

Self-Reported Psychopathy and its Association with Deviant Sexual Fantasy and Sexual Compulsivity in a Nonclinical Sample

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Abstract

Given the multiple problems of psychopathy, the syndrome and its correlates have been extensively researched in offender populations including linkages with deviant sexual behavior. There has been little research, however, examining sexual cognitive and behavioral correlates of psychopathy in nonclinical samples. The sample consisted of 489 participants from the university staff and student campus community who completed four self-report questionnaires via an online anonymous survey: Self-Report Psychopathy-Short Form, the Sexual Compulsivity Scale, The Marlow-Crowne Social Desirability Scale, and the Joyal Sexual Fantasy Questionnaire (J-SFQ). A principal component analysis of the J-SFQ generated six orthogonal components, each of which were positively correlated with constellations of self-reported psychopathic traits and sexual compulsivity. Sexual compulsivity was the strongest and most consistent predictor of sexual fantasy irrespective of content; however, the interpersonal and affective features of self-reported psychopathy uniquely predicted paraphilic fantasies, but only for women. Ramifications of this research are discussed in terms of the potential identification of at-risk individuals for sexual violence, recommended prevention programs, and increased educational efforts.

Key words: psychopathy, sexual compulsivity, sexual deviance, sexual fantasy

Introduction

Psychopathy is a serious personality disorder with destructive social consequences. Interpersonally, psychopaths are grandiose, dominant, superficial, deceptive, and manipulative. Affectively, they are short-tempered, unable to form strong emotional bonds, lack empathy, guilt, remorse, and deep-seated emotions. And behaviorally, psychopaths exhibit irresponsible and impulsive conduct, have a tendency to ignore or violate social conventions, and engage in frequent and diverse forms of criminal behavior (Hare, 2003). Moreover, individuals with psychopathic traits display egocentrism and selfishness, act in a brazen, reckless manner, and are skilled in deception and manipulation (Mokros, Osterheider, Hucker & Nitschke, 2010).

Given the numerous problems of psychopathy, the syndrome and its correlates have been extensively researched in offender populations including linkages with deviant, coercive, and assaultive sexual behavior. There has been very little research, however, examining sexual, cognitive, and behavioral correlates of psychopathy in nonclinical samples (Williams, Cooper, Howell, Yuille, & Paulhus, 2009). It has been established that deviant sexual fantasies are fairly common in the general nonoffender population, and thus it would seem that most individuals who engage in deviant fantasy do not express them behaviorally, or at least criminally (Williams et al., 2009). An important consideration of the current research is that psychopathy is a contributing factor in only a minority of sexually based crimes (Saleh, Malin, Grudzinskas, & Vitacco, 2010). Although

the criminal behavior correlates of psychopathy would suggest that there is a greater likelihood that individuals with psychopathic traits will use coercive means for sexual purposes than people with few such traits, psychopathy is not necessary for these behaviors to occur. Indeed, Lalumière and Quinsey (1996) note that at least 5% of college men report having used coercive tactics that would be considered rape in most jurisdictions, while another 25% reported covert coercive tactics that vary from persistent verbal pressuring, to threats of physical harm. The review of the pertinent literature that follows will provide an overview of the intersection of psychopathy, hypersexuality, and indices of sexual deviance.

Defining Sexual Deviance

An important starting point is defining sexual deviance. Deviant sexual interests refer to enduring sexual attractions that are illegal (e.g., sex with children, rape), or highly unusual (e.g., fetishism, autoerotic-asphyxia; Hanson & Morton-Bourgon, 2005). Presumably, sexual deviance has cognitive (i.e., fantasies), affective (e.g., emotional excitement), physiological (i.e., bodily arousal), and behavioral (e.g., paraphilias) components. The present study focuses on the cognitive and behavioral components of sexual deviance.

In terms of the cognitive component, sexual fantasies in general, tend to be extremely commonplace among men (Crepault & Couture, 1980) and women, although the self-report rates are typically lower for women (Dawson, Bannerman, & Lalumière, 2014). The content of sexual fantasies, however, ranges from very common, to very uncommon (i.e., deviant) as represented by a proportion of experience for both men and women. When sexual fantasies involve the pain, suffering, or humiliation of unwilling partners, or sexual acts with minors or persons who cannot consent, the deviant content becomes problematic.

Behaviorally, paraphilias are sexual disorders characterized by repetitive, socially deviant expressions of intensified sexual arousal and associated behaviors, the most common of which are exhibitionism, voyeurism, pedophilia, sexual masochism and sadism, fetishism, transvestic fetishism, frotteurism, and telephone scatologia (Kafka & Hennen, 2002). There has also been controversy among scholars regarding the need for "sexually coercive paraphilia" to be its own diagnosis in the DSM. Thornton (2009) asserts that for some individuals with a diagnosed paraphilia, it is the act of coercion itself that leads to heightened arousal. This differs from sexual sadism, as the focus is specifically the coercive nature of the act, and not on the humiliation and suffering of the individual (First & Halon, 2008).

Psychopathy, Sexual Deviance, and Sexual Violence

While the Hanson and Morton-Bourgon (2005) review identified sexual deviance and antisociality as primary correlates of sexual violence, the combination of high levels of psychopathy and deviant sexual arousal is a particularly powerful combination that may lead to violent outcomes (Serin, Mailloux, & Malcolm, 2001), specifically, sexually aggressive behaviors (Hawes, Boccaccini, & Murrie, 2013). Thus, a number of studies have found that the combination of psychopathy and sexual deviance is predictive of sexual recidivism. The Hawes et al. (2013) meta-analysis examined the association of psychopathy and sexual deviance, to various forms of recidivism, including the claim that PCL-R scores and deviant sexual arousal pose a particularly high risk for re-offending. Across $k = 6$ studies, Hawes et al. (2013) found the combination of high psychopathy and sexual deviance was found to have about a threefold increase in the likelihood of future sexual violence (odds ratio = 2.80 to 3.21), although their joint prediction of other recidivism outcomes was somewhat weaker. Hawes et al. (2013) also found that Factor 2 (Chronic Antisocial Lifestyle) and Facet 4 (Antisocial Behavior) of the PCL-R were the strongest predictors of sexual recidivism when

compared to other factors/facets, consistent with Hanson and Morton-Bourgon (2005).

The association between psychopathy and sexually deviant or coercive behaviors is well documented in other clinically and theoretically meaningful ways. When comparing specific deviant sexual fantasies, such as sadism, to psychopathy, there is evidence that these features share several common characteristics, such as emotional detachment from the suffering of others, or the preparedness to inflict pain or injuries (Mokros et al., 2010). Indeed, psychopathy has been found to be highly correlated with bondage and sadism measures, as well as sexual coercion (Williams et al., 2009). For instance, Mokros et al. (2010) found aggressive sexual fantasy, sadism, aggression and impulsivity, and emotional detachment, all served as important predictors of sexual coercion. The deviant sexual focus that is most clearly associated with coercive sexual behavior, Thornton (2009) notes, is forcing sex upon a woman in a way that she experiences as abhorrent, humiliating, painful, or terrifying.

Psychopathy and Hypersexuality

What is less evident, though, is to what extent psychopathy is associated with markers of hypersexuality or sexual compulsivity, and if this too bears linkages to sexually deviant interests and behavior. Hypersexuality has long been a defining feature of psychopathy, for instance, as captured by the Psychopathy Checklist-Revised (PCL-R; Hare, 2003) item "Sexual Promiscuity," and has linkages to antisocial behavior (Harris, Rice, Hilton, Lalumiere, & Quinsey, 2007). Sexual preoccupation, defined by Mann, Hanson, and Thornton (2010) as "an abnormally intense interest in sex that dominates psychological functioning" (p. 198) has also been identified as a psychologically meaningful risk factor with robust links to sexual recidivism among sexual offenders (Mann et al., 2010).

One proposed theoretical explanation for the link between psychopathy and hypersexuality includes an underactive behavior inhibition system (BIS), leading to a failure of behavior regulation, including inhibiting sexual behavior in potentially threatening contexts (Kastner & Sellbom, 2012). Recent data also indicate that hypersexuality is associated with an increase in sexual excitation, which in common with psychopathy is linked to increased reward driven behavior (Rettenberger, Klein, & Briken, 2016). This difficulty controlling sexual desires is thought to be pervasive and disruptive to daily activities, and can also lead to promiscuity. Psychopathy, in turn, has been associated with promiscuous sexual relations at a young age for both men and women (Visser, Pozzebon, Bogaert, & Ashton, 2010). It is important though not to take hypersexuality and promiscuity to be synonymous, particularly within nonoffender samples. For instance, although college students are considered adults, much of their normalized sexual behavior may be more promiscuous than the general population (Buhi, Marhefka, & Hoban, 2010).

Present Study and Hypotheses

The current study sought to examine the association of self-reported psychopathic traits with sexual fantasies (deviant and non-deviant) and sexually compulsive thoughts, feelings, and behavior in a nonclinical sample of university students and staff. Each of the aforementioned domains was assessed via self-report through an online administered survey. Given that self-report measures are vulnerable to manipulation by strategic attempts to alter the test outcome (Lukoff, 2012), a measure of social desirability was also used in the current study. This becomes particularly important when one considers that, by definition, people with elevated psychopathic traits are manipulative, deceptive, and superficially charming (Hare, 1993, 2003). Seto, Khattar, Lalumiere and Quinsey (1996) also reported psychopathy to be positively correlated with many forms of deception (e.g., sexual deception, general deception, and socially desirable responding). Others (Verschuere et al.,

2014) have argued that the inverse relation between faking good and self-reported psychopathy instead reflects a true variance in personality (i.e., low social desirability) and is not the result of a response bias. Thus, the current study intended to offset the potential for response distortion through impression management by implementing a measure of social desirability.

Study hypotheses were as follows:

1. We expect that sexual fantasies, as measured by the Joyal Sexual Fantasy Questionnaire (J-SFQ), are able to be grouped into broad categories of qualitatively similar items.
2. Self-reported psychopathy, particularly its antisocial and lifestyle features, will be positively associated with higher self-reported sexual compulsivity and all categories of sexual fantasy, across gender categories.
3. Self-reported sexual fantasies, deviant and non-deviant, as measured by the J-SFQ, will be positively associated with self-reported sexual compulsivity, across gender categories.
4. Males will report a higher level of self-reported psychopathic traits, sexually deviant fantasies, and higher sexual compulsivity than females.
5. Self-reported psychopathy, particularly its antisocial and lifestyle features, will be uniquely predictive of self-reported fantasies characterized by deviant content. Such associations will be found controlling for self-reported sexual compulsivity and social desirability and will transcend gender.

Method

The present research received ethical approval from the University of Saskatchewan Behavioural Research Ethics Board (Beh #15-371).

Participants

Participants included $N = 489$ university staff and student campus community members at the University of Saskatchewan (67% female, $n = 322$, 33% male, $n = 161$). These participants were recruited through the Department of Psychology's participant pool system, as well as through an online bulletin. Individuals recruited through the undergraduate participant pool were granted one credit for their participation, and individuals recruited through the online bulletin received no compensation. In all, 33% of the sample was under age 20, 46% were aged 20-24, and 15% were aged 25-29, indicating that 90% of the sample was under age 30. The sample was primarily White (82%), and most of the sample self-reported as either single (42%) or dating (43%).

Materials

SRP-SF. The Self-Report Psychopathy Short-form (SRP-SF; Paulhus, Neumann, & Hare, 2016) is a 29-item questionnaire that consists of statements pertaining to personality and behavioral traits of individuals with psychopathic tendencies. Ratings are based on a 5-point Likert scale, ranging from 1 (disagree strongly) to 5 (agree strongly). There are seven items each (alpha for present sample reported in parentheses) on the Interpersonal scale (e.g., "I would get a kick out of 'scamming' someone"; $\alpha = .81$), Affective scale (e.g., "Most people are wimps"; $\alpha = .68$), and Lifestyle scale (e.g., "I have done something dangerous for the thrill of it"; $\alpha = .76$), and eight items on the Antisocial scale (e.g., "I have threatened people into giving me money, clothes, or makeup"; $\alpha = .57$). In the present sample, internal consistency values were close in magnitude to past reported values of $\alpha = .79, .74, .78$, and $.60$ for the four SRP-SF facets, respectively (Riopka, Coupland, & Olver, 2015). Psychometric research supports the factor structure of the SRP measures in

non-offender samples (Neumann, Schmitt, Carter, Embley, & Hare, 2012), internal consistency reliability (Malamuth, 2011), and associations with self-reported antisocial behavior (Riopka et al., 2015).

J-SFQ. The Joyal Sexual Fantasy Questionnaire (J-SFQ; Joyal, Cossette, & Lapierre, 2015) is a 54-item measure that assesses the intensity and interest of specific sexual fantasies. It was created with the intention of capturing rare, unusual, common, and typical sexual fantasies of men and women through a validated and comprehensive measure. This questionnaire is rated on a 7-point Likert scale, from 1 (not at all), to 7 (very strong). Questions range from very common sexual fantasies (e.g., "I like to feel romantic emotions during a sexual relationship"), to very uncommon (or deviant) sexual fantasies (e.g., "I have fantasized about having sex with animals"). Total scores range from 54, indicating low levels of sexual fantasies, to 378, indicating high levels and a diverse array of sexual fantasies. There is limited research examining the psychometric properties for this questionnaire given that it was created with the intent to identify other sexual fantasies that are not present in most sexual fantasy questionnaires. This was done through open-ended questions that were formulated and subsequently added to existing sexual fantasy question measures. Of the 54 items in this questionnaire, there are 30 overlapping themes present among the questions; the interrater reliability of the additional new questions was 92% (Joyal et al., 2015)

SCS. The Sexual Compulsivity Scale (SCS; Kalichman & Rompa, 1995) is a brief questionnaire composed of 10 items that are used to assess sexual preoccupation and hypersexuality. The items were initially described by individuals who self-identified as having a sex addiction. This questionnaire is rated on a 4-point Likert scale, ranging from 1 (not at all like me) to 4 (very much like me). With total scores ranging from 10-40, high total scores represent individuals reporting high sexual compulsivity while low scores represent those low in sexual compulsivity. Sample items include "My sexual appetite has gotten in the way of my relationships" and "It has been difficult for me to find sex partners who desire having sex as much as I want to". High internal consistency was obtained in the present sample ($\alpha = .87$) and has been obtained elsewhere ($\alpha = .85-.91$; Kalichman & Rompa, 1995).

M-C SDS. The Marlowe-Crowne Social Desirability Scale (M-C SDS; Crowne & Marlowe, 1960) is a measure used to evaluate the extent to which respondents attempt to place themselves in a favorable light. Impression management can occur by individuals intending to fake good or fake bad by manipulating their responses. The questions of this scale are answered using a binary "true" or "false" format. Sample items include "I never hesitate to go out of my way to help someone in trouble" and "there have been occasions when I took advantage of someone". Half of the scores are reverse keyed and were reverse coded in analysis. The internal consistency of this measure has also shown to be satisfactory ($\alpha = .88$; Crowne & Marlowe, 1960), including in the present sample ($\alpha = .79$).

Procedure

All demographic information and self-report measures were entered into an online format through the University of Saskatchewan's fluid survey tool. Participants first learned of the study either through the participant pool or online university bulletin advertisement, which gave an overview of the study and a brief description of its central measures. After reading this brief description, participants were directed to read an online version of the consent form. After providing informed consent, participants completed the demographic form and self-report measures. Upon completing the survey, participants were directed to a debriefing window. The debriefing form provided a fuller description of the nature of the study, including a list of all measures used and explication of central hypotheses. There was also a list of articles that the participants could consult for further

information about the topics. All data remained anonymous and confidential, and the de-identified data was exported to SPSS for subsequent analysis. The amount of missing data was extremely minimal (0.09% of all data points, or 99.91% complete), and thus SPSS mean substitution was used to estimate absent responses. In most cases in which there were missing data, this was usually limited to one or two items on a given measure. In the most extreme and rare cases, there were no more than 25% items missing for any self-report measure.

Results

Principal Components Analysis of the J-SFQ

The first step taken in analyzing the data was conducting a principal component analysis of the J-SFQ, in order to reduce the items down to a smaller number of interpretable and homogeneous item clusters. This analysis was conducted on 53 out of 54 items of the J-SFQ, using principal components extraction with varimax rotation to generate six orthogonal components, explaining 54.4% of the variance (see Table 1). The final solution was evaluated in light of its interpretability and the homogeneity of the extracted components, with the minimum item loadings generally falling in the .35 to .40 range (with a given item accounting for 12-15% of variance; Tabachnick & Fidell, 2007). Component 1 was labeled "female partner focused" given that the content seemed to focus on sexual activities with female sexual partners. Component 2 was labeled "anonymous" given that the item content was organized around sexual activity with unknown or acquaintance-like partners or otherwise impersonal sex. Component 3 was labeled "eroticized dominance" given that the items featured primarily bondage dominance sadomasochism (BDSM) related sexual activities. Component 4 was labeled "male partner focused" given that its items were arranged around activities with male partners. Component 5 was termed "paraphilia" as its item content included deviant sexual fantasy content. Finally, component 6 was termed "non-coital sexual activities" as its item content tended to focus on sexual activity with a partner that did not involve penile-vaginal intercourse. Items loading on each component were then summed for further analysis.

Table 1: Joyal Sexual Fantasy Questionnaire J-SFQ Principal Component Analysis with Varimax Rotation

J-SFQ Components 1-6	C1	C2	C3	C4	C5	C6
Female Partner Focused (C1)						
9. I have fantasized about having sex with two women	.852	.194	.087	-.051	.103	.030
28. I have fantasized about having sex with a woman with very large breasts	.785	.197	.003	-.060	.072	.114
10. I have fantasized about watching two women make love	.784	.142	.175	.062	.092	.063
40. I have fantasized about having a sexual relationship with a woman with very small breasts	.768	.141	.003	-.091	.183	.091
23. I have fantasized about having sex with more than three people, all women	.729	.378	.087	-.123	.135	-.037
14. I have fantasized about giving cunnilingus	.651	.089	.172	.070	.095	.384
27. I have fantasized about having interracial sex	.465	.149	.142	.236	.061	.156
44. I have fantasized about having sex with a prostitute or stripper	.451	.448	.050	.021	.248	-.073
	.443	.421	.194	.171	.002	.051

6. I have fantasized about having sex with someone I know who is not my spouse						
35. I have fantasized about having sex with someone much younger (legally) than me	.434	.397	-.014	-.125	.419	.138
30. I have fantasized about having sex with someone much older than me	.396	.309	.250	.178	-.033	.050
29. I have fantasized about ejaculating on my sexual partner (men only)	.393	.373	-.144	-.270	.213	.389
15. I have fantasized about having sex with a star or a well-known person	.388	.211	.222	.033	-.041	.011
Anonymous (C2)						
24. I have fantasized about masturbating on an unknown person	.210	.757	.067	.074	.160	.216
21. I have fantasized about being masturbated by an unknown person	.214	.752	.093	.176	.025	.172
36. I have fantasized about petting with a total stranger in a public place (e.g., metro)	.095	.668	.200	.120	.262	-.038
18. I have fantasized about being masturbated by an acquaintance	.328	.660	.127	.139	.030	.360
19. I have fantasized about masturbating an acquaintance	.350	.646	.094	.181	.058	.373
37. I have fantasized about indulging in sexual swinging with a couple I do not know	.408	.572	.195	.211	.066	-.088
11. I have fantasized about having sex with an unknown person	.391	.534	.168	.245	-.017	-.013
26. I have fantasized about watching someone undress without him or her knowing	.191	.522	.169	-.037	.248	.105
46. I have fantasized about showing myself naked or partially naked in a public place	.082	.490	.328	.195	.163	-.149
41. I have fantasized about indulging in sexual swinging with a couple that I know	.407	.483	.163	.142	.102	.013
Eroticized Dominance (C3)						
20. I have fantasized about being tied up by someone in order to gain sexual pleasure	-.017	.159	.714	.235	-.127	.090
13. I have fantasized about being dominated sexually	-.010	.042	.669	.360	-.044	.105
3. I have fantasized about having sex in an unusual place (e.g., in the office; public toilets)	.269	.152	.634	.036	.053	.179
4. Atmosphere and location are important in my sexual fantasies	.152	-.049	.533	.110	.071	.102
33. I have fantasized about being photographed or filmed during a sexual relationship	.125	.390	.521	.102	.046	.062
25. I have fantasized about tying someone up in order to gain sexual pleasure	.186	.382	.513	-.077	.192	.188
12. I have fantasized about making love openly in a public place	.256	.403	.504	.077	.115	.046
17. I have fantasized about dominating someone sexually	.293	.288	.504	-.050	.194	.123
38. I have fantasized about spanking or whipping someone to obtain sexual pleasure	.179	.398	.465	.056	.226	.114

42. I have fantasized about being forced to have sex	.026	.272	.392	.330	.213	-.093
1. I like to feel romantic emotions during a sexual relationship	-.078	-.327	.339	-.173	.018	.248
Male Partner Focused (C4)						
32. I have fantasized about having sex with two men	-.069	.141	.261	.825	.053	.026
45. I have fantasized about having sex with more than three people, all men	-.030	.284	.114	.750	.144	-.072
39. I have fantasized about having homosexual (or gay) sex	.289	.002	.060	.711	.177	.148
47. I have fantasized about watching two men make love	-.043	.169	-.016	.679	.320	.161
16. I have fantasized about giving fellatio	-.117	.039	.398	.538	.009	.360
31. I have fantasized about having sex with more than three people, both men and women	.400	.327	.241	.501	.138	-.145
Paraphilias (C5)						
52. I have fantasized about urinating on my sexual partner	-.035	.036	.026	.109	.778	.217
51. I have fantasized about my sexual partner urinating on me	-.024	-.015	.031	.153	.719	.303
48. I have fantasized about sexually abusing someone who is drunk, asleep, or unconscious	.165	.254	.091	-.019	.672	-.236
49. I have fantasized about forcing someone to have sex	.204	.340	.115	-.063	.596	-.203
54. I have fantasized about having sex with a child under the age of twelve	.109	.082	-.034	.050	.580	-.059
53. I have fantasized about having sex with an animal	.027	.027	.062	.144	.514	.098
43. I have fantasized about having sex with a fetish or non-sexual object	.066	.295	.200	.223	.424	.156
50. I have fantasized about wearing clothing associated with the opposite sex	.200	.034	.036	.182	.352	-.057
Non-Coital Sexual Activities (C6)						
7. I have fantasized about masturbating my partner	.189	.105	.361	.024	.023	.716
8. I have fantasized about being masturbated by my partner	.189	.129	.440	.048	-.042	.626
2. I have fantasized about taking part in fellatio/cunnilingus	.346	.074	.413	.197	.089	.510
22. I have fantasized about having anal sex	.225	.320	.042	.220	.270	.478
34. I have fantasized that my partner ejaculates on me	-.201	.121	.362	.402	.141	.435

Note: Items designated to load on a given component are in bold font; C = component

Self-Reported Psychopathic Traits: Associations with Sexual Fantasy and Compulsivity

It was initially hypothesized that self-reported psychopathic traits (SRP-SF), particularly the antisocial and lifestyle features, would be positively associated with a larger number of sexual fantasies overall (J-SFQ component scores) and higher self-reported sexual compulsivity (SCS scores). Given the large sample size, most correlations were statistically significant as well as positive in valence, but they differed in magnitude (Table 2). As such, Cohen's (1992) convention was used for interpreting correlation magnitude in which values of .10, .30, and .50 between two continuous variables correspond to small, medium, and large effects, respectively. Several themes from these analyses were evident. First, the SRP-SF total score and the four facets had broadly moderate in magnitude correlations with compulsivity scores in the sample overall and across

genders. Second, each of the four psychopathy facets correlated at a comparable magnitude with different constellations of self-reported sexual fantasies including content that would be considered atypical or deviant (i.e., "eroticized dominance" and "paraphilias"). The antisocial facet did not have particularly strong associations with any J-SFQ scores, and in some instances it was actually the most weakly correlated of the four facets. Third, the weakest associations overall were seen with "male partner focused" and "non-coital sexual activity", and it was within these domains that the most prominent gender differences appeared in the magnitude of association. Among males, neither of these domains were significantly associated with any of the psychopathy facets; however, among females, associations with "male partner focused" were on par with the remaining JSFQ components, and several of the correlations with "non-coital sexual activity" were significant. Finally, self-reported psychopathy total and facet scores were significantly inversely associated with social desirability, irrespective of gender.

Table 2: Correlations between Self-Report Psychopathy with JSFQ Components, Sexual Compulsivity, and Social Desirability

SRP-SF	C1 Female Partner	C2 Anonymous	C3 Eroticized Dominance	C4 Male Partner	C5 Paraphilias	C6 Non-Coital Activity	Sexual Compulsivity Scale	M-C Social Desirability
Overall sample								
Total	.46	.44	.33	.16	.32	.21	.39	-.45
Interpersonal	.40	.38	.30	.13	.28	.18	.31	-.44
Affective	.38	.33	.20	.10	.28	.11	.28	-.33
Lifestyle	.44	.43	.39	.22	.24	.27	.40	-.39
Antisocial	.26	.27	.17	.07	.24	.09	.28	-.28
Female								
Total	.41	.43	.38	.35	.35	.20	.33	-.44
Interpersonal	.35	.38	.35	.31	.32	.19	.26	-.46
Affective	.25	.28	.20	.23	.31	.08 ^{ns}	.22	-.30
Lifestyle	.44	.41	.46	.39	.24	.29	.34	-.38
Antisocial	.22	.28	.15	.15	.27	.06 ^{ns}	.22	-.23
Male								
Total	.38	.35	.29	.00 ^{ns}	.22	.10 ^{ns}	.39	-.58
Interpersonal	.30	.29	.23	-.04 ^{ns}	.19 ^a	.07 ^{ns}	.29	-.50
Affective	.37	.27	.23	-.03 ^{ns}	.16 ^a	.05 ^{ns}	.27	-.46
Lifestyle	.35	.37	.28	.06 ^{ns}	.18 ^a	.15 ^{ns}	.41	-.50
Antisocial	.21	.20 ^a	.23	.00 ^{ns}	.20 ^a	.07 ^{ns}	.31	-.47

Note: all $p < .01$, except for ^a = $p < .05$, and ^{ns} = not significant. Overall sample $N = 489$, female subsample $n = 322$, male subsample $n = 161$.

Sexual Fantasy and its Relations with Social Desirability and Sexual Compulsivity

It was also hypothesized that self-reported sexual fantasies, as measured by the J-SFQ, would be positively associated with sexual compulsivity scores. As anticipated, all J-SFQ subscales had significant and moderate to large positive correlations with sexual compulsivity scores, both in the sample as a whole, and across gender categories; the largest observed associations were with general female partner focused and anonymous component scores (Table 3). As anticipated, scores on all six sexual fantasy components had significant inverse associations with social desirability irrespective of gender. Thus higher levels of social desirability were associated with lower endorsement of all types of sexual fantasy.

Table 3: Correlations Between J-SFQ Subscales and Sexual Compulsivity and Marlow-Crowne Social Desirability

Measure	Sexual Compulsivity Scale	M-C Social Desirability
Overall sample		
C1 Female Partner Focused	.51	-.21
C2 Anonymous	.54	-.22
C3 Eroticized Dominance	.41	-.28
C4 Male Partner Focused	.28	-.15
C5 Paraphilias	.40	-.19
C6 Non-Coital Activity	.41	-.13
Female		
C1 Female Partner Focused	.43	-.27
C2 Anonymous	.50	-.22
C3 Eroticized Dominance	.42	-.32
C4 Male Partner Focused	.49	-.22
C5 Paraphilias	.37	-.19
C6 Non-Coital Activity	.41	-.19
Male		
C1 Female Partner Focused	.49	-.32
C2 Anonymous	.51	-.28
C3 Eroticized Dominance	.45	-.22
C4 Male Partner Focused	.12 ^{ns}	-.01
C5 Paraphilias	.36	-.18 ^a
C6 Non-Coital Activity	.29	-.06 ^{ns}

Note: all $p < .01$, except for ^a = $p < .05$, and ^{ns} = not significant. Overall sample $N = 489$, female subsample $n = 322$, male subsample $n = 161$.

Gender-Based Comparisons on Self-Reported Psychopathy and Sexual Fantasies, Interests, and Behavioral Urges

A series of gender based comparisons was also analyzed through a one-way analysis of variance (ANOVA) on each set of scales for a given measure. There were significant gender differences on the SRP-SF including all individual subscales, as well as the SCS and the M-C SDS, with males scoring consistently higher than females (all $p < .001$). Regarding the J-SFQ subscales, there were

no significant gender differences between males and females in the "eroticized dominance" category, while females scored higher than males in the "male partner focused fantasy" category. Finally, for all other J-SFQ components, males scored significantly higher than females (see Table 4). The effect size magnitudes (Cohen's d or standardized mean difference between groups) for significant effects ranged from small in magnitude ($d = .20$) for "male partner focused" to quite large ($d = 1.52$) for "female partner focused."

Table 4: Sex Comparisons on Self-Report Measures

	Female (<i>n</i> = 322) <i>M</i> (<i>SD</i>)	Male (<i>n</i> = 161) <i>M</i> (<i>SD</i>)	<i>F</i>	<i>d</i>	<i>p</i>
J-SFQ	136.6 (48.8)	173.6 (48.8)	62.8	.76	<.001
Female partner focused	30.5 (14.3)	53.7 (16.2)	256.2	1.52	<.001
Anonymous	20.4 (11.3)	29.0 (14.2)	51.9	.67	<.001
Eroticized dominance	35.0 (12.8)	36.3 (13.3)	1.1	.10	.299
Male partner focused	16.2 (8.7)	14.3 (10.0)	4.4	.20	.037
Paraphilias	10.9 (5.1)	13.3 (6.8)	18.1	.40	<.001
Non-coital sexual activity	18.8 (7.7)	22.4 (6.6)	24.9	.50	<.001
SRP-SF	53.0 (13.0)	61.8 (15.7)	39.8	.61	<.001
Interpersonal	14.1 (5.1)	16.8 (5.6)	28.1	.35	<.001
Affective	13.6 (4.3)	16.1 (4.8)	34.2	.55	<.001
Lifestyle	15.0 (4.7)	17.4 (5.2)	27.3	.48	<.001
Antisocial	10.3 (3.1)	11.4 (3.4)	14.4	.34	<.001
Sexual Compulsivity Scale	13.8 (4.6)	17.1 (5.7)	46.6	.64	<.001
Marlow-Crowne SDS	14.9 (5.4)	15.3 (5.2)	0.6	.08	.434

Incremental Prediction of Sexual Fantasy by Psychopathic Traits

The final set of analyses conducted were a series of hierarchical multiple regressions that featured the prediction of sexual fantasy by psychopathic traits, controlling for sexual compulsivity and social desirability. Controls were implemented for sexual compulsivity, given that having higher levels of sexual behavioral urges was understandably a strong predictor of all categories of sexual fantasy (i.e., the higher one's self-reported preoccupation with sex, the greater the number and intensity of sexual fantasies endorsed). The analyses were performed among male and female subgroups, given the group differences observed on the measures and the fact that the sample size permitted analyses stratified by gender.

The foci of analysis were the two J-SFQ dimensions that arguably were deviant in content; C3 "eroticized dominance" and C5 "paraphilias". The results are reported in Tables 5 and 6. As seen in Table 5, sexual compulsivity predicted increased "eroticized dominance" fantasies in both blocks for both genders, while social desirability predicted decreased fantasies only among females. In the second block, among females, the lifestyle features of self-reported psychopathy significantly incrementally predicted increased fantasies of "eroticized dominance"; however, among males, none of the SRP-SF facets uniquely predicted such fantasies. Similar trends were observed in the prediction of self-reported "paraphilic" fantasies (Table 6). Across both genders, sexual compulsivity

uniquely predicted higher levels of such fantasies; however, only among females did psychopathic personality characteristics, in this instance, the affective features, uniquely predict increased "paraphilic" fantasies; the interpersonal features uniquely predicted increased "paraphilic" fantasies at $p = .060$. No unique associations were observed between self-reported psychopathic traits and "paraphilic" fantasies among males.

Table 5: Prediction of Fantasies of Eroticized Dominance (JSFQ) by Self-Reported Psychopathic Traits Controlling for Sexual Compulsivity Scale and Social Desirability Scores

Measure	Female (n = 322)			Male (n = 161)		
	B	β	p	B	β	p
Block 1						
Marlow-Crowne	-.60	-.25	< .001	-.18	-.07	.372
Sexual compulsivity	1.04	.37	< .001	.99	.43	< .001
Block 2						
Marlow-Crowne	-.34	-.14	.007	.01	.01	.954
Sexual compulsivity	.82	.29	< .001	.92	.40	< .001
SRP-Interpersonal	.30	.12	.101	.06	.03	.811
SRP-Affective	-.34	-.11	.072	.14	.05	.631
SRP-Lifestyle	.91	.33	< .001	.16	.06	.547
SRP-Antisocial	-.39	-.09	.089	.15	.04	.665
Constant	19.60		.014	12.66		.108
Final model:	$R = .57, R^2 = .33, F(6, 315) = 25.64, p < .001$			$R = .47, R^2 = .19, F(6, 154) = 7.23, p < .001$		

Note: Significant values in bold font.

Table 6: Prediction of Paraphilic Fantasies (JSFQ) by Self-Reported Psychopathic Traits Controlling for Sexual Compulsivity Scale and Social Desirability Scores

Measure	Female (n = 322)			Male (n = 161)		
	B	β	p	B	β	p
Block 1						
Marlow-Crowne	-.12	-.13	.016	-.08	-.06	.444
Sexual compulsivity	.38	.34	< .001	.40	.34	< .001
Block 2						
Marlow-Crowne	-.03	.00	.531	-.02	-.01	.890
Sexual compulsivity	.33	.30	< .001	.39	.33	< .001
SRP-Interpersonal	.15	.15	.060	.07	.06	.584

SRP-Affective	.16	.14	.046	.02	.01	.901
SRP-Lifestyle	-.09	-.08	.249	-.05	-.04	.735
SRP-Antisocial	.16	.10	.099	.14	.07	.465
Constant	2.17		.206	4.55		.281
Final model:	$R = .46, R^2 = .20, F(6, 315) = 14.17, p < .001$			$R = .38, R^2 = .11, F(6, 154) = 4.21, p = .001$		

Note: Significant values in bold font.

Discussion

The present study examined the relationships of self-reported psychopathy to deviant sexual fantasy and sexual compulsivity in a university staff and student sample. A six-component solution of the sexual fantasy questionnaire provided evidence for two distinct categories that could be considered deviant: paraphilia and eroticized dominance. Definitions regarding what sexual fantasies are considered "deviant" and those considered "non-deviant," however, are problematic for a number of reasons. First, the label of deviance requires that there be a "normophilic" category of fantasy, and what may be considered normal sexual fantasies are heavily dependent on historical, political, and sociological factors (Joyal, 2014). Determining what an atypical sexual fantasy is can be a highly subjective matter, and as such, the inclusion of paraphilia and eroticized dominance as categories of deviant sexual fantasies in the current study is related to their less frequent prevalence in general nonclinical samples, at least relative to non-deviant fantasies. The J-SFQ was created with the intention of determining what could be understood as a deviant sexual fantasy. Relative to the prevalence rates found in that analysis, the principal component analysis revealed that eight fantasies included specifically in the paraphilic category were the eight most uncommon fantasies in Joyal's (2014) analysis. Thus, deviant sexual interests in this study are understood as being the most statistically infrequent fantasies, confirmed by similar findings in two separate datasets.

Relative Sex Differences in Psychopathy and Deviance

Some of the most interesting and unexpected findings suggested that psychopathic characteristics, specifically higher levels of the interpersonal and affective features of psychopathy, to be incrementally predictive of increased paraphilic sexual fantasies, but only among women. Thus, women who self-reported as less empathic, less interested in the feelings or interests of others, and were more inclined to use manipulation and deceit were seemingly more likely to report these paraphilic fantasies. Although males scored higher than females on nearly all levels of sexual fantasy on the J-SFQ, psychopathic characteristics bore no association to these types of fantasies. The evidence suggests that males are inclined only to have such fantasies if they report higher overall levels of arousal, in which case, university males with high SCS scores (i.e., who are essentially sexually preoccupied) would seem to be generally more likely to endorse having a broad and diverse array of sexual fantasies coinciding with their high levels of reported arousal. The psychopathy-deviance link has been studied predominantly in male offender samples, and much less is known about this relationship, if it does exist, in women, and especially in nonclinical female samples. As there is virtually no previous research on this topic, such interpretations are admittedly speculative and call for further research.

There is some research to suggest that there are sex differences, seen in relative psychopathic trait

differences as measured by standard psychopathy assessment instruments. A Swedish study of male and female psychiatric patients who were assessed using the PCL:SV found small but statistically significant sex differences in Part 1 scores, with males scoring higher (Douglas, Strand, Belfrage, Fransson, & Levander, 2005). Douglas et al. (2005) also found, however, that the interpersonal and affective features of the PCL:SV bore stronger associations with aggression among females, thus providing possible evidence of the relative importance and influence of these attributes in their contribution to psychopathic tendencies in males and females. If there are sex differences in the ways individuals express or endorse affective and lifestyle psychopathy features, it may help to explain why these same features were predictive of deviant sexual fantasies for women.

Reinforcing the Psychopathy, Hypersexuality, and Deviance Links

The construct of hypersexuality also had particular prominence in the current study. Sexual compulsivity significantly covaried with the self-report psychopathy subscales and the self-report sexual fantasy subscales, and all correlations were moderate in magnitude. Results from regression analyses further demonstrated sexual compulsivity to be the strongest predictor of increased sexual fantasy, irrespective of sexual fantasy category and gender. Although the direction of the possible relationship is not clear, research elsewhere has identified a link between hypersexuality and psychopathology at a general level. For instance, Reid, Carpenter, and Lloyd (2009) found that hypersexual individuals presented with greater levels of depression, interpersonal sensitivity, obsession, and psychoticism than those who were not. Although studies assessing hypersexuality in women are comparatively scarce, some studies indicate a relation between psychological adjustment and sexual compulsivity in women. One of the few studies conducted on this subject showed that women who sought treatment for sexual compulsivity presented more psychopathological symptoms and lower positive affect than did women who did not seek treatment (Winters, Christoff, & Gorzalka, 2010; see also Klein, Rettenberger, & Briken, 2014 for an exception to this).

Little is known about the relative association for specific psychopathy facets and hypersexuality. Some components of psychopathy have been reported as being correlated with promiscuous sexual behavior: antisociality for men, impulsive thrill seeking in women (Hudek-Knežević, Kardum, & Krapić, 2007). At a conceptual level, this sensation seeking and proneness to boredom may also explain why the Lifestyle facet (i.e., proneness to boredom, impulsivity, and sensation seeking) was associated with increased BDSM-related fantasies in the current study. What may be considered as a painful or dangerous sexual practices to the average individual may be more attractive to those with thrill-seeking tendencies. Thus, there does seem to be a relationship between hypersexuality and the Lifestyle facet of psychopathy in women, and this relationship warrants further research attention.

Limitations and Future directions

The present study has some limitations that merit attention. First, owing to technical issues, the ordering of measures online was not counterbalanced and one item from the 54-item J-SFQ was unintentionally omitted. As these are minor shortcomings, it is anticipated that they had a small impact, if any, on substantive findings. Second, there is also a concern that the self-report measures may not be valid indicators of psychopathic traits, given the nature of some of the core features of psychopathy (e.g., lying, deception, manipulation) which may not be conducive to accurate measurement via self-report (Ray et al., 2013). Third, the normalized sexual behavior of university students (who made up the bulk of the sample) may be more promiscuous than the general population, and thus the findings may not be generalizable to other community nonclinical samples

(Buhi et al., 2010). Finally, given the nature of the sample, which has a high proportion of young, white, female, university undergraduates, the demographic composition of the sample limits the generalizability of study findings; it is anticipated that extending the survey to a university wide bulletin created a broader and more representative sample to offset this concern.

Hare (1999) has written extensively about what he has termed the so-called "deadly combination" of high psychopathy combined with high deviance, and the Hawes et al. (2013) meta-analysis showed that psychopathy and deviance interact to predict sexual violence, or at the very least, jointly contribute in different ways to predict sexual violence. The data do not exist in the present study sample to suggest that individuals have or will participate in acts of sexual violence, and thus future research may be well served to examine proxies of the psychopathy-deviance link through exploring joint associations with self-reported sexually coercive behavior in a community nonoffender sample. The finding of a psychopathy-deviance link, but only among women once controlling for sexual compulsivity, was somewhat unexpected but indicates that such an association could transcend gender. As this is possibly the first study to examine linkages of psychopathy, deviant fantasy, and hypersexuality in a large female subsample, future research should attempt to explore explanatory mechanisms of such an association among women.

The assessment of these variables and examination of their interrelationships is worthy in a nonclinical sample, given that sexual deviance and psychopathy have been shown to be prime predictors of sexual recidivism in sexual offender samples (Hanson & Morton-Bourgon, 2005) and have etiologic relevance in the causation of sexual violence (Mann et al., 2010). If such an association can be demonstrated in nonclinical, nonoffender samples, this may have the potential for identifying at-risk individuals (e.g., in campus health settings) to inform prevention efforts to reduce sexual violence.

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