Do Psychopathic Birds of a Feather Flock Together? Psychopathic Personality Traits and Romantic Preferences

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Abstract

Objective: The goal of the present studies was to investigate whether people are especially attracted to psychopathic traits, and whether there are individual differences characteristics in such attraction.

Method: Female undergraduates (N = 270; M_{age} = 19; 57% White, 20% Asian, 8% Black) and female and male community members (N = 426, M_{age} = 37; 56% female; 81% Caucasian, 10% African American, 4% Asian) reported on their own personality and constructed their ideal mate for a dating, short-term, and long-term relationship from a list of 70 characteristics drawn from well-validated criteria for psychopathic personality and diagnostic criteria for DSM-5 personality disorders (PDs).

Results: Across both studies, absolute romantic preferences for psychopathic traits collapsed across time point were low on average, but higher than those for most all other PDs. In addition, they were higher for Factor 1 (i.e., interpersonal/affective) as opposed to Factor 2 (i.e., impulsive, antisocial) psychopathy traits. Participants with marked PD features, including Factor 2 psychopathy traits, were more inclined than others to endorse a preference for psychopathic males.

Conclusions: Relative attraction to psychopathic males and observed homophily may be avenues through which psychopathic traits persist in the population across time.

Keywords: psychopathy; personality disorders; attraction; romantic preferences

Do Psychopathic Birds of a Feather Flock Together? Psychopathic Personality Traits and Romantic Preferences

Following a high-profile trial in 2005, 32-year old Scott Peterson was convicted of the murder of his wife Laci and her unborn child. Within one day of his incarceration in San Quentin State Prison in California, the warden's office was inundated with over 30 phone calls from women asking for his mailing address. Soon thereafter, Peterson received a deluge of letters from women professing their love for him, along with at least two marriage proposals (Rufus, 2010). Such stories are hardly atypical. Numerous convicted murderers, including Theodore ("Ted") Bundy, Richard Ramirez (the "Night Stalker"), Lyle Menendez, and Joran van der Sloot, were also recipients of multiple marriage proposals from women following their imprisonment (Rufus, 2010). The romantic attraction of individuals, reportedly most often women, to others who have committed serious crimes is sufficiently common to have acquired a formal name: hybristophilia (Gurian, 2013).

The aforementioned men share one noteworthy characteristic in addition to their notoriety as imprisoned killers: They display at least some prominent features of psychopathic personality (psychopathy), and some of them have even been formally characterized as such by experts (Walters et al., 2017). Many writers have posed the question of why many individuals, purportedly more frequently but by no means exclusively women, are attracted to individuals, more often men, with marked psychopathic personality traits (e.g., Rufus, 2010). Still, this very question may be placing the cart before the horse. Such stories are anecdotal, and do not demonstrate that females are especially attracted to psychopathic males. Perhaps these anecdotes are merely isolated stories that have received extensive media coverage stemming from their prurient interest. Or perhaps the admirers of Peterson, Bundy, and others were equally attracted to celebrities, or were merely indiscriminate in their mate preferences. At the same time, these anecdotes raise three intriguing questions: (1) Are women especially attracted to men with marked psychopathic personality traits?, (2) What types of women are especially attracted to men with these traits?, and (3) Presuming a propensity toward attraction to psychopathic traits is a genuine phenomenon, is it generalizable to men as well?.

Until recently there has been scant systematic evidence bearing on the question of whether people are especially attracted to psychopathic individuals, and if so, which personality traits may account for such attraction. We aimed to address these questions in the present manuscript. Across two samples, one undergraduate and one community, we used a simulated dating paradigm to examine romantic attraction to psychopathic traits, as well as individual differences in personality that are associated with these preferences. By addressing these poorly understood issues, we hoped to shed at least some light on the puzzling question of why psychopathic traits, despite their risk for substantial interpersonal, psychological, occupational, and physical costs (e.g, Hemphill, Hart, & Hare, 1994; Hare, 1999; Hiroeh et al., 2008; Weiss, Miller, & Lavner, 2016), have long persisted in the population at large (Lalumiere, Mishra, & Harris, 2008).

Psychopathic Personality

In his classic text, Cleckley (1941/1988) contended that the psychopath is a hybrid creature, seemingly charming and poised on the outside but affectively impoverished on the inside. According to most accounts (e.g., Hare, 1991/2003), psychopaths are dishonest, manipulative, guiltless, unempathic individuals who are nonetheless adept at beguiling others with positive first impressions. The paradoxical nature of psychopathy likely accounts largely for the widespread popular fascination with this condition.

There are numerous well-validated psychopathy measures, although much of psychopathy research has been shaped by the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), the most widely used and extensively validated measure of psychopathy in forensic settings. The PCL-R consists of 20 items, queried using a semi-structured interview in conjunction with corroborative (e.g., file) data, to detect the affective, interpersonal, and behavioral features of psychopathy. Early factor analyses of the PCL-R and closely allied instruments typically yielded two overarching, oblique dimensions (Harpur, Hare, & Hakstian, 1989), Factors 1 and 2, although subsequent factor analyses have typically parsed the former into two narrower facets, namely, interpersonal and affective (see Cooke & Michie, 2001, Hare, 2003). Factor 1 comprises the core affective (e.g., lack of guilt, empathy, and deep love for others) and interpersonal (e.g., glibness and superficial charm, grandiose sense of self-worth) features of psychopathy

highlighted by Cleckley and other writers (e.g., McCord & McCord, 1964), whereas Factor 2 comprises an antisocial and impulsive lifestyle, and correlates moderately to highly with dimensional measures of antisocial personality disorder (ASPD) in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5; American Psychiatric Association, 2013).

Although often regarded as the stuff of criminals (Furnham et al., 2009) and businesspersons (Babiak & Hare, 2006) and as differing qualitatively from normality, psychopathy is underpinned not by a category but by one or more dimensions in nature (e.g., Edens, Marcus, Lilienfeld, & Poythress, 2006; Walters et al., 2007). These findings suggest that psychopathic traits exist along a continuum, and that highly psychopathic individuals differ in degree as opposed to kind from those with low levels of such traits. Motivated by the prospect of detecting psychopathic traits in more normative populations, and because the administration of the PCL-R is both labor- and time-intensive, a growing corpus of research has focused on the development of self-report psychopathy measures for use in such samples.

Perhaps the most widely used self-report psychopathy measure is the Psychopathic Personality Inventory-Revised (PPI-R; Lilienfeld & Widows, 2005). In contrast to most measures of psychopathy, the PPI-R assesses potentially adaptive (e.g., superficial charm, fearlessness) aspects of psychopathy in addition to those assessed by other widely-used measures (e.g., poor impulse control, callousness). Factor analyses of the PPI-R's eight subscales often yield two largely orthogonal higher-order dimensions of Fearless Dominance and Self-centered Impulsivity (Benning, Patrick, Hicks, Blonigen, & Krueger, 2003; but see Neumann, Malterer, & Newman, 2008, for an alternative factor structure).These dimensions differ somewhat in content and correlates from those of the PCL-R. Fearless Dominance is characterized by social and physical boldness and immunity to stress, whereas Self-centered Impulsivity is characterized by a narcissistic and impulsive willingness to take advantage of others. One subscale, Coldheartedness, does not load highly onto either higher-order dimension and is often used as a standalone dimension of psychopathy's affective deficits, namely guiltlessness, callousness, lovelessness, and lack of sentimentality (Lilienfeld & Widows, 2005).

Psychopathy and Interpersonal Attraction

Numerous authors have attempted to explain the puzzling persistence of psychopathic personality traits in the general population by invoking one or more evolutionary models (see Glenn, Kurzban, & Raine, 2011; Skeem, Polaschek, Patrick, & Lilienfeld, 2011, for reviews). These models posit that psychopathy confers direct and/or inclusive fitness benefits, including heightened reproductive success (Harris et al., 2007). Specifically, one grouping of evolutionary rubrics potentially relevant to psychopathy are sexual selection models, which propose that certain psychopathic traits are especially appealing to prospective romantic partners, in turn boosting the likelihood of psychopaths' mating success, at least in the short-term (Glenn et al., 2011). For instance, charm, savoir-faire, and adventurousness may be especially appealing to prospective partners. Much research suggests, however, that psychopathic individuals engage in a variety of behaviors that pose challenges to successful romantic relationships, such as reporting: a preference for impersonal sexual relationships (Jonason, Li, Webster, & Schmitt, 2009), a wide variety of sexual partners (Kastner & Sellbom, 2012), proclivities towards infidelity (Jones & Weiser, 2014), intimate partner violence (Coyne et al., 2010), blame externalization (Lilienfeld & Widows, 2015), decreased feelings of intimacy, passion, and commitment towards romantic partners (Ali & Chamorro-Premuzic, 2010), and sexual aggression (Mouilso & Calhoun, 2012). ,

Despite anecdotal suggestions that females are especially romantically attracted to males with psychopathic features and speculations that certain features of psychopathy are especially appealing to others, including prospective romantic partners, relatively few investigators have examined individuals' preferences for psychopathic individuals. Holtzman and Strube (2013) found that psychopathic undergraduate males were rated as more attractive by independent observers compared with nonpsychopathic males. These findings mirror those of other studies, in which psychopathic individuals were rated as more intelligent, physically attractive (Fowler, Lilienfeld, & Patrick, 2009), and charming (Back et al., 2010) after brief (i.e., 5, 10, and 20 second) periods of observation or interaction in both romantic (Carter, Campbell, & Muncer, 2014) and nonromantic contexts (Back et al., 2010; Fowler et al., 2009). Other research has demonstrated, however, that absolute levels of expressed romantic interest for traits associated with psychopathy (i.e., antagonism, disinhibition) were low, averaging about 2 on a 1 to

5 scale, reflecting a broad consensus that psychopathic traits are undesirable in a romantic partner (Sleep, Lavner, & Miller, 2017).

Although informative, these findings do not bear on the question of whether and which individual differences in personality predict romantic preferences for psychopathic traits. Indeed, few investigators have examined this issue. The scientific and popular ("pop") psychological literatures offer largely competing predictions regarding this question. Virtually all psychological research points to homophily ("like attracts like") as a general principle for mate preferences, although this principle appears to hold more strongly for hypothetically expressed than for actual preferences (Finkel et al., 2012). Recent studies of individuals in committed relationships (Kardum et al., 2017), including married couples (Weiss et al., 2016), have revealed a small to medium association between partners' overall psychopathic traits, raising the possibility that the individuals who report the most attraction to prospective psychopathic partners are those with marked psychopathic traits themselves (see also Jonason et al., 2011; Lamkin, Maples-Keller, & Miller, 2017; Sleep et al., 2017, for related evidence). Another study demonstrated that psychopathic females preferred males with high levels of "Dark Triad" traits (i.e., an amalgam of Machiavellianism, narcissism, and psychopathy; Paulhus & Williams, 2002), and found them more physically attractive, desirable for a casual sexual encounter, and even suitable for marriage (Jonason, Lyons, & Blanchard, 2015). Other evidence suggests that homophily may be most pronounced for psychopathy Factor 2 compared with Factor 1 traits, as homophily tends to be strongest for traits that overlap with Factor 2 (or Self-centered Impulsivity; Harpur et al., 1989) psychopathy, such as (reversed) Constraint, antisocial PD, and sensation seeking (e.g., Krueger, Moffitt, Caspi, Bleske, & Silva, 1998).

In contrast, and consistent with the "opposites attract" maxim, the popular psychology literature often suggests that individuals with *low* levels of certain psychopathic traits are especially romantically attracted to psychopathic individuals. For example, one popular book asserts that women who are vulnerable, trusting, loyal, cooperative, sentimental, and who possess strong dependency needs find psychopathic individuals especially appealing (Brown, 2010). Other sources imply that individuals with low levels of self-esteem are particularly attracted to psychopathic or otherwise manipulative individuals

(e.g., Braiker, 2004). Most or all of these characterizations are sharply at odds with the emotional independence, lack of loyalty, callousness, and self-assurance of the classic psychopath.

The romantic preferences and evolutionary psychology literatures typically focus on psychopathy per se rather than on its constituent subdimensions. Given growing evidence that psychopathy is multidimensional, at least at the lower-order level (Benning et al., 2003; Lilienfeld et al., 2015), an exclusive emphasis on psychopathy as a unitary construct may be misplaced. These findings leave unanswered which psychopathic traits individuals find attractive, and which traits in individuals are associated with a preference for such traits in others. Researchers might more profitably focus on specific features of psychopathy that are more likely to bear more evolutionarily adaptive value (see Nettle, 2006). For example, superficial charm and manipulativeness may be tied to the ability to seduce potential mates, and fearlessness may be tied to higher rates of adaptive risk-taking, thereby boosting the likelihood of acquiring valued resources and approaching and seeking out potential romantic partners.

Study 1

In our initial investigation, we used a simulated dating paradigm in an undergraduate female sample in which participants were asked to "construct" their ideal romantic partners for a (a) date, (b) short-term relationship, and (c) long-term relationship from a list of PD features. To examine the individual difference correlates of these preferences, participants reported on their own psychopathic personality traits, sensation seeking, symptoms of relevant DSM-5 PDs, and self-esteem.

Aim 1: Are female undergraduates especially attracted to psychopathic traits? Does such attraction differ by type of psychopathic trait, anticipated length of the relationship, and level of psychopathic traits?

Hypothesis 1a. We predicted that males' Factor 1 psychopathy traits, particularly the interpersonal features, such as superficial charm, self-confidence, poise, and emotional resilience, would be particularly appealing to romantic partners. Because social and physical risk-taking traits in males are often linked to long-term risks, such as poor fathering and occupational failure (Zuckerman, 1994), we predicted that preferences for psychopathic men would be more marked for a short-term as opposed to a long-term

relationship (see also Leckelt, Küfner, Nestler, & Back, 2015, for evidence that attraction to narcissistic features decreases with time). More tentatively, we also predicted that such preferences would be curvilinear in nature, such that females would prefer moderate to low or high levels of psychopathic traits in males; we anticipated this pattern because a moderate, but not an extremely high, "dose" of such traits might be perceived as alluring and appealing to prospective partner (see Grant & Schwartz, 2011, for a broader discussion of the plausibility of inverted U-shaped associations between personality traits and social behavior).

Hypothesis 1b. In subsidiary analyses, we examined the extent to which females' attraction was specific to psychopathic traits or general as opposed to those of other DSM-5 PDs. We hypothesized that females' attraction would extend to allied PDs, especially narcissistic, borderline, and histrionic PDs, which are in Cluster B ("dramatic, emotional") of DSM-5 (American Psychiatric Association, 2013). We predicted this lack of specificity given the significant overlap among psychopathy with Cluster B PDs (Stålenheim & Von Knorring, 1996).

Aim 2: Which traits are associated with a preference for psychopathic males?

Hypothesis 2. Contrary to much of the popular psychology literature but consistent with the broader homophily literature, we predicted that females who would be most attracted to psychopathic males would be those who are most psychopathic themselves. We hypothesized that homophily would be most marked for Factor 2 psychopathy features (e.g., Krueger et al., 1998) given that they overlap substantially with sensation seeking and antisocial PD. As before, we expected that females higher in other Cluster B PDs, would also indicate a preference for psychopathic traits.

Method

Participants.

Participants were 270 female undergraduates at Emory University in Atlanta, Georgia aged 18 to 23 (M_{age} = 19.01 years, SD = 1.08). Our sample comprised predominantly White (57%), Asian (20%), and Black (8%) individuals, 66% of whom reported their current relationship status as single and 33% of whom reported being in a committed romantic relationship. Relationship status (single versus non-single)

was not significantly correlated with PPI-R subdimensions (point biserial *r*s ranged from -.07 to -.03), and thus was not treated as a covariate in analyses.

The overwhelming majority of participants (97%) identified as heterosexual (2% were homosexual, 1% bisexual). Two participants were identified as potentially problematic responders on the basis of elevated scores on the Inconsistent Responding validity scale of the PPI-R (see *Measures* below). Excluding non-heterosexual participants or potentially problematic responders had no discernable impact on any of the results reported here, so all analyses are reported using the full sample to maximize statistical power.

Measures.

Participants completed a battery of (a) measures of romantic preferences and (b) self-report measures of PD features (including psychopathic traits), sensation seeking, and self-esteem. The order of these two sets of measures (romantic preferences versus personality) was counterbalanced across participants; because there were no significant order effects for any of the major analyses (i.e., order did not moderate the relations between personality and romantic preferences), we presented results combined across these two orders. Descriptive statistics for romantic preferences and primary personality measures are displayed in Table 1.

Romantic preferences.

Personality disorder symptom list. Participants were asked to imagine a good-looking young man named Bill, who was in the same year as they were in school and with whom they shared a mutual friend. They were then presented with 70 assorted personality characteristics and were asked to "construct your own ideal version of Bill." To assemble these 70 characteristics, we compiled a list of PD features (presented in intermixed, quasi-random order) adapted from (1) the 20 items of the PCL-R (Hare, 2003), divided into Factor 1 (8 items) and Factor 2 (9 items) traits, with Factor 1 traits further subdivided into Interpersonal (4 items) and Affective (4 items) traits; and (2) diagnostic criteria for 5 of the 10 DSM PDs, namely, borderline, narcissistic, histrionic, schizotypal, and dependent (αs ranged from .67 [PCL-R Factor

2] to .92 [PCL-R Affective]).[1] The first 3 of these PDs were selected in light of their presence in Cluster B of the DSM PDs section (the fourth Cluster B disorder, antisocial, was not included given its substantial overlap with PCL-R Factor 2; see Ogloff, Campbell, & Shepherd, 2016), and because dimensional measures of these disorders are positively correlated with psychopathy (e.g., Huchzermeier et al., 2007). The last two of these disorders were selected given that they were deemed to be the most prototypical PD in Cluster A ("odd, eccentric" disorders) and Cluster C ("anxious, fearful" disorders), respectively; they therefore served as tests of the discriminant validity of our findings to psychopathy as opposed to non-Cluster B conditions. Participants were not informed that the list of items contained features of psychopathy or other PDs.

For each of the 70 items, participants rated (using a 1-10 scale, with 1 = "Not Interested" and 10 = "Very Interested") the extent to which they desired each trait in Bill for an ideal (a) date, (b) short-term relationship partner, and (c) long-term relationship partner. Items were rephrased or paraphrased slightly from the original sources to make them more accessible to nonspecialists (see Appendix A for the full list of 70 items). For example, the PCL-R item "callousness; lack of empathy" was reworded to "He doesn't experience much caring or empathy for others."

Psychopathy vignettes. Immediately thereafter, participants read three vignettes describing a hypothetical person named Tim, who was described as a good-looking young man whom a close friend suggested they meet. The vignettes were constructed by adapting the Cleckley (1941) criteria for psychopathy into nontechnical, user-friendly language and weaving them into a one-paragraph narrative. One vignette consisted of low severity psychopathy descriptors (e.g., "Tim is awkward and shy, especially when he firsts meets someone. […] However, Tim is highly dependable and honest; you can count on him to keep his word. When he thinks he's down something wrong, he feels guilty or remorseful"), one of medium severity psychopathy descriptors (e.g., "Tim can be awkward in some situations but he usually makes a reasonable first impression. He strikes others as fairly confident but not

[1] Participants also completed ratings on the seminal 16 Cleckley (1941/1988) criteria for psychopathy. Although there are only 16 Cleckley criteria for psychopathy, we constructed 19 items because several of these criteria are compound criteria (e.g., "poor judgment and failure to learn from experience"). Because they are not regarded contemporarily as "diagnostic criteria" for psychopathic personality, and because most of them overlap substantially with PCL-R items, we have elected not to present them here and instead make them available from the first author upon request.

overly so. […] Tim is usually dependable and honest; you can usually count on him to tell the truth and keep his promises. He generally feels guilty or remorseful when he feels he has done something wrong."), and one of high severity psychopathy descriptors (e.g., "Tim is charming and engaging, and makes a good first impression on just about everyone he meets. He comes off as confident, level-headed and intelligent. […] Tim isn't always dependable or honest, and you might not be able to rely on him to keep promises or tell the truth. He doesn't experience much guilt about things he's done wrong.").

After reading each vignette, participants were again asked to rate (using a 1-10 scale, where 1 = Not all interested to 10 = Very Interested) how interested they would be in each "version" of Tim for (a) a date, (b) short-term relationship, and (c) long-term relationship (see Appendix B). After reading all three vignettes, they were also asked to indicate which "version" of Tim is most similar to the majority of men whom they have dated in the past. The order of the vignettes was counterbalanced across participants. Because there were no significant order effects, we collapsed across conditions for all analyses. The vignettes were matched closely on word length (low psychopathy prototype = 280 words; medium psychopathy prototype = 271 words; high psychopathy prototype = 270 words).

Females' personality traits and personality disorder features.

Psychopathic Personality Inventory-Revised (PPI-R; Lilienfeld & Widows, 2005). The PPI-R is a 154-item measure that is designed to detect psychopathic personality traits. It yields a total score (α = .90) and scores on 8 lower-order subscales (αs ranged from .80 [Machiavellian Egocentricity] to .89 [Coldheartedness]), 7 of which typically coalesce in nonclinical samples into the two largely orthogonal higher-order dimensions of Fearless Dominance and Self-centered Impulsivity (Benning et al., 2003). The eighth scale, Coldheartedness, does not load highly on either PPI-R higher-order factor and was examined in analyses as third standalone dimension assessing guiltlessness, lovelessness, and callousness.[2] The PPI-R also contains an Inconsistent Responding scale designed inconsistent responding across 40 pairs of moderately to highly intercorrelated items.

[2] We also extracted triarchic psychopathy dimension composites of boldness, disinhibition, and meanness using the PPI-R items (Hall et al., 2014); their relations with romantic preferences are available from first author upon request.

Short Coolidge Axis II Inventory (SCATI; Coolidge & Merwin, 1992). The SCATI is a 70-item measure that assesses signs and symptoms of the 10 DSM-IV and now DSM-5 PDs, two appendixed PDs that were contained in DSM-IV, sadistic and passive-aggressive (negativistic), and two PDs contained in the appendix of previous versions of the DSM, depressive and self-defeating (αs ranged from .47 [Obsessive-Compulsive] to .74 [Borderline]).

Sensation Seeking Scale, Form V (SSS-V; Zuckerman, Eysenck, & Eysenck, 1978). The SSS-V is a widely-used sensation seeking measure that comprises 40 forced-choice items (e.g., "I like 'wild' uninhibited parties" versus "I prefer quiet parties with good conversation"; α = .77). We adopted a total score composite of the SSS-V as opposed to subscales given low internal consistencies among the latter in our sample (αs ranged from .46 to .77, Zuckerman et al., 1978).

Rosenberg Self-Esteem Inventory (RSES; Rosenberg, 1965). The RSES is a widely-used 10-item measure of self-esteem (e.g., "On the whole, I am satisfied with myself"; α = .79).

Results

Aim 1: Undergraduate females' preferences for psychopathic traits.

Absolute preferences for psychopathic traits. Date, short-term, and long-term preferences for romantic preferences were highly correlated (*r*s ranged from .77 to .90 for Factor 1 psychopathy preferences and from .76 to .91 for Factor 2 psychopathy preferences), so we focused on overall preferences for PD features by combining across all three time points for the following analyses (see Table 1 for descriptive statistics for females' preference ratings). Absolute levels of romantic interest for all psychopathy features were modest: on a 1-10 scale, the average level of expressed interest per psychopathy item was no higher than 4.

Relative preferences for psychopathic traits. A paired-samples t-test revealed that, as predicted, females significantly preferred PCL-R Factor 1 traits (M = 3.56, SD = 1.06) to PCL-R Factor 2 traits (M = 2.98, SD = 1.24) when "constructing" their ideal partner (t (269) = 10.45, $p < .001$); this difference was medium to large in magnitude (Cohen's d = .50). Exploratory analyses at the PCL-R facet level revealed that this effect was most pronounced for the affective (M = 3.99, SD = 1.16) as opposed to interpersonal

(M = 3.14, SD = 1.31; *d* = .69) Factor 1 features, although females significantly preferred both facets to Factor 2 features (*d*s were .84 and .13, respectively). A post-hoc item-level analysis revealed that females' relative preferences for affective deficits appeared driven by the guilt proneness item ("He is not prone to guilt"); dropping this item from the PCL-R Affective features composite resulted in a significant decrease (t (269) = -13.16, $p < .001$; M = 3.18, SD = 1.44) in females' preferences for such features, which were no longer significantly different from the PCL-R Interpersonal features (t (269) = 0.69, $p = .49$).

Parallel paired-samples t-tests revealed that females preferred PCL-R Affective traits to other PD features, with one exception (Cohen's *d*s ranged from .69 [PCL-R Interpersonal] to 1.56 [Schizotypal PD]); participants' preferences for PCL-R Affective traits were slightly but nonsignificantly higher than for Dependent PD traits (t (269) = 1.63, $p = .11$; $d = -.30$). Rank-ordering of females' preferences were as follows: PCL-R Affective traits, Dependent PD, Histrionic PD, Narcissistic PD, PCL-R Interpersonal traits, PCL-R Factor 2 psychopathy, Borderline PD, and Schizotypal PD. Nearly all differences (tested by means of paired samples t-tests) between PDs were significant (*p*s < .01; available from first author upon request).

Preferences for psychopathic traits as a function of time. Despite the high correlations among dating, short-term, and long-term preferences for both PCL-R Factor 1 and Factor 2 traits, analyses separating these three temporal preferences yielded a clear pattern consistent with our predictions (see Figure 2). A repeated measures analysis of variance (ANOVA) examining the statistical effects of time on psychopathy features revealed a significant linear trend for PCL-R Factor 1 traits (F (1, 269) = 456.76, $p<.001$), which was qualified by a significant quadratic trend (F (1, 269) = 8.30, $p=.004$). Females' preferences for PCL-R Factor 1 traits were highest for dating, next highest for a short-term relationship, and lowest for a long-term relationship (see Figure 1 for descriptive statistics by time point); post-hoc pairwise comparisons revealed significant differences between each of the time points (*p*s < .001).

A parallel repeated measures ANOVA revealed a similar linear trend for PCL-R Factor 2 traits (F (1, 269) = 384.21, $p < .001$), which was again qualified by a significant quadratic trend (F (1, 269) = 8.26, $p = .004$). Females' preferences for Factor 2 traits were again highest for dating, next highest for a short-

term relationship, and lowest for a long-term relationship (again, see Figure 1 for descriptive statistics by time point); post-hoc pairwise comparisons revealed significant differences between each of the time points (*p*s < .001; see Figure 1 for descriptive statistics for time point preferences; results from repeated measures ANOVAs for other PD preferences are available from first author upon request).

Similarly, when females reported their preferences for the three psychopathy vignettes (low, medium, high; see Figure 2) for (a) a date, (b) short-term relationship, and (c) long-term relationship, their preference for both the medium and high psychopathy prototypes *decreased* linearly (and not quadratically) as a function of time (F (1, 269) = 380.20, p < .001 and F (1, 269) = 578.83, p <.001, respectively), whereas their preferences for the low psychopathy prototype *increased* linearly as a function of time (F (1, 269) = 13.28, p < .001).

Preferences for differing levels of psychopathy. A repeated measures ANOVA indicated that females' preferences for levels of psychopathic trait differed as a function of time, such that there was a significant interaction between level of psychopathy and time point (F (1, 265) = 327.72, p < .001; see Figure 2). For a date, participants preferred the high psychopathy prototype, followed by the medium, and then the low prototype; differences between females' preferences for the (a) medium and (b) low and high prototypes were significant (*p*s < .001s; Cohen's *d*s were .48 and .57, respectively), whereas the difference between the low and high prototypes was not significant (p = .67, d = .12). For a short-term relationship, females preferred the low and medium psychopathy prototypes to the high prototype (*p*s < .001, Cohen's *d*s were 1.11 and 1.01, respectively); there was no significant difference in females' preferences for the low and medium prototypes (p = .98, d = .09). For a long-term relationship, females preferred the low psychopathy prototype, followed by the medium, and then the high (all *p*s < .001; *d*s ranged from .74 to 2.29).

When asked to report which of the three versions of Tim (low, medium, or high psychopathy levels), 63% of females indicated a history of primarily dating men with medium levels of psychopathic traits, whereas 25% and 12% indicated a history of primarily dating men with low and high levels of such traits, respectively.

Aim 2: Individual differences in undergraduate females' attraction to psychopathic traits.

Table 1 presents the associations between females' traits and their romantic preferences. Again, because the correlations were extremely similar for dating, short-term, and long-term preferences, we present only the data for total (combined) preference scores (correlations subdivided by time point are available from first author upon request).

Convergent correlations. Females with high levels of PPI-R Self-centered Impulsivity reported a statistically significant and moderate preference for males with higher levels of PCL-R Factor 1 and Factor 2 traits (*r*s ranged from .17 to .34). Consistent with our prediction, the correlation between females' PPI-R Self-centered Impulsivity and males' PCL-R Factor 1 traits was significantly different from that of PCL-R Factor 2 traits (Z (269) = 7.46, $p < .001$) on the basis of a Steiger's test of the significance of the difference between dependent correlations; this difference was attributable primarily to the relation between females' PPI-R Self-centered Impulsivity and males' PCL-R Affective but not Interpersonal traits.[3] Females with high levels of PPI-R Fearless Dominance did not express a significant preference for such traits. Although we did not advance specific predictions regarding PPI-R Coldheartedness, females with higher levels of PPI-R Coldheartedness expressed a significant interest in males with high PCL-R Factor 2 ($r = .18$) but not Factor 1 traits (*r*s ranged from .04 to .05). Taken together, these findings indicate that females' preference for psychopathic males was attributable to females' Self-centered Impulsivity but not Fearless Dominance traits, although females higher in Coldheartedness slightly preferred Factor 2 traits in males.

In contrast with females' expressed preference for psychopathic males, neither psychopathic traits nor other PD features were significant predictors of having primarily dated psychopathic males in the past (per Spearman's rank-order correlations between personality and our one-item indicator from the psychopathy vignettes; *r*s ranged from -.12 [PPI-R Coldheartedness, Rosenberg Self-esteem] to .14

[3] Exploratory analyses (available from first author) examining the 7 PPI-R content scales that load on Fearless Dominance and Self-centered Impulsivity revealed that females' Fearless Dominance traits' relations with preferences for PD traits in males were driven primarily by the Fearlessness scale; Social Potency and Stress Immunity were not typically related to preferences for PD traits. In contrast, most all Self-centered Impulsivity subscales (Blame Externalization, Machiavellian Egocentricity, and Rebellious Nonconformity) with the exception of Carefree Nonplanfulness were consistently correlated with a preference for PD traits.

[Borderline and Dependent PDs]); the disinhibition component of sensation seeking and Histrionic PD features exhibited a small positive correlation with dating history (*rs* were .23 and .17, respectively).

As predicted, but contrary to much of the popular psychology literature, self-esteem scores were not significantly correlated with preference for PCL-R Affective or Interpersonal traits (*r*s were .12 and -.13, respectively). Potentially albeit only modestly consistent with this literature, however, females with lower levels of self-esteem expressed a preference for Factor 2 traits ($r = -.17$).

Discriminant correlations. As can be seen in Table 1, there was a notable lack of specificity in the relations between females' personality traits and their preferences for psychopathic males such that similar patterns to those for PPI-R Self-centered Impulsivity emerged for features of several other PDs, including Cluster A (paranoid and schizotypal), Cluster B (antisocial, borderline, histrionic, and narcissistic), Cluster C (avoidant and dependent), and depressive, sadistic, self-defeating, and passive-aggressive PDs. Features of these PDs in females were in general significantly and moderately associated with preferences for all three psychopathy traits in males (*r*s ranged from .08 to .35). Schizoid and obsessive-compulsive PD features were not significantly associated with a preference for psychopathic traits (*r*s ranged from -.03 to .13).

There was also a notable lack of specificity in females' preferences for psychopathy per se as opposed to features of overlapping (Cluster B) PDs and ostensibly largely independent (Cluster A and C) disorders. For instance, PPI-R Self-centered Impulsivity (but not Fearless Dominance or Coldheartedness; *r*s ranged from -.05 to .12 and -.02 to .14, respectively) was generally significantly and modestly associated with preference for features of all PDs measured (*r*s ranged from .25 to .31); none of PPI-R Self-centered Impulsivity's relations with a preference for males' psychopathic features exceeded those of other PDs (i.e., tests of dependent correlations were nonsignificant). Moreover, females with schizotypal, passive-aggressive, self-defeating, antisocial, paranoid, borderline, avoidant, dependent, and sadistic PD features indicated a preference for many if not all of the observed PD features in males (*r*s ranged from .17 to .27). In contrast, females' schizoid, histrionic, narcissistic, and obsessive-compulsive traits were in general not significantly correlated with a romantic preference for PD features in males.

Discussion

The goals of Study 1 were to investigate whether women are especially attracted to psychopathic traits, and whether there are individual differences characteristics in such attraction. When female undergraduates constructed their ideal mate for a dating, short-term, and long-term relationship, their absolute romantic preferences for psychopathic traits were low on average (see Sleep et al., 2017, for broadly similar findings). Romantic preferences for Factor 1 psychopathy traits (i.e., interpersonal/affective), however, were higher than those for most all other PDs, including Factor 2 (i.e., impulsive, antisocial) psychopathy traits. In addition, participants' expressed preferences for psychopathic traits decreased as a function of anticipated time such that they were highest for a dating relationship and lowest for a long-term relationship, indicating that psychopathic traits may be most attractive to others in the short-term, allowing those with high levels of psychopathic traits to capitalize on short-term, potentially impersonal, sexual encounters (e.g., Glenn et al., 2011). Lastly, women with marked PD features, including Cluster B PDs and Factor 2 psychopathy traits, were more inclined than other women to endorse a preference for psychopathic males (as well as males with other PD features), supporting a "like attracts like" hypothesis whereby individuals with pronounced PD features are attracted to one another (Weiss et al., 2017).

Strengths of our study notwithstanding, our methodology was marked by several limitations, most of which we hoped to address in Study 2. First, because our sample comprised female undergraduates, our study cannot address whether our findings hold for males' preferences, or for nonstudent's (e.g., community members') preferences. Second, our within-subjects design, in which participants rated their romantic preferences for various traits for each of three times points (i.e., dating, short-term relationship, long-term relationship), may have inadvertently encouraged contrasts or demand characteristics across time points. As such, our finding that participants' romantic preferences for psychopathic traits (and other PD features) decreased as a function of anticipated relationship duration may be at least partly artifactual (cf., Leckelt et al., 2015). These methodological difficulties could be addressed by means of a between-subjects design in which participants rate their preferences for traits for

one time point in isolation. Third, one possible explanation for our lack of observed specificity in homophily may be due in part to our operationalization of PD features on both the predictor and criterion ends. Because we adopted DSM-5 PD categories as opposed to dimensional general personality domains and their constituent traits found in DSM-5's Section III PDs model (Krueger, Derringer, Markon, Watson, & Skodol, 2012), our lack of specificity may indicate a preference for one or more personality traits, such as antagonism, that cut across multiple PD categories. In Study 2, we aimed to replicate and extend our findings from Study 1 by addressing each of the aforementioned limitations.

Study 2

Relying on the same simulated dating paradigm, we again examined participants' personality and romantic preferences. We addressed each of the aforementioned limitations of Study 1 in the following ways. First, we examined community members rather than undergraduates to examine the generalizability of our findings to a sample drown from a different population. Second, we expanded our investigation to encompass both males' and females' romantic preferences. Third, we prioritized the need to examine replication of Study 1's findings, so we examined participants' romantic preferences primarily by means of a within-subjects design, in which participants reported their anticipated preferences for all three time points (i.e., date, short-term relationship, long-term relationship). Nevertheless, we additionally incorporated a between-subjects component in which participants reported their preference for one time point in isolation to rule out the possibility that participants' discrimination among time points was attributable to demand characteristics, contrast effects, or both. Fourth, to examine the individual difference correlates of these preferences, participants again reported on their own psychopathic personality traits and PD features, including psychopathic traits, self-esteem, sensation seeking, and DSM PD features. Nevertheless, to better ascertain the specificity of our findings to personality disorder features as opposed to broader personality domains, we also examined participants' general personality traits and dimensional personality disorder traits captured within DSM-5's Section III PDs model.

Aim 1: Are community members especially attracted to psychopathic traits? Does such attraction differ by type of psychopathic trait?

Hypothesis 1. As in Study 1, we predicted that absolute romantic preferences for psychopathic traits would be low (see also Sleep et al., 2017), but that Factor 1 psychopathy traits would be particularly appealing to romantic partners relative to Factor 2 psychopathy traits and other PD features. Consistent with our hypothesis for Study 1 but not our Study 1 findings, we predicted that the interpersonal as opposed to the affective features of psychopathy would be particularly attractive to romantic partners.

Aim 2: Does attraction to psychopathic traits differ by anticipated length of the relationship?

Hypothesis 2. As demonstrated by means of a within-subjects design, we predicted that preferences for psychopathic men would be more marked for a short-term as opposed to a long-term relationship. More provisionally, we did not predict significant differences in this effect for the between-subjects component of our methodology.

Aim 3: Which traits are associated with a preference for psychopathic individuals?

Hypothesis 3. Consistent with our findings in Study 1, we predicted that participants' psychopathic traits would be associated with romantic preferences for psychopathic traits, but that psychopathic traits would be associated broadly with an interest in PD features. We did not predict significant differences in the magnitudes of the relations between participants' psychopathic traits and romantic preferences for PD features as a function of type of PD. We also predicted that these associations would not be specific to participants' psychopathic features and that other PD features, including dimensional traits that underpin PDs (i.e., antagonism, disinhibition, detachment), would be associated with a broad romantic interest in PD features.

Aim 4: Are there gender differences in the relations between personality and romantic preferences?

Hypothesis 4. Given that males typically exhibit higher levels of sensation seeking, antagonism, and disinhibition (e.g., Costa, Terracciano, & McCrae, 2001), and that these features best predicted romantic preferences in PDs in Study 1, we predicted that males would exhibit significantly higher mean levels of romantic interest in PD features. In contrast, but again consistent with the limited literature (Jonason et

al., 2015), we did not expect that gender would moderate the relations between personality and romantic preferences, indicating no differences in the manifestation of personality in romantic interests.

Method

Participants.

Participants were North American community members who completed the study online through Amazon's Mechanical Turk (MTurk) and were compensated $2.00 for approximately 40 minutes of their time. The initial sample comprised 481 participants, but 55 were removed because their (a) responses contained excessive missing data (N = 37), and/or (b) PPI-R's Inconsistent Responding scale scores were outliers (N = 18). Participants were removed on a listwise as opposed to pairwise basis to minimize the likelihood of including careless responders. An additional 26 participants completed the dating preferences but not personality questionnaires, so all correlational analyses between personality and romantic preferences comprised 400 participants. To safeguard against including duplicate participants, we used Unique Turker (uniqueturker.myleott.com) to prevent participants from completing the study more than once, both within and across conditions.

Although not fully representative of the U.S. population, MTurk samples tend to yield greater demographic and personality trait variability than those drawn from undergraduate populations (e.g., Miller et al., 2017). Participants in the final sample (N = 426; M_{age}=36.95 years, SD=10.82) were predominantly female (56%), and of Caucasian (81%), African American (10%), or Asian (4%) descent, 90% of whom reported being heterosexual and 3% reported being homosexual. Forty-two percent of participants reported being married and 29% reported being single.

Measures.

Participants completed a similar battery of (a) measures of romantic preferences and (b) self-report measures of PD features (including psychopathic traits), sensation seeking, and self-esteem as in Study 1, but with several noteworthy changes. First, participants completed both within-subjects and between-subjects romantic preferences ratings. Second, to better establish the specificity of relations between psychopathic traits and romantic preferences, we included a measure of the maladaptive traits

from DSM-5's Section III PDs model, a more widely-used measure of DSM-5 PDs, and a measure of general personality traits. Descriptive statistics for romantic preferences and primary personality measures are displayed in Table 2.

Romantic preferences.

Personality disorder symptom list. Participants completed ratings on the same PD symptom list as in Study 1, this time with a between-subjects component in addition their within-subjects ratings. For the within-subjects ratings, we administered the 51 items pertaining to PCL-R Factors 1 and 2 and PD symptom criteria (i.e., schizotypal, borderline, histrionic, narcissistic, and dependent) and, as before, participants reported their preferences for these criteria for a date, short-term relationship, and long-term relationship on a 1 to 10 scale (αs ranged from .55 [PCL-R Interpersonal] to .95 [PCL-R Borderline]).

Given that we prioritized a within-subjects design for the romantic preferences of primary interest (i.e., psychopathy, DSM-5 PDs), we elected to examine the extent to which participants' reported preferences broken down by time point were affected by contrast effects or demand characteristics by using a subset of items used in Study 1 that were less central to Study 2's aims. For the between-subjects ratings, we administered the 19 items pertaining to the Cleckley criteria for psychopathy (α = .88; see Footnote 1 for more information on these items) wherein participants were assigned randomly to a condition in which they rated their preferences for such features for either a date, short-term relationship, or long-term relationship. In Study 1, participants' preferences for Cleckley psychopathy criteria were highly correlated with their preferences for PCL-R features (*r*s ranged from .77 [PCL-R Factor 2] to .91 [PCL-R Factor 1]) and the two item sets manifested a largely similar profile of relations with general personality traits. This pattern of findings suggests that any between-subjects effects should be generalizable to the larger item pool, and the other psychopathy items.

Community participants' personality traits and personality disorder features.

Psychopathic Personality Inventory-Revised, Abbreviated Form (PPI-R-40; Eisenbarth, Lilienfeld, & Yarkoni, 2015). The PPI-R-40 is a 40-item abbreviated version of the 154-item PPI-R that was reduced using an automated genetic algorithm (subscale αs ranged from .68 [Social Influence] to .79

[Stress Immunity]). We also computed an Inconsistent Responding scale designed for use with the PPI-R-40 (Kelley et al., 2016).

Brief Sensation Seeking Scale, Form V (BSSS-V; Hoyle et al., 1991). The BSSS-V is a brief, 8-item measure of sensation seeking that yields scores on four correlated subscales: Thrill and Adventure Seeking, Experience Seeking, Disinhibition, and Boredom Susceptibility (αs ranged from .42 [Boredom Susceptibility] to .72 [Thrill Seeking]).

Rosenberg Self-Esteem Inventory (RSES; Rosenberg, 1965). The RSES is a widely-used measure of self-esteem that comprises 10-items (e.g., "On the whole, I am satisfied with myself") on a 1 to 4 Likert-type scale (α = .93).

Big Five Inventory (BFI; John, Donahue, & Kentle, 1991). The BFI is a widely-used 44-item questionnaire that assesses the Big Five personality domains (αs ranged from .84 [Agreeableness] to .91 [Neuroticism]).

Personality Inventory for the DSM-5 Personality Disorders, Brief Form (PID-5 – Brief Form; Krueger et al., 2012). The PID-5 - Brief Form is a 25-item measure of the maladaptive traits proposed in Section III of the DSM-5, Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism (αs ranged from .82 [Detachment] to .86 [Disinhibition]).

Structured Clinical Interview for DSM-IV Personality Disorders–Personality Questionnaire (SCID-II-PQ; First, Gibbon, Spitzer, Williams, & Benjamin, 1997). The SCID-II-PQ is a 119-item self-report questionnaire designed to assess the diagnostic criteria for the DSM-5 PDs. In addition to the 10 disorders included in DSM-5, it includes items assessing depressive and passive-aggressive (negativistic) PDs, both of which were included in the Appendix of DSM-IV (αs ranged from .65 [Obsessive-Compulsive] to .87 [Antisocial]).

Results

Aim 1: Absolute and relative preferences for psychopathy features

Absolute preferences for psychopathic traits. As in Study 1, because date, short-term, and long-term preferences for romantic preferences were highly correlated (*r*s ranged from .56 to .67 for Factor 1

and from .60 to .78 for Factor 2 psychopathy preferences), we focused on overall preferences for PD features collapsing across all three time points for the following analyses (see Table 2). Absolute levels of romantic interest for all psychopathy features were again modest, and broadly commensurate with the findings from Study 1: on a 1-10 scale, the average level of expressed interest per psychopathy item was no generally higher than 4, with the exception of participants' preference for a PCL-R Interpersonal item ("S/he is charming and easy to talk to."), in which participants' preferences were slightly above 4.

Relative preferences for psychopathic traits. Contrary to the results from Study 1, in which female undergraduates preferred PCL-R Affective to Interpersonal features, paired-samples t-tests revealed that community members significantly preferred PCL-R Interpersonal (M = 4.23, SD = 1.46) to PCL-R Affective traits (M = 3.15, SD = 1.76) and PCL-R Factor 2 traits (M = 3.14, SD = 1.71) when "constructing" their ideal partner (t (399) = 14.93, $p < .001$ and t (399) = 16.39, $p < .001$, respectively); these differences were medium to large in magnitude (Cohen's *ds* were 1.46 and 1.64, respectively). There was no significant difference expressed preferences for PCL-R Affective and Factor 2 features (t (399) = 0.04, $p = .97$; $d = .00$).

Parallel paired-samples t-tests revealed that community members preferred PCL-R Interpersonal traits to other PD features (Cohen's *d*s ranged from .82 [PCL-R Interpersonal] to 2.26 [Borderline PD]). Rank-ordering of community members' preferences were as follows: PCL-R Interpersonal traits, Schizotypal PD, Dependent PD, PCL-R Affective traits, PCL-R Factor 2 traits, Histrionic PD, Narcissistic PD, and Borderline PD. All pairwise comparisons between participants' preferences were statistically significant ($p<.001$), again with the exception of expressed preferences for PCL-R Affective and Factor 2 psychopathy traits.

Aim 2: Preferences for psychopathic traits as a function of time

A one-way between-subjects ANOVA examining the effect of anticipated relationship duration (i.e., date, short-term relationship, long-term relationship) on participants' expressed preferences for Cleckley psychopathy features was nonsignificant (F (2, 430) = 0.04, $p = 0.97$); post hoc comparisons between pairs of conditions were all nonsignificant (all *p*s = 1.00; Date: M = 3.79, SD = 1.30; Short-term

relationship: M = 3.83, SD = 1.16; Long-term relationship: M = 3.78, SD = 1.37). Given that these findings indicate that participants do not report marked differential preferences for psychopathic traits across time when reporting preferences for one time point in isolation, all repeated measures ANOVAs examining the statistical effects of time on psychopathy features (as presented in Study 1) are not reported here and instead are available from the first author upon request.

Aim 3: Individual Differences in Attraction to Psychopathic Traits

Table 2 presents the associations between community members' traits and their romantic preferences. Again, because the correlations were extremely similar for dating, short-term, and long-term preferences, we present only the data for total (combined) preference scores (correlations subdivided by time point available from first author upon request).

Convergent correlations. Consistent with Study 1, community members with higher levels of PPI-R Self-centered Impulsivity reported a moderate preference for males with higher levels of PCL-R Factor 1 and Factor 2 traits (*r*s ranged from .45 to .51); preferences were significantly stronger for PCL-R Factor 2 features compared with Factor 1 features (Steiger's $Z = -2.57$, $p = .01$). To a lesser extent, community members with higher levels of PPI-R Fearless Dominance and Coldheartedness reported a preference for PCL-R Factor 1 and Factor 2 traits (*r*s ranged from .15 to .17 and .19 to .22, respectively), but there were no significant differences in their relations with Factor 1 and 2 features. When PPI-R subdimensions (i.e., Coldheartedness, Fearless Dominance, Self-centered Impulsivity) were entered as simultaneous predictors of romantic interest in Factor 1 and 2 psychopathy features, PPI-R Self-centered Impulsivity, but not Fearless Dominance and Coldheartedness, remained a significant predictor of romantic interest in psychopathy features, suggesting that the latter subdimensions' relations with preferences for psychopathy features were attributable to their modest overlap with the former. In addition, consistent with the pop psychology literature, community members' self-esteem scores were moderately negatively associated with a preference for PCL-R psychopathy features (*r*s were -.20 and -

.21 for Factors 1 and 2, respectively), indicating that participants with lower levels of self-esteem preferred those with psychopathic traits for romantic relationships.[4]

Discriminant correlations. Largely corroborating our findings from Study 1, there was a notable lack of specificity in the relations between community members' personality traits and their preferences for psychopathic individuals. Specifically, similar patterns to those for PPI-R Self-centered Impulsivity emerged for features of other DSM-5 PDs, PID-5 maladaptive personality traits, and Big Five personality traits, with some notable exceptions. Features of schizoid, avoidant, and obsessive-compulsive PDs, as well as BFI Neuroticism, Extraversion, and Openness to Experience, were all nonsignificantly related to a preference for psychopathic individuals (*r*s ranged from -.07 to .16). All other personality traits and trait complexes, however, manifested small (i.e., Dependent PD, Passive-aggressive PD, PID-5 Detachment, PID-5 Negative Affectivity, and reversed BFI Antagonism and Conscientiousness; *r*s ranged from -.37 to .30) to medium (i.e., PID-5 Antagonism, PID-5 Disinhibition, PID-5 Psychoticism, Schizotypal PD, Cluster B PDs; *r*s ranged from .26 to .54) relations with romantic preferences. There was also a notable lack of specificity in females' preferences for psychopathy *per se* as opposed to features of other PDs. Each of other traits and trait complexes that were associated with a preference for psychopathic individuals were also about equally associated with a preference for features of all PDs measured.

Aim 4: Gender differences in romantic preferences

Males endorsed higher mean levels of romantic preferences for PD features than did females (all t-tests were significant at $p<.001$); the magnitudes of these gender differences were generally medium in magnitude (Cohen's *d*s for romantic preferences collapsed across time point ranged from .38 to .57).

[4] To facilitate direct comparison across Studies 1 and 2, we computed PPI-R-40 subscale composites for the data in Study 1 (in which we reported scores for the 154-item PPI-R). Using tests of independent correlations, we found no significant differences in the magnitudes of correlations between the PPI-R and PPI-R-40, on the one hand, and romantic preferences, on the other, suggesting that any differences in the relations between psychopathic traits and romantic preferences across Studies 1 and 2 were not due to changes in psychopathy measures. In addition, since measure differences did not account for the stronger relations between personality and romantic preferences in Study 2, we examined the extent to which restriction of range in psychopathy scores among undergraduates (Study 1) adversely affected our statistical power to detect significant effects between personality and romantic preferences. We employed a widely-used formula for correcting correlation estimates (Hinter & Schmidt, 1990) in which we used our community sample, whose variances in personality variables were larger than the undergraduate sample's, as a proxy for the "unrestricted" sample. Using this formula, we computed the unrestricted correlation (i.e., the "true" *r* value) between psychopathy and romantic preferences among undergraduates by imputing the unrestricted standard deviation for each PPI-R subdimension from the community sample. The final unrestricted correlation represented the correlation corrected for the restricted range in our sample. Doing so resulted in no statistically significant changes in correlations between psychopathy and romantic preferences, suggesting that these relations did not hinge on the variability of psychopathy scores.

Males' reported romantic preferences for PD features were also more variable than were females' (all Levene's tests were significant at $p<.001$). There was little evidence for gender differences in the relations between personality and romantic preferences. Of the 270 zero-order correlations between personality and romantic preferences presented here, only 13 were moderated by gender (4.81%; denoted in Table 2). In the cases of significant gender moderation, the addition of the personality-by-gender interaction term accounted for a significant but small amount (average R^2 Δ: 1.43%) of the variance in romantic preferences above and beyond the main effects.[5]

Discussion

The findings from Study 2 generally replicated those from Study 1 and extended them to males and to non-students (online community members). Among male and female community members, absolute preferences for psychopathic traits were again low on average but were highest for Factor 1 psychopathy traits relative to Factor 2 psychopathy traits and all other PDs, indicating that community members express preferences for psychopathic individuals to those with other forms of personality pathology for romantic relationships. There were again clear individual differences in romantic preferences for psychopathic traits, wherein community members with marked PD features were more likely to endorse a romantic preference for psychopathic individuals. Nevertheless, our methodological changes revealed some interesting and unanticipated findings discrepant from those of Study 1 that warrant further discussion.

First, although participants indicated a significantly stronger preference for Factor 1 psychopathy features compared with Factor 2 features and other PDs, as in Study 1, participants' preferences for interpersonal psychopathy features were significantly higher than their preferences for affective features, the opposite of which was found in Study 1. Second, although males endorsed significantly greater preferences for PD features in romantic partners than did females, there was little evidence that gender

[5] Two patterns of findings emerged. First, gender moderated the relations between PPI-R Fearless Dominance and romantic preferences for Cluster B PDs (i.e., Borderline, Histrionic, Narcissistic) such that effects were near zero in males (rs ranged from -.05 to .02) and more pronounced but small for females (*r*s ranged from .15 to .18). Second, gender moderated the relations between BFI Neuroticism and romantic preferences such that effects were near zero in females (*r*s ranged from .08 to .14) and more pronounced and medium in males (*r*s ranged from .28 to .33). These findings raise the possibility that women with higher levels of social and physical boldness are more likely to express preferences for those with Cluster B PD features, whereas males with higher levels of neuroticism are less likely to express a romantic preference for those with pronounced PD features. Nevertheless, the total number of post-hoc moderation findings did not exceed chance. Thus, these scattered positive findings may be attributable to Type I error and will require replication in independent samples.

moderated the relations between personality and romantic preference, suggesting that personality manifests relatively equally in expressed romantic preferences for PD features across gender. Third, using a between-subjects design, we found that participants' mean-level preferences for psychopathic traits did not differ across time points when participants rated a single time point in isolation, raising the possibility that Study 1's finding that romantic preferences for psychopathic traits and other PD features decreased with time stemmed from contrast effects, demand characteristics, or both. Fourth, the relations between PD traits and romantic preferences were more pronounced in Study 2 than in Study 1. These differences may be due to age or other sample differences, dating experience, or other unmeasured variables, and raise the possibility that romantic preferences for those with marked PD features are more closely tied to personality pathology among community members.

General Discussion

Psychopathic traits have long been associated with qualities that pose serious challenges for interpersonal relationships, particularly romantic relationships (e.g., Coyne et al., 2010; Kastner & Sellbom, 2012; Jones & Weisser, 2014). Studies demonstrating such challenges are seemingly at odds, however, with other evidence that psychopathic traits have long persisted in the population (Lalumiere et al., 2008). Evolutionary psychologists posit that this paradox is explained by sexual selection mechanisms in which psychopathic individuals acquire sexual partners by dint of their interpersonal skills and use of manipulation tactics (Glenn et al., 2011), thereby conferring direct fitness benefits. Others have proposed individual differences in these mating practices whereby psychopathic individuals are especially attracted to those with similar traits (Sleep et al., 2017; Weiss et al., 2017). This tendency would reflect the broader process of homophily, in which individuals actively assort into romantic relationships based on personality similarity. By using a simulated dating paradigm, our studies yielded fresh insights into these possibilities by examining whether people are especially attracted to psychopathic individuals, and which individual difference characteristics are linked to romantic attraction to psychopathic individuals.

Key Findings and Implications

Are women especially romantically attracted to psychopathic traits? Our findings generated a more complicated answer to this question than suggested by prior research, most of which has been limited to psychopathy total scores and to romantic attraction in general. There were several notable differences between Studies 1 and 2, although the commonalities may outweigh the differences. When asked to report their levels of interest in various psychopathic traits in a romantic partner for a date, short-term relationship, and long-term relationship, females' absolute expressed preferences for such traits were low, exceeding on average no more than 4 on a 1 to 10 scale. These findings suggest that, at first glance, women may not be particularly attracted to psychopathic traits. Such a conclusion is generally consistent with the findings of Jonason and colleagues (2015), who found that females reported greater interest in males with low as opposed to high levels of psychopathic traits for long-term relationships. They are also consistent with a growing body of literature demonstrating the same for other PD features, such as those of DSM-5 PD traits (e.g., Lamkin et al. 2017; Sleep et al., 2017). Accordingly, people generally indicate high absolute preferences for traits that are consensually assumed to comprise the "ideal mate" (Figuredo, Sefcek, & Jones, 2014), such as high levels of conscientiousness, agreeableness, and low levels of neuroticism, which are typically absent in psychopathic individuals (e.g., Lilienfeld, Watts, Smith, Berg, & Latzman, 2015). This accumulating literature suggests that women do not find most psychopathic traits especially appealing, at least in the abstract context of expressed preferences, and is inconsistent with anecdotal accounts that posit the opposite (e.g., Rufus, 2010).

Although the popular psychological literature tends to emphasize females' attraction to psychopathic males, our findings indicate that males are not especially attracted to psychopathic females either. There were gender differences in mean levels of attraction to psychopathic mates, however, such that males were more inclined to express romantic interest in mates with PD features than were females. In this way, our findings are perhaps consistent with evolutionary theory, which posits that males and females exhibit differential patterns of mate choice based on differing biological needs and levels of obligate parental investment (e.g., Trivers, 1983). Short-term mating and casual sexual encounters in particular pose greater risks for females, including but not limited to pregnancy, long-term investment in

parenting, sexually transmitted infection, and risk for physical violence (e.g., Buss & Schmitt, 1993). As such, males are ostensibly more inclined to engage in short-term mating behaviors than are females. Running counter to evolutionary theory, however, we did not find much support for gender differences in the manifestation of personality in romantic preferences (see also Jonason et al., 2015), suggesting that psychopathic females and males are about equally as likely to endorse a preference for mates with PD features. In a broader sense, our findings suggest that attraction to psychopathic traits may not be gender-specific, and that people in general are not especially attracted to psychopathic individuals.

Such a conclusion may be qualified by several important caveats. First, despite low absolute preferences for PD features (see also Lamkin et al., 2017; Sleep et al., 2017), there were clear relative preferences for certain psychopathic traits. Across both studies, individuals found Factor 2 psychopathy traits especially unappealing relative to Factor 1 traits, and Factor 1 traits were especially appealing when compared with other PD features. Among undergraduates, this preference for Factor 1 features was driven by the affective psychopathy features (e.g., callousness, lack of remorse), whereas among community members this preference was driven by the interpersonal as opposed to affective features. The reason for this discrepancy between our undergraduate and community member samples is unclear and warrants further exploration.

Second, in Study 1, using a within-subjects design, we demonstrated that undergraduate females' preferences for psychopathic males differed significantly as a function of anticipated time interval of the romantic encounter. Consistent with our predictions, undergraduate females significantly preferred males with high as opposed to moderate or low levels of psychopathic traits for a date. Moreover, preferences for medium and high psychopathy prototypes decreased from date to long-term relationship, whereas preferences for the low psychopathy prototype increased. These findings are consistent with the notion that psychopathic traits facilitate a short-term mating strategy (Glenn et al., 2011), allowing those with high levels of psychopathic traits to capitalize on short-term, potentially impersonal, sexual encounters. Alternatively, these findings may suggest merely that females prefer the "best of both worlds," namely, a

bit of short-term excitement that does not entail long-term commitment or investment of personal resources.

Nevertheless, in Study 2, using a between-subjects design, we demonstrated that participants' preferences, when rating a single time point in isolation, did not discriminate across time, raising the possibility that our time-related findings from Study 1 were a function of demand characteristics, contrast effects, or both. Still, contrast effects do not invariably reflect methodological artifacts, as presenting competing alternatives immediately adjacent to one other may highlight them in bolder relief, thereby allowing participants to better gauge their relative merits. As Scherer and Schott (2013) observed, "contrast effects may ultimately help, rather than hinder, our ability to obtain an accurate and complete measure of participants' spontaneous evaluative associations" (p. 560). At the same time, our Study 2 negative findings suggest that our Study 1 results concerning time-related preferences should be interpreted with caution.

Third, although our findings suggest that individuals do not generally find psychopathic males to be especially appealing, we found clear evidence for individual differences in preferences for such traits. To a large extent, our findings support a "like attracts like" hypothesis for psychopathic traits, such that those with pronounced Factor 2 psychopathy features endorsed a preference for romantic partners with both marked Factor 1 and 2 traits. Among community members, participants with pronounced Factor 1 features also endorsed a preference for both Factor 1 and 2 traits. Across both studies, Factor 2 psychopathy features appeared responsible for the relations between psychopathic traits and romantic preferences for those same traits, as Factor 2 psychopathy traits carried the unique variance in predicting romantic preferences. We found only limited support for the "pop" psychological claim that individuals with marked dependent qualities are especially attracted to psychopathic individuals. As others have noted, however, it is unlikely that people with these same traits would rate such qualities as attractive *per se*, but merely less unattractive than others (e.g., Lamkin et al., 2017; Sleep et al., 2017).

More broadly, we found a notable lack of specificity in romantic attraction to psychopathic individuals such that many PD features and personality traits in participants were associated with an

interest in such individuals. These nonspecific predictors included most all PD categories, Antagonism and Conscientiousness from the five-factor model, and Antagonism, Disinhibition, and Psychoticism from the DSM-5 Section III PD Trait Model (Krueger, Derringer, Markon, Watson, & Skodol, 2012). We also found an absence of specificity in psychopathic participants' preferences for psychopathic individuals, as participants' psychopathic traits were associated with a broad interest in individuals with PD features. Taken together, our findings indicate that individuals with many PD features express a preference not merely for psychopathic romantic partners, but also those with other PD features.

This lack of specificity is broadly consistent with research that psychopathic individuals are less discriminating than are other individuals in their mate preferences (Jonason, Valentine, Li, & Harbeson, 2011), although our findings suggest that this lack of discrimination may extend to individuals with PD features other than psychopathy. These findings also raise questions regarding the validity of certain evolutionary models (e.g., sexual selection models) of psychopathy *per se,* and suggest that a circumscribed focus on psychopathy itself as an adaptation may be misguided. Romantic preferences seem to extend far beyond psychopathic traits themselves and are likely to extend to many personality and PD traits.

Fourth, our findings revealed that the ties between PD features and a preference for PDs in romantic partners were more pronounced among community members as opposed to undergraduates. We were able to rule out two potential explanations, namely that this discrepancy arose because (a) we administered slightly different psychopathy measures across the two samples, and (b) there was more variance in personality and romantic preferences among community members, and therefore higher statistical power to detect effects (see Footnote 4). Although conjectural, we suspect that the discrepancy between our samples indicates that a romantic interest in those with marked PD features may be more maladaptive in its implications among community members, insofar as romantic preferences are more closely tied to personality pathology among community members. Given their young age, undergraduates tend to have fewer relationship experiences than do older adults, and thus probably have a more limited history of adverse experiences associated with dating people with pronounced psychopathic traits, such as

experiencing infidelity (Jones & Weiser, 2014), intimate partner violence (Miller, Watts, & Jones, 2011), or emotional unavailability (Coyne et al., 2010). Although females may express a preference for psychopathic males in principle, such enthusiasm may dwindle or even disappear following either a direct or vicarious negative romantic experience. Moreover, the undergraduate dating culture may possess unique characteristics (e.g., close-knit social networks, Greek life, increased prevalence of alcohol and drug use) that may not generalize to dating outside of college, and as such attraction to psychopathic males may decrease with time (see Qureshi, Harris, & Atkinson, 2016, for evidence that females' attraction to Dark Triad traits decreases with age).

Limitations

Todd and colleagues (2007) called into question the validity of expressed mate preferences in predicting mate choice and demonstrated that undergraduates' mate preferences did not consistently predict their ultimate choices during speed dating. Instead, although certain personality traits may be alluring to others, they have little to do with actual mate choice, as evolutionary drives presumably override individual differences in such preferences. For example, evolutionary psychologists typically argue that men tend to seek out younger (more fertile), attractive, committed women who are capable of obligate long-term parental investment, whereas women tend to seek out high-status, committed men (Buss & Schmitt, 1993). Still, at least some literature challenges Todd and colleagues' (2007) conclusions, wherein other studies demonstrate moderate degrees of homophily for psychopathic traits among dating (Kardum et al., 2017) and married couples (Weiss et al., 2017).

A related limitation stems from the vignette nature of Study 1's design, which examined only females' expressed desire for potential partners in hypothetical scenarios. Such reported desire may not extend fully to real-world situations. For example, in speed dating research, homophily appears to hold for perceived, but not actual, psychological similarity (Tidwell, Eastwick, & Finkel, 2013). Other speed-dating research suggests that romantic attraction in real-world contexts is exceedingly difficult to predict statistically, probably because such attraction is a function of enormously complex and idiosyncratic

higher-order interactions (Joel, Eastwick, & Finkel, in press). Here, "pop" psychology may have it right: When it comes to romance, "chemistry" matters (see also Lykken & Tellegen, 1993).

Conclusion

In the broadest sense, our findings indicate that the role of personality and PD traits is important in mate preferences and are consistent with growing research demonstrating important individual differences in romantic preferences for psychopathic traits. Revisiting our initial aims, our findings suggest that although absolute preferences for psychopathic traits are low on average, individuals with marked psychopathic features and PD features more generally are more inclined than others to endorse a romantic preference for psychopathic individuals, at least in the abstract. Despite its strengths, our two studies' limitations highlight the need to examine our aims in real-world settings to better understand how psychopathic traits unfold in short-term and long-term romantic relationships. Tracking attraction to psychopathic traits over actual spans of time should aid in better understanding how romantic attraction to psychopathic people changes across time. Some research suggests that the appeal of psychopathic traits might be a short-term one that diminishes with time (see Leckelt et al., 2015, for related evidence), perhaps as their initial charm wears off. Other research could examine which traits in particular are initially attractive, and whether these same traits act as double-edged swords, perhaps also contributing to relationship difficulties and dissolution (Weiss et al., 2016) down the line.

Declaration of Conflict of Interests

Scott O. Lilienfeld is the author of the Psychopathic Personality Inventory-Revised. No other authors declared potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Figure 1. *Females' romantic preferences for males' personality disorder features as a function of time.*

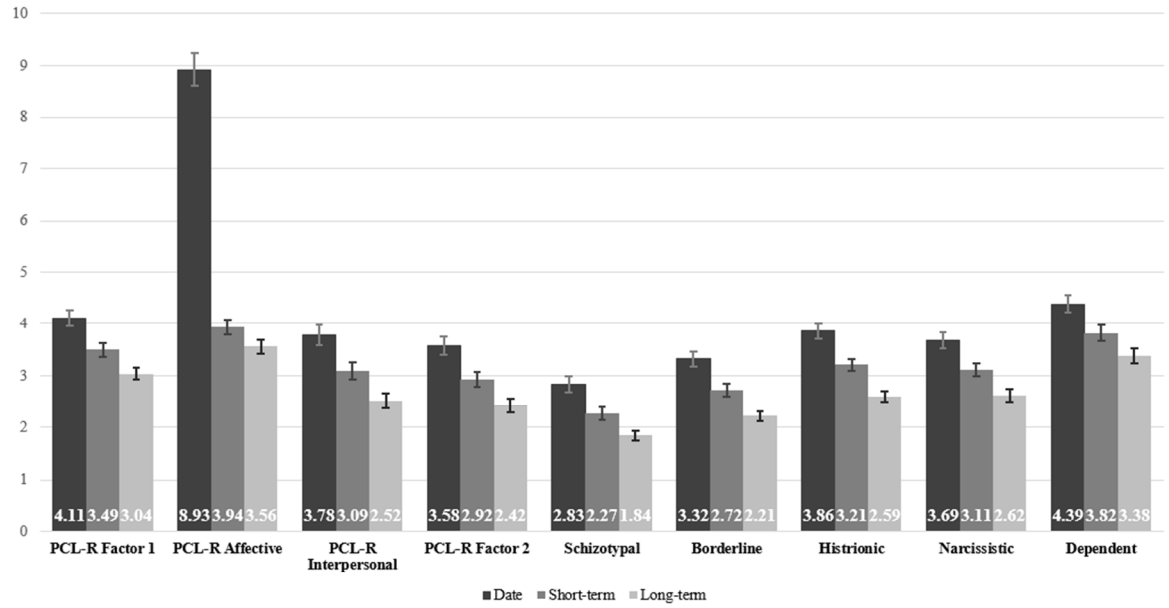

Figure 2. *Females' romantic preferences for psychopathy vignettes.*

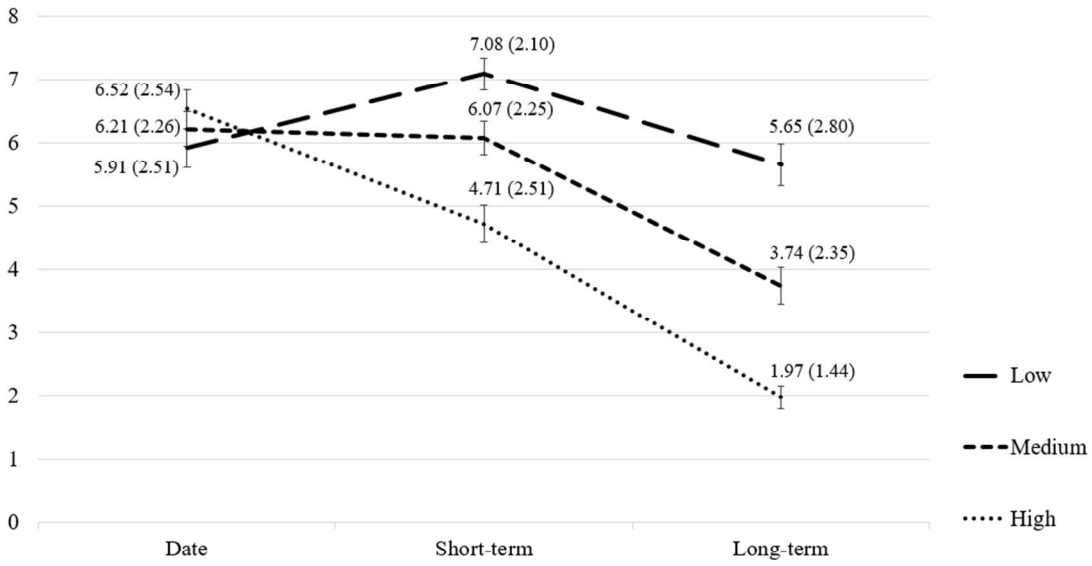

Table 2. *Relations between community members' personality and personality disorder features and their romantic preferences.*

Table 1. *Relations between females' personality and personality disorder features and their romantic preferences.*

		PCL-R Psychopathy				PD Features				
		Factor 1	**Affective**	**Interpersonal**	**Factor 2**	**Schizotypal**	**Borderline**	**Histrionic**	**Narcissistic**	**Dependent**
Participants' traits	*M (SD)*	3.56 (1.06)	3.99 (1.16)	3.14 (1.31)	2.98 (1.24)	2.32 (0.98)	2.76 (0.91)	3.25 (0.93)	3.15 (1.08)	3.89 (1.21)
PPI-R Fearless Dominance	2.48 (0.34)	.01	.03	-.01	.00	-.05	-.02	.12	-.01	.09
PPI-R Self-centered Impulsivity	1.94 (0.31)	**.28**	*.17*	**.30**	**.34**	**.25**	**.31**	**.27**	**.30**	.15
PPI-R Coldheartedness	1.92 (0.65)	.05	.04	.04	*.18*	.10	.13	.08	.14	-.02
SSS-V Boredom Susceptibility	1.29 (0.19)	.05	-.03	.11	.07	.00	.08	.09	.08	.03
SSS-V Disinhibition	1.51 (0.25)	*.19*	.09	**.23**	.14	-.02	*.16*	*.20*	.16	.06
SSS-V Experience Seeking	1.53 (0.19)	.08	-.06	*.17*	.14	.04	**.21**	.09	**.23**	-.09
SSS-V Thrill & Adventure Seeking	1.62 (0.27)	.04	-.04	.10	.10	.09	.13	.11	.13	.06
Rosenberg Self-esteem (RSES)	2.54 (0.53)	-.02	.12	-.13	*-.17*	-.03	-.13	.12	**-.23**	**.24**
SCATI Paranoid	1.95 (0.53)	**.22**	.14	**.23**	**.23**	**.23**	*.18*	.14	**.22**	.08
SCATI Schizoid	1.41 (0.37)	.04	-.03	.08	.13	*.17*	.10	.03	.13	.05
SCATI Schizotypal	1.68 (0.52)	**.28**	**.22**	**.26**	**.26**	**.29**	**.29**	*.21*	**.23**	**.23**
SCATI Antisocial	1.63 (0.51)	**.25**	.12	**.29**	**.23**	*.19*	**.27**	**.23**	**.23**	.15
SCATI Borderline	1.93 (0.51)	*.18*	.08	**.23**	**.23**	*.17*	*.21*	.13	**.22**	.07
SCATI Histrionic	2.49 (0.48)	.14	.09	.15	**.22**	.05	*.16*	.14	.14	.08
SCATI Narcissistic	2.37 (0.48)	.14	.09	.14	**.28**	.10	.15	.12	*.20*	.06
SCATI Avoidant	2.18 (0.52)	*.21*	.15	*.21*	**.25**	**.22**	**.23**	.12	**.22**	.11
SCATI Dependent	1.71 (0.46)	*.21*	.10	**.25**	**.31**	**.24**	**.26**	.12	**.27**	.07
SCATI Obsessive-compulsive	2.31 (0.47)	.07	.10	.03	.10	.11	-.01	.06	.04	.12
SCATI Depressive	2.26 (0.52)	.15	.08	*.17*	**.22**	*.19*	*.18*	.06	.15	.10
SCATI Sadistic	1.39 (0.42)	**.23**	.14	**.24**	**.27**	*.17*	**.21**	.15	**.25**	.10
SCATI Self-defeating	1.86 (0.43)	**.24**	.13	**.28**	**.29**	**.33**	**.30**	*.17*	**.28**	.16
SCATI Passive-aggressive	1.95 (0.50)	**.22**	.16	**.22**	.15	**.22**	**.22**	**.24**	*.16*	**.22**

Note. Correlations are **bolded** at $p < .001$ and *italicized* at $p < .01$.
PD = Personality Disorder; PCL-R = Psychopathy Checklist-Revised; PPI-R = Psychopathic Personality Inventory-Revised; SSS-V = Sensation Seeking Scale-V; RSES = Rosenberg Self-esteem Scale; SCATI = Short-form of the Coolidge Axis II Inventory.

		PCL-R Psychopathy				PD Features				
		Factor 1	**Affective**	**Interpersonal**	**Factor 2**	**Schizotypal**	**Borderline**	**Histrionic**	**Narcissistic**	**Dependent**
Participants' Traits	*M (SD)*	3.69 (1.49)	3.15 (1.76)	4.23 (1.46)	3.14 (1.71)	3.50 (1.94)	2.48 (1.84)	2.96 (1.84)	2.85 (1.89)	3.24 (1.88)
PPI-R Fearless Dominance	11.94 (2.49)	*.16*	*.17*	*.15*	*.16* [a]	*.13* [a]	*.13* [b]	.12 [b]	*.13* [b]	*.15*
PPI-R Self-centered Impulsivity	9.88 (2.35)	**.47** [a]	**.46** [a]	**.45** [a]	**.51** [a]	**.51** [a]	**.50** [a]	**.46** [a]	**.47** [a]	**.51** [a]
PPI-R Coldheartedness	2.19 (0.66)	**.21** [a]	**.19** [a]	**.22** [a]	**.20**	**.19**	**.20**	*.16* [a]	**.17**	**.20** [a]
BSSS-V Boredom Susceptibility	2.63 (0.98)	**.30**	**.27**	**.31**	**.33**	**.29**	**.32**	**.27**	**.31**	**.30**
BSSS-V Disinhibition	2.24 (1.12)	**.48**	**.46**	**.46**	**.48**	**.47**	**.49**	**.44**	**.49**	**.45**
BSSS-V Experience Seeking	3.23 (1.10)	**.18**	**.22**	*.13*	*.15*	*.16*	*.15*	.09	*.17*	.13
BSSS-V Thrill & Adventure Seeking	2.20 (1.14)	**.39**	**.39**	**.37**	**.40**	**.39**	**.40**	**.37**	**.36**	**.41**
RSES Total	3.11 (0.69)	**-.20**	**-.19**	**-.19**	**-.21**	**-.25**	**-.22**	**-.21**	**-.21**	**-.23**
BFI Neuroticism	2.65 (1.02)	.12 [b]	.11 [b]	.12	*.14* [b]	*.16* [b]	*.14* [b]	*.14* [b]	*.13* [b]	*.13* [b]
BFI Extraversion	2.93 (0.97)	.07	.06	.08	.09	.04	.08	.08	.07	.08
BFI Openness to Experience	3.67 (0.75)	.00	.04	-.05	-.04	-.02	-.04	-.06	-.01	-.07
BFI Agreeableness	3.69 (0.75)	**-.24**	**-.22**	**-.24**	**-.27**	**-.26**	**-.27**	**-.25**	**-.25**	**-.27**
BFI Conscientiousness	3.88 (0.76)	**-.33**	**-.31**	**-.32**	**-.37**	**-.39**	**-.39**	**-.36**	**-.37**	**-.38**
PID-5 Negative Affectivity	2.06 (0.78)	**.22**	**.20**	**.22**	**.25**	**.26**	**.25**	**.24**	**.25**	**.25**
PID-5 Detachment	1.91 (0.73)	**.30**	**.29**	**.28**	**.30**	**.34**	**.30**	**.29**	**.29**	**.33**
PID-5 Psychoticism	1.76 (0.72)	**.45**	**.44**	**.41**	**.46**	**.50**	**.47**	**.45**	**.46**	**.48**
PID-5 Antagonism	1.65 (0.65)	**.51**	**.47**	**.52**	**.54**	**.50**	**.52**	**.49**	**.51**	**.52**
PID-5 Disinhibition	1.65 (0.67)	**.47**	**.45**	**.45**	**.49**	**.49**	**.49**	**.48**	**.47**	**.51**
SCID Paranoid	1.32 (0.30)	*.14*	*.14*	*.14*	*.17*	*.16*	*.17*	**.18**	*.14*	**.17**
SCID Schizoid	1.35 (0.25)	.07	.06	.07	.07	*.10*	.07	.08	.06	.10
SCID Schizotypal	1.17 (0.23)	**.36**	**.36**	**.34**	**.39**	**.42**	**.41**	**.41**	**.37**	**.41**
SCID Antisocial	1.08 (0.16)	**.28**	**.26**	**.28**	**.29**	**.31**	**.30**	**.29**	**.29**	**.32**
SCID Borderline	1.21 (0.23)	**.34**	**.34**	**.32**	**.36**	**.39**	**.37**	**.36**	**.35**	**.38**
SCID Histrionic	1.20 (0.23)	**.37**	**.33**	**.39**	**.42**	**.37**	**.42**	**.39**	**.38**	**.38**
SCID Narcissistic	1.22 (0.22)	**.40**	**.36**	**.41**	**.43**	**.40**	**.43**	**.43** [b]	**.40**	**.42**
SCID Avoidant	1.44 (0.33)	.07	.06	.07	.07	.08	.06	.06	.05	.08
SCID Dependent	1.22 (0.23)	**.22**	**.19**	**.23**	**.25**	**.27**	**.26**	**.26**	**.23**	**.27**
SCID Obsessive-compulsive	1.45 (0.25)	.06	.06	.06	.04 [b]	.05	.04 [b]	.02	.05	.02
SCID Depressive	1.31 (0.30)	*.16*	*.17*	*.15*	**.18**	**.21**	**.18**	**.18**	*.16*	**.19**
SCID Passive-aggressive	1.27 (0.27)	**.23**	**.21**	**.24**	**.26**	**.26**	**.28**	**.27**	**.25**	**.27**

Note. Correlations are **bolded** at $p < .001$ and *italicized* at $p < .01$.

PD = Personality Disorder; PCL-R = Psychopathy Checklist-Revised; PPI-R = Psychopathic Personality Inventory-Revised; BSSS-V = Brief Sensation Seeking Scale-V; RSES = Rosenberg Self-esteem Scale; BFI = Big Five Inventory; PID-5 = Personality Inventory for DSM-5 Personality Disorders; SCID = Structured Clinical Interview for DSM-IV.

[a] indicates significant moderation. [b] indicates significant differences in the magnitudes of relations between personality and romantic preferences across Studies 1 and 2, which were tested by means of independent correlations.