Sexually violent women: The PID-5, everyday sadism, and adversarial sexual attitudes predict female sexual aggression and coercion against male victims

Tiffany D. Russell *, Corey M. Doan, Alan R. King

University of North Dakota, Psychology Department, Corwin-Larimore Hall, 319 Harvard St., P.O. Box 8380, Grand Forks, ND 58202-8380, United States

ABSTRACT

Sexual violence research tends to focus on male aggressors and coercers, but females also commit sexual assault. This research tested whether female sexual violence perpetrated against men was predicted by maladaptive personality traits and adversarial sexual attitudes in a university ($n = 439$) and national ($n = 592$) sample. Overall, 10% of women reported sexual violence perpetration, but the national sample rates (13%) were more than twice as high as student rates (6%). This pattern was mirrored in all forms of sexual violence, and national women reported completed rape four times more often than did students. The rate spike in the older, more diverse population may be due to limited prevention efforts, and it emphasizes the importance of collecting data in multiple populations.

A structural equation model predicting sexual violence was also constructed with the university sample. Maladaptive personality traits predicted adversarial sexual attitudes. Adversarial sexual attitudes mediated the relationship between the personality traits and sexual violence. The model was replicated in the national sample. The profile from this model is that of a hostile, eccentric, and grandiose woman prone to abnormal beliefs. These women may enjoy controlling men, and they appear to view sex as a competition rather than an expression of affection.

© 2017 Elsevier Ltd. All rights reserved.

1. Introduction

The field has worked diligently towards understanding male sexual assault, but there is a paucity of sexually violent female (SVF) research. While most sexually aggressive and coercive acts involve male perpetrators, predictors of female sexual violence also warrant empirical scrutiny. Approximately 4–9% of sexual offenses involve SVFs (Cortoni, Hanson, & Coache, 2010), and 16–41% of university men are victimized by a woman (Canan, Jozkowski, & Crawford, 2016; Struckman-Johnson, Struckman-Johnson, & Anderson, 2003). Nearly 5% of men experience directed, forced penetration (i.e., forcible rape), half of which are perpetrated by female intimate partners (Centers for Disease Control and Prevention, 2011). Some men hesitate to report being sexually violated by a woman, particularly if they believe doing so compromises their masculinity. This suggests male victimization rates are underestimated (Pino & Meier, 1999).

Women also report perpetrating sexual violence. One university sample described coercive tactics like telling lies (5%) or questioning a man's sexuality (2%) after an initial sexual advance was refused. They also reported aggressive techniques, such as using intoxicants (5%) and physical force (3%; Struckman-Johnson et al., 2003). These university studies have become somewhat dated, and current rates in national populations are even rarer. Thus, the phenomenon deserves reassessment in contemporary university and nationwide samples.

Several acts fall under the umbrella of *sexual violence*. *Sexual aggression*, *rape*, and *sexual assault* describe physical violence to gain sexual access from an unwilling individual. These behaviors include force, threatening force, and substance-induced incapacitation. *Coercion* describes non-physical strategies meant to persuade reluctant individuals into sexual contact. These tactics include threats, lies, and manipulation (Russell & King, 2016). Coercion may appear less severe than aggression, but consistent with female victims, sexual coercion relates to consequences like PTSD, depression, and alcohol abuse in men (e.g, Creamer, Burgess, & McFarlane, 2001).

There are few theoretical models of female aggression and coercion, and studies investigating the full spectrum of sexual violence (i.e., attempted coercion to completed rape) are fewer still. Consequently, there is not a consensus regarding predictors of female aggression and coercion. Some theoretical models successfully integrated traits like rape myth acceptance (RMA) and psychopathy from male models (Bouffard, Bouffard, & Miller, 2016), suggesting male and female perpetrators are more similar than different. Others elucidated distinctions

* Corresponding author at: Psychology Department, University of North Dakota, P.O. Box 8380, Grand Forks, ND 58202-8380, United States.
E-mail address: tiffany.russell@und.edu (T.D. Russell).

between men and women, such as male coercers having dominance and sociosexuality traits, and female coercers developing sexual compulsiveness characteristics (Schatzel-Murphy, Harris, Knight, & Milburn, 2009). Existing SVF models were often tested exclusively in university samples (e.g., Schatzel-Murphy et al., 2009) or convicted female sex offenders (e.g., Gannon, Rose, & Ward, 2010), thereby limiting generalizability. Other research focused on coercion only (e.g., Bouffard et al., 2016), leaving current prevalence rates and predictors of female sexual aggression essentially unknown.

2. Current study

2.1. Adversarial sexual attitudes

Adversarial sexual attitudes is a latent variable representing the belief that interpersonal relationships are fundamentally aggressive and exploitative. These ideas appear to be byproducts of living in rape-supportive, patriarchal cultures. Perceiving interpersonal relationships as combative likely interferes with honest communication between sex partners (Bouffard et al., 2016) and disinhibits sexually violent behavior. Two factors, RMA and sexual dominance motives (SDMs), indicate the adversarial sexual attitudes variable in this research.

RMA measures persistent beliefs about sexual violence that elude evidentiary support (e.g., "In any rape case, one would have to question whether the victim is promiscuous or has a bad reputation"; Lonsway & Fitzgerald, 1995). RMA predicted male sexual aggression and coercion (Russell & King, 2016), as well as female sexual coercion (Bouffard et al., 2016). It was the strongest indicator of hostile masculinity, which is a latent construct representing adversarial sexual attitudes in male perpetrators. Hostile masculinity predicted male sexual violence, as well as mediated the relationship between personality traits and sexual assault (Russell & King, 2017a).

SDMs, the second adversarial factor, involve sexual drives related to power and control (e.g., "I enjoy the feeling of having someone in my grasp"; Nelson, 1979). Individuals with high levels of SDMs view sex as a game with distinct winners and losers. This competition includes beating rivals for a prize (e.g., desired sex partners), as well as achieving an end goal (e.g., sexual contact). SDMs related to sexual coercion in both male and female populations (e.g., Renaud & Byers, 2005).

2.2. Everyday sadism

Psychopathy and narcissism are maladaptive personality traits that predict coercion and aggression in SVFs (e.g., Gannon et al., 2010). Along with Machiavellianism, these nefarious personalities also make up a construct called the *dark triad*. All triad personalities share a callous and manipulative *dark core*, but each member also contributes distinctive traits to the cluster (e.g., grandiosity is specific to narcissism; Furnham, Richards, & Paulhus, 2013). Recent empirical work supports including another malevolent personality, everyday sadism, in the dark personality grouping (Paulhus, 2014).

Sadists take pleasure in others' pain, and everyday sadism describes common, socially accepted behaviors with violent undertones (Buckels, Jones, & Paulhus, 2013). Everyday sadism associates with violent video game preferences (Greitemeyer, 2015), seeking conflict with others on social media ("trolling"; Buckels, Trapnell, & Paulhus, 2014), and using personal resources to punish cooperative individuals (Pfattheicher & Schindler, 2015). It also predicted RMA and sexual violence in men (Russell & King, 2016), and hostile femininity in women (Russell & King, 2017b).

Three scales make up latent everyday sadism. Verbal sadism includes items like "I enjoy making jokes at the expense of others." Physical sadism consists of responses such as "I enjoy tormenting people." Vicarious sadism includes statements like "I love to watch YouTube clips of people fighting."

2.3. Personality inventory for DSM-5 (PID-5)

The PID-5 (Krueger, Derringer, Markon, Watson, & Skodol, 2012) is a measure coinciding with the *DSM-5*'s hybrid model of personality disorder diagnoses. The PID-5 includes five domains (antagonism, disinhibition, psychoticism, detachment, and negative affectivity), consisting of 25 lower-order facets. These domains are similar to traditional five-factor models of personality, but the PID-5 contains extreme variants of these traits (Krueger & Markon, 2014).

The PID-5 has not been used in SVF samples, but psychopathy and narcissism predicted female sexual violence (e.g., Gannon et al., 2010). PID-5 antagonism and disinhibition related to psychopathy (Anderson, Sellbom, Wygant, Salekin, & Krueger, 2014), and psychoticism and negative affectivity related to narcissism (Wright et al., 2013). Negative affectivity, antagonism, and disinhibition have mediated the relationship between childhood maltreatment and aggressive symptom expression (Veith, Russell, & King, 2017).

2.4. Overview and predictions

The goals of the present research were twofold. The first objective was to update prevalence rates for sexual aggression (attempted rape, completed rape, frotteurism) and coercion (attempted and completed coercion) in university and national women. Learning the scope of this issue is crucial, as prevention efforts and resource allocations are often guided by prevalence data. The second goal was to test everyday sadism and the PID-5 in a model with adversarial sexual attitudes. Understanding specific characteristics of SVFs can inform intervention efforts. Moreover, since clinicians are more likely to use the PID-5, domains related to this phenomenon can also be monitored in treatment settings.

To meet the research goals, two samples of adult women were collected for an online study. The first cohort was a university sample. University students tend to respond to online surveys in the same manner as in-person subjects. They are preferred when questions are sensitive in nature, as social desirability biases seem to decrease online (Gamblin, Winslow, Lindsay, Newsom, & Kehn, 2016). The second sample was a national cohort recruited through Amazon's Mechanical Turk (MTurk). MTurk data quality is often consistent with in-person samples (Buhrmester, Kwang, & Gosling, 2011), as MTurk participants have similar motivational and individual characteristics as traditional research subjects (Gosling, Vazire, Srivastava, & John, 2004).

To address the first research goal, prevalence rates were calculated ordinally by category (e.g., completed coercion), tactic (e.g., physical force), and most severe act perpetrated. To address the second goal, a structural equation model (SEM) was constructed with adversarial sexual attitudes, everyday sadism, and sexual violence as latent variables. It should be noted that this was an exploratory model, and several respecifications occurred before an acceptable model was identified. This type of model building increases the risk of capitalizing on chance (Garson, 2015). To mitigate this risk, the model was independently tested in each sample, and a chi-square difference test was conducted to learn if the models were statistically similar. It should also be noted that SEMs are regression models, and words like "predict" were used to describe the outcomes. The temporal order of the traits and behaviors could not be inferred from these data. As with any regression model, the wording should not be misconstrued as causation.

This research included several predictions. PID-5 antagonism, negative affectivity, disinhibition, and psychoticism were expected to emerge as predictors of sexual violence, mediated by adversarial sexual attitudes. This is consistent with male models that include the hostile masculinity mediator of personality traits (e.g., Russell & King, 2017a). The antagonism domain was also expected to predict everyday sadism, as its callous and manipulative facets are the two traits comprising the dark triad's core (Paulhus, 2014). Everyday sadism and adversarial sexual attitudes were conceptualized as direct predictors of sexual violence, consistent with findings in aggressive and coercive men (e.g., Russell &
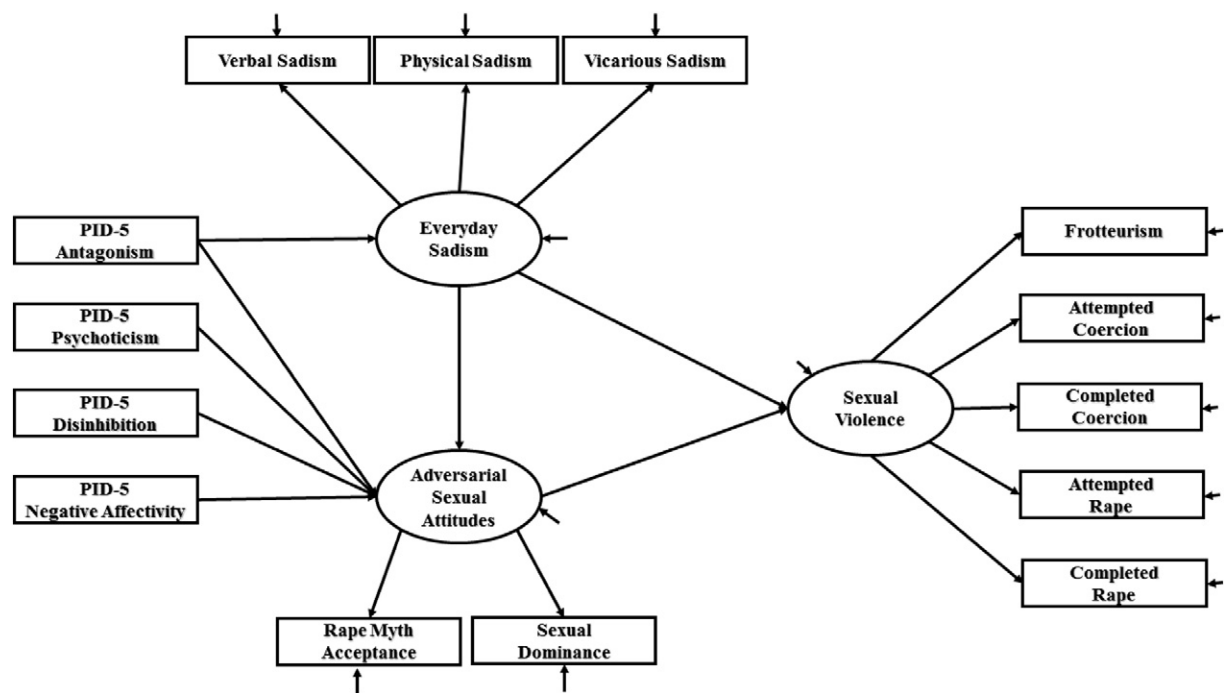
Fig. 1. Conceptual model.

King, 2016). After the model was built, it was also anticipated that the university sample would fit the national data. Fig. 1 demonstrates the conceptual model.

3. Methods

3.1. Participants

Two samples of females ($N = 1058$) were recruited for this research. The first was a university sample attained from a psychology department participant pool in the US Upper Midwest ($n = 450$). The cohort's mean age was 20.02 ($SD = 3.17$; range = 18–56), and they were 92.7% Caucasian (2.3% Native American; 2.1% Asian; 2.9% other). The second was a national sample of U.S. women ($n = 608$) recruited through MTurk. Their mean age was 33.54 ($SD = 11.08$; range = 18–62), and the group was 83.1% Caucasian (6.4% African-American; 2.9% Bi-Racial; 2.7% Latina; 2.7% Asian; 2.2% other). IP addresses were screened and participant locations were within 0.2% of the US Census Bureau's 2016 regional estimates. Responses on the PID-5 were also tested for consistency (Keeley, Webb, Peterson, Roussin, & Flanagan, 2016), and 27 participants were excluded for random response patterns (university = 11; national = 16). The remaining sample ($N = 1031$; 439 university) had <2% missing data, for which full information maximum likelihood was used.

3.2. Materials

3.2.1. Personality inventory for DSM-5 (PID-5)

The 220-item PID-5 (Krueger et al., 2012) assessed the facets contributing to five personality domains. Items were rated on 4-point Likert scales (1 = *Very False or Often False*; 4 = *Very True or Often True*). If >25% of items contributing to a facet were missing, the facet was not calculated. Domain scores were only calculated if all contributing facet scores were available (Krueger et al., 2012). Non-calculated domains were treated as missing data. Previous research had high internal consistency (α range = .86–.96; Russell, 2016).

3.2.2. Comprehensive assessment of sadistic tendencies (CAST)

The 18-item CAST (Buckels & Paulhus, 2013) assessed the tendency to enjoy others' suffering. Items were rated on 5-point Likert scales (1 = *Strongly Disagree*; 5 = *Strongly Agree*). Three indices (verbal, physical, and vicarious sadism) were calculated for latent everyday sadism. During the instrument's development, the CAST had strong internal consistency (α = .89).

3.2.3. Rape myth acceptance scale (RMA)

The 19-item RMA scale (Lonsway & Fitzgerald, 1995) assessed cognitive distortions regarding rape. Items were rated on 7-point Likert scales (1 = *Strongly Disagree*; 7 = *Strongly Agree*). RMA had strong internal consistency in scale development (α = .95).

3.2.4. Sexual dominance subscale (SDM)

The 8-item SDM scale of the Sexual Functions Inventory (Nelson, 1979) assessed sexual dominance motives on a 4-point Likert scale

Table 1
Descriptive statistics by sample.

	α	National M	National SD	University M	University SD
PID-5 antagonism	.96	1.63	0.48	1.53	0.42
PID-5 detachment	.96	1.90	0.55	1.59	0.43
PID-5 disinhibition	.92	1.84	0.44	1.78	0.38
PID-5 negative affectivity	.97	2.03	0.51	1.86	0.46
PID-5 psychoticism	.96	1.75	0.60	1.45	0.47
Physical sadism	.84	1.30	0.59	1.18	0.39
Vicarious sadism	.80	1.71	0.66	1.59	0.39
Verbal sadism	.83	1.85	0.85	1.73	0.71
Rape myth acceptance	.93	1.50	0.79	1.48	0.65
Sexual dominance	.90	1.83	0.76	1.77	0.69
Frotteurism	.78	0.35	1.34	0.14	0.78
Attempted coercion	.93	0.08	0.59	0.04	0.44
Completed coercion	.87	0.14	0.91	0.03	0.41
Attempted rape	.91	0.11	0.93	0.04	0.52
Completed rape	.93	0.17	1.15	0.04	0.50

Table 2
Correlations by sample.

| | | Top diagonal: national sample (n = 592) Bottom diagonal: university sample (n = 439) | | | | | | | | | | | | | | |
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Antagonism	–	.36	.67	.51	.54	.51	.38	.50	.34	.36	.22	.17	.26	.18	.21
2	Detachment	.58	–	.55	.71	.65	.26	.22	.17	.23	.11	.16	.11	.14	.11	.13
3	Disinhibition	.72	.65	–	.72	.66	.37	.31	.34	.25	.28	.20	.14	.19	.12	.15
4	Negative affectivity	.63	.72	.74	–	.64	.28	.26	.28	.21	.24	.17	.09	.16	.09	.13
5	Psychoticism	.70	.72	.77	.72	–	.40	.33	.28	.22	.23	.20	.12	.18	.13	.16
6	Physical sadism	.47	.36	.39	.32	.40	–	.58	.53	.31	.28	.24	.26	.24	.28	.25
7	Vicarious sadism	.36	.43	.34	.31	.41	.52	–	.39	.26	.27	.19	.17	.25	.16	.22
8	Verbal sadism	.54	.34	.39	.37	.39	.51	.38	–	.22	.23	.16	.15	.15	.15	.13
9	Rape myth acceptance	.33	.29	.31	.27	.26	.33	.24	.22	–	.25	.34	.28	.35	.30	.35
10	Sexual dominance	.31	.20	.31	.20	.26	.19	.17	.21	.18	–	.25	.10	.20	.11	.17
11	Frotteurism	.19	.17	.14	.13	.17	.19	.15	.12	.18	.06	–	.62	.76	.61	.74
12	Attempted coercion	.10	.12	.07	.07	.08	.22	.13	.08	.28	.03	.50	–	.61	.85	.74
13	Completed coercion	.11	.11	.05	.05	.08	.18	.08	.05	.23	.04	.56	.91	–	.59	.83
14	Attempted rape	.11	.11	.08	.08	.09	.22	.14	.08	.28	.03	.49	.96	.92	–	.82
15	Completed rape	.10	.10	.08	.08	.08	.23	.13	.08	.26	.03	.47	.88	.85	.93	–

Note. Bold = p ≤ .01; Italic = p ≤ .05.

(1 = Not Important at All; 4 = Very Important). Strong internal consistency (α = .91) has been demonstrated (Russell & King, 2017a).

3.2.5. Revised sexual experiences survey-short form perpetration (SES)

The 10-item SES (Koss et al., 2007) assessed engagement in sexual aggression and coercion since age 14. Women indicated the frequency of sexually violent behavior (0, 1, 2, or 3 + times). Five indices were calculated, which included attempted and completed coercion and rape, as well as an index we called frotteurism (unwanted touching, kissing, and/or clothing removal). Internal consistency has been strong in past studies (α range from .80–.96; Russell, 2016).

3.3. Procedure

Psychology students enrolled in courses at a flagship university in the US Upper Midwest were recruited online through Sona Systems. National participants were recruited online through MTurk. To protect subject anonymity, Sona and MTurk assigned participants an identification number, and participants' names were unknown to the researchers. After accepting the task, women in the study completed the informed consent and survey on Qualtrics, an online survey-hosting website. Scale presentation order was counterbalanced.

4. Results

4.1. Descriptive statistics and prevalence rates

Table 1 presents the mean, standard deviation, and Cronbach's alpha for each measurement instrument. Table 2 demonstrates variable zero-order correlations. Table 3 includes the number of sexually violent acts by sample. Overall (N = 1031), 10.1% of women reported perpetrating sexual violence, which was 13.1% of the national sample (n = 592) and 5.9% of the university sample (n = 439). Roughly 1/4th (28.2%) of sexually violent women were both aggressive and coercive (national = 28.6%; university = 26.9%). The majority (66.0%) of sexually violent women (n = 103) endorsed aggressive tactics only.

Most sexually violent participants (35.0%) reported just one act of sexual violence. However, the second greatest number of violent women (24.3%) endorsed six or more events. Sexual violence tactics reported by sample is detailed in Table 4. About half of the aggressive women took advantage of an intoxicated man, criticized his appearance or sexuality, or told lies and/or threatened to end the relationship. Nearly 1/4th of the aggressive sample physically forced a man to have sex with her. Participants were also classified into a mutually exclusive category based on the most severe sexually aggressive act reported (Table 5). Nearly half of the sexually violent women reported frotteuristic behaviors only, and 29.1% endorsed completed rape.

4.2. Structural equation model

The university sample was used to construct the initial SEM. Because the datasets were large, alpha was set to .01 to guard against type I errors (Garson, 2015). The initial model fit the data well, $\chi^2(51) = 101.93$, $p < .001$, NFI = .964, CFI = .981, RMSEA = .045. However, the direct path from everyday sadism to sexual violence was not significant ($p > .01$). Antagonism and psychoticism did not have significant paths to adversarial sexual attitudes, but there was an unexpected significant path from psychoticism to sadism. Disinhibition and negative affectivity did not have a path to any variables. The revised conceptual SEM is illustrated in Fig. 2. Dashed lines signify non-significant paths and predictors removed from the model, and dotted lines indicate unexpected new paths. After removing non-significant paths and predictors, the model was respecified. The respecified university model (Fig. 3) was an excellent fit to the data, $\chi^2(39) = 45.93$, $p = .207$, NFI = .989, CFI = .998, RMSEA = .020, and a significant improvement from the initial model, $\Delta\chi^2 = 56.00$, $p < .001$.

The university model was then tested in the national sample. The respecified SEM (Fig. 4) was an excellent fit, $\chi^2(37) = 43.74$, $p = .207$, NFI = .989, CFI = .998, RMSEA = .018, and it was not significantly different from the university model, $\Delta\chi^2 = 2.19$, $p = .335$, suggesting model robustness across samples. The university and national models accounted for 14% and 29% of the variance in female sexual violence, respectively.

Table 3
Number of sexually violent acts reported by sample.

	1	2	3	4	5	6+
National n	24	12	11	7	4	19
National sample %	4.1%	2.0%	1.9%	1.2%	0.7%	3.2%
National aggressive sample %	31.1%	15.6%	14.3%	9.1%	5.2%	24.7%
University n	12	2	4	1	1	6
University sample %	2.7%	0.5%	0.9%	0.2%	0.2%	1.4%
University aggressive sample %	46.2%	7.7%	15.4%	3.8%	3.8%	23.1%
Total N	36	14	15	8	5	25
Total sample %	3.5%	1.4%	1.5%	0.8%	0.5%	2.4%
Total aggressive sample %	35.0%	14.0%	14.6%	7.8%	4.9%	24.3%

Note. National sample n = 592; University sample n = 439; Total sample N = 1031.
National aggressive sample n = 77; University aggressive sample n = 26; Total aggressive sample n = 103.

Table 4
Sexual violence tactics reported by sample.

	Criticized appearance or sexuality[a]	Told lies, threatened to end relationship[a]	Took advantage of intoxication[b]	Threatened physical force[b]	Used physical force[b]
National *n*	38	38	42	15	18
National sample %	6.4%	6.4%	7.1%	2.5%	3.0%
National aggressive sample %	49.4%	49.4%	54.6%	19.5%	23.4%
University *n*	13	16	12	4	7
University sample %	3.0%	3.6%	2.7%	0.9%	1.6%
University aggressive sample %	50.0%	61.5%	46.2%	26.9%	26.9%
Total *N*	51	54	54	19	25
Total sample %	4.9%	5.2%	5.2%	1.8%	2.4%
Total aggressive sample %	49.5%	52.4%	52.4%	18.5%	24.3%

Categories are not mutually exclusive.
[a] Coded as coercion.
[b] Coded as aggression.

5. Discussion

Female sexual violence has received minimal empirical attention, and little is known about personality traits and attitudes associated with SVFs. The few existing theoretical models have limited generalizability due to their exclusive use in university convenience samples or convicted sex offenders. The first goal of this research was to address this gap in the literature by updating prevalence statistics in a university and national sample. The second goal was to test everyday sadism and the PID-5 in a model with adversarial sexual attitudes. Understanding specific SVF characteristics can guide new prevention efforts, as well as inform SVF intervention strategies.

The prevalence statistics indicated the female sexual violence rates in the university sample were similar to past university studies (e.g., Struckman-Johnson et al., 2003). Alarmingly, rates for all types of sexual violence at least doubled in the national population, and national women reported completed rape as their most severe act four times more than students. The national sample was >13 years older than the university sample, and personality traits may have been more crystalized in the national women. They also had more years to perpetrate sexual violence. Female sexual violence is rarely addressed in prevention programs, and this research demonstrated that ignoring the topic could have led to this spike in the national cohort.

One study prediction was PID-5 antagonism, negative affectivity, disinhibition, and psychoticism would indirectly predict sexual violence. Adversarial sexual attitudes was expected to mediate these PID-5 domains. This hypothesis had mixed support, as antagonism and psychoticism were the sole PID-5 domains remaining in the model. They were also mediated by everyday sadism, not adversarial sexual attitudes. Some narcissistic and psychopathic factors were thus associated with female sexual violence, but only through two mediators. This is a distinction from male models.

PID-5 antagonism was also expected to predict everyday sadism. This hypothesis was supported, and there was an unexpected path from psychoticism to everyday sadism. Psychoticism includes facets associated with eccentricity and unusual beliefs (e.g., magical thinking; thought-action fusion). Everyday sadism does not seem to include

these traits, and an untested variable may explain the findings. For example, Russell and King (2017b) found everyday sadism predicted hostile femininity, a latent variable indicating hostility towards women and RMA. A similar variable assessing hostility towards men may reveal interesting effects in future work.

The third hypothesis was everyday sadism and adversarial sexual attitudes would directly predict sexual violence, which had mixed support. Sadism predicted adversarial sexual attitudes, but only adversarial attitudes directly predicted sexual violence. This suggests hostile attitudes about interpersonal relationships disinhibit sexual violence in women and men, and the findings add to the growing literature demonstrating the insidious nature of rape myths. Interventions should focus on restructuring these erroneous beliefs, and there should be increased investigation into ways to prevent adversarial sexual attitude development in men and women.

Everyday sadism has emerged as a promising predictor in male sexual violence studies. Russell and King (2016) suggested it might be more predictive of male sexual assault than psychopathy and narcissism due to its distinctive contribution to the dark tetrad (i.e., taking pleasure in others' pain). As with men, it seems everyday sadism is an important SVF characteristic. However, since it does not directly predict sexual violence, its influence in women is somewhat blunted. Future studies should include specific dark triad measures to test if a different dark personality better predicts female sexual violence.

The percentage of female sexual violence accounted for by the SEM varied by sample. The university model accounted for 14% of female sexual violence, which is low relative to male models (up to 33%; Russell & King, 2016). The national model accounted for 29% of female sexual violence, demonstrating the model improved in an older population. The university sample was drawn from a Midwest university, so its diversity was also limited. Moreover, a school in the conservative part of the US may have decreased the violent sample size and variability. This may be especially pronounce since eccentricity is a SVF characteristic, as it seems to represent rejection of traditional values (Russell & King, 2017a).

There are limitations to the present research. These data are self-reported, correlational, and cross-sectional, which threaten validity.

Table 5
Most severe act reported by sample.

|	No sexual violence	Frotteurism	Attempted coercion	Completed coercion	Attempted rape	Completed rape
National *n*	515	37	2	10	3	25
National sample %	87.0%	6.3%	0.3%	1.7%	0.5%	4.2%
National aggressive sample %	–	48.1%	2.5%	13.0%	3.9%	32.5%
University *n*	413	14	4	2	1	5
University sample %	94.1%	3.2%	0.9%	0.5%	0.2%	1.1%
University aggressive sample %	–	53.8%	15.4%	7.7%	3.9%	19.2%
Total *N*	928	51	6	12	4	30
Total sample %	90.0%	4.9%	0.6%	1.2%	0.4%	2.9%
Total aggressive sample %	–	49.5%	5.8%	11.7%	3.9%	29.1%
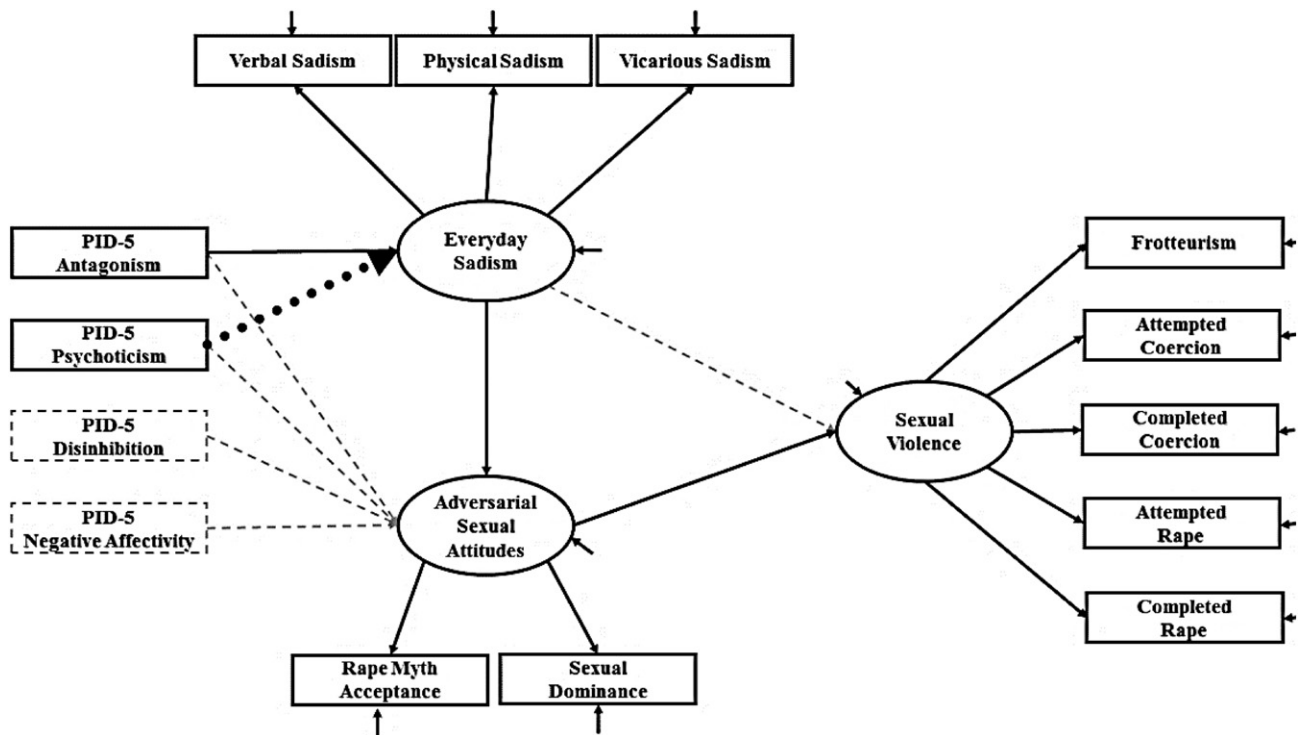
Fig. 2. Conceptual model. *Note*: Dashed lines indicate trimmed non-significant paths and predictors, and the dotted line signifies a new path added to the model.

Longitudinal or experimental studies would be superior to this research. Although MTurk samples appear to be stable, interpretation of online data should be tempered since there is limited experimenter oversight. Additionally, female sexual aggression is a low base-rate event, and our violent samples were somewhat small. Larger samples should be considered in the future. The model was also built with an exploratory, post hoc method, which increases the risk of capitalizing on chance. Two samples were collected to try to mitigate this possibility, but

skepticism is advised. Causation cannot be inferred from this model, and interpretive caution is also recommended.

In conclusion, this manuscript offers initial evidence of PID-5 personality traits, everyday sadism, and adversarial sexual attitudes in the prediction of female sexual violence. This research updated prevalence rates, and it also tested an SEM of female sexual violence in university and national samples of US women. The personality profile emerging from this study was that of an eccentric, hostile woman with an
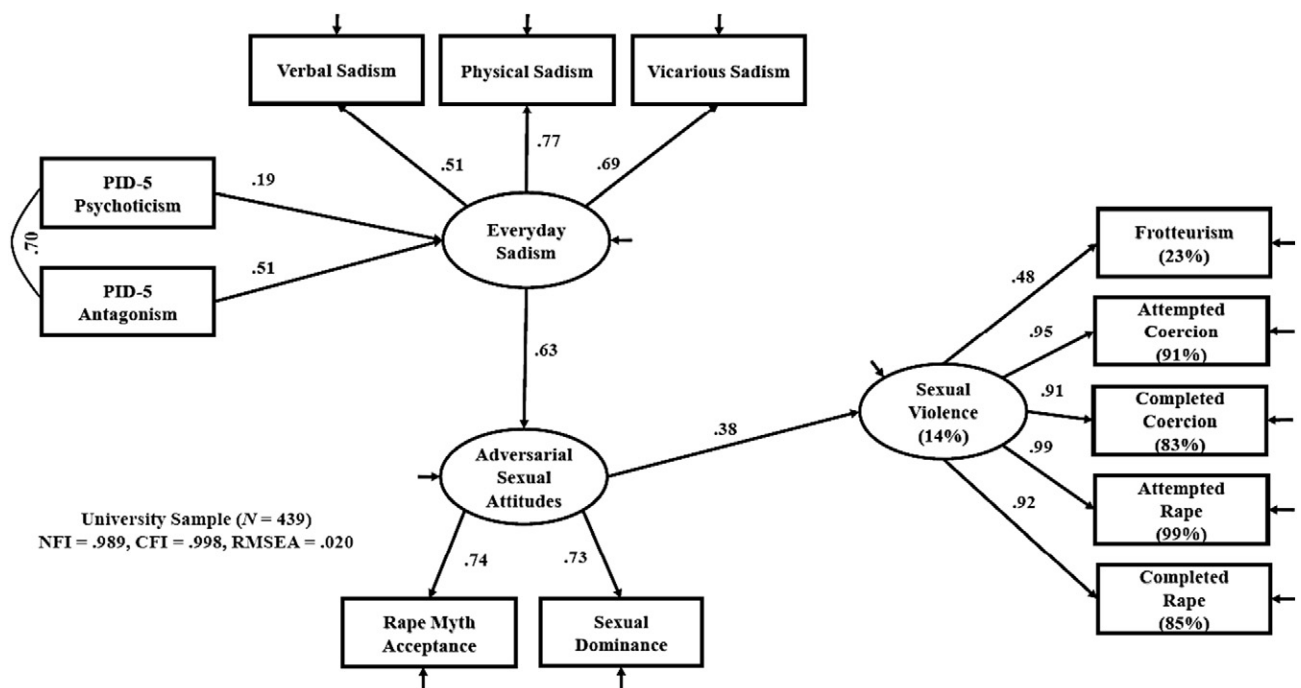

Fig. 3. University model. *Note*: Percentage of variance explained by the model in parentheses.
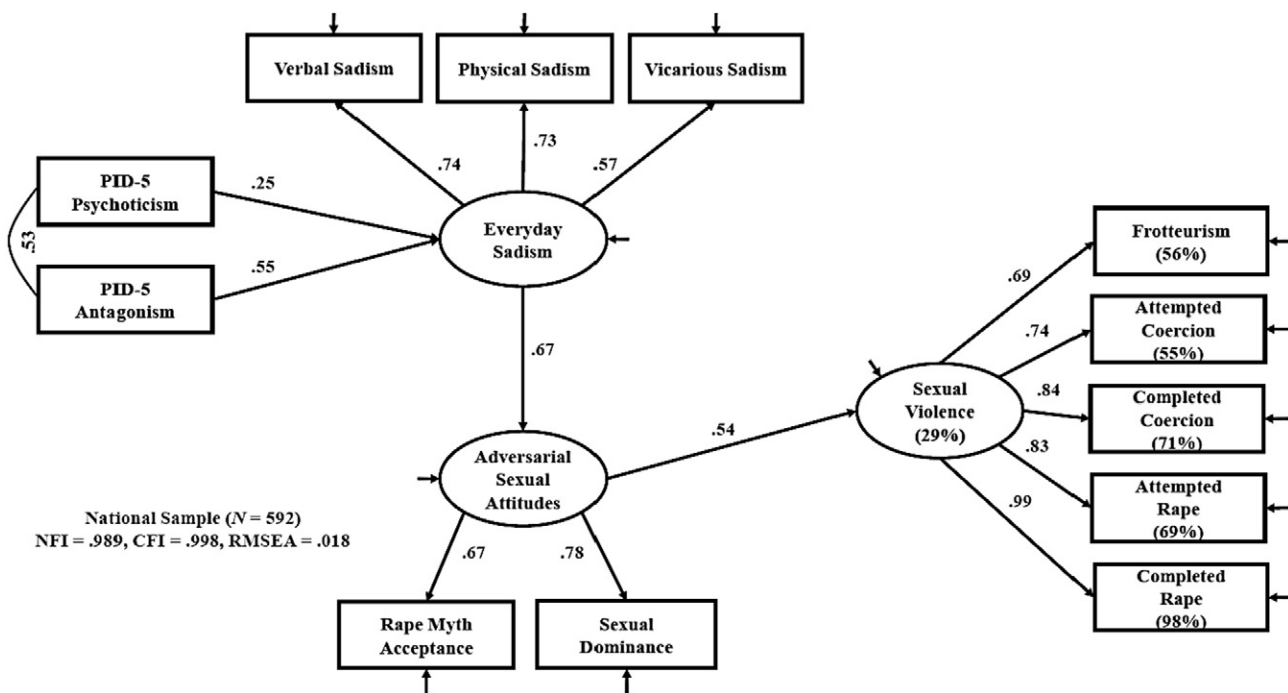
Fig. 4. National model. *Note:* Percentage of variance explained by the model in parentheses.

exaggerated sense of self-importance and callous disregard for others. They may also be competitive and view sex as a game rather than an act of affection.

References

Anderson, J. L., Sellbom, M., Wygant, D. B., Salekin, R. T., & Krueger, R. F. (2014). Examining the associations between DSM-5 section III antisocial personality disorder traits and psychopathy in community and university samples. *Journal of Personality Disorders*, 28(5), 675. http://dx.doi.org/10.1521/pedi_2014_28_134.

Bouffard, J. A., Bouffard, L. A., & Miller, H. A. (2016). Examining the correlates of women's use of sexual coercion: Proposing an explanatory model. *Journal of Interpersonal Violence*, 31(13). http://dx.doi.org/10.1177/0886260515575609.

Buckels, E. E., & Paulhus, D. L. (2013). *Comprehensive Assessment of Sadistic Tendencies (CAST)*. Unpublished measure University of British Columbia.

Buckels, E. E., Jones, D. N., & Paulhus, D. L. (2013). Behavioral confirmation of everyday sadism. *Psychological Science*, 24(11), 2201–2209. http://dx.doi.org/10.1177/0956797613490749.

Buckels, E. E., Trapnell, P. D., & Paulhus, D. L. (2014). Trolls just want to have fun. *Personality and Individual Differences*, 67, 97–102. http://dx.doi.org/10.1016/j.paid.2014.01.016.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3–5. http://dx.doi.org/10.1177/1745691610393980.

Canan, S. N., Jozkowski, K. N., & Crawford, B. L. (2016). Sexual assault supportive attitudes, rape myth acceptance, and token resistance in Greek and non-Greek college students from two university samples in the United States. *Journal of Interpersonal Violence*. http://dx.doi.org/10.1177/0886260516636064.

Centers for Disease Control and Prevention (2011). *National intimate partner and sexual violence survey: 2010 summary report*. (Atlanta, GA).

Cortoni, F., Hanson, R. K., & Coache, M.È. (2010). The recidivism rates of female sexual offenders are low: A meta-analysis. *Sexual Abuse*, 22(4), 387–401. http://dx.doi.org/10.1177/1079063210372142.

Creamer, M., Burgess, P., & McFarlane, A. C. (2001). Post-traumatic stress disorder: Findings from the Australian national survey of mental health and well-being. *Psychological Medicine*, 31(07), 1237–1247. http://dx.doi.org/10.1017/S0033291701004287.

Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The dark triad of personality: A 10 year review. *Social and Personality Psychology Compass*, 7(3), 199–216. http://dx.doi.org/10.1111/spc3.12018.

Gamblin, B. W., Winslow, M. P., Lindsay, B., Newsom, A. W., & Kehn, A. (2016). Comparing In-person, Sona, and mechanical Turk measurements of three prejudice-relevant constructs. *Current Psychology*, 1–8. http://dx.doi.org/10.1007/s12144-015-9403-1.

Gannon, T., Rose, M. R., & Ward, T. (2010). Pathways to female sexual offending: Approach or avoidance? *Psychology, Crime & Law*, 16(5), 359–380. http://dx.doi.org/10.1080/10683160902754956.

Garson, G. D. (2015). *Structural equation modeling*. Asheboro, NC: Statistical Associates Publishing.

Gosling, S., Vazire, S., Srivastava, S., & John, O. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. *American Psychologist*, 59, 93–104. http://dx.doi.org/10.1037/0003-066X.59.2.93.

Greitemeyer, T. (2015). Everyday sadism predicts violent video game preferences. *Personality and Individual Differences*, 75, 19–23. http://dx.doi.org/10.1016/j.paid.2014.10.049.

Keeley, J. W., Webb, C., Peterson, D., Roussin, L., & Flanagan, E. H. (2016). Development of a response inconsistency scale for the personality inventory for DSM-5. *Journal of Personality Assessment*, 98(4), 351–359. http://dx.doi.org/10.1080/00223891.2016.1158719.

Koss, M. P., Abbey, A., Campbell, R., Cook, S., Norris, J., Testa, C., ... White, J. (2007). Revising the SES: A collaborative process to improve assessment of sexual aggression and victimization. *Psychology of Women Quarterly*, 31, 357–370. http://dx.doi.org/10.1111/j.1471-6402.2007.00385.x.

Krueger, R. F., & Markon, K. E. (2014). The role of the DSM-5 personality trait model in moving toward a quantitative and empirically based approach to classifying personality and psychopathology. *Annual Review of Clinical Psychology*, 10, 477–501. http://dx.doi.org/10.1146/annurev-clinpsy-032813-153732.

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine*, 42, 1879–1890. http://dx.doi.org/10.1017/S0033291711002674.

Lonsway, K. A., & Fitzgerald, L. F. (1995). Attitudinal antecedents of rape myth acceptance: A theoretical and empirical reexamination. *Journal of Personality and Social Psychology*, 68(4), 704–711. http://dx.doi.org/10.1037/0022-3514.68.4.704.

Nelson, P. A. (1979). *Personality, sexual functions, and sexual behavior: An experiment in methodology*. (Unpublished doctoral dissertation) University of Florida.

Paulhus, D. L. (2014). Toward a taxonomy of dark personalities. *Current Directions in Psychological Science*, 23(6), 421–426. http://dx.doi.org/10.1177/0963721414547737.

Pfattheicher, S., & Schindler, S. (2015). Understanding the dark side of costly punishment: The impact of individual differences in everyday sadism and existential threat. *European Journal of Personality*, 29(4), 498–505.

Pino, N. W., & Meier, R. F. (1999). Gender differences in rape reporting. *Sex Roles*, 40(11), 979–990. http://dx.doi.org/10.1023/A:1018837524712.

Renaud, C. A., & Byers, E. S. (2005). Relationship between sexual violence and positive and negative cognitions of sexual dominance. *Sex Roles*, 53, 253–260. http://dx.doi.org/10.1007/s11199-005-5683-5.

Russell, T. D. (2016). *The PID-5, everyday sadism, and parental attachment predict sexual aggression*. (Master's thesis). (Retrieved from ProQuest (10125553)).

Russell, T. D., & King, A. R. (2016). Anxious, hostile, and sadistic: Maternal attachment and everyday sadism predict hostile masculine beliefs and male sexual violence. *Personality and Individual Differences*, 99, 340–345. http://dx.doi.org/10.1016/j.paid.2016.05.029.

Russell, T. D., & King, A. R. (2017a). Distrustful, conventional, entitled, and dysregulated: PID-5 personality facets predict hostile masculinity and sexual violence in community men. *Journal of Interpersonal Violence*, 1–24. http://dx.doi.org/10.1177/0886260517689887 Online First.

Russell, T. D., & King, A. R. (2017b). Mean girls: PID-5 personality traits and everyday sadism predict hostile femininity. *Personality and Individual Differences*, 104, 252–257. http://dx.doi.org/10.1016/j.paid.2016.08.020.

Schatzel-Murphy, E. A., Harris, D. A., Knight, R. A., & Milburn, M. A. (2009). Sexual coercion in men and women: Similar behaviors, different predictors. *Archives of Sexual Behavior, 38*(6), 974–986. http://dx.doi.org/10.1007/s10508-009-9481-y.

Struckman-Johnson, C., Struckman-Johnson, D., & Anderson, P. (2003). Tactics of sexual coercion: When men and women won't take no for an answer. *The Journal of Sex Research, 40*(1), 76–86. http://dx.doi.org/10.1080/00224490309552168.

Veith, A. C., Russell, T. D., & King, A. R. (2017). PID-5 trait mediation of childhood maltreatment effects. *Personality and Individual Differences, 104*, 58–63. http://dx.doi.org/10.1016/j.paid.2016.07.024.

Wright, A. G., Pincus, A. L., Thomas, K. M., Hopwood, C. J., Markon, K. E., & Krueger, R. F. (2013). Conceptions of narcissism and the DSM-5 pathological personality traits. *Assessment.* http://dx.doi.org/10.1177/1073191113486692.