J Psychopathol Behav Assess (2011) 33:315–322
DOI 10.1007/s10862-010-9213-6

An examination of the Validity of the Elemental Psychopathy Assessment: Relations with Other Psychopathy Measures, Aggression, and Externalizing Behaviors

Lauren Wilson · Joshua D. Miller · Amos Zeichner · Donald R. Lynam · Thomas A. Widiger

Published online: 1 December 2010

Abstract The Elemental Psychopathy Assessment (EPA) is a new self-report measure of psychopathy designed to assess the personality traits associated with psychopathy from a Five Factor Model perspective. The current study examined the validity of the EPA in sample of undergraduates by examining the relations between the EPA scales and three validated self-report psychopathy instruments, as well as assessments of aggression, substance use, and antisocial behavior. The EPA scales manifested strong convergent validity with the extant psychopathy measures and an expected pattern of relations with measures of externalizing behaviors. Overall, the EPA appears to be a promising measure of psychopathy which provides new opportunities to explore the underlying structure of this construct and parse its relations with constructs central to its nomological network.

Keywords Psychopathy · Assessment · Five-factor model · Aggression

Psychopathy has been described as a personality disorder marked by manipulativeness, a lack of remorse, egocentricity, superficial charm, exploitation, deceitfulness, irresponsibility, shallow affect, and arrogance (Cleckley 1941). Numerous studies have linked psychopathy with a variety of externalizing behaviors such as aggression and antisocial behavior. For instance, psychopathy has been linked to chronic criminality and recidivism of both a non-violent and violent nature (Hare et al. 1988; Gretton et al. 2004; Kosson et al. 1990; Skeem and Mulvey 2001) and substance use disorders (Taylor and Lang 2006; Walsh et al. 2007).

The substantial relations between psychopathy and important outcomes such as violent crime make its assessment an issue of great importance. The Psychopathy Checklist Revised (PCL-R; Hare 2003) is a commonly used psychopathy assessment considered by many to be the gold standard, particularly in forensic settings. The PCL-R includes both an interview and file review in which the interviewer uses a list of specific behaviors to rate the presence of psychopathy traits. These assessment requirements typically limit the use of the PCL-R to forensic settings because of the need for institutionalized records and extensive interviewing. Over the past 15 years, there has been an increased focus on assessing psychopathy in non-institutionalized samples. Pursuant, several self-report measures of psychopathy have emerged, some of which were designed to mirror the PCL-R (e.g., the Levenson Self-Report Psychopathy Scale [LSRP; Levenson et al. 1995] and the Self-Report Psychopathy Scale [SRP-III; Williams et al. 2007]), whereas others were designed independently of the PCL-R (e.g., the Psychopathic Personality Inventory-Revised (PPI-R); Lilienfeld and Windows 2005). Given the derivation of many self-report measures from the PCL-R, it is not surprising that a putatively similar two-factor structure has typically emerged from factor analytic studies of these self-report psychopathy measures. The resulting two factors are conceptualized in a manner consistent with the PCL-R

L. Wilson · J. D. Miller (✉) · A. Zeichner
Department of Psychology, University of Georgia,
Athens, GA 30602-3013, USA
e-mail: jdmiller@uga.edu

D. R. Lynam
Purdue University,
West Lafayette, IN, USA

T. A. Widiger
University of Kentucky,
Lexington, KY, USA

such that factor 1 is thought to assess the interpersonal and affective components, whereas factor 2 is thought to assess the traits and behaviors associated with a chronically antisocial and deviant lifestyle. Although the two-factor structure has been studied most widely, other structures in which three or more factors are extracted (e.g., Cooke and Michie 2001; Gaughan et al. 2009; Neumann et al. 2007; Patrick et al. 2007; Williams et al. 2007) have also received support.

The inconsistencies and uncertainty that surrounds the factor structure of psychopathy, as assessed by these various instruments, highlight some of the concerns related to the assessment of psychopathy. Lynam and Widiger (2007) have argued that it is important to note that these factor structures reflect the respective psychopathy measures from which they are derived, and not the personality construct they are meant to define. An alternative strategy for understanding the basic structure of psychopathy is to examine the construct from the perspective of a general model of personality; the most frequently used model being the Five Factor Model (FFM). Researchers have used a number of techniques to understand how psychopathy can be understood from the perspective of the FFM including developing an expert-based FFM psychopathy prototype (Miller et al. 2001), using the FFM as a means of translating the PCL-R items into basic trait terms (Widiger and Lynam 1998; Lynam 2002), and examining the correlations between various psychopathy assessments and measures of the FFM (e.g., Derefinko and Lynam 2006; Skeem et al. 2005).

Lynam and Widiger (2007) summarized the specific FFM traits that emerged consistently as important elements in the conceptualization of psychopathy. These factors and specific traits included *interpersonal antagonism* (trust, straightforwardness, altruism, compliance, modesty, tender-mindedness, warmth), *interpersonal dominance* (assertiveness), *impulsivity* (impulsiveness, excitement seeking, self-discipline, deliberation), *lack of self-directed negative affect* (anxiety, depression, self-consciousness, vulnerability), and *externally directed affect* (anger, impulsiveness). Recently, the Elemental Psychopathy Assessment (EPA; Lynam et al. in press) was developed, which is a new self-report measure of psychopathy that was created using the basic personality traits as conceptualized by the Five Factor Model (FFM) as a guide for capturing the building blocks of psychopathy. The EPA was developed to assess psychopathy using extreme and maladaptive variants of each of the aforementioned FFM traits. In all, the EPA contains 18 scales, each corresponding to different facets of four of the FFM domains (all except Openness). The initial validation studies by Lynam and colleagues (in press) demonstrated that the EPA scales are substantially correlated with the NEO PI-R scales from which they were derived (i.e., mean r=.68) but provide significant incremental validity over these same scales in the prediction of psychopathy.

The EPA differs from many other psychopathy assessments in that it uses elemental traits from a model of basic personality functioning that was derived independently from any criteria, in contrast to a set of complex symptoms (e.g., parasitic lifestyle) developed from descriptions of the construct. There are clear benefits to the former approach. It allows assessment of psychopathy using traits that have great currency in basic personality research which can then inform our understanding of psychopathy (e.g., in terms of genetic influences, gender differences, cultural differences, etc.). It also ensures that the descriptors are relatively atomic and distinct from one another; even in cases where they overlap, the basic model describes that overlap. Finally, the use of a well-developed, widely-used trait model provides a common language that can be used to describe and compare various inventories to one another. The goal of the current study was to examine the convergent and criterion validity of the EPA by examining its relations to three prominent self-report measures of psychopathy, as well as important behavioral correlates such as aggression, antisocial behavior, and substance use. The current study represents the first broad test of the criterion validity of the EPA in which we test the relations between the EPA scores and a variety of externalizing behaviors. We expected that the EPA total score would manifest substantial correlations with the scores from the PPI-R, LSRP, and SRP-III, and with indices of externalizing behaviors. In addition, we expected that the EPA subscales derived from the FFM domains of Agreeableness (e.g., manipulation, opposition) and Conscientiousness (e.g., disobliged, rashness) would manifest the largest correlations with the various externalizing behaviors (e.g., Miller and Lynam 2001). We also expected that the EPA subscales related to higher levels of Neuroticism (e.g., Anger/Hostility; Urgency) would manifest stronger relations with reactive aggression than proactive aggression (Miller and Lynam 2006).

Method

Participants and Procedure

Participants comprised 66 men and 50 women (Mean Age=19.16; SD=1.27; Age Range=17 to 24; 80.17% Caucasian) at a large Southeastern university. After providing informed consent, participants completed a packet of questionnaires assessing demographic information, psychopathy, antisocial and aggressive behavior, and basic personality. Participants were debriefed at the completion of the study.

Measures

Demographics Questionnaire This questionnaire assessed basic participant demographics including age, ethnicity, marital status, and education level.

Psychopathic Personality Inventory-Revised (PPI-R) The PPI-R (Lilienfeld and Windows 2005) is a 154-item self-report measure designed to assess psychopathy. The PPI-R provides scores for eight subscales, as well as a global psychopathy score (PPI-R T) and two psychopathy factor scores (PPI-R Fearless Dominance [PPI-R FD] and PPI-R Self-centered Impulsivity [PPI-R ScI]) as well as an "orphan" scale, Coldheartedness (PPI-R C), that is not included in the two factor scores. Coefficient alphas can be found in Table 1.

Levenson Self-Report Psychopathy Scale (LSRP) The LSRP (Levenson et al. 1995) is a 26-item self-report inventory designed to measure psychopathy in nonforensic samples. It provides a global psychopathy score (LSRP T) and two factor scores (LSRP Factor 1 and 2). Coefficient alphas can be found in Table 1.

Self-Report Psychopathy Scale: Version III (SRP-III) The SRP-III (Williams et al. 2007) is a 64-item self-report measure that provides a global psychopathy score (SPR T), as well as scores for four subscales: Interpersonal Manipulation (SRP-IPM), Callous Affect (SRP-CA), Erratic Life Style (SRP-ELS), and Anti-Social Behavior (SRP-ASB). Coefficient alphas can be found in Table 1.

Elemental Psychopathy Assessment (EPA) The EPA (Lynam et al. in press) is a 178-item self-report measure designed to assess extreme variants of the Five Factor Model (FFM) traits related to psychopathy. The EPA contains scales related to four of the five FFM factors (i.e., Antagonism, Conscientiousness, Extraversion, and Neuroticism). Antagonism is assessed through six scales (i.e., Distrust, Manipulation, Self-Centeredness, Oppositionality, Arrogance, and Callousness), Conscientiousness through three scales (i.e., Disobliged, Impersistence, and Rashness), Extraversion through three scales (i.e., Coldness, Dominance, and Thrill-seeking), and Neuroticism through six scales (i.e., Unconcern, Anger, Self-contentment, Self-assurance, Urgency, and Invulnerability). The EPA also includes two validity scales: Infrequency and Too Good to be True. Coefficient alphas can be found in Table 3.

Reactive-Proactive Aggression Questionnaire (Raine et al. 2006) This scale is composed of 23 items which are rated on a 0 to 2 scale (0=never, 1=sometimes, 2=always), assessing reactive and proactive aggression. Coefficient alphas for the reactive and proactive aggression scales were .79 and .76, respectively.

Self-report Measure of Aggression and Victimization (Morales and Crick 1999) Fifteen items were used to measure relational aggression (α=.88). Items were scored on a 1 (not at all true) to 7 (very true) scale and included content such as: "I have spread rumors about a person just to be mean."

Crime and Analogous Behavior scale (CAB) The CAB is a self-report inventory that assesses a variety of externalizing behaviors, including substance use and antisocial behavior. An *alcohol use* variable was derived by computing the mean of four standardized variables (i.e., use of alcohol, current pattern of use, ever binge drinking, number of binge drinking past month). A lifetime *substance use* variety

Table 1 Intercorrelations among established psychopathy measures

	PPI-R				LSRP			SRP-III				
	Total	FD	ScI	C	Total	F1	F2	Total	IPM	CA	ELS	ASB
PPI-R	*.92*											
FD	.76*	*.93*										
IA	.78*	.22	*.89*									
C	.56*	.19	.47*	*.81*								
LSRP	.61*	.16	.74*	.54*	*.86*							
F1	.57*	.22	.57*	.58*	.92*	*.86*						
F2	.45*	−.02	.74*	.26*	.74*	.42*	*.72*					
SRP-III	.80*	.44*	.76*	.59*	.73*	.67*	.54*	*.92*				
IPM	.64*	.34*	.61*	.51*	.66*	.69*	.36*	.85*	*.84*			
CA	.62*	.28*	.59*	.66*	.58*	.56*	.40*	.80*	.60*	*.81*		
ELS	.76*	.51*	.71*	.32*	.56*	.44*	.55*	.84*	.58*	.58*	*.83*	
ASB	.43*	.19	.46*	.33*	.45*	.39*	.37*	.60*	.40*	.26*	.36*	*.70*

*$p \leq .005$; alphas (italicized) are reported along the diagonal. *T* Total; *FD* Fearless Dominance; *ScI* Self-centered Impulsivity; *C* Coldheartedness; *F1* Factor 1; *F2* Factor 2; *IPM* Interpersonal Manipulation; *CA* Callous Affect; *ELS* Erratic Lifestyle; *ASB* Antisocial Behavior

count was created by assigning participants a "1" for every substance they endorsed ever using (five items; i.e., alcohol, marijuana, cocaine, psychedelics, other hard drugs). A lifetime *antisocial behavior* count was created by assigning participants a "1" for every relevant act they endorsed (nine items; e.g., stealing). In previous studies, the CAB scales have demonstrated significant relations with psychopathy (Miller and Lynam 2003), reactive and proactive aggression (Miller and Lynam 2006), and disagreeableness (Miller et al. 2008).

Results

Correlations Among Established Psychopathy Measures

To control for type 1 error, a *p*-value of ≤.005 was chosen for all tests of statistical significance. We first examined the interrelations among the three validated self-report psychopathy measures (see Table 1). As expected, the three total scores manifested substantial convergent correlations which ranged from .61 (PPI-R–LSRP) to .80 (PPI-R–SRP-III) with a median of .73. For "factor 1" psychopathy scales, there was a much greater range of relations with correlations which ranged from .22 (PPI-R FD–LSRP F1) to .69 (LSRP F1–SRP-III IPM) with a median of .34. For "factor 2" psychopathy scales, the correlations ranged from .37 (LSRP F2–SRP-III ASB) to .74 (PPI-R ScI–LSRP F2) with a median of .55. Finally, the PPI C scale manifested correlations ranging from .19 (PPI-R FD) to .66 (SRP-III CA) with a mean of .40.

Correlations Between the EPA and the PPI-R, LSRP, and SRP-III Total Scores

We next examined the correlations between the EPA total score and subscales with the total scores from the three validated self-report measures (see Table 2). In order to summarize these findings, we also examined the mean correlations across the three measures. Individual correlations were transformed using a fisher-z transformation before being averaged; the averages were then transformed back to correlations before being reported. At the total score level, the EPA manifested significant correlations with all three psychopathy measures with a mean *r* of .72. For the 18 EPA subscales, the mean correlations ranged from −.03 (Self-contentment) to .58 (Manipulation; Thrill Seeking) with a median correlation of .34. Correlations were smallest for the EPA subscales representing low Neuroticism (i.e., Unconcern, Self-contentment, Self-assurance, and Invulnerability) and were generally highest for those assessing aspects of low Agreeableness (i.e., Manipulation, Self-centeredness, Opposition). The following EPA facets were significantly correlated with the total scores from all three extant psychopathy measures: Thrill Seeking, Manipulation, Self-centeredness, Opposition, Arrogance, Callousness, Disobliged, Impersistence, and Rashness. The scores diverged in relation to the EPA facets related to low Neuroticism, such

Table 2 Correlations between EPA scales and PPI-R, LSRP, and SRP-III total scores

Scale	α	PPI-R Total	LSRP Total	SRP-III Total	*ES*
Unconcern	.89	.54*	.10	.31*	.33
Anger/Hostility	.78	.16	.29*	.33*	.26
Self-contentment	.79	.11	−.18	−.01	−.03
Self-assurance	.84	.43*	−.04	.15	.19
Urgency	.85	.10	.30*	.23	.21
Invulnerability	.87	.42*	−.01	.23	.22
Coldness	.78	.24	.39*	.37*	.33
Dominance	.82	.48*	.20	.32*	.34
Thrill-seeking	.87	.67*	.40*	.64*	.58
Distrust	.72	.09	.34*	.33*	.26
Manipulation	.84	.56*	.51*	.65*	.58
Self-centeredness	.79	.47*	.63*	.56*	.56
Opposition	.75	.53*	.43*	.61*	.53
Arrogance	.68	.33*	.39*	.33*	.35
Callousness	.83	.45*	.41*	.54*	.47
Disobliged	.80	.37*	.41*	.40*	.39
Impersistence	.82	.26*	.34*	.32*	.31
Rashness	.82	.57*	.37*	.53*	.49
EPA total	.94	.78*	.57*	.77*	.72

*$p \leq .005$; *ES* Effect Size

that PPI-R psychopathy manifested larger correlations with EPA Unconcern, Self-assurance, and Invulnerability.

Correlations Between the EPA and the PPI-R, LSRP, and SRP-III Factors

We next examined the correlations between the EPA total score and subscales with the factor scores from the three validated self-report measures (see Table 3). The EPA total score manifested significant correlations with all eight psychopathy factors with correlations that ranged from .37 (LSRP F2) to .66 (SRP-III ELS) with a mean of .56. For the EPA subscales, the mean correlations ranged from −.02 (Self-contentment) to .46 (Manipulation, Self-centeredness) with a median of .27. The divergences between the three extant psychopathy measures "factor 1" scales become clearer with an examination of the EPA results. Most of the factor 1 measures (e.g., SRP-III IPM) were primarily correlated with the EPA subscales derived from FFM Antagonism (e.g., Arrogance, Manipulation, Opposition); the results for PPI-R Fearless Dominance were somewhat different as Fearless Dominance manifested its strongest relations with the low Neuroticism-based EPA scales (e.g., Unconcern, Self-assurance, Invulnerability). As expected, the factor 2 scales, particularly the PPI-R Self-centered Impulsivity and LSRP F2 scales manifested their largest relations with the impulsivity-related traits that were derived from FFM Conscientiousness (e.g., Rashness, Disobliged, Impersistence) and the EPA scales derived from FFM Antagonism.

Correlations Between the EPA and Externalizing Behaviors

We examined the correlations between the EPA and two indices of aggression (reactive, proactive; see Table 4), lifetime counts of antisocial behavior and substance use, as well as a measure of alcohol use. The EPA total score manifested correlations with these outcomes that ranged from .26 (substance use) to .45 (proactive aggression) with a mean of .35. At the level of the EPA subscales, mean correlations ranged from −.09 (Self-contentment) to .34 (Opposition) with a median correlation of .25. As expected, reactive aggression was most strongly related to EPA subscales linked with higher levels of Neuroticism (e.g., Anger/Hostility, Urgency), whereas proactive aggression was also related to the EPA facets related to lower levels of Agreeableness (e.g., Self-centeredness, Manipulation) and Conscientiousness (e.g., Disobliged, Rashness). For the other three indices of externalizing behavior, the EPA subscales of Opposition, Callousness, Thrill-seeking, and Disobliged all manifested significant correlations with at least two of the three outcomes.

Table 3 Correlations between EPA, PPI-R, LSRP, and SRP-III factors

	PPI-R			LSRP		SRP-III				
Scale	FD	ScI	C	F1	F2	IPM	CA	ELS	ASB	*ES*
Unconcern	.68*	.10	.38*	.17	−.08	.17	.31*	.31*	.18	.26
Anger/Hostility	−.11	.36*	.07	.14	.44*	.26*	.279*	.27*	.22	.22
Self-contentment	.34*	−.24	.15	−.02	−.37*	.02	−.05	−.06	.08	−.02
Self-assurance	.68*	.02	.02	.06	−.20	.19	.01	.14	.12	.13
Urgency	−.16	.33*	.00	.17	.41*	.17	.09	.25	.22	.17
Invulnerability	.64*	−.03	.26*	.10	−.19	.19	.27*	.21	.01	.18
Coldness	.00	.24	.58*	.39*	.24	.25	.51*	.19	.21	.30
Dominance	.58*	.18	.12	.29*	−.03	.37*	.23	.20	.19	.25
Thrill-seeking	.52*	.55*	.23	.32*	.38*	.43*	.43*	.72*	.35*	.45
Distrust	−.16	.27*	.14	.36*	.17	.39*	.25	.23	.13	.20
Manipulation	.31*	.51*	.44*	.55*	.26	.71*	.50*	.45*	.31*	.46
Self-centeredness	.17	.45*	.62*	.69*	.29*	.54*	.58*	.33*	.28*	.46
Opposition	.28*	.54*	.27*	.36*	.37*	.43*	.48*	.56*	.41*	.42
Arrogance	.24	.26*	.20	.45*	.13	.32*	.28*	.24	.17	.27
Callousness	.22	.33*	.65*	.48*	.13	.45*	.65*	.31*	.23	.40
Disobliged	.10	.39*	.45*	.34*	.37*	.22	.34*	.33*	.36*	.33
Impersistence	−.06	.46*	.18	.12	.58*	.16	.23	.34*	.27*	.26
Rashness	.32*	.59*	.20	.17	.55*	.25	.36*	.68*	.32*	.40
EPA total	.57*	.59*	.55*	.56*	.37*	.62*	.64*	.66*	.46*	.56

*$p<.01$; *FD* Fearless Dominance; *ScI* Self-centered Impulsivity; *C* Coldheartedness; *F1* Factor 1; *F2* Factor 2; *IPM* Interpersonal Manipulation; *CA* Callous Affect; *ELS* Erratic Lifestyle; *ASB* Antisocial Behavior; *ES* Effect Size

Table 4 Correlations between EPA scales and externalizing behavior scores

Scale	Reactive	Proactive	ASB	AU	SU	ES
Unconcern	−.17	.08	.07	.15	.02	.03
Anger/Hostility	.49*	.33*	.28*	.06	.12	.26
Self-contentment	−.26*	−.07	−.05	.04	−.08	−.09
Self-assurance	−.04	.06	−.02	.10	.03	.03
Urgency	.44*	.36*	.16	.23	.26*	.29
Invulnerability	−.16	−.03	.10	.06	−.06	−.02
Coldness	.09	.24	.25	.11	.08	.16
Dominance	.13	.15	.06	.11	.11	.11
Thrill-seeking	.28*	.35*	.34*	.33*	.30*	.32
Distrust	.21	.20	.35*	.18	.23	.24
Manipulation	.27*	.46*	.36*	.21	.16	.30
Self-centeredness	.14	.46*	.31*	.21	.16	.26
Opposition	.35*	.39*	.36*	.28*	.32*	.34
Arrogance	.03	.07	.03	.08	.04	.05
Callousness	.12	.40*	.33*	.26*	.20	.26
Disobliged	.17	.41*	.31*	.32*	.27*	.30
Impersistence	.20	.26*	.18	−.01	.03	.13
Rashness	.25	.38*	.30*	.25	.19	.28
EPA total	.28*	.45*	.42*	.34*	.26*	.35

*$p \leq .005$; *ASB* Antisocial Behavior; *AU* Alcohol Use; *SU* Substance Use; *ES* Effect Size

Discussion

The current study sought to test the construct validity of the Elemental Psychopathy Assessment. An important initial step in the examination of construct validity is the demonstration of convergent validity. The EPA total score manifested large correlations with total scores from three other validated psychopathy self-report measures (i.e., *mean r*=.72), suggesting that the EPA total score manifests substantial convergent validity at that level. The EPA subscales also manifested evidence of good convergent and discriminant validity via their relations with the various psychopathy factor scores from the PPI-R, LSRP, and SRP-III. For instance, the psychopathy factor 1 scales (e.g., LSRP F1, SRP-III CA, SRP-III IPM), which are typically most strongly related to FFM Agreeableness (see Lynam and Derefinko 2006 for a meta-analytic review), manifested substantial correlations with the EPA scales derived from the FFM Agreeableness domain (e.g., Manipulation, Self-centeredness). Alternatively, the various factor 2 psychopathy scores (e.g., LSRP F2, SRP-III ELS), which typically manifest equally strong relations with FFM Agreeableness and Conscientiousness, evinced substantial correlations with EPA scales derived from both of these domains. Finally, PPI-R Fearless Dominance, which appears to have different properties from either traditional factor 1 or 2 scores (e.g., Gaughan et al. 2009), manifested its largest correlations with EPA subscales related to low Neuroticism (e.g., Unconcern) and high Extraversion (e.g., Dominance), as would be expected from past research with the NEO PI-R (Derefinko and Lynam 2006; Gaughan et al. 2009).

We also tested the construct validity of the EPA by examining its criterion validity in relation to several constructs that are considered to be central to psychopathy's nomological network—aggression and externalizing behaviors (e.g., antisocial behavior, substance use). As predicted, the EPA total score manifested significant relations with reactive and proactive aggression, as well as histories of antisocial behavior, substance use, and alcohol use. Consistent with extant research using measures of normal personality (e.g. Miller and Lynam 2001), the EPA scales derived from FFM Agreeableness and Conscientiousness were among the most consistently and strongly related correlates of the externalizing behaviors. The EPA correlates for reactive aggression were somewhat different from the other aggression variables, as one would expect, in that the strongest correlates stemmed from the EPA scales associated with high Neuroticism (Anger/Hostility; Urgency) and low Agreeableness (e.g., Opposition); this finding is consistent with research examining reactive aggression from a FFM perspective (Miller and Lynam 2006).

The results of the current study also underscore concerns over inconsistencies in putatively similar psychopathy measures (e.g., Derefinko and Lynam 2006; Lilienfeld and Fowler 2006). The divergent relations between the EPA factors and the subscales from the PPI-R, LSRP, and SRP-III also indicate that there are important divergences in the psychopathy traits assessed by various self-report measures.

Of the three established psychopathy measures, the PPI-R is the one that appears to include the most content related to low levels of negative emotionality, as represented in the EPA by scales such as Self-assurance, Invulnerability, and Self-contentment. These constructs may be consistent with Cleckley's (1941) seminal description but are not found in Hare's more recent conceptualization and assessment instrument (e.g., Hare 2003). The fact that the LSRP and SRP-III contain less of this content is to be expected as the LSRP and SRP-III were developed using the PCL-R as a framework. It is important to note, however, that there is some debate regarding the importance of these traits in the assessment of psychopathy. In the current study, for example, these traits did not relate to important behavioral outcomes such as crime and aggression—a consistent finding with the PPI-R Fearless Dominance scale (e.g., Falkenbach et al. 2007; Patrick et al. 2006). Further research and debate are needed regarding the importance of these constructs to psychopathy and the prediction of behavior considered central to its nomological network.

The utility of the EPA, we believe, lies in its ability to parse psychopathy into its constituent parts, which will allow researchers to explore the nature of the relations between psychopathy and various behaviors. For example, in the current study, we found that the low Neuroticism scales (e.g., Self-contentment; Self-assurance) and high Dominance scale manifested no significant correlations with the externalizing behaviors. However, Lynam and colleagues noted that, of the 18 EPA subscales, EPA Dominance was the strongest correlate of officially recorded disciplinary infractions in a sample of male prisoners. The use of a psychopathy measure that breaks this heterogeneous construct into more unidimensional parts should prove useful to future research endeavors. As noted by Smith et al. (2009), "if one correlates a total score of a multidimensional measure with a criterion, one builds…uncertainty into one's test" because "with a single score, one cannot know the nature of the different dimensions' contribution to that score. Conceivably, an overall correlation could reflect the same magnitude of relation between each dimension and the criterion, but that may well not be true" (pp. 273–274).

Limitations and Conclusions

The current study relied on self-report assessments of psychopathy and externalizing behaviors. As a result, it is possible that many of the current correlations are inflated due to common method variance. It would have been informative to include a different assessment method of psychopathy, such as the PCL-R, for comparison. Unfortunately, assessment via the PCL-R was not a viable option in this sample due to the inability to complete a file review. It is worth noting that the EPA manifested a relatively similar effect size with official records of disciplinary infractions (e.g., r=.42) in a male forensic sample (Lynam et al. in press). The current study also used a rather homogenous sample with regard to race, education, and income, which may have also have had more limited levels of psychopathy (compared to forensic samples). Although restriction of range may be a concern when using college samples to study psychopathy, we would note that this should have served to attenuate correlations (countering the inflation due to common method variance). Despite this possible problem, psychopathy largely operated as expected in that it manifested significant correlations with aggression, antisocial behaviors, and substance use.

Overall, the findings of the current study provide evidence of the general construct validity of the EPA as a self-report measure of psychopathy. The EPA demonstrates significant overlap with other psychopathy self-reports as well as expected relations with central constructs such as aggression, antisocial behavior, and substance use. We believe the EPA holds promise for identifying the underlying personality traits that explain psychopathy's relations with a host of important constructs that make-up its nomological network.

References

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

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

Derefinko, K. J., & Lynam, D. R. (2006). Convergence and divergence among self-report psychopathy measures: a personality-based approach. *Journal of Personality Disorders, 20*, 261–280.

Falkenbach, D., Poythress, N., Falki, M., & Manchak, S. (2007). Reliability and validity of two self-report measures of psychopathy. *Assessment, 14*(4), 341–350.

Gaughan, E. T., Miller, J. D., Pryor, L. R., & Lynam, D. R. (2009). Comparing two alternative models of general personality in the assessment of psychopathy: a test of the NEO PI-R and the MPQ. *Journal of Personality, 77*, 965–996.

Gretton, H. M., Hare, R. D., & Catchpole, R. (2004). Psychopathy and offending from adolescence to adulthood: a 10-year follow-up. *Journal of Consulting and Clinical Psychology, 72*, 636–645.

Hare, R. D. (2003). *Manual for the psychopathy checklist-revised* (2nd ed.). Toronto: Multi-Health Systems.

Hare, R. D., McPherson, L. M., & Forth, A. E. (1988). Male psychopaths and their criminal careers. *Journal of Consulting and Clinical Psychology, 56*, 710–714.

Kosson, D. S., Smith, S., & Newman, J. P. (1990). Evaluation of the construct validity of psychopathy in Black and White male inmates: three preliminary studies. *Journal of Abnormal Psychology, 99*, 250–259.

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

Lilienfeld, S. O., & Fowler, K. (2006). The self-report assessment of psychopathy: problems, pitfalls, and promises. In C. J. Patrick

(Ed.), *Handbook of psychopathy* (pp. 107–132). New York: Guilford Press.

Lilienfeld, S. O., & Windows, M. R. (2005). *Psychopathic personality inventory–revised: Professional manual*. Lutz: Psychological Assessment Resources.

Lynam, D. R. (2002). Psychopathy from the perspective of the Five Factor Model. In P. T. Costa & T. A. Widiger (Eds.), *Personality disorders and the five-factor model of personality* (2nd ed., pp. 325–350). Washington: APA.

Lynam, D. R., & Derefinko, K. (2006). Psychopathy and personality. In C. J. Patrick (Ed.), *Handbook of psychopathy* (pp. 133–155). New York: Guilford Press.

Lynam, D. R., & Widiger, T. A. (2007). Using a general model of personality to identify the basic elements of psychopathy. *Journal of Personality Disorders, 21*, 160–178.

Lynam, D. R., Gaughan, E. T., Miller, J. D., Miller, D. J., Mullins-Sweatt, S., & Widiger, T. A. (in press). Assessing the basic traits associated with psychopathy: development and validation of the elemental psychopathy assessment. *Psychological Assessment*.

Miller, J. D., & Lynam, D. R. (2001). Structural models of personality and their relation to antisocial behavior: a meta-analysis. *Criminology, 39*, 765–798.

Miller, J. D., & Lynam, D. R. (2003). Psychopathy and the five-factor model of personality: a replication and extension. *Journal of Personality Assessment, 81*, 168–178.

Miller, J. D., & Lynam, D. R. (2006). Reactive and proactive aggression: similarities and differences. *Personality and Individual Differences, 41*, 1469–1480.

Miller, J. D., Lynam, D., Widiger, T., & Leukefeld, C. (2001). Personality disorders as an extreme variant of common personality dimensions: can the Five Factor Model represent psychopathy. *Journal of Personality, 69*, 253–276.

Miller, J. D., Lynam, D. R., & Jones, S. E. (2008). Externalizing behavior through the lens of the Five Factor Model: a focus on agreeableness and conscientiousness. *Journal of Personality Assessment, 90*, 158–164.

Morales, J. R., & Crick, N. (1999). Hostile attribution and aggression in adolescent peer and romantic relationships. Poster session presented at the biennial meeting of the Society for Research in Child Development, Albuquerque, NM.

Neumann, C. S., Hare, R. D., & Newman, J. P. (2007). The super-ordinate nature of the psychopathy checklist-revised. *Journal of Personality Disorders, 21*, 102–117.

Patrick, C. J., Edens, J. F., Poythress, N. G., Lilienfeld, S. O., & Benning, S. (2006). Construct validity of the psychopathic personality inventory two-factor model with offenders. *Psychological Assessment, 18*, 204–208.

Patrick, C. J., Hicks, B. M., Nichol, P. E., & Krueger, R. F. (2007). A bifactor approach to modeling the structure of the psychopathy checklist-revised. *Journal of Personality Disorders, 21*, 118–141.

Raine, A., Dodge, K., Loeber, R., Kopp, L., Lynam, D., Reynolds, C., et al. (2006). The Reactive-Proactive Aggression (RPQ) Questionnaire: differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior, 32*, 159–171.

Skeem, J. L., & Mulvey, E. P. (2001). Psychopathy and community violence among civil psychiatric patients: results from the MacArthur violence risk assessment study. *Journal of Consulting and Clinical Psychology, 69*, 358–374.

Skeem, J. L., Miller, J. D., Mulvey, E., Tiemann, J., & Monahan, J. (2005). Using a five factor lens to explore the relation between personality traits and violence in psychiatric patients. *Journal of Consulting and Clinical Psychology, 73*, 454–465.

Smith, G. T., McCarthy, D. M., & Zapolski, T. C. (2009). On the value of homogenous constructs for construct validation, theory testing, and the description of psychopathology. *Psychological Assessment, 21*, 272–284.

Taylor, J., & Lang, A. R. (2006). Psychopathy and substance use disorders. In C. J. Patrick (Ed.), *Handbook of psychopathy* (pp. 495–511). New York: Guilford Press.

Walsh, Z., Allen, L., & Kosson, D. S. (2007). Beyond social deviance: substance-specific relationships with PCL-R facets. *Journal of Personality Disorders, 21*, 273–289.

Widiger, T., & Lynam, D. (1998). Psychopathy and the five-factor model of personality. In T. Millon, E. Simonsen, M. Birket-Smith, & R. D. Davis (Eds.), *Psychopathy: Antisocial, criminal, and violent behaviors* (pp. 171–187). New York: Guilford.

Williams, K., Paulhus, D., & Hare, R. (2007). Capturing the four-factor structure of psychopathy in college students via self-report. *Journal of Personality Assessment, 88*, 205–219.