Psychopathy and Criminal Violence: The Moderating Effect of Ethnicity

Zach Walsh
University of British Columbia

This study aimed to determine the cross-ethnic stability of the predictive relationship of psychopathy for violence. Participants were 424 adult male jail inmates. Psychopathy was assessed using the Psychopathy Checklist—Revised and criminal violence was assessed using a comprehensive database of arrests for violent crimes. Ethnic categories included the groups that make up the vast majority of U.S. inmates: European American (EA, $n = 166$), African American (AA, $n = 174$), and Latino American (LA, $n = 84$). Ethnically aggregated Cox regression survival analyses identified predictive effects for psychopathy. Disaggregated analyses identified ethnic differences: Psychopathy was more strongly predictive of violence among EA ($R^2 = .13$, 95% CI [.04, .22], $p < .01$) relative to AA inmates ($R^2 = .05$, 95% CI [.00, .11], $p < .01$) and was not related to violence among LA participants ($R^2 = .02$, 95% CI [.00, .08], $p = .22$). Receiver operating characteristic curve analyses yielded an equivalent pattern of results. These findings add to a growing literature suggesting cross-ethnic variability in the predictive power of psychopathy for violence.

Keywords: psychopathy, violence, ethnicity, personality disorder

Research and practical interest in psychopathy have been fueled by a widely demonstrated relationship with violent behavior (Hare, 2003; Skeem & Cooke, 2010; Walsh & Walsh, 2006). Notable ethnic differences in the rates and correlates of criminal violence (Hawkins, 2003) and heterogeneous effect sizes for the predictive power of psychopathy for violence (Edens, Campbell, & Weir, 2007; Leistico, Salekin, DeCoster, & Rogers, 2008) beg further investigation of the stability of the predictive power of psychopathy across ethnicity. The determination of cross-ethnic stability has implications for the specification of contexts in which the psychopathy construct can be appropriately applied and may elucidate factors that influence the manifestations of psychopathic personality. To this end, this prospective study of male jail inmates compared the predictive power of psychopathy for criminal violence among the three ethnic groups that make up the vast majority

of the United States population: African American (AA), European American (EA), and Latino American (LA; U.S. Census Bureau, 2000).

Psychopathy is a personality disorder that has long been associated with transgressive behavior (Cleckley, 1941). As conceptualized by Hare's influential Psychopathy Checklist measures (Psychopathy Checklist—Revised, Hare, 2003; Psychopathy Checklist Screening Version, Hart, Cox, & Hare, 1995; Psychopathy Checklist Youth Version, Forth, Kosson, & Hare, 2003), psychopathy is characterized by a constellation of traits including impulsivity, interpersonal manipulation, and callousness. Although there is controversy surrounding the status of antisociality within the broader framework of psychopathy (Hare & Neumann, 2010; Skeem & Cooke, 2010), a strong literature attests to the relevance of the disorder for understanding violence and criminality (Douglas, Vincent, & Edens, 2006; Porter & Woodworth, 2007), and the psychopathy construct is increasingly being applied as a predictor of dangerousness (DeMatteo & Edens, 2006; Walsh & Walsh, 2006). The proposed revision to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.) to adjust the antisocial personality disorder diagnosis to more closely resemble classical conceptualizations of psychopathy prognosticates the accelerated use of the construct in this capacity (Duggan, 2011). This potential increase in practical and theoretical interest in psychopathy further heightens the importance of identifying potential ethnic differences in the clinical manifestations of psychopathic personality.

Ethnicity has been found to influence the expression and diagnosis of psychopathology in general (Garb, 1997; Loring & Powell, 1988), and evidence suggests ethnic differences in the diagnosis and prevalence of personality disorders (Chavira et al., 2003; Iwamasa, Larrabee, & Merritt, 2000). With regard to psychopathy, equivalent levels and structure have been reported for EA and AA men (Jackson, Neumann, & Vitacco, 2007; Kosson, Smith, & Newman, 1990; McCoy & Edens, 2006; Skeem, Edens, Camp, & Colwell, 2004; Sullivan, Abramowitz, Lopez, & Kosson, 2006;

Sullivan & Kosson, 2006). A study of EA and AA males that tested the cross-ethnic consistency of many theoretically important correlates of psychopathy reported that ethnic differences were scarce and small: Substance use problems were associated with psychopathy among EA but not among AA males, whereas equivalent patterns of associations were identified for diverse adult and childhood factors such as parental punishment, delinquency, education, and antisociality (Vachon, Lynam, Loeber, & Stouthamer-Loeber, 2012). The few studies of psychopathy among LA men also report general similarity to EA and AA men (Sullivan et al., 2006; Windle & Dumenci, 1999). However, this apparent stability of measurement across ethnicity does not indicate equivalence with regard to other correlates (Jackson et al., 2007; Skeem, Edens, Sanford, & Colwell, 2003), and calls have been made for the routine consideration of ethnicity in psychopathy research (Walsh, Swogger, & Kosson, 2004).

The cross-ethnic and cross-cultural stability of the association between psychopathy and violence has not been definitively determined. A review of studies from North America and Europe reported positive associations between psychopathy and violence across nations (Hare, Clark, Grann, & Thorton, 2000). However, a more recent meta-analysis indicated stronger relationships in Canadian and European versus U.S. samples (Leistico et al., 2008). Studies of ethnic differences within nations also have produced equivocal findings. Meta-analyses of adults identified positive associations between proportion of Caucasians and predictive power of psychopathy and have therefore called for caution in the practical application of psychopathy as a predictor of violence (Leistico et al., 2008; Singh, Grann, & Fazel, 2011), and a meta-analysis of adolescent studies indicated a similar pattern of results (Edens et al., 2007). In contrast, prospective and cross-sectional studies of U.S. inmates generally have reported equivalent associations with violence among EA and AA adults (Walsh & Kosson, 2007; Walsh et al., 2004) and adolescents (Edens & Cahill, 2007; but see also Vitacco, Neumann, & Caldwell, 2010). Although prior studies have examined both EA and AA men, the only prior examination to include LA men in a direct comparison of ethnic differences in associations between psychopathy and violence reported relative ethnic consistency for relationships with past violence (Sullivan et al., 2006). However, the prominence of antisocial behavior in the assessment of psychopathy may obscure the postdiction of violence (Douglas et al., 2006), which thereby complicates the interpretation of those findings. In sum, evidence pertaining to the cross-ethnic stability of the association between psychopathy and violence is equivocal and points to the need for more specific examination.

Several factors have been advanced to explain ethnic differences in predictors of violence. Cultural differences in familial organization and kinship attitudes have been proposed to underlie differing patterns of association between violence and risk factors such as impulsivity and interpersonal instability among Asian American, Native Hawaiian American, and European American psychiatric patients (Fujii, Tokioka, Lichton, & Hishinuma, 2005). Similarly, an examination of ethnicity and predictors of recidivism among Nordic European and African/Asian European sexual offenders alluded to low social support and familial abuse history to explain ethnic variation in the predictive power of actuarial risk assessment measures (Långström, 2004).

Structural approaches to understanding ethnic differences in violent crime propose that ethnicity may be best understood as a marker for sociodemographic contexts, including but not limited to socioeconomic status (Sampson, Morenoff, & Raudenbush, 2005). Exposure to sociodemographic risk factors has been found to mute the effects of individual-level predictors (Raine, Reynolds, Venables, & Mednick, 1997; Raine & Venables, 1981). As such, it is possible that the predictive power of individual differences in levels of psychopathy might vary according to ethnic differences in sociodemographic risk factors (e.g., socioeconomic status, unemployment, residence in a criminogenic neighborhood; Raine, 2002). Specifically, exposure to criminogenic sociodemographic factors might exert a relatively greater effect on lower psychopathy individuals, thus attenuating the apparent predictive power of psychopathy. In consideration of this possibility, and based on precedents from prior literature (Edens et al., 2007; Leistico et al., 2008; Singh et al., 2011), I expected that the predictive relationship between psychopathy and violence would be relatively greater among EA compared with non-EA participants.

Method

Participants

Inmates were contacted randomly from the jail roster and invited to participate. Those who reported taking psychotropic medication or who could not read English were excluded. Of those invited, approximately 70% agreed to participate. Participants were paid and provided written informed consent to participate. The university institutional review board approved the study. A total of 463 participants met study criteria; of these, 39 (8.42%) were excluded because of missing data. The remaining 424 subjects consisted of 166 EA, 174 AA, and 84 LA inmates in a northeastern Illinois county jail. Participant characteristics are presented in Table 1. The sample partially overlaps with the sample used in a prior examination of ethnicity and psychopathy (Sullivan et al., 2006); of the 424 participants in the present study, 169 (39.86%) were included in the prior study. The present study predicted prospective violence, whereas the prior study postdicted historical violence. This distinction is particularly important given concerns of criterion contamination associated with the concurrent assessment of psychopathy and retrospective violence.

Psychopathy

Psychopathy was assessed by trained raters using the Psychopathy Checklist—Revised (PCL–R; Hare, 2003) between January 1995 and July 2001 based on interview and review of institutional files. The PCL–R is the most widely used and well-validated tool for assessing psychopathy in adults (Hare et al., 2000; Hare & Neumann, 2010). Two raters were present for 23% of the psychopathy assessment interviews. Interrater reliability for the PCL–R was acceptable (two-way mixed model intraclass r with measures of consistency = .86), as was Cronbach's alpha, α = .83. The mean PCL–R score for the sample was 23.21 (SD = 7.11); of these, 88 participants (20.75%) scored in the high-psychopathy range ($\geq$30), and 140 (33.00%) scored in the low range ($\leq$20; Hare, 2003). PCL–R total and facet scores are reported by ethnicity in Table 1.

Table 1
Demographics and Psychopathy by Ethnicity

Variable	AA ($n = 174$)		EA ($n = 166$)		LA ($n = 84$)		$F(2, 421)$
	M	SD	M	SD	M	SD	
PCL–R total	23.08	7.36	23.31	6.94	23.30	7.00	0.05
Interpersonal facet	4.35	2.18	4.35	2.35	4.03	2.05	0.73
Affective facet	4.96	1.95	4.96	2.06	4.95	1.77	<0.01
Impulsive facet	6.09	2.20	6.36	2.11	6.09	2.04	0.83
Antisocial facet	6.09	2.45	6.19	2.39	6.62	2.28	0.25
Education (years)	11.36[l]	1.60	11.40[l]	1.89	10.43[ea]	1.66	10.19[**]
Age (years)	26.31[l]	6.50	25.87[l]	6.66	23.31[ea]	5.61	6.58[**]
Prior violent arrests	3.12[e]	3.57	2.14[a]	2.61	2.39	2.52	4.64[*]

Note. AA = African American; EA = European American; LA = Latino American; PCL–R = Psychopathy Checklist—Revised. Lower case superscript letters indicate between-groups differences: l = difference from the LA group; e = difference from the EA group; a = difference from the AA group.
[*] $p < .05$. [**] $p < .01$.

There is debate regarding whether PCL–R scores best conform to a hierarchical two-factor/four-facet model that includes dimensions of (a) interpersonal manipulation, (b) callous affect, (c) impulsive irresponsibility, and (d) antisociality, versus a three-factor model that omits antisociality (Cooke & Michie, 2001; Hare, 2003). Some studies have reported good fit for both models (Neumann, Kosson, Forth, & Hare, 2006; Neumann, Vitacco, Hare, & Wupperman, 2005; Vitacco, Rogers, Neumann, Harrison, & Vincent, 2005), whereas other studies have reported good findings for the three-factor model only (Cooke, Michie, Hart, & Clark, 2004). This debate is germane to the prediction of violence, as the inclusion of antisociality has been proposed to contaminate assessment and prediction by measuring consequences rather than symptoms of the disorder (Cooke et al., 2004). To address this concern, I calculated a total score based on the three-factor model for use in supplementary analyses; the mean for this adjusted PCL–R was 15.40 ($SD = 4.93$). To allow more fine-grained examination of the predictive power of psychopathy subcomponents, I conducted further supplementary analyses that tested the predictive power of psychopathy facets for violence.

Ethnicity

Status as EA, AA, or LA was based on classifications in the jail roster, which was based on self-report.

Criminal Violence

Recidivism was coded based on the Law Enforcement Agencies Data System database, which combines state-level and national records to provide the most comprehensive available national index of U.S. criminal arrests. Arrest for a violent crime was the criterion of interest. Violent crimes included robbery, domestic battery, assault, murder, weapons crimes, sex crimes other than indecent exposure and failure to register, kidnapping, and arson. Time to incident was measured in months. Time to incident was adjusted to reflect incarceration during the follow-up period for reasons other than a new violent offense.

Statistical Analysis

Recent evidence suggests that psychopathy is most appropriately conceptualized as dimensional (Edens, Marcus, Lilienfeld, &

Poythress, 2006; Guay, Ruscio, Knight, & Hare, 2007; Walters et al., 2007). The primary analyses used Cox regression to analyze survival data with continuous variables. Because psychopathy can also be examined categorically and to allow for graphical representation of survival curves, I conducted extreme-group Kaplan Meier survival analyses. Extreme groups of high and low psychopathy were constructed based on established PCL–R cutoff scores of 20 and below for membership in the low-psychopathy group and 30 and above for membership in the high-psychopathy group (Hare, 2003). To construct groups that were large enough to allow for reliable comparisons, I combined AA and LA participants into a non-EA category for extreme-group analyses. Extreme-group comparisons examined differences between high- and low-psychopathy groups among the following four groups: non-EA low psychopathy ($n = 85$), non-EA high psychopathy ($n = 53$), EA low psychopathy ($n = 55$), and EA high psychopathy ($n = 35$). Participants with psychopathy scores falling within the middle range were omitted from extreme group analyses. Parallel analyses of continuous psychopathy score were conducted using receiver operating characteristic (ROC) curves to determine whether results were consistent in analyses that were not affected by group differences in base rates of reoffending (Mossman, 1994).

Results

The mean survival time for the entire sample was 65.85 months ($SE = 2.66$), and 57% of participants were arrested for a violent offense. Ethnic groups differed with regard to violence such that AA status was associated with higher risk relative to EA status, $R^2 = .05$, 95% CI [.01, .09], Wald $\chi^2(1, N = 340) = 15.71$, Exp($B$) = 1.80, $p < .01$, and no difference relative to LA status, $R^2 < .01$, 95% CI [.00, .01], Wald $\chi^2(1, N = 258) = 0.39$, Exp($B$) = 1.11, $p = .54$. Comparison of LA and EA groups indicated that LA status was associated with increased risk of violence, $R^2 = .03$, 95% CI [.00, .07], Wald $\chi^2(1, N = 250) = 7.09$, Exp($B$) = 1.61, $p < .01$.

Continuous analyses aggregated across ethnicity indicated that psychopathy predicted violence, $R^2 = .06$, 95% CI [.02, .10], Wald $\chi^2(1, N = 424) = 26.83$, Exp($B$) = 1.05, $p < .01$. Disaggregated analyses (see Table 2) indicated that psychopathy predicted violence among EA and AA but not LA participants. Pairwise analyses by ethnicity identified a Psychopathy × Ethnicity interaction

Table 2
Univariate Prediction of Violence by Ethnicity

Predictor	AA (*n* = 174)					EA (*n* = 166)					LA (*n* = 84)				
	β	*SE*	R^2	95% CI	Sig.	β	*SE*	R^2	95% CI	Sig.	β	*SE*	R^2	95% CI	Sig.
PCL–R total	.04	.01	.05	[.00, .11]	<.01	.08	.02	.13	[.04, .22]	<.01	.02	.02	.02	[.00, .08]	.22
Interpersonal facet	.05	.04	.01	[.00, .03]	.26	.09	.05	.02	[.00, .06]	.07	.06	.07	.01	[.00, .05]	.39
Affective facet	.14	.05	.05	[.00, .11]	<.01	.14	.06	.03	[.00, .08]	.02	.01	.08	<.01	[.00, .02]	.91
Impulsive facet	.06	.04	.01	[.00, .03]	.14	.16	.06	.05	[.00, .11]	<.01	.12	.07	.04	[.00, .12]	.08
Antisocial facet	.17	.04	.09	[.01, .17]	<.01	.29	.06	.17	[.07, .27]	<.01	.13	.06	.05	[.00, .14]	.05

Note. AA = African American; EA = European American; LA = Latino American; R^2 = Cox and Snell R^2; PCL–R = Psychopathy Checklist—Revised.

for EA and AA participants in the prediction of violence that approached significance, $R^2 = .01$, 95% CI [.00, .03], Wald $\chi^2(1, N = 340) = 3.53$, Exp(*B*) = 1.04, *p* = .06. The Psychopathy × Ethnicity interaction also approached significance among EA and LA participants, $R^2 = .01$, 95% CI [.00, .03], Wald $\chi^2(1, N = 250) = 3.62$, Exp(*B*) = 0.95, *p* = .06. Both interactions reflect the greater predictive power of psychopathy among EA participants relative to AA and LA participants. Analyses including AA and LA participants indicated that the Psychopathy × Ethnicity interaction did not add to the prediction of violence, $R^2 < .01$, 95% CI [.00, .02], Wald $\chi^2(1, N = 254) = 0.23$, Exp(*B*) = 0.99, *p* = .63. Analyses that compared aggregated non-EA participants with EA participants identified a Psychopathy × Ethnicity interaction, $R^2 = .01$, 95% CI [.00, .03], Wald $\chi^2(1, N = 424) = 4.35$, Exp(*B*) = 1.04, *p* = .04, indicating stronger prediction among EA participants. Supplementary continuous analyses in which PCL–R scores were adjusted to omit the Antisocial facet reflected an equivalent pattern of results: Psychopathy predicted violence most strongly among EA participants, $R^2 = .06$, 95% CI [.00, .13], Wald $\chi^2(1, N = 166) = 9.56$, Exp(*B*) = 1.08, *p* < .01. The association was weaker among AA participants, $R^2 = .03$, 95% CI [.00, .08], Wald $\chi^2(1, N = 174) = 4.94$, Exp(*B*) = 1.04, *p* = .03, and was not evident among LA participants, $R^2 = .02$, 95% CI [.00, .08], Wald $\chi^2(1, N = 84) = 1.34$, Exp(*B*) = 1.04, *p* = .25. Facet-level results (see Table 2) mirror results from total scores, in that predictive power appeared to be most broad among EA participants, with three of the four facets predicting violence, compared with AA participants for whom only the Affective and Antisocial facets were predictive, and with LA participants, among whom only the Antisocial facet was predictive of violence. Examination of Facet × Ethnicity interactions identified trends toward significant findings for the greater predictive power for the Antisocial facet among EA relative to AA participants, $R^2 = .01$, 95% CI [.00, .03], Wald $\chi^2(1, N = 340) = 3.18$, Exp(*B*) = 1.13, *p* = .07, and among EA relative to LA participants, $R^2 = .01$, 95% CI [.00, .03]), Wald $\chi^2(1, N = 250) = 3.28$, Exp(*B*) = 1.14, *p* = .07. No other Facet × Ethnicity interactions approached significance, all Wald χ^2s < 2.00, *p*s > .10.

Extreme-group analyses aggregated across ethnicity revealed expected effects for psychopathy: The high-psychopathy group recidivated at a higher rate than the low-psychopathy group, $R^2 = .08$, 95% CI [.01, .15], Wald $\chi^2(1, N = 228) = 20.17$, Exp(*B*) = 2.28, *p* < .01; 40.71% of the low group recidivated, mean survival time = 73.87 months (*SE* = 3.78), compared with 71.59% of the high-psychopathy group, mean survival time = 49.01 months (*SE* = 5.00). The survival curves (see Figure 1) and pairwise

comparisons (see Table 3) from disaggregated extreme-group analyses also mirror the results of the continuous analyses: High- and low-psychopathy groups differed most strongly among EA participants and less strongly among non-EA participants. Conversely, EA participants differed from non-EA participants at lower levels of psychopathy but exhibited no differences at higher levels of psychopathy.

ROC analyses yielded a pattern of results that was similar to the results produced by the survival analyses: PCL–R scores were predictive among EA participants, area under the curve (AUC) = .71, *SE* = .04, 95% CI [.63, .78], *p* < .01, and among AA participants, AUC = .65, *SE* = .04, 95% CI [.57, .74], *p* < .01, but were unrelated to violence among LA participants, AUC = .57, *SE* = .07, 95% CI [.43, .70], *p* = .32. Pairwise comparisons (Hanley & MacNeil, 1982) examining ethnic differences in predictive power indicated that the AUCs differed between EA and LA participants, *Z* = 1.83, *p* = .07, whereas AA participants did not differ from EA participants, *Z* = 0.85, *p* = .39, and AA participants did not differ from LA participants, *Z* = 1.16, *p* = .24.

Discussion

This study assessed ethnic differences in the predictive power of psychopathy for violence among male offenders in the United States. At the aggregate level, these findings are generally consistent with prior research: Psychopathy predicted criminal violence with a medium-size effect (Cohen, 1988). However, ethnic aggregation masked variability in the predictive power of psychopathy for violence. Specifically, psychopathy was more strongly predictive among EA relative to AA men and was not predictive among LA men. The present findings add to a growing literature that suggests limitations on the cross-ethnic generalizability of the relationship between psychopathy and violence (Edens et al., 2007; Leistico et al., 2008; Singh et al., 2011).

Psychopathy explained approximately 13% of the variance in arrest among EA participants, which is consistent with the larger effects reported for psychopathy predicting violence (Gendreau, Goggin, & Smith, 2002; Hemphill, Hare, & Wong, 1998; Walters, 2003). Although this relatively strong effect (Cohen, 1988) is consistent with meta-analyses of largely non-U.S. studies, it is notably larger than the relatively small effects ranging from $R^2 = .02$ to .04 reported in a prior U.S. study (Walsh & Kosson, 2007). This discrepancy might reflect different criteria for violence; I examined arrest rather than the conviction criteria employed in the prior study. Increased power due to this more sensitive criterion might account for the observed differences. Facet-level analyses
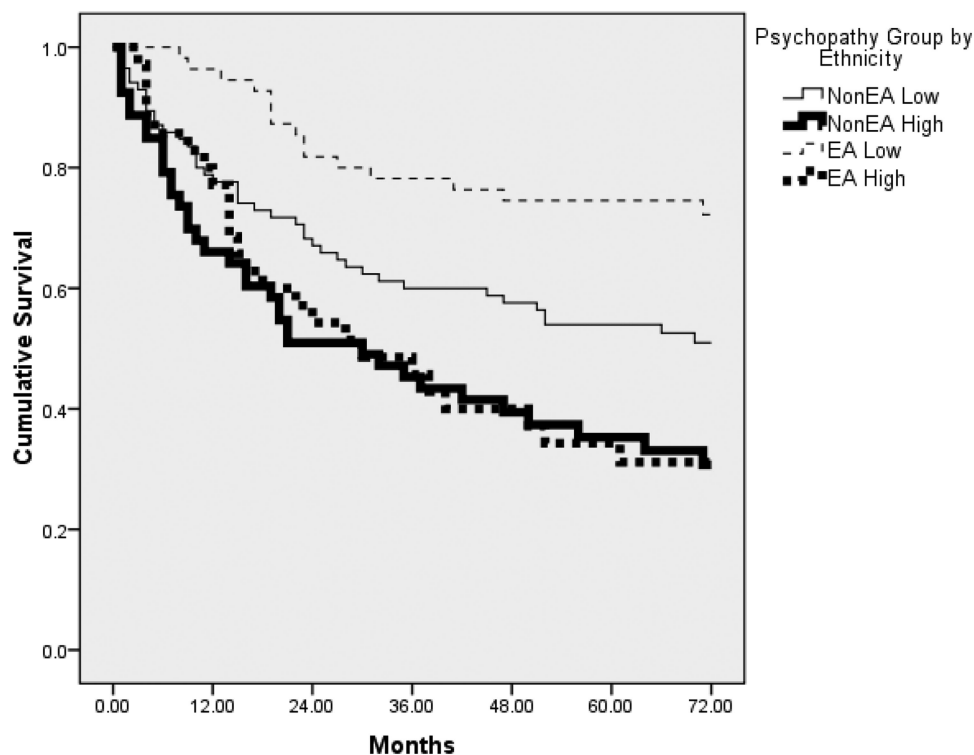
Figure 1. Months to arrest for high- and low-psychopathy groups by ethnicity. Months = months to arrest for a violence offense; Cumulative survival = proportion of group that has not been arrested. Low psychopathy = scores ≤ 20 on the Psychopathy Checklist—Revised; High psychopathy = scores ≥ 30 on the Psychopathy Checklist—Revised; Non-EA = African American and Latino American; EA = European American; Wald's chi-square = χ^2 value for the difference between groups. Non-EA low psychopathy $n = 85$; non-EA high psychopathy $n = 53$; EA low psychopathy $n = 55$; EA high psychopathy $n = 35$.

among EAs indicated that the Affective, Impulsive, and Antisocial facets, but not the Interpersonal facet, predicted violence. The apparent lack of association between violence and the interpersonally manipulative features of psychopathy is consistent with recent findings regarding general violence (Dolan, Castle, & McGregor, 2012; Wallinius, Nilsson, Hofvander, Anckarsäter, & Stålenheim, 2012); however, this trend should be considered in light of several

Table 3
Comparisons of High- and Low-Psychopathy Groups by Ethnicity

Group	Non-EA high psychopathy		EA low psychopathy		EA high psychopathy	
	Wald χ^2	Φ	Wald χ^2	Φ	Wald χ^2	Φ
Non-EA low psychopathy	5.17[*]	.19	7.53[**]	.23	2.67	.15
Non-EA high psychopathy			22.00[**]	.45	0.19	.05
EA low psychopathy					18.57[**]	.45

Note. Non-EA = African American and Latino American; EA = European American; Low psychopathy = scores ≤ 20 on the Psychopathy Checklist—Revised; High psychopathy = scores ≥ 30 on the Psychopathy Checklist—Revised; Wald chi-squre = χ^2 value for the difference between groups; Φ = phi effect size for the difference. Non-EA low psychopathy $n = 85$; non-EA high psychopathy $n = 53$; EA low psychopathy $n = 55$; EA high psychopathy $n = 35$.
[*] $p < .05$.　[**] $p < .01$.

studies that report an important role for such features in predicting the predatory and instrumental subcategories of violence (Vitacco, Neumann, Caldwell, Leistico, & Van Rybroek, 2006; Walsh, Swogger, & Kosson, 2009; Declercq, Willemsen, Audenaert, & Verhaege, 2012). Facet-level results are also largely consistent with recent research that highlights the relative importance of the antisocial features for predicting violence (Wallinius et al., 2012; Walters & Heilbrun, 2010); among EAs, the facet that captures antisociality accounted for several times more variance in future violence than did any other facet.

Psychopathy explained less than half the proportion of variance in violence among AA compared with EA participants. This is consistent with reports of an inverse association between proportion of the sample that is non-EA and the magnitude of the predictive power of psychopathy (Edens et al., 2007; Leistico et al., 2008; Singh et al., 2011). Indeed, my examination within non-EA inmates identified no difference in the predictive power of psychopathy between AA and LA inmates, which suggests that the attenuated predictive power of psychopathy is not distinct to AAs and may be shared with other non-EA populations. However, my findings for AA offenders diverge from the reports of a prospective U.S. study that found that the main effect of psychopathy was relatively stable across adult EA and AA inmates (Walsh & Kosson, 2007). Given this discrepancy and the dearth of additional

evidence bearing on this issue, the current state of empirical knowledge does not appear to warrant equivalent levels of confidence in the predictive utility of psychopathy for violence among adult male AA offenders relative to EA offenders.

Examination at the facet level identified predictive relationships with both the antisocial and the callous unemotional features of psychopathy and indicated that these observed differences in predictive power for the PCL–R are primarily attributable to attenuated predictive power for antisociality among AAs relative to EAs. The finding that the impulsive and irresponsible features did not predict violence among AAs is somewhat surprising, but is consistent with prior studies that have identified divergent patterns of associations between psychopathy and impulsivity as a function of ethnicity (Jackson et al., 2007; Kosson et al., 1990), and more broadly with studies reporting differences between EAs and AAs on laboratory measures of mechanisms thought to underlie psychopathy (Doninger & Kosson, 2001; Lorenz & Newman, 2002), More specifically, my findings of attenuated predictive power for antisocial and impulsive features among AAs are consistent with the results of a meta-analysis that identified attenuated predictive power for the PCL–R total and Factor 2 scores (i.e., Affective and Antisocial facets) among non-EA compared with EA men (Leistico et al., 2008).

The finding that psychopathy was unrelated to violence among LA participants is surprising given findings of associations between psychopathy and violence across diverse populations. My findings also appear to be inconsistent with those of a prior study that examined the relationship between criminal violence and psychopathy among LA inmates. That study (Sullivan et al., 2006) estimated historical violence from self-report and incomprehensive jail records. However, the interpretation of those findings is complicated by the retrospective assessment of violence, which raises concerns of criterion contamination (Douglas, Guy, Edens, Boer, & Hamilton, 2007). In contrast, the present study assessed charges prospectively based on a review of national criminal records. These discrepant findings suggest that the relationship between psychopathy and violence among LA offenders is not consistent.

LA offenders are understudied (Martinez, 2003), and as such the explication of factors that might explain apparent differences in correlates of violence between LA and non-LA offenders is largely conjectural. Nonetheless, prior research has identified some areas in which LA offenders might differ from their EA and AA counterparts. For example, factors related to immigration may be particularly important for understanding LA crime (Sampson et al., 2005), and there is evidence for differential effects of socioeconomic deprivation on violence among LA relative to non-LA populations (Martinez, 1996; Zahn, 1987). It is possible that differential effects of risk factors such as these may have masked the observed effects of psychopathy. Alternatively, the observed differences might reflect distinctive expressions of psychopathy among LA individuals. Prior research has reported that psychopathy was unrelated to impulsivity and passive avoidance learning deficits among LA individuals (Thornquist & Zuckerman, 1995), and given the dearth of research that has examined external correlates of psychopathy among LA individuals, this failure to replicate relationships that have been widely documented in EA psychopaths provides a partial precedent for my findings. However, pending future research that better elucidates the distinctive manifestations of psychopathy among LA individuals, and in light

of the growing presence of LA individuals in the criminal justice system, the present findings highlight the need for further examination of the construct validity of psychopathy among LA individuals. From a risk assessment perspective, it is important to note that the predictive utility of scores on the PCL–R do not currently enjoy equivalent empirical support among LA relative to EA men.

Examination of extreme groups provides a foundation for speculation regarding the factors that underlie the apparent attenuation of the predictive power of psychopathy among non-EA participants. Analyses that were restricted to high- and low-psychopathy groups revealed that rates of violence were strikingly similar across ethnicity among the high-psychopathy groups: 74% among EA and 70% among non-EA, whereas pronounced ethnic differences were evident among the low-psychopathy groups, with a recidivism rate of 27% for EAs compared with 49% for non-EAs. To the extent that ethnicity is associated with sociodemographic risk, the proposal that sociodemographic risk factors mute individual differences (Raine, 2002) appears to be congruent with my findings of attenuated associations between psychopathy and violence among non-EA relative to EA participants. Specifically, criminogenic factors other than psychopathy may be differentially influencing low-psychopathy EA and non-EA offenders, such that higher recidivism rates among the non-EA low-psychopathy group attenuated the observed effects of psychopathy. Although the present study was not designed to directly test the influence of sociodemographic correlates of ethnicity, future studies that match EA, AA, and LA participants on other known predictors of violence such as abuse history, neighborhood factors, socioeconomic status, and family structure might be helpful for further distinguishing the predictive power of psychopathy for violence across ethnicity. Research that directly examines the influence of sociodemographic factors such as neighborhood and individual socioeconomic status across ethnicity may also be particularly helpful for parsing the complex nexus of ethnicity, socioeconomic status, personality, and violence.

Differences in measurement may also contribute to apparent ethnic differences in the association between psychopathy and violence. A meta-analysis of several prominent predictors of risk, including psychopathy, reported stronger prediction among EA compared with non-EA samples, and noted that most measures used in risk assessments were calibrated on primarily EA samples (Singh et al., 2011). However, the PCL–R is a clinical personality measure rather than a risk assessment tool (Hemphill & Hare, 2004), which limits the implications of these prior results for psychopathy. Nonetheless, future studies that employ alternative measures of psychopathy (i.e., Comprehensive Assessment of Psychopathic Personality, Kreis & Cooke, 2011; Psychopathic Personality Inventory, Lilienfeld & Andrews, 1996) would be helpful for determining the extent to which ethnic differences in associations with violence are related to differential validity of assessment.

The survival rates in the current sample are consistent with official estimates of national rates of violence (Langan & Levin, 2002), and are also consistent with widely reported ethnic differences in U.S. crime rates; AA participants demonstrated higher rates of arrest for violent crime relative to EA participants, with LA participants at an intermediate level (Harrison & Beck, 2002; Pew Center on the States, 2008). That my findings at the aggregate level are largely consistent with prior research adds to confidence in the representativeness of my sample. Confidence in the validity

of these findings is further enhanced by a number of methodological strengths, including prospective design, a large sample, combined interview and file-based assessment of psychopathy, and a comprehensive review of official records of criminal violence.

The study is also marked by several important limitations. First, the index of violence was limited to acts leading to police involvement. Many violent acts go unnoticed by law enforcement, and as such the index of violence likely underestimated the true prevalence of violent behavior in the sample (Maltz, 2001). Replication of the findings with interview or self-report indices of violence would add to confidence that the findings generalize to violent behavior beyond that which attracts police attention. Second, psychopathy was measured by a single measure. The PCL–R remains the best validated instrument for assessing psychopathy (Hare & Neumann, 2010); however, future research that supplements the PCL with complementary measures of psychopathy (i.e., Kosson, Steuerwald, Forth, & Kirkhart, 1997; Lilienfeld & Andrews, 1996) might further refine assessment. Third, the measurement of ethnicity is limited by the widely used but overly broad categories of EA, AA, and LA, each of which captures distinct subgroups. To the extent that I identified differences between ethnic groups, I may have overlooked within-group variation. This possibility is particularly salient among the LA participants, as I did not assess several potentially important differences such as foreign versus U.S. birth and region of ancestry (Martinez, 2003). Moreover, my sample of LA participants was limited to English speakers and as such the extent to which the results generalize to non–English-speaking LAs is unknown. Future research that includes more detailed assessment of ethnic subgroups might add to our understanding of apparent ethnic variance. Also, given distinctive national elements of ethnic identities within nations, the extent to which these findings might generalize outside of the United States is not clear. Finally, I was not able to gather data on inmates who declined to participate; thus, I was unable to rule out the possibility of a selection bias that might limit the generalizability of the results. Nonetheless, the present findings provide broad support for the consideration of ethnicity in the study of psychopathy and violence.

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