

Recent studies suggest that two higher-order dimensions, each composed of two correlated facets, underlie variation in psychopathy scores [Hare, 2003], with Factor one composed of distinct interpersonal and affective facets, and Factor two composed of lifestyle and antisocial facets. In this model, the interpersonal facet consists of items related to arrogance and a deceitful and manipulative interpersonal style. The affective facet assesses a deficiency of affective experience, including a lack of empathy. The lifestyle facet is composed of items that assess a tendency toward impulsivity and irresponsibility. The antisocial facet consists of items related to juvenile and adult antisocial behavior. The two-factor, four-facet model permits a more fine-grained examination of the relationships between criteria and specific dimensions underlying psychopathy than prior PCL-R models. Moreover, the facets appear to display distinct relationships to different indices of violent and antisocial behavior [Hare, 2003; Vitacco et al., 2005] and to the instrumentality of violent offenses [Walsh et al., 2003].

Relationships between psychopathic tendencies and domestic violence have been found using self-report personality measures [Gondolf and White, 2001], and prevalence estimates of psychopathy among batterers range from 15 to 30% [Huss and Langhinrichsen-Rohling, 2000]. The utility of psychopathy as both a descriptive and predictive construct has led to calls for greater use of the PCL-R in research on batterers [Huss and Langhinrichsen-Rohling, 2000]. However, few studies of batterers have incorporated the PCL-R. Hilton et al. [2001] found lower PCL-R scores among wife assaulters than nonassaulters in a psychiatric offender sample. Interpretation of their findings is constrained, however, by the prevalence of comorbid mental illness among participants and the failure to utilize batterer subtypes. In contrast, Grann and Wedin [2002] found that higher scores on PCL-R-assessed psychopathy positively predicted recidivism among individuals convicted of spousal assault.

The increased use of batterer typologies in empirical studies has refined our understanding of domestic violence [Holtzworth-Munroe et al., 2003; Langhinrichsen-Rohling et al., 2000]. Holtzworth-Munroe and Stuart [1994] proposed a batterer typology that included subgroups of batterers characterized by distinct behavioral and personality profiles, including family-only (FO), borderline/dysphoric (BD), and generally violent/antisocial (GVA) batterers. Among these theoretically-derived subgroups, FO batterers were hypothesized to be

least likely to engage in violence outside the home and to exhibit lower levels of psychopathology than members of the other groups. BD batterers were proposed to exhibit greater severity of violence than FO batterers, along with significant emotional dysregulation and attachment difficulties. The GVA batterer subtype was proposed to consist of GVA individuals characterized by a combination of personality traits including impulsivity and lack of empathy, and prone to considerable violence within and outside of the home. Subsequent research [Dixon and Browne, 2003; Holtzworth-Munroe et al., 2000] has provided evidence for the reliability of the Holtzworth-Munroe and Stuart [1994] typology.

Although Holtzworth-Munroe et al. [2003] hypothesized that GVA batterers resemble other generally antisocial individuals, the constellation of personality and behavioral traits associated with GVA batterers bears a notable similarity to core features of psychopathy [Cleckley, 1976]. However, the extent to which antisocial batterers resemble other antisocial offenders with regards to psychopathy or psychopathic traits has not been established.

The intimate nature of domestic violence suggests that antisocial batterers may be characterized by greater callousness and poorer empathy than other antisocial offenders who direct violence only toward individuals outside the home. Both callousness and lack of empathy are prominent features of the affective dimension of psychopathy, commonly labeled deficient affective experience. Clinical observations [e.g., Dutton, 2003] and prior empirical investigations [e.g., Holtzworth-Munroe et al., 2000; Umberson et al., 2003] have also tentatively identified emotional deficits in batterers including lack of empathy, lack of remorse, and deficient emotional expression. On the basis of these findings, we hypothesized that higher scores on the PCL-R affective facet would distinguish batterers from other offenders without a history of charges for domestic violence.

Impulsivity has been identified as important to understanding individual differences in violent behavior in general and domestic violence in particular [Holtzworth-Munroe and Stuart, 1994]. Impulsivity is also a prominent feature of the lifestyle facet of psychopathy, and antisocial batterers have been characterized by high levels of impulsivity relative to other batterer groups [Holtzworth-Munroe et al., 2003]. However, high levels of impulsivity may contribute to increased violence across a wide range of situations, and given that antisocial individuals are generally prone to

impulsive behavior [DSM-IV-TR, American Psychiatric Association, 2000], it is not clear that antisocial batterers are more impulsive than other antisocial offenders. On the contrary, given reports that antisocial batterers tend to commit instrumental rather than impulsive domestic violence [Chase et al., 2001; Tweed and Dutton, 1998], antisocial batterers may be characterized by less impulsivity and greater premeditation than other antisocial individuals. The current study aimed to distinguish between the conflicting possibilities of higher versus lower levels of impulsivity among antisocial batterers relative to other antisocial individuals.

We designed this study to extend prior research on the personality correlates of domestic violence by employing a reliable measure of psychopathy to refine our understanding of the relationship between psychopathy and domestic violence. Specifically, we examined the unique contributions of the facets of psychopathy to postdicting batterer status. We restricted our sample to antisocial batterers (batterers) and analogous antisocial offenders without a history of charges for domestic violence (non-batterers). Restricting our analyses to these groups allowed us to interpret our results in light of the more refined understanding of the personality and behavioral correlates of domestic violence provided by investigating specific subtypes of batterers. Restricting our sample to antisocial offenders also reduced the confounding impact of general antisociality on our results. To further reduce the influence of general criminality, analyses were conducted after controlling for the number of prior violent offenses other than domestic battery.

In light of the established relationship between psychopathy and general violence, we aimed to determine whether psychopathy (i.e., PCL-R total scores) would postdict batterer versus non-batterer status. We also aimed to determine the extent to which commission of domestic battery was related to individual differences in impulsivity captured by the lifestyle facet of the PCL-R. We predicted that batterers would be characterized by higher scores on the affective facet of the PCL-R. We made no predictions regarding the interpersonal and antisocial facets of psychopathy.

METHOD

Participants

Participants were 211 European American and African American male inmates at a county jail near Chicago. All participants exhibited antisocial per-

sonality features, as operationalized by meeting criterion A for antisocial personality disorder (ASPD; i.e., three or more adult symptoms of DSM-IV-TR ASPD [American Psychiatric Association, 2000]).^{1,2} Participants were serving jail terms of one year or less. Inmates were invited to participate if they had been convicted of a felony or misdemeanor, were not taking psychotropic medications, and were able to read English. After providing written consent, participants completed a semi-structured interview covering domains recommended by Hare [2003] and administered by interviewers trained in PCL-R assessment. Participants were paid \$6–\$8 for their participation. On the basis of an interview and a review of institutional files, the interviewers completed the PCL-R [Hare, 2003]. On the basis of the same files, raters assessed the number of domestic battery charges. Thirty-nine participants were excluded because institutional file information was insufficient to assess battery charges or the interviewer's confidence in the PCL-R rating was low, leaving 172 cases (81.5%) for analysis. See Table I for sample characteristics.

Measures

Psychopathy. Psychopathy was assessed using the 20-item PCL-R, based on an in-depth, semi-structured interview that queried personal and criminal history and supplemented by a review of participants' pre-trial services or probation files. The PCL-R is well established as a valid measure of psychopathy [Hare, 2003]. Observers were present for 24 (14%) of the interviews, and interrater reliability for PCL-R total scores was adequate; intraclass correlation ($r = 0.81$). Because some participants' PCL-R ratings omitted items, facet scores could not be computed for all participants: antisocial facet scores were missing for seven participants; lifestyle and interpersonal facet scores were missing for one participant each. Mean PCL-R total and facet scores are presented in Table II.

¹The present sample ($n = 211$) was derived from a larger sample of inmates ($n = 376$) on the basis of meeting the following inclusion criteria: (1) subjects exhibited three or more adult symptoms of ASPD, and (2) ethnicity was either European American or African American. For the larger study, 70% of individuals contacted regarding enrollment agreed to participate. Data are not available on the participation rate for the subset of cases analyzed for this study. ²Full ASPD criteria were not used because of the unavailability of an assessment of childhood conduct disorder symptoms for 51 participants. Nevertheless, supplementary analyses (see Footnote 4 below) examined the contribution of PCL-R total and facet scores to the postdiction of batterer status for the 121 inmates who met full DSM-IV criteria for ASPD.

TABLE I. Ethnic Composition and Means for Number of Other Violent Charges, ASPD Symptoms, and Age for Batterers and Non-Batterers

	Batterers	Non-Batterers
<i>N</i>	85	87
Ethnicity		
EA	43	42
AA	42	45
Other violent charges		
<i>M</i>	5.41**	2.78**
SD	5.62	3.50
ASPD symptoms		
<i>M</i>	4.40	4.26
SD	1.09	1.14
Age		
<i>M</i>	28.42*	26.17*
SD	6.80	6.84

Note: *Difference between batterers and non-batterers significant, $P < 0.05$. **Difference between batterers and non-batterers significant, $P < 0.01$. *N* = Number of subjects. *M*, mean; SD, standard deviation; EA, European Americans; AA, African Americans; ASPD, antisocial personality disorder.

TABLE II. Means and Standard Deviations of PCL-R Total and Facet Scores for Individuals with and Without Domestic Battery Charges (Batterers and Non-Batterers)

	Batterers	Non-Batterers
<i>N</i>	85	87
PCL-R total	27.05 (4.88)	26.01 (5.51)
Interpersonal	5.07 (1.97)	4.71 (2.17)
Affective	5.65 (1.77)	4.94 (1.82)
Lifestyle	6.78 (1.66)	7.24 (1.69)
Antisocial	7.61 (1.55)	7.01 (2.18)

PCL-R, Psychopathy Checklist-Revised.

Symptoms of ASPD. The number of ASPD Category A symptoms (Table III) met, based on *Diagnostic and Statistical Manual of Mental Disorders-4th Edition (DSM-IV)* criteria, was assessed during the same semi-structured interview and file review used to assess psychopathy.

Criminal charges. Batterer versus non-batterer group membership and the total number of violent charges excluding charges for domestic battery (other violent charges), were determined via a review of jail pre-trial services or probation files. For the primary analyses, batterer versus non-batterer status was assigned according to the presence or absence of a domestic battery charge. Other violent charges included: robbery, assault, murder, weapons charges, kidnapping, arson, criminal damage to property, and sex crimes other than indecent exposure.

Self-reported domestic violence. To provide an additional index of participation in domestic violence, interviews included “yes or no” questions about physical violence toward women and children. Responses were then coded by one rater for the presence or absence of such violence. Inmates who reported violence against women were significantly more likely to have charges for domestic violence, $\chi^2(1) = 56.75$, $P < 0.01$. Only two participants reported violence toward children in the home, and both of these individuals also reported violence toward women and had charges for domestic battery.

RESULTS

Preliminary Analyses

One extremely low score on the PCL-R antisocial facet was more than three standard deviations from the mean, and was transformed to one point lower than the next lowest score to reduce its impact [Tabachnick and Fidell, 2001]. No other outliers on PCL-R facet or total scores were identified. Four extremely high scores on other violent charges were identified. These scores were transformed as above to reduce their impact on analyses. Before conducting logistic regressions to assess the relationship between PCL-R scores and domestic battery status, we computed correlations between the predictor variables to examine multicollinearity. The highest correlation between predictor variables was $r = 0.43$ (between the affective and interpersonal facets), indicating an absence of pronounced multicollinearity.³

Group Comparisons

Batterers and non-batterers were compared on age, number of ASPD symptoms, and number of other violent charges. As shown in Table I, batterers were significantly older than non-batterers, and had been charged with significantly more other violent offenses. Because age was correlated with the number of other violent charges ($r = 0.32$, $P < 0.01$), separate logistic regressions were conducted, controlling for age. The pattern of results was equivalent to the analysis that did not account for age, so age was not included as a covariate in analyses reported.

³The distributions of all predictor variables (coded on interval/ratio scales) were examined, and it was determined that the distribution of other violent charges was significantly skewed. For this reason logistic regressions, which do not require normally distributed predictor variables, were chosen over discriminant function analyses.

TABLE III. Criterion A Symptoms of ASPD [American Psychiatric Association, 2000]

- (1) Failure to conform to social norms with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrest
- (2) Deceitfulness, as indicated by repeated lying, use of aliases, or conning other for personal profit or pleasure
- (3) Impulsivity or failure to plan ahead
- (4) Irritability and aggressiveness, as indicated by repeated physical fights or assaults
- (5) Reckless disregard for safety of self or others
- (6) Consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations
- (7) Lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another

TABLE IV. Logistic Regressions Postdicting Batterer Versus Non-Batterer Group Membership Using PCL-R Facet Scores

	B	SE	Odds ratio/CI	R ²
Logistic regression 1				
Step 1				
Other violent charges	0.13**	0.04	1.14** (1.04–1.24)	0.10
Step 2				
Other violent charges	0.12**	0.04	1.13** (1.04–1.23)	0.07
PCL-R total	0.03	0.03	1.03 (.97–1.10)	0.03
Logistic regression 2				
Step 1				
Other violent charges	0.13**	0.04	1.14** (1.04–1.24)	0.10
Step 2				
Other violent charges	0.12**	0.04	1.13** (1.03–1.23)	0.07
Interpersonal	–0.04	0.10	0.96 (0.79–1.17)	<0.01
Affective	–0.29*	0.11	1.34* (1.07–1.67)	0.06
Lifestyle	–0.24*	0.11	0.79* (0.63–0.98)	0.04
Antisocial	0.13	0.10	1.13 (0.93–1.38)	0.01

Note: * $P < 0.05$, ** $P < 0.01$. CI, 95% confidence interval; R², Nagelkerke pseudo R²; PCL-R, Psychopathy Checklist-Revised.

Primary Analyses

We conducted a series of logistic regressions to determine the relationship between PCL-R total and facet scores and batterer/non-batterer status. Because overall level of violent criminality may contribute to batterer/non-batterer status, we conducted stepwise regressions to examine the relationships between PCL-R scores and batterer/non-batterer status after controlling for other violent charges. In the first logistic regression, the number of other violent charges was entered on Step 1, followed by PCL-R total scores on Step 2. In the second logistic regression, other violent charges were entered on Step 1, followed by the four PCL-R facets on Step 2.⁴ Results are presented in Table IV.

Total scores on the PCL-R did not significantly postdict batterer status after controlling for other violent charges, Wald $\chi^2(1) = 0.82$. However, we

identified opposing postdictive relationships between the affective and lifestyle PCL-R facets and batterer status after controlling for other violent charges. Affective facet scores *positively* postdicted batterer status, Wald $\chi^2(1) = 6.63$, $P < 0.05$, and lifestyle facet scores *negatively* postdicted batterer group membership, Wald $\chi^2(1) = 4.71$, $P < 0.05$. Neither interpersonal facet scores, Wald $\chi^2(1) = 0.15$, nor antisocial facet scores, Wald $\chi^2(1) = 1.61$, were significantly related to batterer status. To determine whether the opposing effects of the affective and lifestyle facet scores in the multivariate logistic regression were due to correlations among predictor variables, separate univariate logistic regressions were conducted for each of the PCL-R facet scores after controlling for number of other violent charges. Again, affective facet scores *positively* postdicted batterer group membership, Wald $\chi^2(1) = 6.36$, $P < 0.05$, and lifestyle facet scores *negatively* postdicted batterer group membership, although the latter relationship was reduced to a trend, Wald $\chi^2(1) = 3.67$, $P = 0.06$. Neither interpersonal facet scores, Wald $\chi^2(1) = 0.61$, nor anti-

⁴To ensure that the assumption of homogeneity of regression was met, PCL-R total and facet score \times other violent charges interactions were examined for all regressions conducted. There were no significant interactions.

social facet scores, Wald $\chi^2(1) = 2.83$, approached significance in these regressions.⁵

Supplementary Analyses

Finally, to ensure that findings did not reflect our use of an insensitive measure of involvement in domestic battery (official charges), we conducted a series of analyses that supplemented official charges with self-reports of violence against women. The supplementary analyses involved procedures identical to those used in the primary analyses, in which PCL-R total and facet scores were used to postdict batterer status in separate simultaneous regressions. For these analyses, however, participants were classified as batterers if file data included a domestic battery charge *or* the participant reported violence against women during the interview. Eight individuals (9.2%) without domestic battery charges admitted to perpetrating domestic violence. Of participants with domestic battery charges, 63 (74.1%) admitted to domestic violence during the interview.

Results of the supplementary analyses indicated a pattern of results equivalent to those presented in the primary analyses. Total PCL-R scores did not significantly postdict batterer status controlling for other violent charges, Wald $\chi^2(1) = 1.38$. The affective facet positively postdicted batterer group membership, Wald $\chi^2(1) = 7.54$, $P < 0.01$, and the lifestyle facet negatively postdicted batterer group membership, Wald $\chi^2(1) = 4.53$, $P < 0.05$, after controlling for other violent charges. The interpersonal facet remained nonsignificant, Wald $\chi^2(1) = 0.76$, but, in this analysis, the antisocial facet

approached significance as a postdictor of batterer status, Wald $\chi^2(1) = 3.59$, $P = 0.06$.

DISCUSSION

This study was designed to examine whether psychopathy or psychopathic traits discriminated GVA domestic batterers from antisocial individuals without domestic battery charges. We found that although perpetration of domestic violence was unrelated to total scores on a single index of psychopathy, it was associated with relatively higher scores on the psychopathy facet that captures affective deficits and by relatively lower scores on the facet that indexes impulsivity and irresponsibility. Therefore, the apparent absence of a relationship between PCL-R total scores and batterer status reflected the opposing directions of the relationships between psychopathy facets and battery. Indeed, our findings indicate that, among offenders with significant features of antisocial personality, batterers and non-batterers differ in potentially important ways that are captured by dimensions that underlie psychopathy but that may be overlooked by examination at the level of the higher-order construct of psychopathy.

The finding that the deficient affective experience facet postdicted batterer status indicates a link between status as an antisocial batterer and a core trait of psychopathy. Such differences may operate via the attenuation of empathy, remorse, or deep relational bonds that might otherwise inhibit the infliction of violence against intimates. The finding of an inverse relationship between the psychopathy facet capturing impulsivity and irresponsibility and status as a batterer is interesting in that it suggests that factors that accentuate the risk of violence in general may have less explanatory power with regard to domestic violence. Taken together, these findings suggest an image of the antisocial batterer as emotionally cold and calculating rather than affectively labile and undercontrolled. Indeed, although prior research [see Holtzworth-Munroe and Stuart, 1994] had indicated that antisocial batterers exhibit personality characteristics and behaviors more similar to those of other antisocial and aggressive groups than to those of other batterer subtypes, these studies had not compared antisocial batterers directly with other generally antisocial offenders. Current findings provide further elaboration of the traits of antisocial batterers, and suggest that they can be distinguished from the larger pool of violent, antisocial offenders on important personality characteristics.

⁵The reliability of reported findings was tested across several supplementary analyses. The first analysis examined the contribution of PCL-R total and facet scores to the postdiction of batterer status for inmates ($n = 121$) who met *full* DSM-IV criteria for ASPD. The pattern of results was quite similar to that reported in the primary analysis, although weaker because of the loss of power. Effect sizes (Nagelkurke pseudo- R^2) were 0.05 ($P < 0.05$) for the affective facet and 0.04 ($P = 0.06$) for the lifestyle facet. Effect sizes for PCL-R total scores and the other facet scores were very small ($R^2 < 0.006$), as in the primary analyses. Next, multiple regressions were conducted to examine the reliability of findings using total number of domestic battery charges as a continuous criterion variable. The pattern of significant main effects for PCL-R total and facet scores was identical to that of the reported logistic regressions after controlling for other violent charges. Two additional supplementary analyses were conducted. In the first, the primary analyses were conducted without entering other violent charges before entering total PCL-R scores in the first logistic regression and the four facets in the second logistic regression. Analyses yielded the same pattern of significant results as that reported in the text. Finally, ethnicity-specific analyses also yielded the same pattern of effects for African American and for European American participants.

These findings also add to a growing literature linking specific aspects of psychopathy with different kinds of violent behavior. For example, the cluster of psychopathic symptoms related to impulsivity and unstable lifestyle appears to be associated with greater levels of reactive aggression [Hall et al., 2004; Hart and Dempster, 1997]. Hart and Dempster [1997] reported that the traits loading on PCL-R Factor one predict instrumental violence. Recently Walsh et al. [2003] demonstrated a specific link between instrumental violence and the interpersonal, rather than affective, features of psychopathy. Current evidence of a unique role for affective deficits in distinguishing antisocial batterers from other antisocial offenders provides further evidence that the specific correlated dimensions underlying PCL-R scores have distinct real-world correlates and have predictive value apart from the full construct of psychopathy. Moreover, the current study, along with Vitacco et al. [2005], appear to be among the first studies to identify a link between deficient affective experience and violence.

In the treatment of batterers, specific personality factors may interact with intervention approach to impact outcome [Saunders, 1996]. Currently, the majority of batterer treatment programs involves skills training in areas such as self-regulation and problem-solving [Taft et al., 2003]. These interventions are similar to those used to treat other violent antisocial offenders. However, present findings suggest that interventions designed to target impulsivity, although important, might have relatively smaller impact on antisocial batterers than on other antisocial individuals. Moreover, antisocial batterers might require significant attention to affective deficits, in the form of enhancing empathy and increasing sensitivity to feedback. However, because to date no treatments have been demonstrated to be effective at increasing empathy among psychopathic individuals [PCL-R > 30; Hare, 2003], research aimed at facilitating the development of empathic responses in psychopathic batterers is warranted. Individuals with PCL-R scores of 30 and above comprised 36% of antisocial batterers in the present investigation.

The evidence that antisocial batterers differ from other antisocial individuals on psychopathic traits raises the question of other ways in which the groups differ. Future research appears warranted to determine whether other distinct dispositions help to distinguish antisocial batterers from other antisocial offenders. Research on more proximal causes of violence might reveal important differences between the groups as well.

Several limitations of this study should be noted. First, although statistics from Illinois suggest that the majority of domestic violence charges result from intimate partner violence, individuals also receive domestic battery charges for violence against other individuals in the home [Illinois State Police, 2002, 2003]. Thus, it cannot be assumed that the batterer group in this study consisted exclusively of individuals who committed violence against an intimate partner. Additionally, because charges and convictions for domestic battery may depend on the nature of the violence and the actions of the victim, we cannot be sure that no individuals in the non-batterer group committed acts of domestic violence. However, such false negatives (battering individuals in the non-batterer group) should have reduced the likelihood of obtaining significant differences between batterer and non-batterer groups. Moreover, the results of supplementary analyses in which only individuals with neither domestic battery charges nor self-reported aggression toward women were included in the non-batterer group increases our confidence in these findings, as does the significant correlation between self-reported violence and domestic battery charges. Finally, because this study is one of the first to identify a specific link between deficient affective experience and real-world violence, we believe that it is important to replicate this relationship in an independent sample and with other criteria for determining batterer versus non-batterer status.

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