

Relating Sexual Sadism and Psychopathy to One Another, Non-Sexual Violence, and Sexual Crime Behaviors

Carrie A. Robertson* and Raymond A. Knight

Psychology Department, Brandeis University, Waltham, Massachusetts

Sexual sadism and psychopathy have been theoretically, clinically, and empirically linked to violence. Although both constructs are linked to predatory violence, few studies have sought to explore the covariation of the two constructs, and even fewer have sought to conceptualize the similarities of violence prediction in each. The current study considered all four Psychopathy Checklist-Revised (PCL-R) facets and employed well-defined, validated measures of sadism to elucidate the relation between sadism and psychopathy, as well as to determine the role of each in the prediction of non-sexual violence and sexual crime behaviors. Study 1 assessed 314 adult, male sex offenders using archival ratings, as well as the self-report Multidimensional Inventory of Development, Sex, and Aggression (the MIDSA). Study 2 used archival ratings to assess 599 adult, male sex offenders. Exploratory and confirmatory factor analyses of crime scene descriptions yielded four sexual crime behavior factors: Violence, Physical Control, Sexual Behavior, and Paraphilic. Sadism and psychopathy covaried, but were not coextensive; sadism correlated with Total PCL-R, Facet 1, and Facet 4 scores. The constructs predicted all non-sexual violence measures, but predicted different sexual crime behavior factors. The PCL-R facets collectively predicted the Violence and Paraphilic factors, whereas sadism only predicted the Violence factor. *Aggr. Behav.* 40:12–23, 2014. © 2013 Wiley Periodicals, Inc.

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INTRODUCTION

Sexual sadism and psychopathy have been theoretically, clinically, and empirically linked to sexual offending (Knight, 2010; Knight & Guay, 2006), as well as to non-sexual violence (Porter & Woodworth, 2006). Whereas sadists have been shown to derive sexual gratification from the physical and emotional suffering of others (Breslow, 1989; Johnson & Becker, 1997b; Kirsch & Becker, 2007), psychopaths appear to be violent for a variety of reasons: failing to attend to another's distress cues (Hare, Cooke, & Hart, 1999; Kirsch & Becker, 2007), overreacting to perceived aggression (Porter & Woodworth, 2006), or as a means to a goal (Hare et al., 1999; Hare & Neumann, 2009; Porter & Woodworth, 2006). The high risk of violence associated with each construct should warrant increased research attention to both constructs and to their potential covariation (Hare et al., 1999; Seto & Lalumière, 2000).

Thus far, studies that have sought to explore the interface of sadism and psychopathy have suffered from limited assessments of violence, poorly operationalized definitions of sadism, or failure to consider all four facets of the Psychopathy Checklist-Revised (PCL-R; Hare, 1991, 2003). The current study sought to remedy these problems by: (a) using empirical analyses of crime

behaviors to generate measures of non-sexual and sexual violence, (b) employing multiple well-defined, validated measures of sadism, and (c) considering all four PCL-R facets. The current study aimed to determine the role of sadism and psychopathy in the prediction of non-sexual violence and sexual crime behaviors, as well as to elucidate the relation between sadism and the psychopathy facets.

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The Multidimensional Inventory of Development, Sex, and Aggression (MIDSA) is now available as a clinical instrument, but the data gathered in the present study used earlier versions of the MIDSA that predated its release as a clinical assessment tool. Dr. Knight is involved in the validation and marketing of the current version of the MIDSA.

*Correspondence to: Carrie A. Robertson, Psychology Department, Brandeis University, 415 South Street, MS 062, Waltham, MA 02454-9110. E-mail: crobertson@brandeis.edu

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Consistent with the DSM-5 (American Psychiatric Association, 2013), sadism is most frequently defined as the range of cognitions and behaviors associated with deriving sexual excitement from inflicting physical and/or emotional pain (e.g., Abel & Osborn, 1992; Kirsch & Becker, 2007; Porter, Woodworth, Earle, Drugge, & Boer, 2003). In contrast, some contend that control/domination over another individual is central to the definition (Grubin, 1994; Johnson & Becker, 1997a; MacCulloch, Snowden, Wood, & Mills, 1983). Given this lack of consensus at the conceptual level, assessment of sexual sadism has been idiosyncratic (Knight & Prentky, 1990; Marshall & Hucker, 2006a; Marshall & Kennedy, 2003), which impedes the generalization of findings. The current study hoped to improve generalizability by cross-validating findings across multiple methods: assessing sadism in Study 1 using a reliable, well-validated self-report scale (the MIDSA, 2011) and in Study 2 using archivally rated classification criteria (Massachusetts Treatment Center Sex Offender Typologies for rapists [MTC:R3] and child molesters [MTC:C3], Knight, 1988, 1989, 1999, 2010; Knight & Cerce, 1999; Knight & King, 2012). The identified sadistic participants are all sexual offenders who have engaged in *non-consensual* sadistic fantasies/behaviors.

Like sadism, conceptualizations of psychopathy vary. The descriptive characteristics proposed by Cleckley (1976) have achieved wide acceptance, and the operationalization of these characteristics in the PCL-R (Hare, 1991, 2003) constitutes the most extensively validated and widely used measure of psychopathy. The PCL-R's two-factor model (Interpersonal-Affective and Impulsivity-Antisocial) has been the most frequently employed subdivision of psychopathy used to explore the relation between violence and psychopathy. Although some covariation of Factor 1 and violence has emerged (First & Halon, 2008; Porter et al., 2003), Factor 2 has more consistently predicted violent behavior (Hare & McPherson, 1984; Porter & Woodworth, 2006). Recent research using the PCL-R's four-facet model (Interpersonal, Affective, Impulsivity, and Antisocial) of the PCL-R indicated that the four facets may be uniquely related to specific types of violent behavior (e.g., aggressive acts and violent criminal charges; Vitacco, Neumann, & Jackson, 2005). The current study aimed to provide a more refined understanding of the relation between the PCL-R facets and violence by examining both sexual and non-sexual violence.

Violence is a heterogeneous construct with multiple etiologies, motivations, and manifestations, and it requires definitional and measurement specification (Lion, 1991). The current study used both theoretically and empirically derived definitions and measurements of violence. Self-report inventories and archival ratings

captured non-sexual general aggression, juvenile fighting and assaultive behavior, and adult fighting and assaultive behavior. Factor analyses conducted on archivally rated sexual crime behaviors produced a sexual Violence factor scale, as well as Physical Control, Sexual Behavior, and Paraphilic factor scales. Table I illustrates the sexual crime behaviors that each of the factor scales comprise.

Psychopathy's ties to non-sexual and sexual violence have been well documented. Because psychopathy has been associated with non-sexual violence both in adolescence and in adulthood, it was hypothesized that the PCL-R facets would collectively predict all three non-sexual violence measures (Gretton, Hare, & Catchpole, 2004; Hare et al., 1999; Porter & Woodworth, 2006; Serin, 1991). Psychopathy's link to sexual violence led to the hypothesis that the facets would collectively predict the Violence factor of sexual crimes (Hare et al., 1999; Porter et al., 2003). Psychopaths' use of intimidation and violence to achieve control over others informed the hypothesis that the PCL-R facets would collectively predict the Physical Control factor (Hare & Neumann, 2009; Porter & Woodworth, 2006). No studies have focused on sexual behaviors extraneous to coitus in psychopaths' coercive sexuality. Thus, it was hypothesized that the facets would not collectively predict the Sexual Behavior and Paraphilic factors.

Inconsistent empirical associations between PCL-R Factor 1 and violence occasioned the prediction that Facet 1 (Interpersonal) and Facet 2 (Affective) would not consistently predict any of the violence measures (Kennealy, Skeem, Walters, & Camp, 2010). In contrast, the consistent associations between PCL-R Factor 2 and violence support the hypothesis that Facet 3 (Impulsivity)

TABLE I. Sex Crime Behavior Factor Scale Variables and Internal Consistencies

	Study 1		Study 2	
	α	<i>n</i>	α	<i>n</i>
Violence	.84	272	.70	489
Expressive aggression before/during				
Expressive aggression after				
Injury requiring a doctor				
Sadistic assault of genitals/breasts				
Stabbing				
Physical Control	.69	313	.79	580
Victim blindfold/gag				
Victim tied up				
Sexual Behavior	.54	220	.47	385
Cunnilingus on victim				
Fellatio on the offender				
Masturbate the offender				
Paraphilic	.66	272	.54	470
Voyeurism				
Exhibitionism				

and Facet 4 (Antisocial) would predict both non-sexual and sexual violence (Kennealy et al., 2010).

Unlike psychopathy, sadism has been found to covary with behaviors analogous to all four sexual crime behavior factors: Violence (Beauregard & Proulx, 2007; Hill, Habermann, Berner, & Briken, 2006; Knight, 2010), Physical Control (Chan & Heide, 2009; Hare et al., 1999; Marshall & Kennedy, 2003), Sexual Behavior (Geberth & Turco, 1997; Hazelwood & Warren, 2000; Knight, 1999), and Paraphilic (Abel, Becker, Cunningham-Rathner, Mittelman, & Rouleau, 1988; Abel & Osborn, 1992; Fedora et al., 1992). Consequently, sadism was hypothesized to predict each of the sexual crime behavior factors. Because sadism has been linked to non-sexual aggression (Ahlmeier, Kleinsasser, Stoner, & Retzlaff, 2003; Hazelwood & Warren, 2000; Marshall, Kennedy, & Yates, 2002), to childhood/juvenile behavior problems (American Psychiatric Association, 2000; Hare et al., 1999; Hill et al., 2006), and to adult assaultive behavior (Briken, Habermann, Kafka, Berner, & Hill, 2006; Kirsch & Becker, 2007; Warren, Hazelwood, & Dietz, 1996), it was hypothesized that sadism would also predict all three non-sexual violence measures.

STUDY 1

Methods

Participants. The sample comprised 314 adult, male sex offenders who were administered the MIDSA (2011) while incarcerated in prisons and special commitment facilities. The sample's archival records (e.g., school reports, arrest records, therapeutic assessments, interviews, etc.) were sufficiently complete to rate the PCL-R and crime scene behaviors. The majority were repeat offenders, some of whom had been deemed sexually dangerous persons and civilly committed ($n = 189$; 60%). The sample was predominantly Caucasian ($n = 211$, 67%), with 60 African Americans (19%), 15 Native Americans (5%), 15 Hispanics (5%), two Asians (<1%), and 11 undisclosed ethnicities (3%). At assessment, offender ages ranged from 20 to 68 years ($M = 39.06$, $SD = 9.66$). Fifty-six percent of offenders had sexually assaulted children under the age of 16 ($n = 175$), 40% had sexually assaulted an adult 16 years of age or older ($n = 124$), and the victim histories of 5% were not included in their files. These offenders were charged with an average of .26 serious sexual offenses ($SD = 0.86$, total = 74, $n = 281$) before turning 17 years of age and an average of 2.43 ($SD = 1.93$, total = 724, $n = 298$) after turning 17.

Human subjects' procedures were approved by the Institutional Review Board (IRB) at Brandeis University and at each institution in which participants were tested.

Measures

Psychopathology. Independent variables included self-report measures of sexual sadism and archival ratings of the PCL-R facets. PCL-R raters were blind to participant answers on the MIDSA's Sexual Sadism scale.

Sexual sadism. The MIDSA (2011) is a contingency-based, computerized inventory (formerly the Multi-dimensional Assessment of Sex and Aggression (the MASA; Knight, Prentky, & Cerce, 1994) that assesses multiple domains relevant to sexual aggression. The overall strategy for creating and validating the MIDSA has been described in detail elsewhere (Knight & Cerce, 1999; Knight et al., 1994; MIDSA, 2011). The MIDSA's Sexual Sadism scale is a composite of two subscales: a seven-item Sadistic Fantasies scale and an eight-item Sadistic Behaviors scale. The items in each subscale are presented in the Appendix. The internal consistencies for this sample for the fantasy and behavior scales were .90 and .89, respectively. The correlation between the two scales was .80.

Psychopathy. The PCL-R, the gold standard for assessing psychopathy, was coded. The reliability and validity of the PCL-R has been well established (e.g., Hare, 2003). The PCL-R consists of 20 items each rated on a 3-point scale based on the degree to which the item described the offender. Archival files were rated by a research assistant trained by an approved PCL-R expert. Scores reflect the extent to which the offender matches the description of a prototypical psychopath; the scores do not convey diagnoses. Total PCL-R scores and individual facet scores were calculated; only the valid total and facet scores were used in statistical analyses. These scores had no more than five items omitted from a total score and no more than one item from a facet score (Hare, 2003), resulting in varied n 's among the facets and total scores.

Non-sexual violence. Archival ratings and self-report scales were used to assess non-sexual violence.

Unsocialized general aggression (USAG). This archivally rated scale measures the amount and frequency of aggression displayed by the offender throughout his life prior to imprisonment. The USAG is a 7-point Gutman scale, ranging from 0 (no evidence of unsocialized aggression) to 6 (evidence of occasional or frequent extreme unsocialized aggression, for example, extreme mutilation or brutal murders). When there was not enough information present to rate the offender, a code of -1 (unclear) was assigned. The USAG was rated by a single rater.

Juvenile assault. The MIDSA's factor-generated Juvenile Fighting and Assaultive Behavior scale includes five subscales measuring: fighting and aggressive behavior; impulsivity in grammar school; impulsivity

in middle and high schools; aggressive behavior in grammar school; and aggressive behavior in middle and high schools. Higher scores indicate high incidence rates of fighting and impulsivity. The Cronbach alpha for this sample was .83.

Adult assault. The MIDSA's factor-generated Adult Fighting and Assaultive Behavior scale was used to measure adult assaultive behavior. This scale includes five subscales that measure instances of: carrying weapons; weapons charges and convictions; assaultive crime charges and convictions; robbery charges and convictions; and fighting and assaultive behavior. Higher scores indicate high incidence rates of fighting, violent crimes, and weapons possession. The Cronbach alpha for this sample was .79.

Sexual crime behavior factors. Exploratory factor analyses in Study 1 of sexual crime behavior ratings from archival records—and confirmatory factor analyses in Study 2—yielded four sexual crime behavior factors. Up to nine sexual offenses were coded for Study 1; up to ten sexual offenses were coded for Study 2. Parallel Analysis (PA; Patil, Singh, Mishra, & Donavan, 2007) suggested the retention of five factors. Principal Components Analysis (PCA) with VARIMAX rotation and PCA with OBLIMIN rotation forcing five factors produced nearly identical factors: Violence 1, Violence 2, Physical Control, Sexual Behavior, and Paraphilic. Excessive factorial complexity and a lack of theoretical basis for retaining two violence factors led to PCA with VARIMAX and OBLIMIN rotations forcing four factors. Identical Violence, Physical Control, Sexual Behavior, and Paraphilic factors emerged. The internal consistency of the Sexual Behavior factor fell below traditional thresholds (Study 1 = .54; Study 2 = .47), suggesting suboptimal coherence of the three variables that loaded on this factor scale. Study 2's Paraphilic factor also showed lower than desirable internal consistency (.54). The four sexual crime behavior factors accounted for 65.29% of the sex crime behavior variance in Study 1.

Confirmatory factor analysis using structural equation modeling with the Study 2 sample ($n = 491$) resulted in the removal of two variables on the Violence factor. The

final, four-factor model provided an acceptable fit to the data: $\chi^2(48) = 138.71$, $P < .001$; RMSEA = 0.06; CFI = 0.90; TLI = 0.86.

Violence. The Violence factor scale accounted for 25.77% of the variance and measured the mean severity of expressive aggression before, during and after the assault; injury requiring a doctor; sadistic assault of the genitals and/or breasts; and stabbing. The standardized internal consistency of this factor scale was .84.

Physical control. The Physical Control factor scale accounted for 13.11% of the variance and measured the mean instances of blindfolding and/or gagging the victim and tying up the victim. The standardized Cronbach alpha for the Physical Control factor scale was .69.

Sexual behavior. The Sexual Behavior factor scale accounted for 13.84% of the variance and measured the mean instances of performing cunnilingus on the victim; the victim performing fellatio on the offender; and the victim masturbating the offender. The standardized internal consistency for this scale was .54.

Paraphilic. The Paraphilic factor scale accounted for 12.58% of the variance and measured the mean instances of voyeurism and exhibitionism. The standardized Cronbach alpha for the Paraphilic scale was .66.

Results

Pearson correlation coefficients were calculated to determine the quantitative relations among sadism, Total PCL-R score, and each of the facets. As shown in Table II, sadism has low-order positive relations with Total PCL-R score, Facet 1 (Interpersonal), Facet 3 (Impulsivity), and Facet 4 (Antisocial)—all P s $< .001$. Sadism was not related to Facet 2 (Affective).

Linear regressions were calculated to determine the contributions of sadism and the PCL-R facets to the prediction of all seven outcome variables. Table III presents the R^2 s that occurred when either sadism or the facets were entered in Block 1. Sadism significantly predicted all non-sexual violence measures. Sadism also contributed to the prediction of the Sexual Violence factor, but did *not* relate to the Physical Control, Sexual Behavior, and Paraphilic factors. The PCL-R facets

TABLE II. Correlations of Sadism, Total PCL-R Score, and the PCL-R Facets

	Psychopathy Total PCL-R	Facet 1 Interpersonal	Facet 2 Affective	Facet 3 Impulsivity	Facet 4 Antisocial
Study 1—MIDSA: Self-Report, Continuous					
Sadism	.35*** (313)	.26*** (313)	.09 (294)	.28*** (313)	.27*** (313)
Study 2—MTC Typology: Archival-Classification, Dichotomous					
Sadism	.16** (487)	.14** (443)	.10* (480)	.04 (489)	.15** (488)

Note. Number of scores correlated provided in parentheses.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

TABLE III. Variance of Non-Sexual Violence and Sexual Crime Behavior Factors Explained by Sadism and the PCL-R Facets

	Sadism		PCL-R Facets	
	Study 1 (R^2)	Study 2 (R^2)	Study 1 (R^2)	Study 2 (R^2)
Non-sexual violence				
Unsocialized aggression	.04**	.02**	.29***	.31***
Juvenile assault	.17***	.03***	.21***	.37***
Adult assault	.22***	.05***	.17***	.38***
Sexual crime behavior factors				
Violence	.02*	.06***	.09***	.09***
Physical control	.01	.05***	.01	.04**
Sexual behavior	.00	.01*	.02	.05**
Paraphilic	.00	.00	.05*	.03*

Note. Values reflect the variance explained when only this predictor is used in the regression model. Study 1 Sadism, Juvenile, and Adult Assault ratings were self-report; Study 2 Sadism, Juvenile, and Adult Assault were archivally rated.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

predicted all three non-sexual violence measures, as well as the Violence and Paraphilic factors. The facets did not predict the Physical Control and Sexual Behavior factors.

Linear regressions with the four facets entered in Block 1 were calculated to determine the unique contributions of each to the prediction of all seven outcome measures. The relative Beta (β) weights of the PCL-R facets are shown in Table IV. Facet 1 (Interpersonal) significantly contributed to the prediction of Juvenile and Adult Assault. Facet 2 (Affective) contributed to the prediction of the Violence and Paraphilic factors. Impulsivity (Facet 3) and Antisocial (Facet 4) predicted all three non-sexual violence measures. Antisocial correlated negatively with the Paraphilic factor.

STUDY 2

Methods

Participants. The sample comprised 599 adult, male sex offenders who had been evaluated for commitment—a selection process that required record completeness similar to that described in Study 1 and detailed elsewhere (Knight & Thornton, 2007). The majority were repeat offenders, some of whom had been deemed sexually dangerous persons and civilly committed ($n = 266$; 44%). The sample was predominantly Caucasian ($n = 545$, 91%), with 54 non-Caucasian offenders (9%). Offender ages at the time of assessment ranged from 17 to 73 years of age ($M = 36.26$, $SD = 11.54$). Forty-six percent of the offenders had sexually assaulted children under the age of 16 ($n = 277$),

TABLE IV. Relative Strengths of PCL-R Facets in the Prediction of Non-Sexual Violence and Sexual Crime Behavior Factors

	Study 1 (β)	Study 2 (β)
Non-sexual violence		
Unsocialized aggression		
F1 Interpersonal	.09	.07
F2 Affective	.02	.15**
F3 Impulsivity	.22***	.04
F4 Antisocial	.36***	.43***
Juvenile assault		
F1 Interpersonal	.19**	-.10
F2 Affective	-.08	.11*
F3 Impulsivity	.22***	.14*
F4 Antisocial	.24***	.50***
Adult assault		
F1 Interpersonal	.14*	.14**
F2 Affective	-.09	.11*
F3 Impulsivity	.19**	.06
F4 Antisocial	.26***	.46***
Sexual crime behavior factors		
Violence		
F1 Interpersonal	-.08	.06
F2 Affective	.19**	.18**
F3 Impulsivity	.12	-.06
F4 Antisocial	.12	.20***
Physical control		
F1 Interpersonal	-.09	.05
F2 affective	.03	.10
F3 Impulsivity	.03	-.07
F4 antisocial	.01	.14*
Sexual behavior		
F1 Interpersonal	-.02	.11
F2 Affective	.04	-.13*
F3 Impulsivity	-.07	-.05
F4 Antisocial	-.10	-.14*
Paraphilic		
F1 Interpersonal	.06	.19**
F2 Affective	.13*	-.12
F3 Impulsivity	.02	-.03
F4 Antisocial	-.22**	-.04

Note. The β reflects the standardized coefficient for this component with all four facets entered in Block 1. Juvenile and Adult Assault ratings in Study 1 were self-report; Juvenile and Adult Assault ratings in Study 2 were based on data in archival records.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

37% had sexually assaulted adults aged 16 years or older ($n = 222$), and the victim histories for 17% were not included in their files. Offenders in this sample were charged with an average of .24 serious sexual offenses ($SD = 0.77$, total = 139, $n = 585$) before the age of 17 and an average of 2.53 ($SD = 2.20$, total = 1,479, $n = 585$) additional sexual offenses after turning 17.

Human subjects' procedures were reviewed and approved by the IRB at Brandeis University and at the institution in which participants were tested.

Measures

Psychopathology. Independent variables included archivally classified sadism and archival ratings of the PCL-R facets. Sadism classifiers were blind to PCL-R scores and PCL-R raters were blind to sadism classifications.

Sexual sadism. Archival files were rated using the two-axis Massachusetts Treatment Center: Child Molester Typology, Version 3 (MTC: CM3; Knight, Carter, & Prentky, 1989; Knight & King, 2012) and the Massachusetts Treatment Center: Rapist Typology, Version 3 (MTC: R3; Knight, 1999, 2010; Knight & Prentky, 1990). The overall strategies for creating and validating the CM3 and R3 have been described in detail elsewhere (Knight, 1988, 2010; Knight & King, 2012). Child molesters and rapists who met the criteria for the CM3 Axis II and R3 sadistic categories, respectively, were classified as sexual sadists. These individuals use gratuitous violence in excess of that needed to control a victim, manifest behaviors that reflect some intention to inflict fear or pain on a victim, and there is some indication that the excessive violence either contributes to or does not inhibit their sexual arousal. The overall reliability for the sadism classifications, $\kappa = .69$, was good (Cicchetti & Sparrow, 1981).

Psychopathy. The archival files were rated using the PCL-R (Hare, 2003). Two raters trained by the same expert who trained the raters in Study 1 completed the ratings. This expert was available to monitor the ratings and answer questions during the process (see Knight & Thornton, 2007). Total PCL-R scores and individual facet scores were calculated; only the valid total and facet scores were used in statistical analyses. These scores had no more than five items omitted from a total score and no more than one item from a facet score (Hare, 2003), resulting in varied n 's among the facets and total scores. Random subsets of offenders were coded by both raters. The interrater reliability was .79 ($n = 177$) for Total PCL-R scores; .72 ($n = 148$) for Facet 1; .59 ($n = 169$) for Facet 2; .57 ($n = 177$) for Facet 3; and .78 ($n = 179$) for Facet 4. To increase reliability, all dual-rated PCL-R scores were averaged across raters (Epstein, 1980; Roff, 1981).

Non-sexual violence. All non-sexual violence measures in Study 2 were archivally rated.

Unsocialized general aggression (USAG). The same scale used in Study 1 to measure the amount and frequency of general aggression displayed by the offender throughout his life prior to imprisonment was used in Study 2. Here, however, two raters coded the files; the interrater reliability was .67 ($n = 493$). When both raters coded an offender, the consensus rating was used (Spearman Brown reliability = .80).

Juvenile assault. An archivally rated, rational scale was created that measured items similar to those in the Juvenile Fighting and Assaultive Behavior scale used in Study 1. The Juvenile Assault scale assessed instances of verbal and physical aggression toward schoolmates and teachers; instigation and involvement in fights; and truancy and conduct problems in grammar school and junior high school. The standardized Cronbach alpha for this scale was .95, and the interrater reliability was .85 ($n = 370$). When both raters coded an offender, the consensus rating was used (Spearman Brown reliability = .92).

Adult assault. An archivally rated, rational scale was created that measured items similar to the Adult Fighting and Assaultive Behavior scale used in Study 1. The Adult Assault scale measured instances of verbal and physical aggression toward coworkers and supervisors; instigation and involvement in fights; repeated aggressive and destructive behavior; physical aggression; verbal aggression; and assault arrests and charges. The internal consistency of this scale was .88, and the interrater reliability was .78 ($n = 397$). When both raters coded an offender, the consensus rating was used (Spearman Brown reliability = .88).

Sexual crime behavior factors. The same factor scales used in Study 1 were used here.

Violence. The standardized Cronbach alpha was .70.

Physical control. The standardized Cronbach alpha for this factor scale was .79.

Sexual behavior. The standardized internal consistency of this factor scale was .47.

Paraphilic. The standardized Cronbach alpha for this factor scale was .54.

Results

Correlation coefficients were calculated to determine the quantitative relation among sadism, Total PCL-R scores, and each of the facets (Table II). Sadism had low-order positive correlations with Total PCL-R score, Facet 1 (Interpersonal), Facet 2 (Affective), and Facet 4 (Antisocial). Sadism was not related to Facet 3 (Impulsivity).

Linear regressions were calculated to determine the contributions of sadism and the PCL-R facets to the prediction of all seven outcome measures (Table III). Sadism significantly predicted all non-sexual violence measures; sadism also predicted the Violence, Physical Control, and Sexual Behavior factors. The PCL-R facets significantly predicted all non-sexual violence measures, as well as all sex crime behavior factors.

Linear regressions with the four PCL-R facets entered in Block 1 were calculated to determine the unique contributions of each to the prediction of all seven

outcome measures (Table IV). Facet 1 (Interpersonal) predicted Adult Assault and the Paraphilic factor. Facet 2 (Affective) contributed to the prediction of all non-sexual violence measures and the Violence factor. The Affective facet correlated negatively with the Sexual Behavior factor. Facet 3 (Impulsivity) only predicted Juvenile Assault. Facet 4 (Antisocial) predicted all non-sexual violence measures, as well as the Violence and Physical Control factors. The Antisocial facet correlated negatively with the Sexual Behavior factor.

GENERAL DISCUSSION

This study addressed several critical issues about sadism and psychopathy: the overall relation between the two, the similarities and differences in the types of non-sexual violence and sexual crime behaviors to which each relates, and the differential correlations of the PCL-R facets with non-sexual violence and sexual crime behaviors. In two of the largest sex offender samples with sadism *and* psychopathy information to date, results were replicated across multimethod assessment (self-report and ratings from archival files) and across different methods of scaling (rationally derived Guttman scales, factor scales, and categorical judgments). Sadism consistently related to Total PCL-R scores, the Interpersonal facet, and the Antisocial facet. Sadism and the facets similarly predicted all non-sexual violence measures and the sexual violence factor, but only the facets consistently predicted any of the other sexual crime behavior factors (Paraphilic). Finally, the PCL-R facets covaried with different aspects of violence. Whereas non-sexual violence measures correlated primarily with the Antisocial facet and secondarily with the Interpersonal and Impulsivity facets, sexual violence only correlated with the Affective facet.

Relation of Sadism and Psychopathy

Despite the theoretical and clinical overlap of sexual sadism and psychopathy, little empirical work has specifically studied the relation between the two constructs. The current findings corroborated that the two are significantly, positively correlated (Holt, Meloy, & Strack, 1999; Mokros, Osterheider, Hucker, & Nitschke, 2011; Porter & Woodworth, 2006). Sadism correlated with Total PCL-R, Facet 1 (Interpersonal), and Facet 4 (Antisocial) across samples and methods.

The psychopath's and the sadist's apparent shared desire to control and dominate others, often as a means of obtaining a goal (Chan & Heide, 2009; Hare & Neumann, 2008; Walsh, Swogger, Walsh, & Kosson, 2007), may account for the consistent relation between sadism and Facet 1 (Interpersonal). Study 2 replicated Mokros et al.'s (2011) significant covariation between

archivally rated sadism and Facet 2 (Affective). In contrast, sadism assessed by self-report in Study 1 had no relation with Facet 2. The insignificant correlation in Study 1 may be a reflection of the smaller sample. Alternatively, Study 2's covariation of sadism and the Affective facet could be a spurious consequence of raters deriving both callous, unemotionality and sadistic intent from the level of violence present in offenders' crimes. Given the difficulties associated with inferring sadistic motivation and Interpersonal-Affective traits from archival records crime-scene information would likely be used in the absence of other indicators (Doren & Elwood, 2009; Hare & Neumann, 2009; Kingston & Yates, 2008; Marshall, 2006).

Sadists are often organized and have their offenses planned well in advance of the event (Healey, Lussier, & Beauregard, 2012; Stone, 2010). Although sadists are not often associated with poor impulse control or diminished frustration tolerance (Juni, 2009; Mokros et al., 2011), some sadists have been found to be impulsive and to relinquish control over their emotions during sexual offenses (Marshall & Hucker, 2006b; Stone, 2010). This inconsistency in the literature is reflected in the present study, where sadism significantly correlated with Facet 3 (Impulsivity) in Study 1, but not in Study 2. The exploration of the roles of ritualistic planning and impulsivity in sadism requires further investigation.

Finally, Mokros et al.'s (2011) significant covariation between sadism and Facet 4 (Antisocial) was corroborated in both Study 1 and Study 2. Both sadism and psychopathy have been found to covary with early behavior problems, including both verbal and physical aggression, that continue well into their adult lives (Briken et al., 2006; Hare & Neumann, 2008; Hill et al., 2006). Hence, both sadism and Facet 4 (Antisocial) may in part be manifestations of aspects of longstanding disinhibitory psychopathology.

Although the correlations between sadism and the psychopathy facets discussed here were significant, they represented small effect sizes, indicating substantial divergences in the constructs of sadism and psychopathy. Not surprisingly, they each yielded different patterns of covariation with violence and sex crime behavior factors.

Sadism's Relation With Non-Sexual Violence and Sexual Crime Behaviors

Given sadists' heightened sexual arousal to non-sexual violence (Fedora et al., 1992; Marshall, Kennedy, & Yates, 2002) and sexual violence (Herron & Herron, 1982), it was hypothesized that sadism would predict all three non-sexual violence measures and the Violence factor. These hypotheses were corroborated, indicating

that sadism was associated with: non-sexual violence, sexual violence, increased instances of violence (as measured by Juvenile and Adult Assault), and elevated severity of violence (as measured by USAG and the Violence factor).

In contrast, the hypothesis that sadism would predict the Physical Control factor was only supported in Study 2. Sadism's inconsistent prediction of the Physical Control factor questions the centrality of victim control in the sexual arousal of sadists (Grubin, 1994; Marshall, Kennedy, Yates, & Serran, 2002; Weinberg, 1987). Alternatively, the inconsistent prediction could be explained by Study 1 sadists using violence to intimidate and control where Study 2 sadists used bondage materials (Hare et al., 1999). Further research is needed to dissect the disparity between the theory-driven hypothesis relating sadism with control and the empirically derived associations in the present study. The true nature of the relation should be examined using more comprehensive measurements of control, because the Physical Control factor was here defined by only two variables (Schumacker & Lomax, 2010).

Sadism's hypothesized relations with the Sexual Behavior and Paraphilic factors were not supported. Sadism only predicted the Sexual Behavior factor in Study 2 and did not predict the Paraphilic factor in either study. Sexual behaviors that were extraneous to aggression or achieving climax were seemingly irrelevant to sadists during the course of sexual crimes. Sadists might not be aroused by sexual acts themselves. Instead, these acts might be means of degradation and control (Gratzer & Bradford, 1995).

Psychopathy's Relation With Non-Sexual Violence and Sexual Crime Behaviors

Collectively, the four facets predicted all three measures of non-sexual violence and the Violence factor corroborating the hypothesis that psychopathy is associated with: sexual violence, non-sexual violence, increased instances of violence, and violence severity (Gretton et al., 2004; Porter & Woodworth, 2006; Walsh & Kosson, 2008). Additionally, the facets collectively predicted the Paraphilic factor of sex crime behaviors lending credence to the notion that psychopaths use sexuality as a means of exploitation (Hare & Neumann, 2009; Harris, Rice, Hilton, Lalumière, & Quinsey, 2007; Knight & Guay, 2006). In contrast, the four facets did not consistently predict the Physical Control factor suggesting that behaviors not central to aggression and exploitation are seemingly less relevant to psychopathic offenders during the commission of sexual crimes (Hare & Neumann, 2009; Hare et al., 1999; Porter & Woodworth, 2006). Alternatively, the inconsistent prediction may be the result of the rape itself serving

as a sufficient control mechanism for psychopaths. Finally, it may be the result of the insufficient measurement of control used in the current study. As was the case with sadism, the nature of the relation between psychopathy and sexual control should be examined further.

Differentiating among types of violence can be informative when determining the roles that the PCL-R facets play in prediction. Given the inconsistent relations the Interpersonal and the Affective facets have with violence (Kennealy et al., 2010), it was hypothesized that neither facet would significantly predict any of the violence measures. The Interpersonal facet (Facet 1) significantly predicted Adult Assault, however, suggesting that individuals high on this component of psychopathy successfully use verbal and physical aggression to intimidate and dominate others in adulthood (Hare & Neumann, 2009; Hill, Neumann, & Rogers, 2004; Porter & Woodworth, 2006). The Affective facet (Facet 2) correlated with the Violence factor, suggesting that during sexual crimes offenders' attentional biases and difficulties processing affective cues might render them less likely to attend to/understand victim distress or to feel guilt/empathy in relation to victim plight (Blair et al., 1995; Hare et al., 1999).

Unlike the Interpersonal and Affective facets, the Impulsivity and Antisocial facets have shown strong, consistent associations with both non-sexual and sexual violence (Kennealy et al., 2010), which led to the hypothesis that they would predict both types of violence. Impulsivity appeared to play a crucial role in the young psychopath's violent behavior, with Facet 3 predicting Juvenile Assault. The Antisocial facet (Facet 4) covaried with all measures of non-sexual violence, suggesting that the behavioral dyscontrol underlying antisocial/criminal activity may begin at a relatively early age for some offenders and continue unabated throughout adulthood (Harris et al., 2007; Hill et al., 2004; Porter & Woodworth, 2006). Although the Impulsivity and Antisocial facets predicted non-sexual violence across the lifespan and were associated with increased violence severity, neither was associated consistently across studies with sexual violence as had been hypothesized. The discrepancies between theory-driven hypotheses and empirically based associations illustrate the need for further research designed to elucidate the nature of each psychopathy facet's relations with various types of violence.

Limitations of the Current Study

Even though Study 1 participants were ensured anonymity in their responses on the MDSA, and very low scores on social desirability scales indicated an overall lack of duplicity, the accuracy of their responses

must be treated with caution given the host of distortions associated with retrospective data (Henry, Moffitt, Caspi, Langley, & Silva, 1994). Similarly, the completeness and accuracy of the information contained within the archival records are always suspect. This limitation should apply equally to both studies and any unreliability should have contributed unsystematic error. Further, it is difficult to assess accurately the personality traits associated with psychopathy when only archival ratings are used (Hare, 2003; Williamson, Hare, & Wong, 1987). These difficulties render interrater reliability checks prudent, but none were conducted in Study 1.

The conclusions drawn from the current study might only apply to convicted male sexual offenders. Further, our samples comprised predominantly repeat offenders, which might have biased the results toward more severe offenders. Finally, the results might not generalize to females for whom research on sadism and psychopathy has been infrequent (Kirsch & Becker, 2007; Seto, Khattar, Lalumière, & Quinsey, 1997) nor to sadists and psychopaths who avoid the criminal justice system (Krueger, 2010; Marshall Kennedy, 2003; Meloy, 1997).

Future Directions

Research is needed that explores the generalizability of the present findings to: non-sex offenders, non-offenders, and females (Hare et al., 1999; Hucker, 1997; Krueger, 2010). Future research should also investigate whether the general findings are consistent across different subgroups of offenders (i.e., child molesters vs. rapists). Moreover, a better understanding of the life course of psychopathy and sadism is needed. Although psychopathy has been studied extensively over the past few decades, the etiology remains unclear. Evidence of the genetic (Viding, Blair, Moffitt, & Plomin, 2005; Kim-Cohen et al., 2006) and psychoneurological underpinnings (Kiehl et al., 2001; Raine & Yang, 2006) exists, but little consistency has emerged in identifying specific experiential antecedents. Similarly, although various developmental factors have been identified that covary with sadism (e.g., parental infidelity, parental divorce, vicarious violence, physical abuse and neglect, and child sexual abuse), this area remains largely unexplored (Chan & Heide, 2009; Gratzer & Bradford, 1995; Hill et al., 2006; Johnson & Becker, 1997b; MacCulloch, Gray, & Watt, 2000; Robertson & Knight, 2013; Warren et al., 1996). Future research should examine the relations of developmental antecedents with psychopathy and sadism, as well as explore the manifestations of these disorders at various developmental stages. Earlier identification of the disorders will hopefully lead to prevention measures for at-risk youths (Knight & Sims-Knight, 2011).

CONCLUSION

Despite the current study's limitations, consistencies emerged across samples, measurement sources, and type of measurement scales. Sadism and psychopathy covaried, but were not coextensive. Sadism consistently correlated with total PCL-R, the Interpersonal facet, and the Antisocial facet. The relations between sadism and psychopathy represented small effect sizes, indicating substantial divergences between the two constructs.

Both sadism and psychopathy consistently predicted non-sexual and sexual violence, indicating their associations both with increased instances of violence and elevated severity of violence. Despite theoretical connections with control, neither sadism nor psychopathy consistently predicted the Physical Control factor in the analyses of behaviors during sexual crimes. Although sexual behaviors extraneous to coitus were unrelated to sadism, psychopathy consistently predicted the Paraphilic sex crime behavior factor. Our results strongly supported the importance of differentiating among types of violence when exploring the relations of the psychopathy facets to aggressive behavior. The Interpersonal facet covaried with Adult Assault; the Affective facet predicted the Violence factor; Impulsivity correlated with Juvenile Assault; and the Antisocial facet related to all measures of non-sexual violence.

APPENDIX

Multidimensional Inventory of Development, Sex, and Aggression (MIDSA) Sexual Sadism Scales

Sadistic fantasy.

When I have had sexual thoughts, I have thought of cutting a woman or girl with a knife.
 I have thought about burning someone during sex.
 I have thought about killing someone during sex.
 I have thought about strangling a woman or girl during sex.
 I have had sexual thoughts about tying my partner to a bed, legs and arms spread apart.
 I have thought about embarrassing or humiliating a woman or girl during sex.
 When I had sexual thoughts, I thought about threatening or frightening a woman or girl.

Sadistic behavior.

While having sex, I have used handcuffs, whips, or leathers.

I have tied someone up while we were having sex.
 I have beaten a woman or girl while I was having sex
 with her.
 I have purposely hurt a woman or girl physically
 during sex.
 While having sex I have enjoyed scaring my
 companion so that she begged me to stop.
 I have daydreamed about how good it would feel to
 hurt someone during sex.
 It turns me on to think about overpowering someone
 sexually.
 The more scared a person becomes, the more sexually
 turned on I get.

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