

IDENTIFYING THE MANIPULATIVE MATING METHODS ASSOCIATED WITH PSYCHOPATHIC TRAITS AND BPD FEATURES

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Psychopathy and borderline personality disorder (BPD) traits are associated with coercion and manipulation within relationships. The authors investigated whether BPD traits were uniquely associated with manipulation for emotional closeness whereas psychopathy was used for the purpose of attaining physical closeness. A community sample ($N = 164$) reported on mating behaviors, psychopathic traits, and BPD traits. Hierarchical regressions were conducted to predict mating behaviors that would account for the overlap between psychopathy and BPD. Total psychopathic traits were associated with lower levels of relationship exclusivity, greater use of partner poaching, and perpetration of sexual coercion. Specifically, callousness and egocentricity were related to lower relationship exclusivity. BPD traits were associated with the use of mate retention strategies, mate poaching, and victimization in sexual coercion. These findings indicate that manipulative mating behaviors encompass tools to achieve sex and intimacy. Those with BPD traits use these tools for emotional closeness, whereas those with psychopathic traits use them to obtain physical closeness and gratification.

Maladaptive interpersonal functioning is characteristic of various personality disorders. Personality features such as having poor behavioral controls, thinking mainly about oneself, and resorting to manipulative behaviors all preclude the maintenance of satisfying long-term relationships. Indeed, maladaptive interpersonal functioning has been found to characterize several personality disorders (Wright, Scott, Stepp, Halquist, & Pilkonis, 2015).

Individuals with borderline personality disorder (BPD) traits show sensitivity to rejection within their important relationships (Chapman, Walters, & Gordon, 2014), and research shows that they experience stable levels of distress but also fluctuate in being able to effectively manage closeness in their relationships (Wright et al., 2015), using emotional manipulation (e.g., Tragesser & Benfield, 2012). Individuals with psychopathy may callously use

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and coerce others into romantic and sexual relationships; this manipulative behavior for closeness in relationships may stem from seeking to gain physical pleasure (Kastner & Sellbom, 2012). Thus, although both personality pathologies are associated with coercion and manipulation, they diverge in that BPD traits are used to gain emotional closeness whereas psychopathic traits are used to achieve physical closeness. Wright and colleagues (2015) argue that focusing on single diagnostic categories may fail to identify the domains of functioning that are unique or overlapping across disorders. Based on arguments in the literature (Krueger & Eaton, 2010), criteria in the *Diagnostic and Statistical Manual (DSM; American Psychiatric Association [APA], 2010)* have had endemic problems, both in covariation among disorders (Lilienfeld, Waldman, & Israel, 1994) and in heterogeneity within disorders (Hallquist & Pilkonis, 2012; Lenzenweger, Clarkin, Yeomans, Kernberg, & Levy, 2008; Samuel & Widiger, 2008; Widiger & Sanderson, 1995; Wright et al., 2013). Furthermore, *DSM-V* aimed to use dimensional diagnostic structures and to limit the use of categories. This may reveal that maladaptive personality traits, along a domain, relate differently to domains of functioning based on demographic factors. Indeed, Sprague, Javdani, Sadeh, Newman, and Verona (2012) argue that BPD in women could be the phenotypic equivalent to psychopathy in men. Recently, women with BPD were shown to be psychophysiological hyporeactive to emotional stimuli (Pfaltz et al., 2015), which has also been found in males with psychopathic traits (Fanti, Panayiotou, Lombardo, & Kyranides, 2015; Patrick, Bradley, & Lang, 1993). Thus, the present study aimed to examine interpersonal functioning specific to BPD and psychopathy as well as to explore the overlap of the dimensional features of these two disorders in males and females.

Wright and colleagues (2015) describe individuals with BPD as exhibiting “fits and starts or lurches toward and away from closeness” (p. 15). Individuals with BPD traits show manipulative behaviors within their interpersonal relationships (Tragesser & Benfield, 2012), possibly to maintain emotional closeness. That is, individuals with BPD traits tend to be motivated to obtain reassurance (Abela, Skitch, Auerbach, & Adams, 2005) and validation (Selby, Anestis, & Joiner, 2008; Selby & Joiner, 2013) from others. Given the motivation for emotional closeness and reassurance, Sprague and colleagues (2012) suggest that a perceived slight from the partner of a person with BPD traits may result in a reactive (i.e., impulsive) emotional coldness, callous retaliation, or use of manipulative tactics to attain emotional closeness with the partner. To be sure, prior research shows that BPD traits are related to impulsive use of mate retention behaviors (Tragesser & Benfield, 2012). Thus, the manipulative mating behaviors that individuals with BPD traits display may be related to seeking to fulfill their emotional needs.

Prior research supports similarities between psychopathic traits and features of BPD (Baskin-Sommers, Krusemark, & Ronningstam, 2014; Fossati et al., 2004; Sprague et al., 2012). This association is specific to the antisocial dimension of psychopathy (Hunt, Bornovalova, & Patrick, 2015). Furthermore, BPD and antisocial personality disorder have diagnostic features in common, particularly reckless, disinhibited behavior and being emotionally reactive and unstable (APA, 2013). However, we argue that there may be

important distinctions at the same time that there are overlaps. BPD traits have been specifically associated with dysfunctional romantic relationships, with worse impairment in this domain than other personality disorders (Hill et al., 2008). Yet BPD traits show instability across communal interpersonal domains that are similar to other personality disorders (Wright et al., 2015). In relationships, individuals with BPD traits may engage in behaviors that stem from their fearful, preoccupied interpersonal style (Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004). For example, feeling that they have been abandoned, which is a typical fear for individuals with BPD traits, may precipitate reactive behaviors to ensure that emotional closeness is gained or maintained (e.g., checking on the proximity of significant others; Cheavens, Lazarus, & Herr, 2014; Gunderson, 1996). Furthermore, individuals with BPD traits may use mate retention strategies to preempt abandonment by their partners (Tragesser & Benfield, 2012). The use of manipulation and coercive tactics is similar to the use of manipulative behaviors shown by those with psychopathy (see Muñoz, Khan, & Cordwell, 2011). Therefore, phenotypically, BPD traits may be similar to psychopathic traits; this may be particularly true for females with BPD, who appear to share features with males exhibiting psychopathic traits (see Sprague et al., 2012). An important difference postulated is that the manipulation used by those with BPD results from a fearful, preoccupied state triggered by perceived rejection from a partner.

Another reactive manipulative tactic that may result from perceived abandonment by a partner is pursuing new relationships, so those with BPD may seek multiple intimate relationships to satisfy their emotional needs (Cheavens et al., 2014). For example, when individuals with BPD traits feel emotionally vulnerable in their current relationships, they show a preference toward new/novel relationships, possibly to retaliate aggressively (Cheavens et al., 2014). Indeed, aggression is characteristic of psychopathy, which is also related to reactive forms of retaliation (Blair, 2010). BPD traits and antisocial traits have been shown to be highly associated (Sprague et al., 2012). Similar to antisocial individuals, individuals with BPD traits engage in risky and impulsive behavior, such as having unsafe sex (APA, 2013) and being sexually promiscuous (Sansone & Wiederman, 2009). Therefore, the relative contribution of particular mating behaviors that explain BPD features could be similar to that observed for antisocial traits. Yet, accounting for the overlap between BPD and psychopathy may reveal BPD to be uniquely related to the use of manipulative tactics to maintaining emotional closeness.

In contrast to persons with BPD, individuals with high levels of psychopathic traits may strive for fulfillment of their physical desires, given their acute focus on bodily needs (e.g., Hancock, Woodworth, & Porter, 2013). That is, their manipulative and coercive tactics may serve physical pursuits for sex. There is a robust association between psychopathy and sexual coercion, leading to the idea that the callous and manipulative traits related to psychopathy may be advantageous for acquiring sexual mates. Prior research shows associations between the callous and manipulative features of psychopathy in university samples that vary in trait severity (Muñoz et al., 2011) and within psychopathic offenders (see Knight & Guay, 2006). At least one study has shown that perpetration of sexual coercion is associated with psychopathy

for both men and women (see Muñoz et al., 2011). A possible motivation for individuals with psychopathic traits to engage in intimate relationships with others may be their hypersexuality (Kastner & Sellbom, 2012). Therefore, promiscuity and forceful sexual tactics may uniquely relate to psychopathic traits, once the overlap in variance with BPD traits has been accounted for.

In addition to understanding maladaptive functioning within interpersonal domains while accounting for overlapping psychopathological personality traits, there is heterogeneity to consider. Research that fails to consider heterogeneity within disorders may fail to identify maladaptive functioning that is specific to some variants of the disorder (Wright et al., 2015)—possibly even overlapping with that identified for BPD traits or other personality disorders. Indeed, Sprague and colleagues (2012) argue that BPD traits may be most damaging to relationships when they show the greatest overlap with callous and egocentric traits (those associated with the affective and interpersonal facets of psychopathy). Psychopathy has traditionally been conceptualized as a combination of traits reflecting emotional detachment and antisocial deviance, but more recent empirical work suggests that the measure most commonly used to assess psychopathy, the Psychopathy Checklist-Revised (PCL-R; Hare, 1991), taps three (Cooke & Michie, 2001) or four distinct dimensions (Hare, 2003; Hare & Neumann, 2005; Neumann, Hare, & Newman, 2007). These include an interpersonal style characterized by interpersonal traits (Factor 1), affective traits (Factor 2), and an impulsive and irresponsible (antisocial) lifestyle (Factor 3). Analogous factor debates have extended to understanding the construct of psychopathy with measures developed for community samples. For example, several factor analytic studies of the Levenson Self-Report of Psychopathy Scale (Levenson, Kiehl, & Fitzpatrick, 1995) have emerged in recent years, suggesting a similar three-factor structure (Brinkley, Diamond, Magaletta, & Heigel, 2008; Sellbom, 2011). The interpersonal traits include egocentric, grandiose, dominant, and manipulative behaviors; affective traits include callousness and a lack of empathy; and antisocial traits include sensation seeking, impulsivity, and irresponsibility (Brinkley et al., 2008). Although researchers have examined total scores of psychopathy, there is evidence for examining the three factors (Brinkley et al., 2008; Sellbom, 2011; Somma, Fossati, Patrick, Maffei, & Borroni, 2014). The affective traits, in particular, may be related to a lack of faithfulness and concern for relationships beyond sexual gratification. Related to coercion, the affective and interpersonal traits may be associated with coercive sexual behavior when a partner refuses sex when compared to other mating behaviors. For example, individuals with interpersonal and affective psychopathic traits have been shown to exhibit greater sexual sensation seeking and less concern over being caught for their sexual risk taking (Kastner & Sellbom, 2012).

In the short term, interpersonal traits such as grandiosity, manipulation, and glibness are advantageous for maintaining the exciting and novel characteristics of a superficial relationship. However, in the long term, partners might see through the superficiality and disloyalty. For these reasons, those with psychopathic traits have many short-term partners (Jonason, Li, & Buss, 2010; Jonason, Li, Webster, & Schmitt, 2009), possibly obtained and maintained through coercive, controlling, and manipulative methods. Also,

psychopathic traits have been associated with manipulative strategies meant to maintain control over one's mates (Jonason et al., 2010). Yet research has not identified whether these strategies relate to particular dimensions of psychopathy and whether they are as important as other coercive mating strategies to understanding psychopathy dimensions. Therefore, mate retention behaviors may be particularly related to interpersonal psychopathic traits, given their egocentric concern. However, it may be that egocentricity ceases to be associated with the use of mate retention strategies once the overlap in variance with BPD is accounted for.

Seeking short-term sexual relationships with people who are already committed to another person is another coercive and manipulative mating behavior. In addition, this mate-poaching behavior breaks social norms about the importance of respecting monogamy. Although prior research shows psychopathic traits to be associated with mate poaching (Jonason et al., 2009, 2010), the facets of psychopathy associated with this behavior are unknown. Mate poaching would be hypothesized to be associated with antisociality, given the association with the violation of social norms. However, research on personality traits associated with short-term mating strategies has tended to examine the Dark Triad. Although the Dark Triad includes psychopathy within the cluster of personality traits, research finds that psychopathy is comparatively more important than the other clustered traits (Glenn & Sellbom, 2014). Thus, research should focus on psychopathy, and arguably the psychopathy facets related to mate poaching, to determine if antisocial traits are best explained by this mating behavior that challenges social norms.

An important point of divergence in mating behaviors typifying BPD but not antisocial traits or psychopathy is sexual victimization. Individuals with BPD traits report being sexually victimized (Bandelow et al., 2005; Sansone, Barnes, Muennich, & Wiederman, 2008; Sansone & Sansone, 2011). When examining the relative contribution of coercive tactics, we would hypothesize that BPD features would be associated with experiencing sexual coercion. BPD may also be associated with perpetration of sexual coercion, but this would not be expected to be uniquely related to BPD once the overlap in variance with psychopathic traits was controlled.

Prior research has failed to examine mating behaviors that might differentiate psychopathy and BPD, such as those that specifically relate to a set of personality traits related to psychopathy and BPD. To date, mating behaviors associated with psychopathy and BPD have been studied in isolation from each other. In understanding the interpersonal dynamics that are emblematic of psychopathic traits and BPD features, we need to examine and compare the mating behaviors within the same study. Furthermore, no known studies exist that examine mating strategies and the three dimensions of psychopathy, even though they would be expected to be differentially associated with mating strategies.

In many of the current industrialized societies, a culture of uncommitted sexual encounters exists, particularly in younger individuals (Garcia, Reiber, Massey, & Merriwether, 2012). Therefore, the mating behaviors of interest to this study may be more likely to occur in community settings. Attitudes toward this behavior, at least in popular culture, suggest that dominant sexual

pursuers are desirable (Bryan, Webster, & Mahaffey, 2011). Therefore, to assess normative sexual behaviors, it is important to include community samples who exhibit a range of committed and uncommitted relationships. Undergraduate populations are not as diverse because they come from restricted socioeconomic strata and ethnic diversity as well as being disproportionately female.

The present study aimed to examine BPD and psychopathy as differentiated personality dimensions related to mating behaviors for distinct reasons, although we argue, based on prior research, that they share features of disinhibition (e.g., impulsivity and risk taking). Overall, on the basis that psychopathy and BPD show differentiation in interpersonal functioning, we propose here that all the sexual/mating behaviors examined will exhibit relationships with traits that relate to each of these conditions. By examining behaviors central to attaining and maintaining intimate relationships, the present study may disentangle interpersonal behaviors related to psychopathy dimensions separate from those related to BPD features. We tested this in a community sample. First, we tested the overlap between BPD traits and psychopathy. We expected BPD traits to be most associated with the antisocial dimension of psychopathy. Second, we hypothesized that psychopathy and BPD traits may differ based on their motivations for physical contact (hypothesized to be uniquely associated with psychopathy) and emotional connections (hypothesized to be uniquely associated with BPD traits). Specifically, we expected that perpetration of coercion, sexual promiscuity (low relationship exclusivity), mate retention strategies, and partner poaching would be associated with total levels of psychopathy, beyond the variance contributed by BPD traits. We hypothesized interpersonal (egocentric) traits to be most associated with the perpetration of sexual coercion, mate retention, and sexual promiscuity, and affective (callousness) traits to be most associated with perpetration of sexual coercion and sexual promiscuity. The antisocial traits were hypothesized to be associated with perpetration of sexual coercion, sexual promiscuity, and partner poaching. Finally, we aimed to examine whether BPD traits show similar or divergent association with mating behaviors in comparison with the dimensions of psychopathy. The hypothesis was that BPD traits will be best predicted by mate retention strategies, sexual promiscuity, partner poaching, and being a victim of sexual coercion.

METHOD

PARTICIPANTS

A community sample ($N = 164$) was recruited that was 56% female with an age range of 17 to 51 years ($M = 22.3$, $SD = 6.1$). Participants were primarily White British (85%), with minorities consisting of Middle Eastern (3.6%), Asian (5.4%), and African ethnicity (1.2%). Individuals reported their relationship status as married (5%), in a long-term relationship of 3 or more years (22%), in a relationship between 6 months and 3 years (28%), in a relationship for less than 6 months (14%), single or divorced and sexually active (19%), single or divorced and not sexually active (11%), or other (1%). Of the sample, 73% reported living with a partner. The highest education level

achieved ranged between no high school qualifications (1%), graduation from high school (24%), college/associate's diploma/A-levels (36%), bachelor's degree (28%), master's degree (9%), and PhD (2%). We used education as a covariate as a proxy for socioeconomic status.

Participants reported their occupation as managers and senior officials (9%), professional occupations (3%), associate professional and technical occupations (1%), administrative and secretarial occupations (3%), skilled trades occupations (3%), personal service occupations (5%), sales and customer service occupations (23%), process, plant and machine operatives (1%), elementary occupations (11%), student (35%), or unemployed (6%).

MEASURES

Psychopathy. The Levenson Self-Report of Psychopathy Scale (LSRP; Levenson et al., 1995) was developed for noninstitutionalized populations to measure what Levenson et al. called "primary" and "secondary" psychopathy in the same manner that the PCL-R (Hare, 2003) captured two factors. More recently, research has supported a three-factor model. Sellbom (2011) found in three separate groups (male inmates, and male and female college students) three facets representing different aspects of psychopathy. In this study, egocentricity was most associated with Machiavellianism, as would be expected for interpersonal psychopathy characteristics. Callousness, as part of affective psychopathy traits, was found to be the strongest predictor of Coldheartedness and low empathy (Sellbom, 2011). The antisocial factor correlated most strongly with Impulsive-Antisociality on the PPI, impulsivity, disinhibition, and emotional distress, in addition to rebelliousness and non-conformity only within the male prison inmates (Sellbom, 2011). The LSRP consists of 26 items reported in a Likert-scale self-report format, with ratings from 1 (*disagree strongly*) to 4 (*agree strongly*), with alpha of .78 for the total score ($M = 52.94$, $SD = 9.49$). Egocentric (10 items [e.g., "In today's world, I feel justified in doing anything I can get away with to succeed"]; $M = 19.61$, $SD = 5.35$), Callousness (four items [e.g., "I make a point of trying not to hurt others in pursuit of my goals"]; $M = 7.32$, $SD = 2.16$), and Antisocial (six items [e.g., "I have been in a lot of shouting matches with other people"]; $M = 13.05$, $SD = 2.86$) psychopathy subscales showed low to adequate internal consistency (Cronbach's alphas = .72, .52, and .45, respectively). Mean inter-item correlations (MIC) above .20 indicate acceptable homogeneity within a scale (Nunnally & Bernstein, 1994). In the present study the MIC for Callous (.21) and Egocentric (.23) met this threshold, while Antisocial was lower than expected (.12). Yet the average corrected item-total correlations ranged from .22 to .40, which were above acceptable ranges (Clark & Watson, 1995) and similar to those reported by Sellbom (2011). Furthermore, none of the corrected item-total correlations were negative.

Borderline Personality Traits. The Minnesota Borderline Personality Disorder Scale (MBPD; Bornovalova, Hicks, Patrick, Iacono, & McGue, 2011) was used to measure BPD traits. The MBPD is a derivative of the Multidimensional Personality Questionnaire-Brief Form (MPQ; Patrick, Curtin, & Tellegen,

2002) and consists of 19 true/false items that tap into BPD features (e.g., “Sometimes I seem to enjoy hurting people by saying mean things,” “My mood often goes up and down,” “My ‘friends’ have often betrayed me”). The MBPD has been established as a reputable and valid measure of BPD traits in twin studies, young adults from the community (Rojas et al., 2013), substance users, undergraduates (Bornovalova et al., 2011), and forensic samples (Blonigen, Sullivan, Hicks, & Patrick, 2012). MBPD scores have been positively correlated with other measures of BPD traits: the Personality Assessment Inventory–Borderline scale (Morey, 1991); the Inventory for Interpersonal Problems–BPD scale (Lejuez et al., 2003; Pilkonis, Kim, Proietti, & Barkham, 1996); and the Structured Clinical Interview for *DSM-IV* Axis II Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997). In the present study, the MBPD showed good internal consistency (Cronbach’s $\alpha = .80$; $M = 7.24$, $SD = 4.10$).

Partner Poaching. The Anonymous Romantic Attraction Survey (ARAS; Schmitt & Buss, 2001) is an eight-item measure designed to examine the extent to which (1) participants attract short-term or long-term sexual partners (e.g., “How frequently do you attract romantic partners, either as short-term sexual partners or long-term mating partners?”), (2) participants have attempted to attract another individual’s romantic partner (e.g., “Have you ever tried to attract someone who was already in a relationship with someone else for a short-term sexual relationship with you?”), (3) another individual has attempted to attract the participant away from his or her romantic partner (e.g., “While you were in a romantic relationship, have others tried to attract you as a short-term sexual partner?”), and (4) participants’ romantic partners have been approached by others in an attempt to attract them away (e.g., “While you were in a romantic relationship, have others ever attempted to obtain your partner for a short-term sexual relationship?”). Responses are indicated on a 7-point scale ranging from 1 (*Never*) to 7 (*Always*). The present study was concerned only with poaching: On average, participants rated poaching as *Rarely to Seldom* ($M = 2.49$, $SD = 1.54$). This was measured with the single item.

Sexual Coercion. With the Postrefusal Sexual Persistence Scale (PSP Scale; Struckman-Johnson, Struckman-Johnson, & Anderson, 2003), participants were asked to report if they had experienced sexually coercive behaviors (as both perpetrator and victim since the age of 16) by indicating “yes” [1] or “no” [0] in response to 19 items that constitute the PSP Scale. These items reflect different tactics and are placed in four subscales to measure (1) sexual arousal, three items (e.g., “Persistent kissing and touching”); (2) emotional manipulation and deception, eight items (e.g., “Threatening self-harm”); (3) exploitation of the intoxicated, two items (e.g., “Purposely getting you drunk”); and (4) physical force, threats, or harm, six items (e.g., “Using physical restraint”). Prior research provides evidence for a strong relationship between sexually coercive tactics and primary psychopathy in both male and female university students when using this measure (see Muñoz et al., 2011). A total score for each subsection was calculated by summing the nominal responses (i.e.,

number of “yes” responses). Perpetration ($M = 1.90$; $SD = 2.38$) and victimization ($M = 3.60$; $SD = 3.30$) showed good internal consistency (Cronbach’s alphas = .80 and .83, respectively).

Relationship Exclusivity. The Sexy Seven Dimensions of Sexuality Questionnaire (Schmitt & Buss, 2001) uses 67 sexual adjectives to measure seven dimensions of sexuality. The Relationship Exclusivity scale derived from the original questionnaire was used to ask participants to rate how accurately each of the adjectives described their personality on a 9-point scale ranging from 1 (*Extremely Inaccurate*) to 9 (*Extremely Accurate*). Relationship exclusivity scores were determined using a total score of the following eight words from the 67 words presented in this scale: adulterous (R), devoted, faithful, loose (R), monogamous, polygamous (R), promiscuous (R), and unfaithful (R). In prior research, this measure has shown a relationship between the Big Five personality trait of extraversion and sexual promiscuity, which, along with low agreeableness and low conscientiousness, was associated with sexual infidelity (Schmitt, 2004)—personality traits integral to psychopathy. Internal consistency was good in the present study (Cronbach’s alpha = .77; $M = 57.99$, $SD = 10.35$).

Mate Retention Strategies. The Mate Retention Inventory–Short Form (MRI-SF; Buss, Shackelford, & McKibbin, 2008) consists of 38 different tactics that individuals use to retain their romantic partners. Research has established that the MRI-SF is suitable for basic and applied research contexts, showing high internal consistency and high correlations with the full version. The items cover a wide range of psychological (e.g., “Pleaded that I could not live without my partner”), verbal (e.g., “Complimented my partner on his appearance”), physical (e.g., “Made myself ‘extra’ attractive for my partner”), sexually coercive (e.g., “Performed sexual favors to keep my partner around”), and violent behaviors (e.g., “Slapped a woman who made a pass at my partner”). In the present study, internal consistency was good (Cronbach’s alpha = .91; $M = 35.66$, $SD = 17.85$).

PROCEDURE

Approval for this study was obtained from the University of Durham, Department of Psychology Ethics Committee. Participants were recruited by handing questionnaires to people at their places of work (e.g., shops, restaurants, bars, malls). These places were chosen to recruit mainly young adults, with relatively equal numbers of males and females. Participants were introduced to the study by briefly informing them about its nature and purpose. They were told that the questionnaires included some personal questions regarding sexual behaviors, but that they could withdraw from the study if they felt uncomfortable completing the questionnaire. Anyone not present for the briefing had access to a poster with an information sheet about the study. Participants had access to envelopes, which contained questionnaire booklets with demographic questions and the assessment questionnaires. The questionnaires were left with the participants within the targeted venue to be completed on their own time. A

stack of manila envelopes was left at the venue, in which participants placed the completed questionnaires with a seal for privacy. The questionnaires were anonymous and only a participant ID number was included. The researcher returned at another time to collect the sealed envelopes. Compensation (£5) was provided for participation. To be compensated, participants wrote their name on a separate sheet that was posted at the locations. Because there was never only one questionnaire completed at the locations, the names could not be linked to questionnaires in the sealed envelopes. We compared the number of names to the number of envelopes containing completed questionnaires, and these invariably matched, although one participant requested not to be compensated. Finally, debriefing sheets were left at the locations for participants to collect. The response rate (64%) was acceptable for a community sample. This rate was achieved by continually visiting the locations, saving travel and postage costs for participants.

RESULTS

One-way analyses of variance (ANOVA) were conducted to examine whether the main study variables differed with respect to relationship status. The Brown-Forsythe (Brown & Forsythe, 1974) test was performed because it is more robust in terms of heteroscedasticity. All tests showed nonsignificant differences among relationship status categories (see Table 1 for descriptive information). We also tested if individuals who reported living with someone were significantly different on all the main study variables. Independent samples *t* tests showed no significant effects of living with someone. Males (see Table 1) were higher in total psychopathic traits, callousness, egocentricity, antisociality, and BPD traits than females. Relationship exclusivity, partner poaching, and perpetration of sexual coercion were also higher for men.

To test the relation between psychopathy facets, BPD traits, and mating strategies, we first conducted zero-order correlations (see Table 2). Callousness,

TABLE 1. Means and Standard Deviations of Psychopathy and BPD as a Function of Gender and Relationship Status

Measures	Gender				Relationship Status											
	Male		Female		Married		Long-term relationship		Medium-term relationship		Early relationship		Single/divorced sexually active		Single/divorced not sexually active	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Antisocial	13.38	3.07	12.79	2.69	11.63	2.07	13.03	2.96	13.19	3.06	13.09	2.49	13.26	2.93	12.50	2.87
Egocentric	21.68	5.74	17.97	5.74	18.25	3.33	18.91	4.51	20.17	5.98	20.05	4.91	20.58	6.09	17.06	4.67
Callous	7.82	2.13	6.95	2.12	7.88	2.47	7.11	1.98	7.54	2.38	7.27	2.39	7.48	1.98	6.50	1.92
BPD	3.06	1.96	2.73	1.93	2.00	1.38	2.51	1.31	3.39	1.98	2.73	2.03	2.94	1.79	2.56	1.98

TABLE 2. Zero-Order Correlations Among the Main Study Variables

	2	3	4	5	6	7	8	9
1 Callous	.29***	0.12	0.11	-0.01	-.26***	0.14	-0.07	.26***
2 Egocentric	—	.38***	.37***	.27***	-.32***	.37***	0.18	.38***
3 Antisocial		—	.63***	.26***	-.22**	.38***	.29***	.36***
4 BPD Traits			—	.49***	-.24**	.42***	.42***	.36***
5 Mate Retention				—	-0.07	.37***	.38***	.36***
6 Relationship Exclusivity					—	-.33***	-0.11	-.27***
7 Partner Poaching						—	.32***	.39***
8 Victim of Coercion							—	.56***
9 Perpetrator of Coercion								—

Note. BPD = borderline personality disorder. ** $p < .01$. *** $p < .001$.

egocentricity, antisocial psychopathic traits, and BPD traits were negatively related to mate retention. Callous psychopathic traits were positively related to egocentric psychopathic traits and perpetrator of coercion. Egocentric psychopathic traits were positively related to antisocial psychopathic traits, BPD traits, mate retention strategies, partner poaching, and perpetrator of coercion, but they were not significantly associated with victim of coercion. As expected, antisocial psychopathic traits were positively associated with BPD traits. Furthermore, BPD traits and antisocial psychopathic traits were positively related to egocentric psychopathic traits, mate retention, partner poaching, victim of coercion, and perpetrator of coercion. BPD and antisocial psychopathic traits were most similar in their associations with all methods of mating strategies and being a victim of coercion, while callous psychopathic traits were related only to perpetration of coercion.

We tested the overlap between BPD traits and psychopathic traits. We tested the association with egocentric, callous, and antisocial psychopathy traits. The correlation between BPD and antisocial ($r = .63, p < .001$) was stronger than the association between BPD and egocentricity ($r = .37, p < .001$) and BPD and callousness ($r = .11, p = .160$) traits, $t(161) = 3.71, p < .001$; and $t(161) = 6.14, p < .001$, respectively. This was shown by the Williams t test for testing comparable differences in strength of correlations (Steiger, 1980), accounting for the overlap between antisocial and egocentricity ($r = .38, p < .001$) and antisocial and callousness traits ($r = .12, p = .112$). Accounting for the correlation between egocentricity and callousness ($r = .29, p < .001$), egocentricity was more highly correlated with BPD than callousness, $t(161) = 2.96, p = .003$.

WAS MATE RETENTION UNIQUELY ASSOCIATED WITH PSYCHOPATHIC AND BPD TRAITS?

To examine which mating behaviors were most associated with psychopathic and BPD traits, we conducted a hierarchical regression predicting mating behaviors. We entered gender on the first step and the personality traits on the second step. We examined the significance of the second step to determine

if the mating behavior being examined (i.e., mate retention) was significantly associated with both psychopathic traits and BPD traits, expecting BPD traits to be uniquely associated with mate retention. We examined the regression weights, which are used to indicate the unique overlap between personality and mate retention, controlling for the other personality traits in the regression model. In two separate regressions, we did this for the total score on psychopathic traits and for the psychopathy dimensions. Table 3 shows the result of the final model with all variables entered and for the regression with the psychopathy dimensions. The regression with total psychopathy and the regression with the dimensions of psychopathy both revealed BPD to be uniquely associated with the use of mate retention strategies ($\beta = .47$, $t = 5.64$, $p < .001$; $\beta = .51$, $t = 5.66$, $p < .001$, respectively). Total psychopathy was nonsignificant ($\beta = .03$, $t = 0.30$, $p = .768$). As shown in Table 3, the psychopathy dimensions were also nonsignificant when taking into account the overlapping variance with BPD traits. Yet the model including personality explained 26% of the variance in mate retention, and BPD traits accounted for this significant variance. In sum, higher BPD traits were uniquely related to greater use of mate retention strategies.

WAS MATE POACHING UNIQUELY ASSOCIATED WITH PSYCHOPATHIC AND BPD TRAITS?

Hierarchical regressions were conducted to examine the association that psychopathy and BPD traits have with mate poaching, with the expectation that antisocial and BPD traits would be unique statistical predictors. In the first regression with BPD and total psychopathy, both were significant ($\beta = .25$, $t = 3.20$, $p = .002$; $\beta = .21$, $t = 2.52$, $p = .013$, respectively). When the three psychopathy dimensions were included in the subsequent hierarchical regression, only BPD traits were uniquely related to mate poaching ($\beta = .23$, $t = 2.62$, $p = .010$). The personality traits on Step 2 explained 16% of the variance. As shown in Table 3, the antisocial dimension was the closest to being significant ($\beta = .16$, $t = 1.81$, $p = .073$); however, none of the psychopathy dimensions were significant when accounting for the overlap with BPD traits. Thus, BPD traits were uniquely associated with attracting potential partners who were already in relationships.

WAS RELATIONSHIP EXCLUSIVITY UNIQUELY ASSOCIATED WITH PSYCHOPATHIC AND BPD TRAITS?

Separate hierarchical regressions were conducted to examine psychopathy and BPD traits as statistical predictors of relationship exclusivity, with the expectation that most personality traits would be negatively related to relationship exclusivity (the inverse of promiscuity). Higher total psychopathic traits were related to lower levels of relationship exclusivity ($\beta = -.36$, $t = -3.96$, $p < .001$) while BPD traits were nonsignificant ($\beta = -.02$, $t = -0.21$, $p = .831$). Table 3 shows the result of the regression, including the psychopathy dimensions, and it reveals egocentric and callousness as uniquely associated with relationship exclusivity ($\beta = -.19$, $t = -2.15$, $p = .033$; $\beta = -.18$, $t = -2.31$,

TABLE 3. Hierarchical Multiple Regression With Gender (Step 1) and Personality Traits (Step 2) Predicting Mating Behaviors

Final model (Step 2):	Mate Retention			Relationship Exclusivity			Poacher			Victim of Coercion			Perpetrator of Coercion		
	b	SE	β	b	SE	β	b	SE	β	Beta	[95% CI]	SE	Beta	[95% CI]	SE
Gender	0.92	2.64	.03	1.44	2.17	.05	-0.94	0.22	-.31***	.15	[-.23, .53]	0.19	.67***	[-.28, 1.07]	0.20
Borderline	2.19	0.39	.51***	-0.33	0.32	-.10	0.08	0.03	.23**	.09*	[.03, .14]	0.03	.04	[-.01, .10]	0.03
Egocentricity	0.53	0.27	.16*	-0.48	0.22	-.19*	0.04	0.02	.12	.01	[-.03, .05]	0.02	.03	[-.01, .07]	0.02
Callousness	-0.79	0.60	-.10	-1.13	0.49	-.18*	0.00	0.05	.00	-.08	[-.17, .01]	0.04	.07	[-.02, .16]	0.04
Antisocial	-0.65	0.56	-.11	-0.27	0.46	-.06	0.08	0.05	.16	.01	[-.06, .09]	0.04	.07	[-.01, .15]	0.04

Note. Mate retention: Step 1, $R^2 = .01$, $F(1, 161) = 1.31$, $p = .254$, Step 2 $\Delta R^2 = .26$, $\Delta F(4, 157) = 13.61$, $p < .001$; Relationship exclusivity: Step 1, $R^2 = .03$, $F(1, 160) = 5.22$, $p = .024$, Step 2 $\Delta R^2 = .12$, $\Delta F(4, 156) = 5.56$, $p < .001$; Poacher: Step 1, $R^2 = .16$, $F(1, 161) = 31.40$, $p < .001$, Step 2, $\Delta R^2 = .16$, $\Delta F(4, 157) = 9.33$, $p < .001$; Coercion variables were analyzed using negative binomial regression using log link functions and both had significant omnibus tests (Perpetration: Likelihood ratio ($df = 5$) = 43.81, $p < .001$; Victimization: Likelihood ratio ($df = 5$) = 22.18, $p < .001$). * $p < .05$. ** $p < .01$. *** $p < .001$.

$p = .022$, respectively). The second step with the personality traits explained 12% of the variance. Thus, the affective and interpersonal traits related to psychopathy explained the relation between total psychopathy scores and relationship exclusivity.

WAS PERPETRATION OF SEXUAL COERCION UNIQUELY ASSOCIATED WITH PSYCHOPATHIC AND BPD TRAITS?

Negative binomial regression was selected because of its capability of handling positively skewed data that are overdispersed and because of its suitability to handle count variables, which describes the coercion variables (i.e., number of endorsements [“yes”] of coercive tactics). Goodness of fit, indicated by deviance scores below 1, was examined. Gender, BPD traits, and total psychopathy scores were entered into the model as predictors of perpetration of sexual coercion, with the expectation that psychopathy would emerge as a unique predictor. In the subsequent regression, we entered gender, BPD traits, and the three psychopathy dimensions as predictors of sexual coercion, with the expectation that the affective and interpersonal dimensions might emerge as unique predictors. The goodness of fit was close to 1 (1.02) with minimal deviance from a good-fitting model. The omnibus test was significant (Likelihood ratio [$df = 3$] = 41.94, $p < .001$), and total psychopathy scores emerged as a significant predictor of perpetration of sexual coercion, Wald $\chi^2(1) = 8.13$, $p = .004$, $B = .03$, $SE = .01$, 95% CI = [.01, .06]. The results of the regression, including the three dimensions of psychopathy, are shown in Table 3. Again the goodness of fit was close to 1 (1.02), and the omnibus test was significant (Likelihood ratio [$df = 5$] = 43.81, $p < .001$). In this regression, none of the psychopathy dimensions reached significance. Although total psychopathy was associated with perpetration of sexual coercion, the overlap among the dimensions seemed to account for the significant association.

WAS VICTIMIZATION IN SEXUAL COERCION UNIQUELY ASSOCIATED WITH PSYCHOPATHIC AND BPD TRAITS?

Negative binomial regression analyses were conducted to assess the unique contribution of BPD traits and psychopathy in predicting victimization in sexual coercion, both with total psychopathy scores entered and separately with the psychopathy dimensions entered as we described above. We hypothesized that BPD traits would emerge as a unique predictor of victimization. The goodness of fit in both models was good as indicated by deviance scores below 1 (.95 and .94, respectively). The omnibus test was significant for the model with total psychopathy (Likelihood ratio [$df = 3$] = 19.01, $p < .001$) and the dimensions (Likelihood ratio [$df = 5$] = 22.18, $p < .001$). Consistent with predictions, BPD traits contributed unique variance to the statistical prediction of victimization beyond total psychopathy, Wald $\chi^2(1) = 13.71$, $p < .001$, $B = .10$, $SE = .03$, 95% CI = [.05, .15], and the psychopathy dimensions, Wald $\chi^2(1) = 9.89$, $p = .002$, $B = .09$, $SE = .03$, 95% CI = [.03, .14]. Psychopathy did not add significantly unique variance. Higher BPD traits were related to greater reporting of victimization in sexual relationships.

DISCUSSION

The present study aimed to examine which mating behaviors were most associated with psychopathic and BPD traits, controlling for the overlap between these two sets of traits, which share features associated with interpersonal functioning (e.g., Wright et al., 2015). Total psychopathic traits were associated with lower levels of relationship exclusivity, greater use of partner poaching, and perpetration of sexual coercion. The affective and interpersonal traits (callousness and egocentricity) associated with psychopathy emerged as significant in predicting relationship exclusivity, indicating unique associations with promiscuous, unfaithful behavior. These are meaningful findings because prior research has neglected to include other forms of mating behaviors; we can conclude that psychopathy is associated with many forms of mating behaviors meant to seek physical contact with a sexual or romantic partner, regardless of whether the partner is unwilling or unavailable. BPD traits were associated with the use of mate retention strategies, mate poaching, and victimization in sexual coercion. Therefore, the present study shows that psychopathy was characterized by persistent use of physically coercive (sometimes including physical force) strategies to sexually pursue a partner, whereas BPD traits were related to seeking emotional closeness as a result of victimization in relationships.

Our findings suggest that individuals with psychopathy may be motivated by a desire to physically control others for their own sexual gratification. The egocentric and callousness dimensions of psychopathy were uniquely associated with lower levels of relationship exclusivity, which focuses on the physical pursuit of intimate relationships without worrying about being committed to these relationships. The motivations behind these actions may be the psychopathic individual's "self-enhancement at the expense of others" (Blackburn, 2007, p. 10) and the determination to gain opportunities to enhance reproductive success at any cost. Consistent with this notion, we found that total psychopathy was associated with using sexually coercive tactics to gain sex, although none of the three dimensions were significant in contributing unique variance, which was different from research only separating psychopathy into primary and secondary dimensions (e.g., Muñoz et al., 2011). There are recent studies suggesting that three dimensions better represent psychopathy measures (Sellbom, 2011; Skeem, Mulvey, & Grisso, 2003).

Our results suggest that the affective traits of callousness and interpersonal traits of egocentricity were strongly related to promiscuity, arguably a highly risky sexual behavior. Prior research suggests that affective and egocentric traits most relate to sexual risk taking (Kastner & Sellbom, 2012). Callousness is characterized by emotional detachment, which may allow individuals with these traits to avoid emotional connections in relationships. Thus, they may move from partner to partner, possibly without guilt or concern for the feelings of others. Prior research has found callousness and egocentricity to be related to having little concern for the negative consequences of sexual risk taking (Kastner & Sellbom, 2012). Because individuals high on egocentricity are self-centered, they may seek physical sexual relationships with short-term partners without concern for the needs of others. Indeed, Kastner and Sellbom

(2012) found that affective and interpersonal traits (e.g., Fearless-Dominance) were associated with a lack of concern for the consequences of sexual risk taking. Therefore, although all facets of psychopathy and BPD traits were associated with reduced relationship exclusivity in the zero-order correlations, the callous and egocentric features of psychopathy appeared to explain unique variance in self-reported pursuits of physical pleasure with multiple partners.

Total psychopathy was associated with greater partner poaching. We hypothesized that BPD traits would be related to mating behaviors similar to the antisocial dimension of psychopathy, because we hypothesized that BPD would be most associated with antisocial traits and the impulsive and risk-taking propensities associated with antisocial traits. In particular, recent research suggests that BPD may be a manifestation of psychopathy, at least for women (Sprague et al., 2012). In correlations, BPD traits were most associated with antisocial traits and least associated with callousness. Furthermore, we found that BPD traits were most associated with greater partner poaching, mate retention strategies, and greater occurrences of victimization in sexually coercive contexts. Because the overlap between personality features was controlled for in the regressions, unique associations were revealed between psychopathy and BPD.

Psychopathic traits have been found to be associated with partner poaching and using manipulative mate retention strategies (Jonason et al., 2009, 2010). Our findings extend this research by showing that psychopathy as a total score (made up of the three dimensions) and BPD traits both contributed uniquely to partner poaching. Indeed, BPD traits showed a moderate association with partner poaching in the zero-order correlations, and this association held in the regression analyses. Also, BPD traits were uniquely predictive when including the three dimensions of psychopathy as simultaneous predictors. Egocentricity and antisocial traits were significantly associated with mate retention strategies in the zero-order correlations, but were not in the regressions where BPD features were covaried. Together with the mate retention findings, our findings suggest that people with BPD traits are manipulative in their romantic or sexual relationships in order to secure and maintain partners, even when these partners are already in committed relationships. Because people with BPD traits show greater fear of abandonment (Barone, Fossati, & Guiducci, 2011), they may seek to gain new relationships at the same time they are trying to maintain current relationships (Cheavens et al., 2014; Tragesser & Benfield, 2012). Our findings support the view that people with BPD traits may seek both to maintain control over current relationships and to seek new relationships—showing a focus on emotional closeness in intimate relationships. As suggested by prior research (Cheavens et al., 2014), individuals with high levels of BPD traits may respond to perceived rejection from their current partner by being instrumentally aggressive. One way they may do this is to seek partners who are unavailable—already in partnerships. This is an interesting possibility to explore in future research.

Consistent with prior research (Sprague et al., 2012), we found that BPD traits and antisocial features of psychopathy were more strongly related to each other than was the case for BPD and the other psychopathy features. Moreover, accounting for the overlap with psychopathy, promiscuity or unfaithful behavior was not significantly related to BPD traits. This is consistent with

prior research, which is equivocal in showing associations between promiscuity and BPD traits (Sansone & Wiederman, 2009; Sansone et al., 2008). Individuals high on BPD traits also reported being a victim of others' pursuits of sexual contact. Consistent with individuals with BPD traits seeking social approval, our results regarding victimization suggest that individuals with BPD traits may place themselves in situations where they are, or at least perceive themselves to be, victimized (see Bouchard, Sabourin, Lussier, & Villeneuve, 2009). Although the direction of effect is unclear, this is a well-replicated finding. The association we found between BPD traits and greater victimization is consistent with research showing that individuals with BPD report both being sexually coerced and having a history of sexual abuse (Bandelow et al., 2005; Sansone et al., 2008; Sansone & Sansone, 2011). In all, individuals with BPD traits may attempt to attain or maintain emotional security within their intimate relationships.

There are several limitations that must be considered when interpreting our findings. We included only self-reported measures, which could lead to inflated relations between our variables due to shared method variance. Also, research has shown that individuals with psychopathic traits are very good at managing their social impressions on questionnaires (Kelsey, Rogers, & Robinson, 2015); thus, future studies should attempt to incorporate a variety of measures or multiple reporters. Another issue to consider is that participants may have been reluctant to report engaging in atypical sexual mating behaviors. For example, we recruited a community sample, which could be generally low in engagement in norm-breaking behavior or unwilling to divulge their mating behaviors. However, because we found similar results to prior research, we feel confident in the validity of our data; many of our measures have been validated in community samples. Also, recent research (Edwards, Bradshaw, & Hinsz, 2014) suggests that individuals who are callous may feel free to endorse using force to gain sex when the phrasing of the question refers to force and not rape. In line with this idea, we used research scales that described general behaviors rather than naming illegal acts. Regardless, future studies should include clinical samples to determine if our results are robust according to the type of sample recruited. The present study benefited from certain methodological strengths. In particular, we included multiple measures of personality traits hypothesized to be related to specific mating strategies and sexual behaviors. In the present study, by controlling for BPD traits, we accounted for the possibility that psychopathic traits were related to mating behaviors mainly because of their overlap with borderline features. These multiple measures of personality traits have been neglected in prior research (Marcus & Norris, 2014; Muñoz et al., 2011). Because we included a community sample, we included measures that varied in severity from promiscuity to coercive acts; this adds to the understanding of normative to antisocial behaviors in the general population.

We found that psychopathic trait expression was related to continued attempts to gain sex when obstructed and being open to infidelity, and that individuals high on borderline trait expression report more preoccupation with relationship loss (via the use of mate retention tactics), starting new relationships with attached partners, and experiencing victimization. Our findings

dovetail with clinical vignettes of these two disorders, such that those with BPD traits show marked impairment within romantic relationships (Hill et al., 2008), exhibiting a preoccupation with their current romantic relationship at the same time that they are open to fulfilling emotional needs outside of their relationship. We found that individuals with psychopathic traits vary in their mating behaviors, but are coercive and show a lack of commitment, possibly owing to their callous, manipulative, and charming ways while showing a blasé attitude to possibly damaging others. Hence, our findings indicate that manipulative mating behaviors encompass tools that are used to achieve sex and intimacy, but the effect depends on who is using the tools. Those with BPD traits use these tools for emotional closeness, whereas those with psychopathic traits use them to obtain physical closeness and sex.

REFERENCES

- Abela, J. R., Skitch, S. A., Auerbach, R. P., & Adams, P. (2005). The impact of parental borderline personality disorder on vulnerability to depression in children of affectively ill parents. *Journal of Personality Disorders, 19*(1), 68–83. doi:10.1521/pedi.19.1.68.62177
- Agrawal, H. R., Gunderson, J., Holmes, B. M., & Lyons-Ruth, K. (2004). Attachment studies with borderline patients: A review. *Harvard Review of Psychiatry, 12*(2), 94–104. doi:10.1080/10673220490447218
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., rev.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Bandelow, B., Krause, J., Wedekind, D., Broocks, A., Hajak, G., & Rüther, E. (2005). Early traumatic life events, parental attitudes, family history, and birth risk factors in patients with borderline personality disorder and healthy controls. *Psychiatry Research, 134*(2), 169–179. doi:10.1016/j.psychres.2003.07.008
- Barone, L., Fossati, A., & Guiducci, V. (2011). Attachment mental states and inferred pathways of development in borderline personality disorder: A study using the Adult Attachment Interview. *Attachment & Human Development, 13*(5), 451–469. doi:10.1080/14616734.2011.602245
- Baskin-Sommers, A., Krusemark, E., & Ronnings-tam, E. (2014). Empathy in narcissistic personality disorder: From clinical and empirical perspectives. *Personality Disorders: Theory, Research, and Treatment, 5*(3), 323–333. doi:10.1037/per0000061
- Blackburn, R. (2007). Personality disorder and psychopathy: Conceptual and empirical integration. *Psychology, Crime & Law, 13*(1), 7–18. doi:10.1080/10683160600869585
- Blair, R. J. R. (2010). Psychopathy, frustration, and reactive aggression: The role of ventromedial prefrontal cortex. *British Journal of Psychology, 101*(3), 383–399. doi:10.1348/000712609x418480
- Blonigen, D. M., Sullivan, E. A., Hicks, B. M., & Patrick, C. J. (2012). Facets of psychopathy in relation to potentially traumatic events and posttraumatic stress disorder among female prisoners: The mediating role of borderline personality disorder traits. *Personality Disorders: Theory, Research, and Treatment, 3*(4), 406–414. doi:10.1037/a0026184
- Bornovalova, M. A., Hicks, B. M., Patrick, C. J., Iacono, W. G., & McGue, M. (2011). Development and validation of the Minnesota Borderline Personality Disorder scale. *Assessment, 18*(2), 234–252. doi:10.1177/1073191111398320
- Bouchard, S., Sabourin, S., Lussier, Y., & Villeneuve, E. (2009). Relationship quality and stability in couples when one partner suffers from borderline personality disorder. *Journal of Marital and Family Therapy, 35*(4), 446–455. doi:10.1111/j.1752-0606.2009.00151.x
- Brinkley, C. A., Diamond, P. M., Magaletta, P. R., & Heigel, C. P. (2008). Cross-validation of Levenson's Psychopathy Scale in a sample of federal female inmates. *Assessment, 15*(4), 464–482. doi:10.1177/1073191108319043
- Brown, M. B., & Forsythe, A. B. (1974). Robust tests for the equality of variances. *Journal of the American Statistical Association, 69*(346), 364–367. doi:10.1080/01621459.1974.10482955
- Bryan, A. D., Webster, G. D., & Mahaffey, A. L. (2011). The big, the rich, and the powerful: Physical, financial, and social dimensions of

- dominance in mating and attraction. *Personality and Social Psychology Bulletin*, 37(3), 365–382. doi:10.1177/0146167210395604
- Buss, D. M., Shackelford, T. K., & McKibbin, W. F. (2008). The Mate Retention Inventory-Short Form (MRI-SF). *Personality and Individual Differences*, 44(1), 322–334. doi:10.1016/j.paid.2007.08.013
- Chapman, A. L., Walters, K. N., & Gordon, K. L. D. (2014). Emotional reactivity to social rejection and negative evaluation among persons with borderline personality features. *Journal of Personality Disorders*, 28(5), 720–733. doi:10.1521/pedi_2012_26_068
- Cheavens, J. S., Lazarus, S. A., & Herr, N. R. (2014). Interpersonal partner choices by individuals with elevated features of borderline personality disorder. *Journal of Personality Disorders*, 28(4), 594–606. doi:10.1521/pedi_2013_27_069
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7(3), 309–319. doi:10.1037/1040-3590.7.3.309
- Cooke, D. J., & Michie, C. (2001). Refining the construct of psychopathy: Towards a hierarchical model. *Psychological Assessment*, 13(2), 171–188. doi:10.1037/1040-3590.13.2.171
- Edwards, S. R., Bradshaw, K. A., & Hinsz, V. B. (2014). Denying rape but endorsing forceful intercourse: Exploring differences among responders. *Violence and Gender*, 1(4), 188–193. doi:10.1089/vio.2014.0022.
- Fanti, K. A., Panayiotou, G., Lombardo, M. V., & Kyranides, M. N. (2015). Unemotional on all counts: Evidence of reduced affective responses in individuals with high callous-unemotional traits across emotion systems and valences. *Social Neuroscience*. Advance online publication. doi:10.1080/17470919.2015.1034378
- First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B., & Benjamin, L. (1997). *Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II): Interview and Questionnaire*. Washington, DC: American Psychiatric Association.
- Fossati, A., Barratt, E. S., Carretta, I., Leonardi, B., Grazioli, F., & Maffei, C. (2004). Predicting borderline and antisocial personality disorder features in nonclinical subjects using measures of impulsivity and aggressiveness. *Psychiatry Research*, 125(2), 161–170. doi:10.1016/j.psychres.2003.12.001
- Garcia, J. R., Reiber, C., Massey, S. G., & Merriwether, A. M. (2012). Sexual hookup culture: A review. *Review of General Psychology*, 16(2), 161–176. doi:10.1037/a0027911
- Glenn, A. L., & Sellbom, M. (2014). Theoretical and empirical concerns regarding the dark triad as a construct. *Journal of Personality Disorders*, 29(3), 360–377. doi:10.1521/pedi_2014_28_162
- Gunderson, J. G. (1996). The borderline patient's intolerance of aloneness: Insecure attachments and therapist availability. *American Journal of Psychiatry*, 153(6), 752–758. doi:10.1176/ajp.153.6.752
- Hallquist, M. N., & Pilkonis, P. A. (2012). Refining the phenotype of borderline personality disorder: Diagnostic criteria and beyond. *Personality Disorders: Theory, Research, and Treatment*, 3(3), 228–246. doi:10.1037/a0027953
- Hancock, J. T., Woodworth, M. T., & Porter, S. (2013). Hungry like the wolf: A word-pattern analysis of the language of psychopaths. *Legal and Criminological Psychology*, 18(1), 102–114. doi:10.1111/lj.2044-8333.2011.02025.x
- Hare, R. D. (1991). *The Hare Psychopathy Checklist-Revised*. Toronto, ON: Multi-Health Systems.
- Hare, R. D. (2003). *Manual for the Psychopathy Checklist-Revised* (2nd ed.). Toronto, ON: Multi-Health Systems.
- Hare, R. D., & Neumann, C. S. (2005). Structural models of psychopathy. *Current Psychiatry Reports*, 7(1), 57–64. doi:10.1007/s11920-005-0026-3
- Hill, J., Pilkonis, P., Morse, J., Feske, U., Reynolds, S., Hope, H., . . . Broyden, N. (2008). Social domain dysfunction and disorganization in borderline personality disorder. *Psychological Medicine*, 38(1), 135–146. doi:10.1017/s0033291707001626
- Hunt, E., Bornovalova, M. A., & Patrick, C. J. (2015). Genetic and environmental overlap between borderline personality disorder traits and psychopathy: Evidence for promotive effects of Factor 2 and protective effects of Factor 1. *Psychological Medicine*, 45(7), 1471–1481. doi:10.1017/s0033291714002608
- Jonason, P. K., Li, N. P., & Buss, D. M. (2010). The costs and benefits of the Dark Triad: Implications for mate poaching and mate retention tactics. *Personality and Individual Differences*, 48(4), 373–378. doi:10.1016/j.paid.2009.11.003
- Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2009). The dark triad: Facilitating a short-term mating strategy in men. *European Journal of Personality*, 23(1), 5–18. doi:10.1002/per.698
- Kastner, R. M., & Sellbom, M. (2012). Hypersexuality in college students: The role of psychopathy. *Personality and Individual Differences*, 53(5), 644–649. doi:10.1016/j.paid.2012.05.005
- Kelsey, K. R., Rogers, R., & Robinson, E. V. (2015). Self-report measures of psychopathy: What is their role in forensic assessments? *Journal of Psychopathology and Behavioral Assessment*, 37(3), 380–391. doi:10.1007/s10862-014-9475-5

- Knight, R. A., & Guay, J. P. (2006). The role of psychopathy in sexual coercion against women. In C. J. Patrick (Ed.), *The handbook of psychopathy* (pp. 512–532). New York, NY: Guilford Press.
- Krueger, R. F., & Eaton, N. R. (2010). Personality traits and the classification of mental disorders. *Personality Disorders: Theory, Research, and Treatment*, 1(2), 97–118. doi:10.1037/a0018990
- Lejuez, C. W., Daughters, S. B., Nowak, J. A., Lynch, T., Rosenthal, M. Z., & Kosson, D. (2003). Examining the Inventory of Interpersonal Problems as a tool for conducting analogue studies of mechanisms underlying borderline personality disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, 34(3), 313–324. doi:10.1016/j.jbtep.2003.11.002
- Lenzenweger, M. F., Clarkin, J. F., Yeomans, F. E., Kernberg, O. F., & Levy, K. N. (2008). Refining the borderline personality disorder phenotype through finite mixture modeling: Implications for classification. *Journal of Personality Disorders*, 22(4), 313–331. doi:10.1521/pedi.2008.22.4.313
- Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, 68(1), 151–158. doi:10.1037//0022-3514.68.1.151
- Lilienfeld, S. O., Waldman, I. D., & Israel, A. C. (1994). A critical examination of the use of the term and concept of comorbidity in psychopathology research. *Clinical Psychology: Science and Practice*, 1(1), 71–83. doi:10.1111/j.1468-2850.1994.tb00007.x
- Marcus, D. K., & Norris, A. L. (2014). A new measure of attitudes toward sexually predatory tactics and its relation to the triarchic model of psychopathy. *Journal of Personality Disorders*, 28(2), 247–261. doi:10.1521/pedi_2013_27_118
- Morey, L. C. (1991). *Personality Assessment Inventory professional manual*. Odessa, FL: Psychological Assessment Resources.
- Muñoz, L. C., Khan, R., & Cordwell, L. (2011). Sexually coercive tactics used by university students: A clear role for primary psychopathy. *Journal of Personality Disorders*, 25(1), 28–40. doi:10.1521/pedi.2011.25.1.28
- Neumann, C. S., Hare, R. D., & Newman, J. P. (2007). The super-ordinate nature of the Psychopathy Checklist-Revised. *Journal of Personality Disorders*, 21(2), 102–117. doi:10.1521/pedi.2007.21.2.102
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill.
- Patrick, C. J., Bradley, M. M., & Lang, P. J. (1993). Emotion in the criminal psychopath: Startle reflex modulation. *Journal of Abnormal Psychology*, 102(1), 82–92. doi:10.1037/0021-843x.102.1.82
- Patrick, C. J., Curtin, J. J., & Tellegen, A. (2002). Development and validation of a brief form of the Multidimensional Personality Questionnaire. *Psychological Assessment*, 14(2), 150–163. doi:10.1037//1040-3590.14.2.150
- Pfaltz, M. C., Schumacher, S., Wilhelm, F. H., Dammann, G., Seifritz, E., & Martin-Soelch, C. (2015). Acoustic emotional processing in patients with borderline personality disorder: Hyper- or hyporeactivity? *Journal of Personality Disorders*. Advance online publication. doi:10.1521/pedi_2015_29_176
- Pilkonis, P. A., Kim, Y., Proietti, J. M., & Barkham, M. (1996). Scales for personality disorders developed from the Inventory of Interpersonal Problems. *Journal of Personality Disorders*, 10(4), 355–369. doi:10.1521/pedi.1996.10.4.355
- Rojas, E. C., Cummings, J. R., Bornovalova, M. A., Hopwood, C. J., Racine, S. E., Keel, P. K., . . . Klump, K. L. (2013). A further validation of the Minnesota Borderline Personality Disorder Scale. *Personality Disorders: Theory, Research, and Treatment*, 5(2), 146–153. doi:10.1037/per0000036.
- Samuel, D. B., & Widiger, T. A. (2008). A meta-analytic review of the relationships between the five-factor model and DSM-IV-TR personality disorders: A facet level analysis. *Clinical Psychology Review*, 28(8), 1326–1342. doi:10.1016/j.cpr.2008.07.002
- Sansone, R. A., Barnes, J., Muennich, E., & Wiederman, M. W. (2008). Borderline personality symptomatology and sexual impulsivity. *International Journal of Psychiatry in Medicine*, 38(1), 53–60. doi:10.2190/PM.38.1.e
- Sansone, R. A., & Sansone, L. A. (2011). Sexual behavior in borderline personality: A review. *Innovations in Clinical Neuroscience*, 8(2), 14–18. doi:10.1016/j.eurpsy.2008.01.723
- Sansone, R. A., & Wiederman, M. W. (2009). Borderline personality symptomatology, casual sexual relationships, and promiscuity. *Psychiatry (Edgmont)*, 6(3), 36–40. doi:10.2190/pm.38.1.e
- Schmitt, D. P. (2004). The Big Five related to risky sexual behaviour across 10 world regions: Differential personality associations of sexual promiscuity and relationship infidelity. *European Journal of Personality*, 18(4), 301–319. doi:10.1002/per.520
- Schmitt, D. P., & Buss, D. M. (2001). Human mate poaching: Tactics and temptations for infiltrating existing mateships. *Journal of Personality and Social Psychology*, 80(6), 894–917. doi:10.1037/0022-3514.80.6.894
- Selby, E. A., Anestis, M. D., & Joiner, T. E. (2008). Understanding the relationship between

- emotional and behavioral dysregulation: Emotional cascades. *Behaviour Research and Therapy*, 46(5), 593–611. doi:10.1016/j.brat.2008.02.002
- Selby, E. A., & Joiner, Jr., T. E. (2013). Emotional cascades as prospective predictors of dysregulated behaviors in borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment*, 4(2), 168–174. doi:10.1037/a0029933
- Sellbom, M. (2011). Elaborating on the construct validity of the Levenson Self-Report Psychopathy Scale in incarcerated and non-incarcerated samples. *Law and Human Behavior*, 35(6), 440–451. doi:10.1007/s10979-010-9249-x
- Skeem, J. L., Mulvey, E. P., & Grisso, T. (2003). Applicability of traditional and revised models of psychopathy to the Psychopathy Checklist: Screening version. *Psychological Assessment*, 15(1), 41–55. doi:10.1037/1040-3590.15.1.41
- Somma, A., Fossati, A., Patrick, C., Maffei, C., & Borroni, S. (2014). The three-factor structure of the Levenson Self-Report Psychopathy Scale: Fool's gold or true gold? A study in a sample of Italian adult non-clinical participants. *Personality and Mental Health*, 8(4), 337–347. doi:10.1002/pmh.1267
- Sprague, J., Javdani, S., Sadeh, N., Newman, J. P., & Verona, E. (2012). Borderline personality disorder as a female phenotypic expression of psychopathy? *Personality Disorders: Theory, Research, and Treatment*, 3(2), 127–139. doi:10.1037/a0024134
- Struckman-Johnson, C., Struckman-Johnson, D., & Anderson, P. B. (2003). Tactics of sexual coercion: When men and women won't take no for an answer. *Journal of Sex Research*, 40(1), 76–86. doi:10.1080/00224490309552168
- Tragesser, S. L., & Benfield, J. (2012). Borderline personality disorder features and mate retention tactics. *Journal of Personality Disorders*, 26(3), 334–344. doi:10.1521/pedi.2012.26.003
- Widiger, T. A., & Sanderson, C. (1995). Toward a dimensional model of personality disorder in *DSM-III-R* and *DSM-IV*. In W. J. Livesley, *The DSM-IV personality disorders* (pp. 433–458). New York, NY: Guilford.
- Wright, A. G., Hallquist, M. N., Morse, J. Q., Scott, L. N., Stepp, S. D., Nolf, K. A., & Pilkonis, P. A. (2013). Clarifying interpersonal heterogeneity in borderline personality disorder using latent mixture modeling. *Journal of Personality Disorders*, 27(2), 125–143. doi:10.1521/pedi.2013.27.2.125
- Wright, A. G., Scott, L. N., Stepp, S. D., Hallquist, M. N., & Pilkonis, P. A. (2015). Personality pathology and interpersonal problem stability. *Journal of Personality Disorders*, 29, 684–706. doi:10.1521/pedi.2014.28.171