PCL:YV) in non-incarcerated adolescent males. *Psychological Assessment*, *14*, 97-109.

Lambert, E. W., Wahler, R. G., Andrade, A. R., & Bickman, L. (2001). Looking for the disorder in conduct disorder. *Journal of Abnormal Psychology*, *110*, 110-123.

Lee, Z., Vincent, G. M., Hart, S. D., & Corrado, R. R. (2003). The validity of the Antisocial Process Screening Device as a self-report measure of psychopathy in adolescents. *Behavioral Sciences and the Law*, *21*, 771-786.

Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, *68*, 151-158.

Lilienfeld, S. O., & Andrews, B. P. (1996). Development and preliminary validation of a self-report measure of psychopathic personality traits in non-criminal populations. *Journal of Personality Assessment*, *66*, 488-524.

Lilienfeld, S. O., & Hess, T. H. (2001). Psychopathic personality traits and somatization: Sex differences and the mediating role of negative emotionality. *Journal of Psychopathology and Behavioral Assessment*, *23*, 11-24.

Loney, B. R., Frick, P. J., Clements, C. B., Ellis, M. L., & Kerlin, K. (2003). Callous-unemotional traits, impulsivity, and emotional processing in antisocial adolescents. *Journal of Clinical Child and Adolescent Psychology*, *32*, 66-80.

Lynam, D. R. (1996). Early identification of chronic offenders: Who is the fledgling psychopath? *Psychological Bulletin*, *120*, 209-234.

Meyers, K., McDermott, P., Webb, A., & Hagan, T. A. (in press). Mapping the clinical complexities of adolescents with substance use disorders: A typological study. *Journal of Child and Adolescent Substance Abuse*.

Meyers, K., Webb, A., Randall, M., McDermott, P., Mulvaney, F., Tucker, W., et al. (1999). Psychometric properties of the Comprehensive Adolescent Severity Inventory (CASI). *National Institute on Drug Abuse Research Monograph: Problems of Drug Dependence*, Proceedings of the 60th Annual Scientific Meeting, College on Problems of Drug Dependence, Scottsdale, AZ.

Millon, T., Simonsen, E., Birket-Smith, M., & Davis, R. D. (1998). *Psychopathy: Antisocial, criminal, and violent behavior*. New York: Guilford.

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, *100*, 674-701.

Murrie, D., & Cornell, D. (2002). Psychopathy screening of incarcerated juveniles: A comparison of measures. *Psychological Assessment*, *14*, 390-396.

Muthén, B. O., & Muthén, L. K. (2001). *Mplus: Statistical analysis with latent variables* (User's Guide, 2nd ed.). Los Angeles: Muthén & Muthén.

Nunnally, J., & Bernstein, I. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

O'Brien, B. S., & Frick, P. J. (1996). Reward dominance: Associations with anxiety, conduct problems, and psychopathy in children. *Journal of Abnormal Child Psychology*, *24*, 223-240.

Ogloff, J.R.P., Wong, S., & Greenwood, A. (1990). Treating criminal psychopaths in a therapeutic community program. *Behavioral Sciences and the Law*, *8*, 181-190.

O'Neill, M. L., Lidz, V., & Heilbrun, K. (2003). Adolescents with psychopathic characteristics in a substance abusing cohort: Treatment process and outcomes. *Law and Human Behavior*, *27*, 299-313.

Pardini, D., Lochman, J., & Frick, P. (2003). Callous/unemotional traits and social cognitive processes in adjudicated youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, *42*, 364-371.

Poythress, N. G., Douglas, K. D., Greenbaum, P., Falkenbach, D., Cruise, K., Lee, Z., et al. (2004, March). Internal consistency of the self-report APSD. In N. G. Poythress (Chair), *Critique of the self-report APSD in at-risk populations*. Symposium conducted at the meeting of the American Psychology-Law Society, Scottsdale, AZ.

Reynolds, C. R., & Richmond, B. O. (1985). *Revised Children's Manifest Anxiety Scale. RCMAS manual*. Los Angeles: Western Psychological Services.

Rogers, R., Johansen, J., Chang, J. J., & Salekin, R. T. (1997). Predictors of adolescent psychopathy: Oppositional and conduct-disordered symptoms. *Journal of the American Academy of Psychiatry and Law*, *25*, 261-271.

Rogers, R., Vitacco, M. J., Jackson, R. L., Martin, M., Collins, M., & Sewell, K. W. (2002). Faking psychopathy? An examination of response styles with antisocial youth. *Journal of Personality Assessment*, *78*, 31-46.

Salekin, R. T. (2002). Psychopathy and therapeutic pessimism: Clinical lore or clinical reality? *Clinical Psychology Review*, *22*, 79-112.

Salekin, R. T., Rogers, R., & Sewell, K. W. (1996). A review and meta-analysis of the Psychopathy Checklist and Psychopathy Checklist–Revised: Predictive validity of dangerousness. *Clinical Psychology: Science and Practice*, *3*, 625-637.

Seagrave, D., & Grisso, T. (2002). Adolescent development and the measurement of juvenile psychopathy. *Law and Human Behavior*, *26*, 219-239.

Skeem, J. L., & Cauffman, E. (2003). Views of the downward extension: Comparing the youth version of the Psychopathy Checklist with the Youth Psychopathic traits Inventory. *Behavioral Sciences and the Law*, *21*, 737-770.

Spain, S., Douglas, K., Poythress, N. G., & Epstein, M. (2004). The relationship between psychopathic features, violence and treatment outcome: The comparison of three youth measures of psychopathic features. *Behavioral Sciences and the Law*, *22*, 85-102.

Steiger, J. H., & Lind, J. C. (1980, May). *Statistically-based tests for the number of common factors*. Paper presented at the annual meeting of the Psychonomic Society, Iowa City, IA.

Steinberg, L. (2001). The juvenile psychopath: Fads, fictions, and facts. *National Institute of Justice Perspectives on Crime and Justice: 2001 Lecture Series*, *5*, 35-64.

Stoff, D. M., Breiling, J., & Maser, J. D. (1997). *Handbook of antisocial behavior*. New York: Wiley.

Tolan, P. (1987). Implications of age of onset for delinquency risk. *Journal of Abnormal Child Psychology*, *15*, 47-65.

Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, *38*, 110.

Verona, E., Patrick, C. J., & Joiner, T. E. (2001). Psychopathy, antisocial personality and suicide risk. *Journal of Abnormal Psychology*, *110*, 462-470.

Vitacco, M. J., Rogers, R., & Neumann, C. S. (2003). The Antisocial Process Screening Device: An examination of its construct and criterion-related validity. *Assessment*, *10*, 143-150.

Wilson, D. L., Frick, P. J., & Clements, C. (1999). Gender, somatization, and psychopathic traits in a college sample. *Journal of Psychopathology and Behavioral Assessment*, *21*, 221-235.