



An actor–partner interdependence model of the Dark Triad and aggression in couples: Relationship duration moderates the link between psychopathy and argumentativeness[☆]



Gregory D. Webster^{a,*}, Amanda N. Gesselman^b, Laura C. Crysel^c, Amy B. Brunell^d, Peter K. Jonason^e, Benjamin W. Hadden^f, C. Veronica Smith^g

^a University of Florida, USA

^b Indiana University Bloomington, USA

^c Stetson University, USA

^d The Ohio State University at Mansfield, USA

^e Western Sydney University, Australia

^f University of Houston, USA

^g University of Mississippi, USA

ARTICLE INFO

Article history:

Received 15 April 2016

Received in revised form 24 May 2016

Accepted 25 May 2016

Available online xxxx

Keywords:

Actor–partner interdependence model

Aggression

Argumentativeness

Brief Aggression Questionnaire

Couples

Dark Triad

Displaced Aggression Questionnaire

Romantic relationships

ABSTRACT

Prior research has examined links between Dark Triad traits—Machiavellianism, psychopathy, and narcissism—and aggression in *individuals*, but not *couples*. Dating heterosexual couples self-reported measures of the Dark Triad and aggression (trait and displaced; Study 1) or negativity (Study 2). Actor–partner interdependence models showed positive links between (a) women's psychopathy and women's trait and displaced aggression (actor effects), and (b) men's psychopathy and women's trait aggression (partner effect). Positive actor effects also linked narcissism to displaced aggression. Using integrative data analysis to combine Studies 1 and 2, relationship duration moderated actor and partner effects linking psychopathy to women's argumentativeness (negativity and verbal aggression); men in longer relationships and women in shorter relationships had psychopathy–argumentativeness slopes that were especially positive.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

1.1. Aggression and the Dark Triad

The Dark Triad is a cluster of three subclinical, socially undesirable, related-yet-distinct personality traits: narcissism, Machiavellianism, and psychopathy (Paulhus & Williams, 2002). Narcissism reflects an artificially inflated sense of self and feeling superior to peers, Machiavellianism describes a willingness to manipulate others to suit one's own

ends, and psychopathy's hallmarks include callousness and lack of empathy toward others (Jonason & Webster, 2010). Research on the Dark Triad has increased dramatically over the last decade (for reviews, see Furnham, Richards, & Paulhus, 2013; Jonason, Webster, Li, Schmitt & Crysel, 2012), some of which examines Dark Triad traits as correlates of anger, aggression, or violence. For example, a small meta-analysis ($k = 8$ studies, $N = 20,332$) showed that grandiose narcissism positively relates to anger/aggression ($r = .24$, 95% CI [.19, .29]; Rosenthal, Montoya, Ridings, Rieck, & Hooley, 2011). Whereas most prior Dark Triad–aggression research has focused on individuals, the present research examines romantic couples, which may provide key insights into possible dynamic dyadic processes. In the present research, we examined links between the Dark Triad traits and multiple measures related to aggression or dyadic negativity in undergraduate samples of dating couples. Doing so allowed for novel tests of partner effects and moderation by relationship duration, which plays a key role in multiple relationship domains (Hadden, Smith, & Webster, 2014; Webster, Laurenceau, et al., 2015).

[☆] The couples in Studies 1 and 2 of this article are also those sampled in Brunell and Webster (2013, Study 3) and Webster, Laurenceau, et al. (2015, “Florida dating sample”; Study 1), and Smith et al. (2014; Study 2). None of these articles examined aggression, and only one (Smith et al.) examined the Dark Triad traits. Parts of this research were presented at the 2013 meeting of the International Society for the Study of Individual Differences (ISSID) in Barcelona, Spain, and an abstract of this talk appeared in ISSID's conference proceedings (Webster, Gesselman, Crysel, Brunell & Jonason, 2014).

* Corresponding author at: P.O. Box 112250, Gainesville, FL 32611-2250, USA.
E-mail address: gwebsts@ufl.edu (G.D. Webster).

Table 1
Multiple regressions based on correlation matrixes—and meta-analysis of the resulting partial correlations—for 10 models predicting aggression from Dark Triad traits.

Aggression outcome	Machiavellianism			Psychopathy			Narcissism		
	<i>b</i>	<i>t</i>	<i>r_p</i>	<i>b</i>	<i>t</i>	<i>r_p</i>	<i>b</i>	<i>t</i>	<i>r_p</i>
Total bullying ^a	0.12	3.16*	.12	0.51	13.11*	.46	−0.04	−0.96	−.04
Violence ^b	1.02	1.77†	.10	3.98	7.15*	.38	0.19	0.36	.02
Aggression (latent) ^c	0.02	0.43	.03	0.52	9.02*	.47	0.01	0.26	.02
Proactive aggression	0.03	0.52	.03	0.50	8.03*	.43	0.07	1.24	.07
Reactive aggression	0.01	0.24	.01	0.57	9.27*	.48	−0.04	−0.66	−.04
Aggression (latent) ^d	0.03	0.57	.03	0.54	9.16*	.46	0.04	0.92	.05
Physical aggression	0.01	0.16	.01	0.54	8.50*	.43	0.07	1.32	.07
Verbal aggression	−0.02	−0.36	−.02	0.37	5.23*	.28	0.12	2.06*	.11
Hostility	0.14	2.10*	.12	0.28	3.77*	.21	−0.11	−1.97*	−.11
Anger	0.02	0.34	.02	0.41	5.71*	.30	−0.00	−0.08	−.00
Meta-analysis ^e	–	–	.08*	–	–	.45*	–	–	.00

^a Baughman, Dearing, Giammarco, and Vernon (2012; *N* = 657).

^b Westhead and Egan (2015; *N* = 305).

^c Jonason, Duineveld, and Middleton (2015; *N* = 290).

^d Jones and Neria (2015; *N* = 325).

^e Random-effects meta-analysis of Dark Triad trait partial correlations (*r_p*) for bullying, violence, and both latent aggression measures (*k* = 4; *N* = 1577); see Introduction for 95% CIs. Partial correlations (*r_p*s) show the effects for one Dark Triad trait controlling for the other two.

† *p* < .10.

* *p* < .05.

In young adults, narcissists react aggressively to ego threat provocation (Bushman & Baumeister, 1998; Konrath, Bushman, & Campbell, 2006; Twenge & Campbell, 2003; but also see Kirkpatrick, Waugh, Valencia, & Webster, 2002), whereas psychopaths react aggressively to physical provocation; Machiavellians react aggressively to neither threat (Jones & Paulhus, 2010). Similar dissociations occur in predicting racism: Machiavellianism predicts modern racism, whereas psychopathy predicts old-fashioned racism (Jones, 2013; but see also

Jonason, 2015) and criminal behavior (Hare, 1996). Nevertheless, provocation is neither necessary nor sufficient to link Dark Triad traits to trait aggression. For example, unprovoked aggression relates to both psychopathy (Reidy, Zeichner, & Martinez, 2008; Reidy, Zeichner, Miller, & Martinez, 2007; Reidy, Zeichner, & Seibert, 2011) and narcissism (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Webster, 2006; Webster, Kirkpatrick, Nezlak, Smith, & Paddock, 2007).

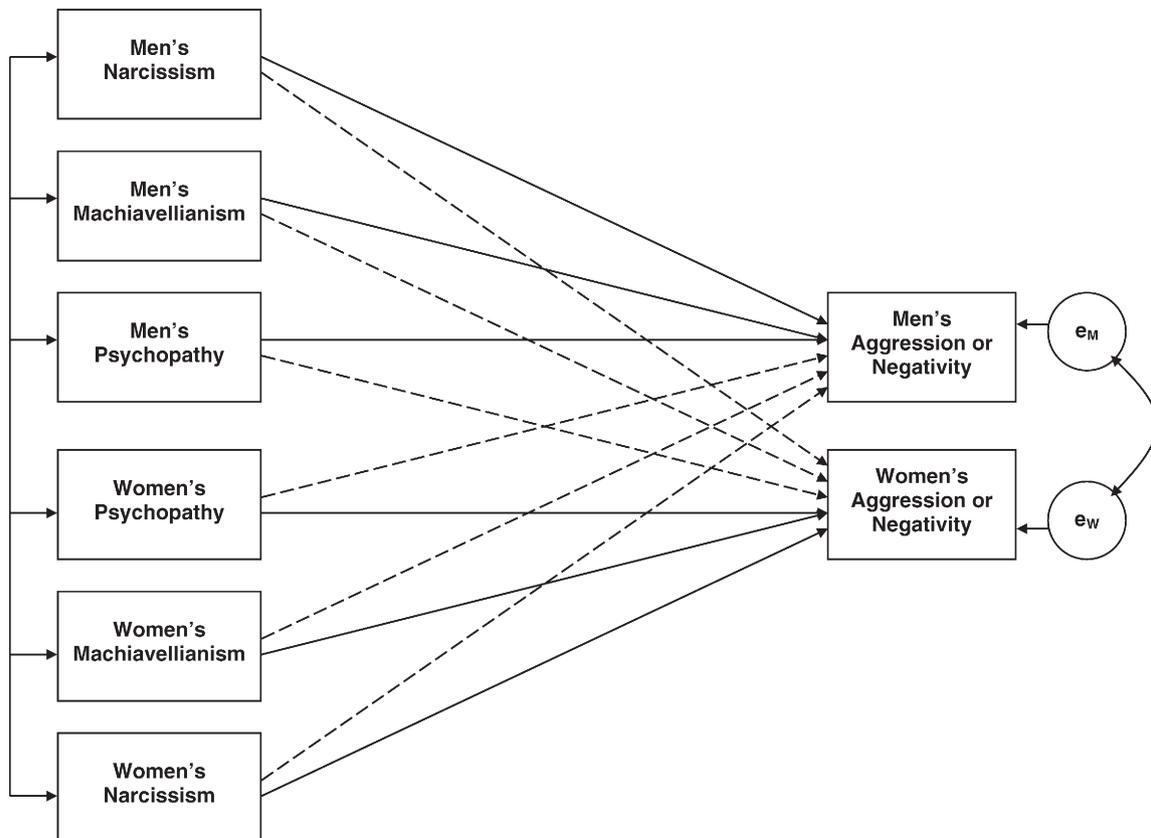


Fig. 1. APIM of the Dark Triad traits and aggression. Actor effects are solid lines. Partner effects are dashed lines. Lines with multiple arrowheads reflect correlations.

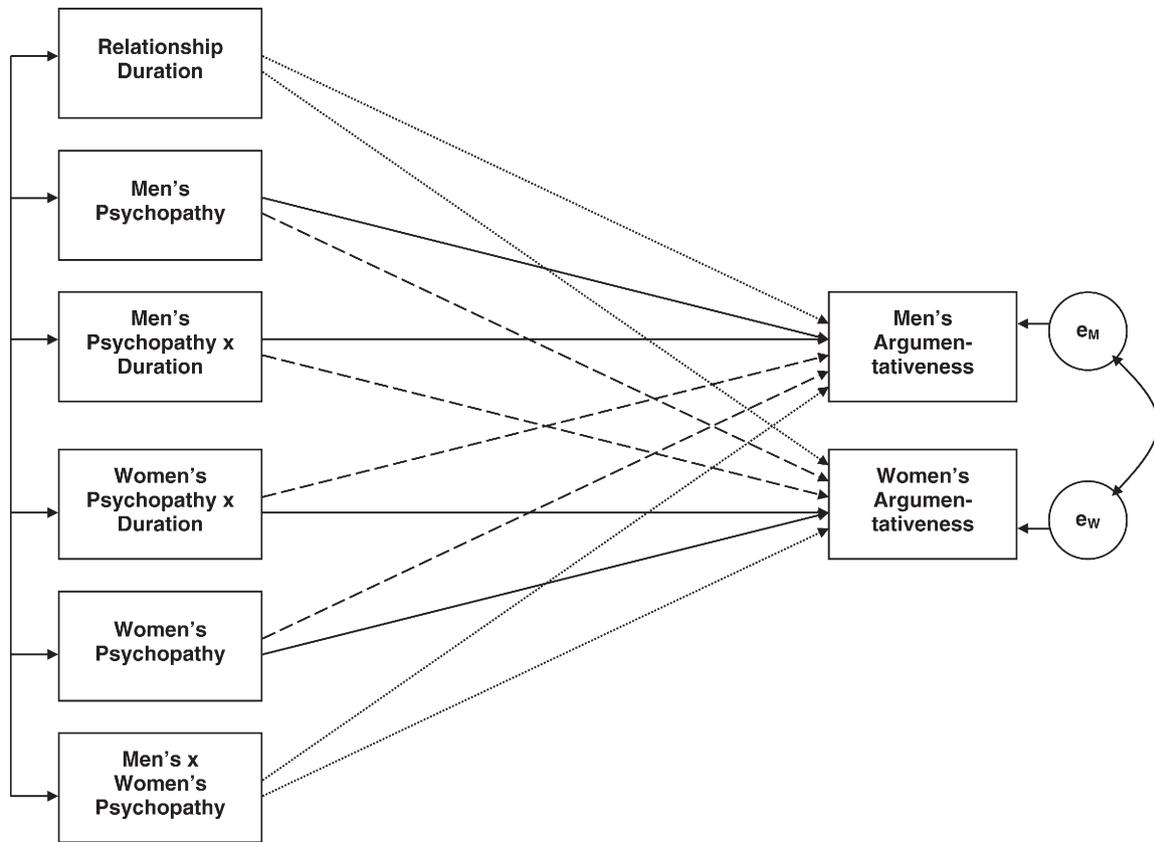


Fig. 2. APIM of psychopathy, relationship duration, and aggression. Actor effects are solid lines. Partner effects are dashed lines. Couple or relationships effects are dotted lines. Lines with multiple arrowheads reflect correlations.

Researchers theorize that, because some narcissists hold artificially inflated self-views, they tend to be especially susceptible to lashing out at others who may challenge or threaten their grandiose self-views (Jones & Paulhus, 2010; Morf & Rhodewalt, 2001). Whereas some researchers contend that provocation is necessary to show narcissism–aggression links (Bushman & Baumeister, 1998), others suggest that narcissism is inherently positively correlated with aggression (Donnellan et al., 2005; Rosenthal et al., 2011). This discrepancy may partly depend on the type of aggression measured (behavioral vs. self-report) and whether psychopathy and Machiavellianism are also modeled simultaneously (our meta-analysis below suggests doing so weakens narcissism–aggression links).

A few studies have examined all three Dark Triad traits as correlates of unprovoked aggression in adults. In a small ($N = 60$) study using the Dark Triad Dirty Dozen (DTDD; Jonason & Webster, 2010; Webster & Jonason, 2013) and the Brief Aggression Questionnaire (BAQ; Webster, DeWall, et al., 2014, 2015), narcissism related positively to hostility, psychopathy related positively to verbal and physical aggression, and Machiavellianism positively related to hostility, verbal, and physical aggression; no Dark Triad trait related to anger (Jonason & Webster, 2010, Study 3). In romantic couples, there is some limited evidence of homophily or assortative mating (mate choice) in Dark Triad traits (Smith et al., 2014), but there is also evidence that grandiose narcissism relates to negative dyadic adjustment (Lamkin, Campbell, vanDellen, & Miller, 2015). Although narrative literature reviews are helpful, we also conducted an empirical meta-analysis.

A series of four large ($Ns = 290$ – 657) studies of adults examined the Dark Triad's relation to bullying (Baughman, Dearing, Giammarco, & Vernon, 2012), violence (Westhead & Egan, 2015), proactive and reactive aggression (Jonason, Duineveld, & Middleton, 2015), and four trait aggression subscales—anger, hostility, verbal aggression, and physical

aggression (Jones & Neria, 2015). Across these four studies, zero-order correlations showed that all three Dark Triad traits related positively to total bullying, violence, proactive and reactive aggression, and trait aggression in adults (with narcissism–hostility being the sole non-significant relation). Notably, all four studies showed the same pattern: psychopathy was the strongest correlate of aggression, followed by Machiavellianism, and then narcissism. Using the correlation matrixes provided in these articles, we ran 10 multiple regressions (in Mplus 6.1; Muthén & Muthén, 2010) using the three Dark Triad traits as simultaneous predictors of (1) total bullying, (2) violence, (3) two latent aggression measures consisting of (a) proactive and reactive aggression and (b) the four BAQ subscales, and (4) proactive aggression, reactive aggression, and each of the four BAQ subscales individually (Table 1). We then ran a weighted random-effects meta-analysis on the resulting partial correlations for total bullying, violence, and both latent aggression measures ($k = 4$, $N = 1577$; Card, 2012).¹ When controlling for the other two Dark Triad traits, Psychopathy was the strongest correlate ($r_p = .45$ [.41, .49]), followed by Machiavellianism ($r_p = .08$ [.03, .13]), and then narcissism, which did not differ from zero ($r_p = .00$ [–.05, .05]). Although all three Dark Triad traits often show positive zero-order correlations with aggression measures, their respective partial correlations suggest that psychopathy plays a dominant role. These

¹ This meta-analysis was not meant to be comprehensive, exhaustive, or definitive; instead, it merely provides some valuable insights beyond that which can be gleaned from zero-order correlations published in a few recent large- N studies. We also acknowledge that there are more sophisticated ways to estimate weighted mean partial correlations using multivariate meta-analysis (Card, 2012; Webster & Duffy, 2016); however, the estimates are often comparable. We used random (vs. fixed) effects meta-analysis because it makes fewer assumptions and provides wider (more conservative) confidence intervals (Schmidt, 2010).

meta-analytic results contrast with a single study of young teenagers that showed narcissism had a dominant role (Lau & Marsee, 2013); however, this discrepancy may be due to either a younger sample or a measure—callousness and unemotional traits—that only reflected a thin slice of the broader construct of psychopathy. Nevertheless, all of these findings concerned individuals; in the present research, we examine couples.

1.2. The present research

1.2.1. Actor–partner interdependence model

Examining romantic couples as naturally occurring dyads may be crucial to advancing our understanding of interpersonal aggression as an inherently dynamic process. By modeling how each partner's traits relate to their own or their partner's aggression, we can begin to understand these key processes at the dyadic level. Because we analyzed couples, we used a series of actor–partner interdependence models (APIMs; Kenny, Kashy, & Cook, 2006). APIMs are a standard way to analyze dyadic data (Brunell et al., 2010; Brunell, Pilkington, & Webster, 2007; Brunell & Webster, 2013; Smith et al., 2014; Webster, Laurenceau, et al., 2015) and are used in aggression research (Crane, Testa, Derrick, & Leonard, 2014; Dickson et al., 2015; Parrott et al., 2012; Watkins, Maldonado, & DiLillo, 2014). APIMs estimate actor and partner effects simultaneously. *Actor* effects reflect associations between a target's own traits (men's Dark Triad traits → men's aggression; women's Dark Triad traits → women's aggression). *Partner* effects reflect associations between a target's traits and their partner's traits (men's Dark Triad traits → women's aggression; women's Dark Triad traits → men's aggression). We tested expanded APIMs that accounted for shared variance among Dark Triad traits (Smith et al., 2014; Fig. 1).

Combining Studies 1 and 2 for additional statistical power, we also tested two types of interactions involving psychopathy because of its strong links to aggression (Fig. 2). First, we tested actor–partner interactions or *relationship* effects, where one person's effect moderates or depends on the other person's effect. One helpful way to understand a relationship effect is to imagine a partner effect moderating the strength of an actor effect. For example, imagine that the men's psychopathy → men's aggression slope becomes more positive as women's psychopathy increases; couples in which both partners score high on psychopathy are especially aggressive. Second, we tested psychopathy × relationship duration interactions. Relationship duration is a couple-level variable that may moderate either (or both) of the actor and partner effects linking Dark Triad traits to aggression.

1.2.2. Predictions

Because prior research has shown positive links between psychopathy and aggression measures in individuals, we expected the same positive links in couples. Specifically, we expected positive actor effects linking Dark Triad traits—especially psychopathy—with trait aggression and negativity. Because this is the first research to examine links between aggression and Dark Triad traits in couples, we examined partner effects on an exploratory basis, and remained agnostic regarding trait- or gender-specific predictions. When present, however, we expected partner effects to mirror actor effects in their direction—positive. Because the meta-analytic findings above used a broad swath of aggression-related measures (anger, bullying, violence), we sought to cast a similarly broad nomological net by measuring trait and displaced aggression (Study 1) as well as dyadic negativity (Study 2). Thus, using multiple regression to account for shared variance among the Dark Triad traits, we expected positive relations between those traits—especially psychopathy—and aggression or negativity.

We also expected and tested two types of interactions. And because interactions among continuous (vs. dichotomous) variables are harder to detect (McClelland & Judd, 1993), we combined Studies 1 and 2 to increase statistical power using integrative data analysis (IDA; Curran & Hussong, 2009). We aggregated similar scales across studies, including

merging verbal aggression (Study 1) and dyadic negativity (Study 2) into a measure of argumentativeness. Finally, because psychopathy had the strongest effect in our meta-analysis, we chose to focus on testing moderators of psychopathy (vs. narcissism or Machiavellianism).

First, we expected some possible actor–partner interactions or relationship effects for psychopathy. Specifically, in couples where both partners scored high on psychopathy, one or both partners would also report high argumentativeness. Because no prior research has examined this effect, it was exploratory.

Second, we expected couples' relationship durations to moderate the links between psychopathy and argumentativeness, especially among men. Because the Dark Triad traits—including psychopathy—often relate positively to men's pursuing a short-term mating strategy (Jonason, Li, Webster, & Schmitt, 2009; Jonason, Luévano, & Adams, 2012; Jonason, Valentine, Li, & Harbeson, 2011), and because such men with high Dark Triad traits may grow increasingly frustrated in longer-term relationships (Jonason, Li, & Buss, 2010), we expected that men's psychopathy–argumentativeness links—both actor and partner effects—would be more positive in couples with longer relationship durations. In contrast, we expected women's psychopathy × relationship duration interactions—both actor and partner effects—to be relatively weaker than men's. This pattern is consistent with a gender × psychopathy × relationship duration interaction.

To test these predictions, we performed secondary analyses on two datasets of couples. We first examined links between the Dark Triad traits and (a) trait and displaced aggression (Study 1) and (b) dyadic negativity (Study 2). We then combined these datasets to examine moderation effects.

2. Study 1: trait and displaced aggression

2.1. Method

2.1.1. Power and participants

Assuming the meta-analytic correlations linking the Dark Triad traits with aggression are accurate, to achieve adequate power ($\geq .80$ at $\alpha = .05$), we would need over 1225 cases—couples in this context—to detect a partial actor effect for Machiavellianism and a near infinite number of couples to detect a null partial effect for narcissism. In contrast, detecting a partial actor effect for psychopathy ($r_p = .45$) only requires about 35 couples. Although partner effects have yet to be assessed in this context, we expect them to be weaker than actor effects, which is typical (Dyrenforth, Kasky, Donnellan, & Lucas, 2010). To this end, we recruited 44 heterosexual sexually active romantic couples living within at least 25 miles (40 km) of each other, which gave us enough power to reliably detect psychopathy actor effects. At least one partner was recruited from an Introductory Psychology participant pool at a large public university in Florida. Student participants received partial course credit; non-student participants were paid US\$30. Of the 44 couples, 32 (73%) provided complete data on all variables for both partners, which lowered power to .76. The average participant was aged 19.1 years ($SD = 1.8$), and the average couple had been dating 13.7 months ($SD = 13.8$, $Mdn = 8.0$). Consistent with prior research (Hadden et al., 2014; Webster, Laurenceau, et al., 2015), we natural-log-transformed relationship duration in months before all analyses; doing so reduced kurtosis and positive skew, and normalized its frequency distribution.

2.1.2. Procedure

The present sample was part of a larger three-week daily diary study (21 days). See Brunell and Webster (2013, Study 3) for a description of the procedure. Data for the present study were trait or person-level (vs. state or day-level) data collected on the last day of the study. Thus, it contains no daily or repeated-measures data; only trait-level individual

Table 2
Study 1: Correlations and descriptive statistics for all variables.

Variable	Men					Women				
	1	2	3	4	5	6	7	8	9	10
Men										
1. Narcissism										
2. Machiavellianism	.46									
3. Psychopathy	.25	.37								
4. Trait aggression	.26	.38	.15							
5. Displaced aggression	.39	.17	.04	.36						
Women										
6. Narcissism	.17	.16	−.02	.16	−.19					
7. Machiavellianism	.09	.09	−.07	.27	.36	.42				
8. Psychopathy	−.17	.12	−.08	.21	.08	−.05	.43			
9. Trait aggression	.11	.01	.42	−.01	−.01	−.02	.12	.30		
10. Displaced aggression	−.16	.13	.10	.12	−.05	.27	.29	.55	.52	
Couple										
Relationship duration ^a	.12	−.13	.36	.08	.16	−.02	−.14	−.35	.02	−.25
Descriptive statistics										
Mean	4.87	4.22	3.19	4.77	3.10	4.98	3.58	2.55	3.88	3.19
SD	1.42	2.36	1.56	1.28	1.72	1.96	1.91	1.84	1.03	1.55
α	.59	.88	.69	.73	.90	.88	.77	.87	.61	.88

Note. $N = 32$ couples. **Bold:** Homophily correlations. $|r|s \geq .30, .35,$ and $.45$ have $ps < .10, .05,$ and $.01,$ respectively.

^a Natural log months: $M = 2.35, SD = 1.03.$

differences. Different trait data from this study, which used neither the Dark Triad nor aggression, appears as one of four samples in Webster, Laurenceau, et al. (2015; “Florida dating sample”).

2.1.3. Measures

All measures used nine-point response scales (1 = *disagree strongly*, 9 = *agree strongly*) and were averaged so that higher scores reflect more of that respective trait.

2.1.3.1. Dark Triad. We measured the Dark Triad using the 12-item Dark Triad Dirty Dozen (DTDD; Jonason & Webster, 2010; Webster & Jonason, 2013). The DTDD has three 4-item subscales including subclinical narcissism (“I tend to expect special favors from others”), Machiavellianism (“I tend to manipulate others to get my way”), and psychopathy (“I tend to be callous or insensitive”). We would have preferred to use the 27-item Short Dark Triad (SD3; Jones & Paulhus, 2014); however, because we collected data prior to the SD3’s publication, we could not do so.

2.1.3.2. Aggression. We measured aggression using the 12-item Brief Aggression Questionnaire (BAQ; Webster, DeWall, et al., 2014, 2015), which takes the highest-loading items from the Aggression Questionnaire (Buss & Perry, 1992). The BAQ has four 3-item subscales, including anger (“I have trouble controlling my temper”), hostility (“Other people always seem to get the breaks”), physical aggression (“Given enough provocation, I may hit another person”), and verbal aggression (“My friends say that I’m somewhat argumentative”).

2.1.3.3. Displaced aggression. Displaced aggression involves (a) provocation, (b) reluctance or inability to aggress against the provocation’s source, and consequently (c) aggression against an uninvolved third party (Hovland & Sears, 1940). We measured it using a nine-item Brief Displaced Aggression Questionnaire (BDAQ; see Webster, DeWall, et al., 2015), which was based on the 31-item Displaced Aggression Questionnaire (Denson, Pedersen, & Miller, 2006). The BDAQ has three 3-item subscales including angry rumination (“I keep thinking about events that angered me for a long time”), revenge planning (“When someone makes me angry, I can’t stop thinking about how to get back at that person”), and displaced aggression (“When feeling bad, I take it out on others”).

2.2. Results and discussion

2.2.1. Correlations

Table 2 shows descriptive statistics and zero-order correlations. In contrast to other research that used longer Dark Triad measures (vs. the DTDD; see Smith et al., 2014; Study 2 below), there was no evidence of homophily or positive assortative mating (people choosing similar partners) in couples for either the Dark Triad traits or the aggression measures (Table 2, boldfaced correlations). These small homophily effects were consistent with prior research on homophily in Big Five personality trait correlations between 256 newlywed couples (Watson et al., 2004), which found only a small inverse correlation for extraversion ($r = -.17$); the other four homophily correlations were non-significant ($|r|s \leq .07$). Relationship duration (log months) related positively to men’s psychopathy but negatively to women’s psychopathy.

2.2.2. Unique contributions of Dark Triad traits

We used multiple-regression-based path models (in Mplus 6.1; Muthén & Muthén, 2010) to assess the unique contributions of each Dark Triad trait controlling for the others in expanded APIMs (Fig. 1). Table 3 shows the APIM results for two multiple regressions: trait aggression (BAQ, top) and displaced aggression (BDAQ, bottom).

2.2.2.1. Brief Aggression Questionnaire. Both men’s ($r_p = .56$) and women’s ($r_p = .45$) psychopathy positively related to women’s trait aggression (Table 3), and these partner and actor effects were the only significant ones to emerge in the APIM.

2.2.2.2. Brief Displaced Aggression Questionnaire. The APIM results for displaced aggression revealed similarities to—and differences from—trait aggression. First, replicating the actor effect for trait aggression, women’s psychopathy positively related to their own displaced aggression ($r_p = .59$). Second, men’s ($r_p = .45$) and women’s ($r_p = .43$) narcissism positively related to their own respective displaced aggression scores (two actor effects), whereas women’s narcissism related negatively to men’s displaced aggression ($r_p = -.57$, an inverse partner effect). Third, women’s Machiavellianism positively related to men’s displaced aggression ($r_p = .59$, a partner effect).

Table 3

Study 1: Two APIMs for Dark Triad traits predicting trait aggression (top) and displaced aggression (bottom).

Trait and gender	Men's outcome				Women's outcome			
	<i>b</i>	<i>t</i>	<i>p</i> ≤	<i>r_p</i> [95% CI]	<i>b</i>	<i>t</i>	<i>p</i> ≤	<i>r_p</i> [95% CI]
Trait aggression								
Narcissism								
Men	−0.107	−0.640	.640	−.13 [−.50, .28]	0.144	1.183	.237	.23 [−.18, .57]
Women	0.020	0.165	.165	.03 [−.37, .42]	0.025	0.289	.773	.06 [−.35, .44]
Machiavellianism								
Men	0.151	1.447	.148	.28 [−.13, .61]	−0.144	−1.904	.057	−.36 [−.66, .05]
Women	0.112	0.831	.406	.16 [−.25, .53]	−0.023	−0.231	.817	−.05 [−.43, .36]
Psychopathy								
Men	0.031	0.218	.827	.04 [−.36, .43]	0.344	3.394	.001	.56 [.21, .78]
Women	0.091	0.684	.494	.14 [−.27, .50]	0.246	2.554	.011	.45 [.07, .72]
Displaced aggression								
Narcissism								
Men	0.469	2.506	.012	.45 [.06, .72]	−0.191	−1.112	.266	−.22 [−.56, .19]
Women	−0.464	−3.503	.001	−.57 [−.79, −.23]	0.287	2.357	.018	.43 [.04, .70]
Machiavellianism								
Men	0.042	0.357	.721	.07 [−.33, .45]	0.012	0.112	.911	.02 [−.38, .41]
Women	0.547	3.635	.001	.59 [.25, .80]	−0.073	−0.527	.598	−.10 [−.48, .30]
Psychopathy								
Men	−0.061	−0.392	.695	−.08 [−.46, .33]	0.189	1.322	.186	.26 [−.16, .59]
Women	−0.139	−0.938	.348	−.18 [−.54, .23]	0.499	3.673	.001	.59 [.26, .80]

Note. *N* = 32 couples. Actor effects are **boldfaced**; partner effects are not.

2.2.3. Summary

As expected, psychopathy produced the most consistent positive effects across the two aggression measures. In addition, narcissism produced two positive actor effects for displaced aggression (as well as an unexpected inverse partner effect), and Machiavellianism produced a positive partner effect. Together, these results suggested that although psychopathy appeared paramount, narcissism and Machiavellianism also played pivotal roles in their relation to displaced aggression in couples. This study is important because it is the first to examine Dark Triad–aggression links in romantic couples, and consequently, the first to show partner effects (e.g., positive partner effects linking men's psychopathy to women's trait aggression and women's Machiavellianism to men's displaced aggression). A potential limitation of Study 1 was that both aggression outcomes concerned the self rather than what people feel in the presence of their partner—an issue we address in Study 2.

3. Study 2: dyadic negativity

Although Study 1 showed the expected link between psychopathy and aggression in couples, it was limited in at least three ways: short scales, statistical power, and self-oriented measures. First, although the DTDD has performed well in studies that require efficient measures (Rauthmann & Kolar, 2012), it is a brief measure by design, and its four-item subscales lack breadth and may not be as valid as longer, more established measures of psychopathy, narcissism, and Machiavellianism (Carter, Campbell, Muncer, & Carter, 2015; Jones & Paulhus, 2014; Lee et al., 2013; Maples, Lamkin, & Miller, 2014; Miller et al., 2012; but see Rammstedt & Beierlein, 2014; Widaman, Little, Preacher, & Sawalani, 2011). Second, because of missing data, Study 1 was slightly underpowered (.76 vs. ≥ .80) to detect partial psychopathy effects. Third, because Study 1 asked people about themselves in isolation versus when they were with their partners, the dyadic nature of the findings is limited.

Table 4

Study 2: Correlations and descriptive statistics for all variables.

Variable	Men				Women			
	1	2	3	4	5	6	7	8
Men								
1. Narcissism								
2. Machiavellianism	.28							
3. Psychopathy	.50	.45						
4. Dyadic negativity	.24	.44	.27					
Women								
5. Narcissism	−.23	−.06	.11	−.11				
6. Machiavellianism	.14	.28	.15	−.02	.08			
7. Psychopathy	.23	.34	.39	.16	.17	.39		
8. Dyadic negativity	.22	.40	.35	.24	−.21	.05	.13	
Couple								
Relationship duration ^a	−.10	.17	.04	.33	−.08	−.15	−.30	.21
Descriptive statistics								
Mean	0.51	3.04	2.49	2.59	0.48	2.81	2.14	2.43
SD	0.17	0.42	0.55	0.88	0.16	0.33	0.38	0.71
α	.85	.64	.90	.80	.79	.58	.82	.69

Note. *N* = 45 couples. **Bold**: Homophily correlations. $|r|s \geq .25, .30$, and $.38$ have *ps* < .10, .05, and .01, respectively.^a Natural log months: *M* = 2.10, *SD* = 1.04.

Table 5
Study 2 and integrative data analysis: Two APIMs for Dark Triad traits predicting dyadic negativity (top) and argumentativeness (bottom).

Trait and gender	Men's outcome				Women's outcome			
	<i>b</i>	<i>t</i>	<i>p</i> ≤	<i>r_p</i> [95% CI]	<i>b</i>	<i>t</i>	<i>p</i> ≤	<i>r_p</i> [95% CI]
Dyadic negativity								
Narcissism								
Men	0.492	0.607	.544	.10 [−.23, .40]	−0.170	−0.262	0.793	−0.04 [−0.36, 0.28]
Women	−0.387	−0.495	.621	−.08 [−.39, .25]	−1.000	−1.596	0.110	−0.25 [−0.53, 0.08]
Machiavellianism								
Men	0.871	2.728	.006	.40 [.10, .64]	0.482	1.882	.060	.29 [−.03, .56]
Women	−0.462	−1.197	.231	−.19 [−.48, .14]	−0.091	−0.295	.768	−.05 [−.36, .28]
Psychopathy								
Men	0.076	0.277	.781	.04 [−.28, .36]	0.354	1.608	.108	.25 [−.07, .53]
Women	0.130	0.368	.713	.06 [−.27, .37]	−0.019	−0.066	.947	−.01 [−.33, .31]
Argumentativeness								
Narcissism								
Men	0.033	0.270	.787	.03 [−.20, .27]	−0.044	−0.365	.715	−.04 [−.28, .19]
Women	−0.017	−0.161	.872	−.02 [−.25, .22]	−0.199	−1.950	.051	−.23 [−.44, .01]
Machiavellianism								
Men	0.244	2.717	.007	.31 [.08, .51]	0.127	1.430	.153	.17 [−.07, .39]
Women	−0.173	−1.251	.211	−.15 [−.37, 0.09]	−0.085	−0.622	.534	−.07 [−.30, .16]
Psychopathy								
Men	0.121	1.002	.316	.12 [−.12, .34]	0.183	1.531	.126	.18 [−.06, .40]
Women	0.206	1.571	.116	.18 [−.05, .40]	0.344	2.662	.008	.30 [.07, .50]

Note. *N*s = 45 (top) or 77 (bottom) couples. Actor effects are **boldfaced**; partner effects are not.

In Study 2, we sought to address each of these limitations by (a) using longer, more-established Dark Triad measures; (b) achieving adequate power with a larger sample; and (c) using a measure of dyadic negativity that asked people how they felt when their partners were present.

3.1. Method

3.1.1. Power and participants

Drawing on our meta-analysis, detecting a partial effect for psychopathy ($r_p = .45$) at adequate power ($\geq .80$) requires at least 35 couples. To this end, we re-analyzed data collected from 45 heterosexual romantic couples (see Smith et al., 2014), which yielded about .89 power to detect an effect of that size or larger. At least one partner was recruited from an undergraduate psychology class at a medium-sized public university in the mid-Atlantic United States. Student participants received extra course credit; non-student participants were entered into raffles for gift cards of US\$30 to local businesses. The average participant was aged 19.3 years ($SD = 1.3$), and the average couple had been dating 12.7 months ($SD = 14.3$, $Mdn = 6.0$). Consistent with Study 1, we natural-log-transformed relationship duration in months before all analyses, and doing so reduced kurtosis and positive skew, normalizing its frequency distribution.

3.1.2. Procedure

Couples arrived at a computer laboratory where they independently completed an online questionnaire at opposite sides of a room to

promote privacy and prevent communication. After completing the questionnaire, participants were thanked and debriefed.

3.1.3. Measures

Study 2's measures included full-length versions of the Dark Triad traits and a measure of dyadic negativity.

3.1.3.1. Dark Triad. We measured narcissism with the 40-item Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). Each item asks participants to pick one of two statements that best describe them; one is narcissistic (“I have a natural talent for influencing people”), whereas the other is its opposite (“I am not good at influencing people”). We averaged people's narcissistic responses such that larger numbers reflected higher narcissism (range: 0–1).

We measured Machiavellianism using the 20-item MACH-IV (Christie & Geis, 1970). We asked participants how much they agreed (1 = *strongly disagree*, 5 = *strongly agree*) with items including, “It is hard to get ahead without cutting corners here and there.” We averaged participants' responses across items to obtain composite Machiavellianism scores.

We measured psychopathy using the 31-item Self-Report Psychopathy scale (SRP-II; Hare, Harpur, & Hemphill, 1989). We asked participants how much they agreed (1 = *strongly disagree*, 5 = *strongly agree*) with items such as, “I think I could beat a lie detector.” We averaged participants' responses across items to form an index of psychopathy.

Table 6
Integrative data analysis: APIM for psychopathy predicting argumentativeness, moderated by relationship duration (log months).

Variable	Men's argumentativeness				Women's argumentativeness			
	<i>b</i>	<i>t</i>	<i>p</i> ≤	<i>r_p</i> [95% CI]	<i>b</i>	<i>t</i>	<i>p</i> ≤	<i>r_p</i> [95% CI]
Couple								
Log months	0.145	1.114	.265	.13 [−.11, .36]	−0.129	−1.084	.278	−.13 [−.35, .11]
Men								
Psyc	0.234	2.100	.036	.24 [.01, .45]	<i>0.169</i>	<i>1.658</i>	<i>.097</i>	<i>.19 [−.04, .41]</i>
Psyc × mos.	0.089	0.792	.428	0.09 [−.14, .32]	<i>0.305</i>	<i>2.980</i>	<i>.003</i>	<i>.34 [.11, .53]</i>
Women								
Psyc	<i>0.257</i>	<i>1.788</i>	<i>.074</i>	<i>.21 [−.03, .42]</i>	0.357	2.713	.007	.31 [.08, .51]
Psyc × mos.	<i>0.011</i>	<i>0.075</i>	<i>.940</i>	<i>.01 [−.23, .24]</i>	−0.254	−1.845	.065	−.22 [−.43, .02]
Relationship								
Psyc × psyc	0.019	0.152	.879	.02 [−.22, .25]	−0.093	−0.792	.429	−.09 [−.32, .14]

Note. *N* = 77 couples. Actor effects are in **boldface**; partner effects are in italics. Psyc = psychopathy. Mos. = log months.

3.1.3.2. Dyadic negativity. We measured dyadic negativity using the stem, “Over the past two weeks, when you were with your partner, to what extent did you feel...” in response to 36 items. Of these items, we identified five that reflected dyadic negativity: *powerful, critical of others, competitive, superior, and contemptuous*. Principal axis factoring with oblique rotation revealed that these five items loaded on single factors ($\lambda_s > .40$) for both men (eigenvalue = 2.80, 56% of variance) and women (eigenvalue = 2.23, 45% of variance). Participants indicated how much they agreed (1 = *not at all*, 5 = *extremely*) with each item, and we averaged participants' responses across items to form an index of dyadic negativity.

3.2. Results and discussion

3.2.1. Correlations

Table 4 shows descriptive statistics and zero-order correlations for all variables. As previously shown (see Smith et al., 2014), there was evidence of homophily or positive assortative mating in couples only for psychopathy (Table 4, boldfaced correlations). Comparing these Dark Triad homophily correlations to those in Study 1 revealed only a significant difference between the two psychopathy correlations ($z = 2.04$, $p = .041$); neither narcissism ($z = -1.68$, $p = .093$) nor Machiavellianism showed a difference ($z = 0.81$, $p = .41$). Similarly, the dyadic negativity homophily correlation differed from neither trait aggression ($z = 1.06$, $p = .29$) nor displaced aggression ($z = 1.22$, $p = .22$). Relationship duration (log months) related negatively to women's psychopathy but non-significantly to men's psychopathy; the former result replicated Study 1, but the latter did not.

3.2.2. Unique contributions of Dark Triad traits

We used multiple-regression-based path models (in Mplus 6.1; Muthén & Muthén, 2010) to assess the unique contributions of each Dark Triad trait controlling for the others in an expanded APIM (Fig. 1). Table 5 (top) shows the APIM multiple regression results for dyadic negativity. Showing both actor and partner effects, men's Machiavellianism related positively to both their own ($r_p = .40$) and their partner's ($r_p = .29$) dyadic negativity, though the latter effect was only marginal.

3.2.3. Summary

Whereas Study 1's results largely highlighted psychopathy's role in relating to self-reported trait and displaced aggression, Study 2's results highlighted Machiavellianism's role in relating to dyadic negativity—self-reports about how one feels in the presence of their partner. It could be that the inherently interpersonal nature of Machiavellianism (one person manipulating another) may relate more closely to the interpersonal aspect of dyadic negativity (one's feeling when one's partner is present) than the other two Dark Triad traits. In the next section, we further explore this possibility by aggregating dyadic negativity (Study 2) and verbal aggression (Study 1) outcomes to form a general measure of couples' argumentativeness. Using this larger, more powerful combined sample, we also test for moderation by relationship duration (log months).

4. Integrative data analysis: psychopathy, argumentativeness, and relationship duration

In this section we aggregated couples' data from Studies 1 and 2 to test two APIMs. First, we tested an overall APIM with all three Dark Triad traits. Second, we tested an APIM that focused on psychopathy and the extent to which relationship duration moderated its effects.

4.1. Method

4.1.1. Power and participants

Aggregating data from Studies 1 and 2 yielded a total sample of 77 couples. Post-hoc power analysis suggested a sample of this size is adequately powered (.99) to detect an effect for psychopathy ($r_p = .45$).

Nevertheless, because interactions between normally distributed variables are difficult to detect (McClelland & Judd, 1993), our power to detect such interactions was more modest.

4.1.2. Measures and data analysis

Integrative data analysis (IDA; Curran & Hussong, 2009) is an analytic approach for analyzing raw data aggregated across samples or studies. Using IDA, we combined our data from Studies 1 and 2 to test Dark Triad APIMs and the extent to which relationship duration moderates psychopathy effects. Using multiple measures of the same or similar constructs across samples or studies is both a strength and weakness of IDA. From a generalizability perspective, analyzing multiple measures can be useful because it can show replication on the construct level rather than being limited to a particular measure. In contrast, from a measurement consistency perspective, analyzing multiple measures can be challenging because, in the absence of identical items, researchers often rely on the subjective face validity of similar items or scales.

Linking the short- and long-form Dark Triad measures by trait across studies was straightforward, and studies have shown that the three DTDD scales relate to their longer respective “parent” measures (Jonason & Webster, 2010). The verbal aggression subscale of the BAQ (Study 1; “I tell my friends openly when I disagree with them,” “When people annoy me, I may tell them what I think of them,” “My friends say that I'm somewhat argumentative”) showed the most overlapping face validity with dyadic negativity (Study 2; *powerful, critical of others, competitive, superior, contemptuous*). In addition, both measures are inherently interpersonal because each requires another's presence. Consequently, we standardized (*z*-scored) each measure within each study prior to analyses; we labeled this aggregate measure of verbal aggression and dyadic negativity as “argumentativeness.” Although standardization eliminates mean differences across studies, it does not necessarily affect associations among variables, which are of principal interest here. As an additional precaution, we also coded for sample (Study 1 = -0.5 , Study 2 = 0.5) to test whether study-level differences moderated the effects of interest as a set.

4.2. Results and discussion

4.2.1. Preliminary models

We ran two sets of APIMs; one examined links between the Dark Triad traits and argumentativeness, the other tested whether relationship duration moderated the psychopathy–argumentativeness links. We first tested whether the two samples *as a set* altered the fit of either APIM by letting the sample variable predict both outcomes and moderate all 12 paths (14 total effects). Neither the Dark Triad trait APIM ($\Delta\chi^2_{14} = 12.32$, $p = .58$) nor the psychopathy-moderated-by-relationship-duration APIM ($\Delta\chi^2_{14} = 20.60$, $p = .11$) improved after including the sample variable. These results implied no systematic differences in the slopes across studies and suggested that aggregating the two Dark Triad and two argumentativeness measures (verbal aggression, dyadic negativity) was justified. Thus, we dropped all sample variables and proceeded with more parsimonious APIMs.

4.2.2. Unique contributions of the Dark Triad traits

The Dark Triad APIM results for argumentativeness revealed two significantly positive actor effects (Table 5, bottom). Echoing Study 1's results, women's psychopathy related to their own argumentativeness ($r_p = .30$). And echoing Study 2's results, men's Machiavellianism related to their own argumentativeness ($r_p = .31$).

4.2.3. Psychopathy, relationship duration, and argumentativeness

Because psychopathy was the Dark Triad trait most highly associated with unprovoked aggression in our meta-analysis, we focused on testing psychopathy interactions to maximize power. We expected two kinds of psychopathy interactions (Fig. 2, Table 6): relationship effects (men's psychopathy \times women's psychopathy) and moderation by

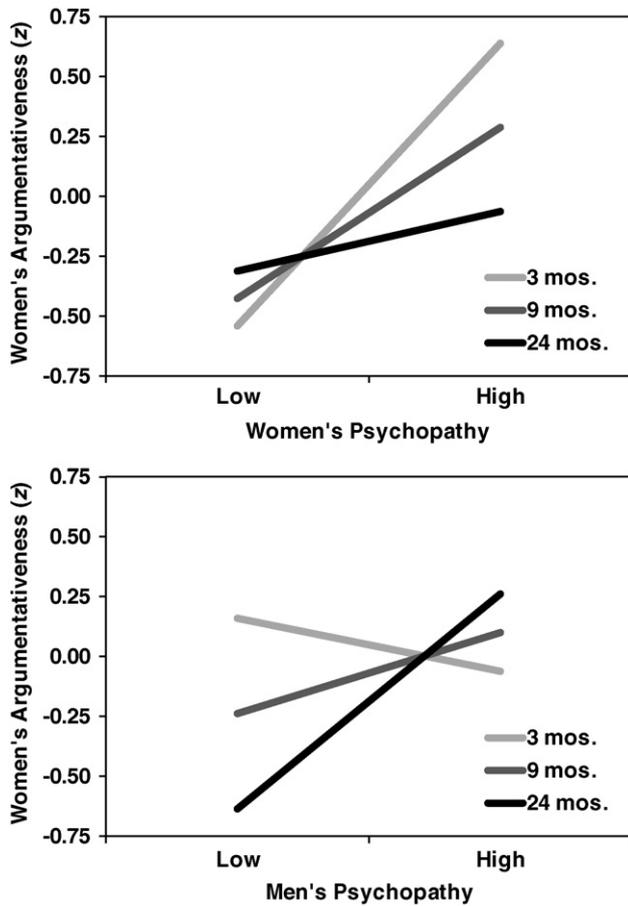


Fig. 3. Interaction plots: Women's argumentativeness as functions of relationship duration (months) and women's (top, actor effect) or men's (bottom, partner effect) psychopathy. "Low" and "high" correspond to ± 1 SD from their respective psychopathy means.

relationship duration (log months). Contrary to our expectations, no relationship effects emerged; couples where both partners scored high on psychopathy were no more argumentative than other couples. In contrast, and consistent with our predictions, relationship duration (a) marginally moderated the actor effect linking women's psychopathy and their argumentativeness ($r_p = -.22$; Fig. 3, top) and (b) significantly moderated the partner effect linking men's psychopathy and women's argumentativeness ($r_p = .34$; Fig. 3, bottom). Comparing these actor and partner interactions by constraining paths within this APIM showed a significant difference (Wald $\chi^2_1 = 7.23$, $p = .007$), suggesting a three-way interaction (a gender \times psychopathy \times relationship duration interaction for women's argumentativeness).

We probed or decomposed these two-way interactions by testing simple effects at meaningful monthly intervals that roughly corresponded to 1 SD below (3 months) and above (24 months) the mean of the aggregated log-transformed relationship duration variable (see Judd, McClelland, & Ryan, 2009; see also Hadden et al., 2014; Webster, Laurenceau, et al., 2015). First, the actor effect linking women's psychopathy to their own argumentativeness was significantly positive for couples with relationship durations of three months ($b = 0.59$, $t_{70} = 3.91$, $p < .001$, $r_p = .42$ [.21, .60]), but non-significant for those dating for 24 months ($b = 0.12$, $t_{70} = 0.59$, $p = .556$, $r_p = .07$ [-.17, .30]; Fig. 3, top). Second, the partner effect linking men's psychopathy to women's argumentativeness was non-significant for couples with relationship durations of three months ($b = -0.11$, $t_{70} = -0.80$, $p = .423$, $r_p = -.10$ [-.32, .14]), but significantly positive for those dating for 24 months ($b = 0.45$, $t_{70} = 3.23$, $p = .001$, $r_p = .36$ [.14, .55]; Fig. 3, bottom). We also tested for actor-partner effect differences at 3 and 24 months relationship duration by constraining paths

within these APIMs. At 3 months, the positive actor effect was significantly different from the non-significant actor effect (Wald $\chi^2_1 = 8.93$, $p = .003$; compare light grey lines in Fig. 3). In contrast, at 24 months, the non-significant actor effect did not differ in strength from the significantly positive partner effect (Wald $\chi^2_1 = 1.22$, $p = .27$; compare black lines in Fig. 3).

Probing both interactions again from another angle, we examined the simple effects of relationship duration (log months) on argumentativeness at different levels of psychopathy (± 1 SD from the mean). Probing the actor effect, for women with low psychopathy scores, relationship duration was unrelated to their own argumentativeness ($b = 0.12$, $t_{70} = 0.90$, $p = .37$, $r_p = .11$ [-.13, .33]); however, for women with high psychopathy scores, this association was marginally negative ($b = -0.38$, $t_{70} = -1.77$, $p = .077$, $r_p = -.21$ [-.42, .03]; Fig. 3, top). Probing the partner effect, for men with low psychopathy scores, relationship duration was significantly negatively related to argumentativeness ($b = -0.44$, $t_{70} = -2.30$, $p = .021$, $r_p = -.27$ [-.47, -.03]); however, for men with high psychopathy scores, this association was non-significant ($b = 0.18$, $t_{70} = 1.50$, $p = .13$, $r_p = .18$ [-.06, .40]; Fig. 3, bottom).

4.2.4. Summary

Combining data from Studies 1 and 2 using IDA gave us additional power to test APIM moderator effects linking psychopathy (the Dark Triad trait most closely related to aggression) with argumentativeness (an aggregate of verbal aggression and dyadic negativity). An APIM with all three Dark Triad traits produced positive actor effects for women's psychopathy and men's Machiavellianism. In the moderation APIM, relationship duration moderated the associations between men's and women's psychopathy and women's argumentativeness in different ways (a 3-way interaction). For women's argumentativeness, relationships of longer durations diminished the psychopathy actor effect for women, but augmented the psychopathy partner effect for men. In other words, being in longer-term relationships may buffer the psychopathy-argumentativeness actor effect in women, but also accentuate the corresponding partner effect linking men's psychopathy with women's argumentativeness.

5. General discussion

The first investigation of Dark Triad-aggression links in couples (of which we are aware) both corroborated prior research on individuals and revealed some novel links including some partner effects and interactions. The observed actor effects generally supported the view that psychopathy plays a dominant role in relating to aggression, even after controlling for narcissism and Machiavellianism. Regarding actor and partner effects, narcissism and Machiavellianism each played supporting roles, especially relating to displaced aggression.

Although we expected some positive partner effects, we avoided specific predictions because of the exploratory nature of this aspect of our research. What we found were one negative (women's narcissism with men's displaced aggression) and two positive (women's Machiavellianism with men's displaced aggression and men's psychopathy with women's trait aggression) significant partner effects, meaning that one partner's Dark Triad trait related to the other partner's aggression score—a new finding in this literature. While both positive partner effects were novel, their direction was unsurprising given our meta-analysis on the partial effects of Dark Triad traits in individuals. In contrast, the negative partner effect showing an inverse link between women's narcissism and men's displaced aggression was surprising. This unexpected result highlights the need for replication in future research, especially concerning hard-to-detect partner and interaction effects.

Regarding psychopathy and its moderators, no relationship effects emerged, but relationship duration played a pivotal role in understanding psychopathy-argumentativeness links, which also depended on

gender. Consistent with expectations, couples in longer (vs. shorter) relationships showed positive links between men's psychopathy and women's argumentativeness. Unexpectedly—but consistent with a post-hoc account that views relationship duration as a possible buffering agent in women—couples in longer (vs. shorter) relationships showed no substantial links between women's psychopathy and their own argumentativeness. From a theoretical standpoint, because men's Dark Triad traits—including psychopathy—often relate positively to short-term mating strategies in some men (Jonason et al., 2009, 2011; Jonason, Luévano, et al., 2012), being in a long-term relationship may interfere with that strategy (Jonason et al., 2010), possibly resulting in increased frustration, negativity, aggression, and argumentativeness. In contrast, women with higher Dark Triad traits, such as psychopathy, may be more aggressive or argumentative during relationship formation (perhaps from fending off competitors or dissuading infidelity), but once the relationship is established, the link is reduced or buffered by the positive reinforcement that most relationships provide (e.g., care, commitment, interdependence). Alternatively, because women may be adaptively tuned to be skeptical of men's initial romantic advances (because of biologically based sex differences in minimal parental investment costs; Haselton & Buss, 2000), it is reasonable to assume that some women—and perhaps especially those scoring high on psychopathy—may be particularly argumentative with their partner early in the relationship to help ferret out whether he's interested in a long- or short-term relationship.

The present research advances theory on the Dark Triad on multiple fronts. First, it replicates prior research linking Dark Triad traits to trait aggression in individuals (Jones & Neria, 2015) at the couples' level. In other words, couples' actor effects appear to reflect some of the same positive Dark Triad–aggression associations seen in individuals. Second, the present research advances theory by showing novel partner effects in the Dark Triad–aggression links. These novel partner effects suggest that individual differences in the Dark Triad traits may influence a partner's aggression, or vice versa. Thus, unraveling the Dark Triad–aggression dynamic in couples likely requires assessments from both individuals and their broader relationship context.

5.1. Limitations and implications

The present research has multiple limitations. First, our findings have the usual caveats regarding self-report measures, including socially desirable responding and acquiescence bias (Paulhus & Vazire, 2007), which are present in self-reporting aggression, dyadic negativity, and Dark Triad traits. Future research should strive to obtain partner or peer reports in addition to self-reports.

Second, because our data consisted of heterosexual, sexually active undergraduate dating couples, our findings lack generalizability. For example, because we drew both samples from introductory psychology classes, and because these were 60–80% women, their male partners were not drawn from the same psychology participant pool; however, nearly all couples were enrolled in the same universities. Future research should strive to draw from less-WEIRD (Western, educated, industrialized, rich, and democratic; Henrich, Heine, & Norenzayan, 2010) populations, non-heterosexual couples, and couples that are married or have been dating for longer durations.

Third, although our two studies' samples were small, each was roughly powerful enough to detect the large psychopathy–aggression effects seen in our meta-analysis. Although small samples are not uncommon in couples' research (Brunell & Webster, 2013; Brunell et al., 2007; Brunell et al., 2010; Monfort et al., 2014; Smith et al., 2014; Webster, Brunell, & Pilkington, 2009), they are rarely powerful enough to test interactions. To address this limitation, we aggregated data across studies, and used IDA to test for moderation of the strongest Dark Triad–aggression correlate—psychopathy. Nevertheless, the novel partner and interaction effects will need to be replicated by future research.

Fourth, because we did not measure the acts, frequencies, or consequences (reported injuries) of physical aggression between partners, our data cannot speak to sex differences (or lack thereof) on such a specific level (see Archer, 2000). Fifth, because we used a brief measure of the Dark Triad traits in Study 1 (DTDD), our findings may be less generalizable than comparable studies using longer measures. We addressed this concern in Study 2 by using longer traditional Dark Triad measures. Sixth, because our data were correlational, we could not test causal processes. Future research should study Dark Triad–aggression links in couples by examining change over time or by manipulating provocations (Jones & Paulhus, 2010).

One theoretical implication of the present research concerns empirical evidence linking narcissism to increased aggression. Although our observed actor effects for displaced aggression replicated robust narcissism–aggression links at the individual level (Bushman & Baumeister, 1998; Donnellan et al., 2005; Konrath et al., 2006; Rosenthal et al., 2011; Twenge & Campbell, 2003; Webster, 2006; Webster et al., 2007), our observed inverse partner effect was as novel as it was unexpected. Future researchers may wish to study narcissism–aggression links in broader socially dynamic contexts, including not only dyads, but also small groups (Campbell, Bush, Brunell, & Shelton, 2005). Researchers may also wish to consider casting a wider net of dark personality traits to include sadism (Buckels, Jones, & Paulhus, 2013; Charbol, Van Leeuwen, Rodgers, & Séjourné, 2009) or greed and spitefulness (Marcus & Zeigler-Hill, 2015).

6. Conclusions

The present research showed the first evidence of links between the Dark Triad traits—narcissism, Machiavellianism, and psychopathy—and multiple aggression measures in couples. Consistent with prior research on individuals (vs. couples), actor effects were typically positive; people who scored higher on the Dark Triad traits—particularly psychopathy—also had higher aggression and argumentativeness scores. Partner effects, which are novel because they can only be examined in couples, suggested that one's partner's Dark Triad traits can relate to one's own aggression, or that one's own Dark Triad traits can relate to one's partner's aggression. Partner (vs. actor) effects, however, were less consistent and more nuanced, showing a mix of both positive and negative effects. Finally, men in longer relationships and women in shorter relationships had especially positive links between their respective psychopathy scores and women's argumentativeness. Although we speculate that being in long-term relationships may help buffer the psychopathy–argumentativeness link in women, the positive partner effect interaction for men confirmed our expectations based on prior research. We hope our findings inspire further research on Dark Triad–aggression links in couples.

References

- Archer, J. (2000). Sex differences in aggression between heterosexual partners: A meta-analytic review. *Psychological Bulletin*, 126, 651–680. <http://dx.doi.org/10.1037/0033-2909.126.5.651>.
- Baughman, H. M., Dearing, S., Giammarco, E., & Vernon, P. A. (2012). Relationships between bullying behaviors and the Dark Triad: A study with adults. *Personality and Individual Differences*, 52, 571–575. <http://dx.doi.org/10.1016/j.paid.2011.11.020>.
- Brunell, A. B., & Webster, G. D. (2013). Self-determination and sexual experience in dating relationships. *Personality and Social Psychology Bulletin*, 39, 970–987. <http://dx.doi.org/10.1177/0146167213485442>.
- Brunell, A. B., Pilkington, C. J., & Webster, G. D. (2007). Perceptions of risk in intimacy in dating couples: Conversation and partner perceptions. *Journal of Social and Clinical Psychology*, 26, 93–117. <http://dx.doi.org/10.1521/jscp.2007.26.1.92>.
- Brunell, A. B., Kernis, M. H., Goldman, B. M., Davis, P., Heppner, W., Cascio, E. V., & Webster, G. D. (2010). Dispositional authenticity and romantic relationship functioning. *Personality and Individual Differences*, 48, 900–905. <http://dx.doi.org/10.1016/j.paid.2010.02.018>.
- Buckels, E. E., Jones, D. N., & Paulhus, D. L. (2013). Behavioral confirmation of everyday sadism. *Psychological Science*, 24, 2201–2209. <http://dx.doi.org/10.1177/0956797613490749>.
- Bushman, B. J., & Baumeister, R. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal*

- of Personality and Social Psychology, 75, 219–229. <http://dx.doi.org/10.1037/0022-3514.75.1.219>.
- Buss, A. H., & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology*, 63, 452–459. <http://dx.doi.org/10.1037/0022-3514.63.3.452>.
- Campbell, W. K., Bush, C. P., Brunell, A. B., & Shelton, J. (2005). Understanding the social costs of narcissism: The case of the tragedy of the commons. *Personality and Social Psychology Bulletin*, 31, 1358–1368. <http://dx.doi.org/10.1177/0146167205274855>.
- Card, N. A. (2012). *Applied meta-analysis for social science research*. New York: Guilford.
- Carter, G. L., Campbell, A. C., Muncer, S., & Carter, K. A. (2015). A Mokken analysis of the Dark Triad 'Dirty Dozen': Sex and age differences in scale structures, and issues with individual items. *Personality and Individual Differences*, 83, 185–191. <http://dx.doi.org/10.1016/j.paid.2015.04.012>.
- Charbol, H., Van Leeuwen, N., Rodgers, R., & Séjourné, N. (2009). Contributions of psychopathic, narcissistic, Machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*, 47, 734–739. <http://dx.doi.org/10.1016/j.paid.2009.06.020>.
- Christie, R., & Geis, F. (1970). *Studies in Machiavellianism*. New York: Academic Press.
- Crane, C. A., Testa, M., Derrick, J. L., & Leonard, K. E. (2014). Daily associations among self-control, heavy episodic drinking, and relationship functioning: An examination of actor and partner effects. *Aggressive Behavior*, 40, 440–450. <http://dx.doi.org/10.1002/ab.21533>.
- Curran, P. J., & Hussong, A. M. (2009). Integrative data analysis: The simultaneous analysis of multiple data sets. *Psychological Methods*, 14, 81–100. <http://dx.doi.org/10.1037/a0015914>.
- Denson, T. F., Pedersen, W. C., & Miller, N. (2006). The Displaced Aggression Questionnaire. *Journal of Personality and Social Psychology*, 90, 1032–1051. <http://dx.doi.org/10.1037/0022-3514.90.6.1032>.
- Dickson, D. J., Richmond, A. D., Brendgen, M., Vitaro, F., Laursen, B., Dionne, G., & Boivin, M. (2015). Aggression can be contagious: Longitudinal associations between proactive aggression and reactive aggression among young twins. *Aggressive Behavior*, 41, 455–466. <http://dx.doi.org/10.1002/ab.21582>.
- Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., Moffitt, T. E., & Caspi, A. (2005). Low self-esteem is related to aggression, antisocial behavior, and delinquency. *Psychological Science*, 16, 328–335. <http://dx.doi.org/10.1111/j.0956-7976.2005.01535.x>.
- Dyrenforth, P. S., Kasky, D. A., Donnellan, M. B., & Lucas, R. E. (2010). Predicting relationship and life satisfaction from personality in nationally representative samples from three countries: The relative importance of actor, partner, and similarity effects. *Journal of Personality and Social Psychology*, 99, 690–702. <http://dx.doi.org/10.1037/a0020385>.
- Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The Dark Triad of personality: A 10-year review. *Social and Personality Psychology Compass*, 7, 199–216. <http://dx.doi.org/10.1111/spc3.12018>.
- Hadden, B. W., Smith, C. V., & Webster, G. D. (2014). Relationship duration moderates associations between attachment and relationship quality: Meta-analytic support for the temporal adult romantic attachment model. *Personality and Social Psychology Review*, 18, 42–58. <http://dx.doi.org/10.1177/1088868313501885>.
- Hare, R. D. (1996). Psychopathy: A clinical construct whose time has come. *Criminal Justice and Behavior*, 23, 25–54. <http://dx.doi.org/10.1177/0093854896023001004>.
- Hare, R. D., Harpur, T. J., & Hemplill, J. F. (1989). *Scoring pamphlet for the Self-Report Psychopathy Scale: SRP-II*. (unpublished document) Vancouver, BC, Canada: Simon Fraser University.
- Haselton, M. G., & Buss, D. M. (2000). Error management theory: A new perspective on biases in cross-sex mind reading. *Journal of Personality and Social Psychology*, 78, 81–91. <http://dx.doi.org/10.1037/0022-3514.78.1.81>.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33, 61–83. <http://dx.doi.org/10.1017/S0140525X0999152X>.
- Hovland, C., & Sears, R. (1940). Minor studies in aggression: VI. Correlation of lynchings with economic indices. *Journal of Psychology*, 9, 301–310. <http://dx.doi.org/10.1080/00223980.1940.9917696>.
- Jonason, P. K. (2015). How "dark" personality traits and perceptions relate to racism in Australia. *Personality and Individual Differences*, 72, 47–51. <http://dx.doi.org/10.1016/j.paid.2014.08.030>.
- Jonason, P. K., & Webster, G. D. (2010). The Dirty Dozen: A concise measure of the Dark Triad. *Psychological Assessment*, 22, 420–432. <http://dx.doi.org/10.1037/a0019265>.
- Jonason, P. K., Li, N. P., Webster, G. W., & Schmitt, D. P. (2009). The Dark Triad: Facilitating short-term mating in men. *European Journal of Personality*, 23, 5–18. <http://dx.doi.org/10.1002/per.698>.
- Jonason, P. K., Li, N. P., & Buss, D. M. (2010). The costs and benefits of the Dark Triad: Implications for mate poaching and mate retention tactics. *Personality and Individual Differences*, 48, 373–378. <http://dx.doi.org/10.1016/j.paid.2009.11.003>.
- Jonason, P. K., Valentine, K. A., Li, N. P., & Harbeson, C. L. (2011). Mate-selection and the Dark Triad: Facilitating a short-term mating strategy and creating a volatile environment. *Personality and Individual Differences*, 51, 759–763. <http://dx.doi.org/10.1016/j.paid.2011.06.025>.
- Jonason, P. K., Webster, G. D., Li, N. P., Schmitt, D., & Crysel, L. C. (2012). The rise of the anti-hero in popular culture: A life history theory of the Dark Triad. *Review of General Psychology*, 16, 192–199. <http://dx.doi.org/10.1037/a0027914>.
- Jonason, P. K., Luévano, V. X., & Adams, H. M. (2012). How the Dark Triad traits predict relationship choices. *Personality and Individual Differences*, 53, 180–184. <http://dx.doi.org/10.1016/j.paid.2012.03.007>.
- Jonason, P. K., Duineveld, J. J., & Middleton, J. P. (2015). Pathology, pseudopathy, and the Dark Triad of personality. *Personality and Individual Differences*, 78, 43–47. <http://dx.doi.org/10.1016/j.paid.2015.01.028>.
- Jones, D. N. (2013). Psychopathy and Machiavellianism predict differences in racially motivated attitudes and their affiliations. *Journal of Applied Social Psychology*, 43, E367–E378. <http://dx.doi.org/10.1111/jasp.12035>.
- Jones, D. N., & Neria, A. L. (2015). The Dark Triad and dispositional aggression. *Personality and Individual Differences*, 86, 360–364. <http://dx.doi.org/10.1016/j.paid.2015.06.021>.
- Jones, D. N., & Paulhus, D. L. (2010). Different provocations trigger aggression in narcissists and psychopaths. *Social Psychological and Personality Science*, 1, 12–18. <http://dx.doi.org/10.1177/1948550609347591>.
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the short Dark Triad (SD3): A brief measure of dark personality traits. *Assessment*, 21, 28–41. <http://dx.doi.org/10.1177/1073191113514105>.
- Judd, C. M., McClelland, G. H., & Ryan, C. S. (2009). *Data analysis: A model comparison approach* (2nd ed.). New York: Routledge Press.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York: Guilford.
- Kirkpatrick, L. A., Waugh, C. E., Valencia, A., & Webster, G. D. (2002). The functional domain-specificity of self-esteem and the differential prediction of aggression. *Journal of Personality and Social Psychology*, 82, 756–767. <http://dx.doi.org/10.1037/0022-3514.82.5.756>.
- Konrath, S., Bushman, B. J., & Campbell, W. K. (2006). Attenuating the link between threatened egotism and aggression. *Psychological Science*, 17, 995–1001. <http://dx.doi.org/10.1111/j.1467-9280.2006.01818.x>.
- Lamkin, J., Campbell, W. K., vanDellen, M. R., & Miller, J. D. (2015). An exploration of the correlates of grandiose and vulnerable narcissism in romantic relationships: Homophily, partner characteristics, and dyadic adjustment. *Personality and Individual Differences*, 79, 166–171. <http://dx.doi.org/10.1016/j.paid.2015.01.029>.
- Lau, K. S. L., & Marsee, M. A. (2013). Exploring narcissism, psychopathy, and Machiavellianism in youth: Examination of associations with antisocial behavior and aggression. *Journal of Child Family Studies*, 22, 355–367. <http://dx.doi.org/10.1007/s10826-012-9586-0>.
- Lee, K., Ashton, M. C., Wiltshire, J., Bourdage, J. S., Visser, B. A., & Gallucci, A. (2013). Sex, power, and money: Prediction from the Dark Triad and Honesty–Humility. *European Journal of Personality*, 27, 169–184. <http://dx.doi.org/10.1002/per.1860>.
- Maples, J. L., Lamkin, J., & Miller, J. D. (2014). A test of two brief measures of the Dark Triad: The Dirty Dozen and Short Dark Triad. *Psychological Assessment*, 26, 326–331. <http://dx.doi.org/10.1037/a0035084>.
- Marcus, D. K., & Zeigler-Hill, V. (2015). A big tent of dark personality traits. *Social and Personality Psychology Compass*, 9, 434–446. <http://dx.doi.org/10.1111/spc3.12185>.
- McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*, 114, 376–390. <http://dx.doi.org/10.1037/0033-2909.114.2.376>.
- Miller, J. D., Few, L. R., Seibert, L. A., Watts, A., Zeichner, A., & Lynam, D. R. (2012). An examination of the Dirty Dozen measure of psychopathy: A cautionary tale about the costs of brief measures. *Psychological Assessment*, 24, 1048–1052. <http://dx.doi.org/10.1037/a0028583>.
- Monfort, S. S., Kaczmarek, L. D., Kashdan, T. B., Drajkowski, D., Kosakowski, M., Guzik, P., ... Graciani, A. (2014). Capitalizing on the success of romantic partners: A laboratory investigation on subjective, facial, and physiological emotional processing. *Personality and Individual Differences*, 68, 149–153. <http://dx.doi.org/10.1016/j.paid.2014.04.028>.
- Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, 12, 177–196. http://dx.doi.org/10.1207/S15327965PLI1204_1.
- Muthén, L. K., & Muthén, B. O. (2010). *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.
- Parrott, D. J., Tharp, A. T., Swartout, K. M., Miller, C. A., Hall, G. C. N., & George, W. H. (2012). Validity for an integrated laboratory analogue of sexual aggression and bystander intervention. *Aggressive Behavior*, 38, 309–321. <http://dx.doi.org/10.1002/ab.21429>.
- Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224–239). New York: Guilford.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36, 556–563. [http://dx.doi.org/10.1016/S0092-6566\(02\)00505-6](http://dx.doi.org/10.1016/S0092-6566(02)00505-6).
- Rammstedt, B., & Beierlein, C. (2014). Can't we make it any shorter? The limits of personality assessment and ways to overcome them. *Journal of Individual Differences*, 35, 212–220. <http://dx.doi.org/10.1027/1614-0001/a000141>.
- Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, 54, 890–902. <http://dx.doi.org/10.1037/0022-3514.54.5.890>.
- Rauthmann, J. F., & Kolar, G. P. (2012). How "dark" are the Dark Triad traits? Examining the perceived darkness of narcissism, Machiavellianism, and psychopathy. *Personality and Individual Differences*, 53, 884–889. <http://dx.doi.org/10.1016/j.paid.2012.06.020>.
- Reidy, D. E., Zeichner, A., Miller, J. D., & Martinez, M. A. (2007). Psychopathy and aggression: Examining the role of psychopathy factors in predicting laboratory aggression under hostile and instrumental conditions. *Journal of Research in Personality*, 41, 1244–1251. <http://dx.doi.org/10.1016/j.jrp.2007.03.001>.
- Reidy, D. E., Zeichner, A., & Martinez, M. A. (2008). Effects of psychopathy traits on unprovoked aggression. *Aggressive Behavior*, 34, 319–328. <http://dx.doi.org/10.1002/ab.20238>.
- Reidy, D. E., Zeichner, A., & Seibert, L. A. (2011). Unprovoked aggression: Effects of psychopathic traits and sadism. *Journal of Personality*, 79, 75–100. <http://dx.doi.org/10.1111/j.1467-6494.2010.00691.x>.
- Rosenthal, S. A., Montoya, R. M., Riddings, L. E., Rieck, S. M., & Hooley, J. M. (2011). Further evidence of the Narcissistic Personality Inventory's validity problems: A meta-

- analytic investigation—Response to Miller, Maples, and Campbell (this issue). *Journal of Research in Personality*, 45, 408–416. <http://dx.doi.org/10.1016/j.jrjp.2011.06.004>.
- Schmidt, F. (2010). Detecting and correcting the lies that data tell. *Perspectives on Psychological Science*, 5, 233–242. <http://dx.doi.org/10.1177/1745691610369339>.
- Smith, C. V., Hadden, B. W., Webster, G. D., Jonason, P. K., Gesselman, A. N., & Crysel, L. C. (2014). Mutually attracted or repulsed? Actor–partner interdependence models of Dark Triad traits and relationship outcomes. *Personality and Individual Differences*, 67, 35–41. <http://dx.doi.org/10.1016/j.paid.2014.01.044>.
- Twenge, J. M., & Campbell, K. W. (2003). “Isn’t it fun to get the respect that we’re going to deserve?” Narcissism, social rejection, and aggression. *Personality and Social Psychology Bulletin*, 29, 261–272. <http://dx.doi.org/10.1177/0146167202239051>.
- Watkins, L. E., Maldonado, R. C., & DiLillo, D. (2014). Hazardous alcohol use and intimate partner aggression among dating couples: The role of impulse control difficulties. *Aggressive Behavior*, 40, 369–381. <http://dx.doi.org/10.1002/ab.21528>.
- Watson, D., Klohnen, E. C., Casillas, A., Simms, N., Haig, J., & Berry, D. S. (2004). Match makers and deal breakers: Analyses of assortative mating in newlywed couples. *Journal of Personality*, 72, 1029–1068. <http://dx.doi.org/10.1111/j.0022-3506.2004.00289.x>.
- Webster, G. D. (2006). Low self-esteem is related to aggression, but especially when controlling for gender: A replication and extension of Donnellan et al. (2005). *Representative Research in Social Psychology*, 29, 12–18.
- Webster, G. D., Brunell, A. B., & Pilkington, C. J. (2009). Men’s and women’s warmth and disclosure differentially moderate couples’ reciprocity in conversational disclosure. *Personality and Individual Differences*, 46, 292–297. <http://dx.doi.org/10.1016/j.paid.2008.10.014>.
- Webster, G. D., DeWall, C. N., Pond, R. S., Jr., Deckman, T., Jonason, P. K., Le, B. M., ... Bator, R. J. (2014). The Brief Aggression Questionnaire: Psychometric and behavioral evidence for an efficient measure of trait aggression. *Aggressive Behavior*, 40, 120–139. <http://dx.doi.org/10.1002/ab.21507>.
- Webster, G. D., DeWall, C. N., Pond, R. S., Jr., Deckman, T., Jonason, P. K., Le, B. M., ... Bator, R. J. (2015). The Brief Aggression Questionnaire: Structure, validity, reliability, and generalizability. *Journal of Personality Assessment*, 97, 638–649. <http://dx.doi.org/10.1080/00223891.2015.1044093>.
- Webster, G. D., & Duffy, R. D. (2016). Losing faith in the intelligence–religiosity link: New evidence for a decline effect, spatial dependence, and mediation by education and life quality. *Intelligence*, 55, 15–27. <http://dx.doi.org/10.1016/j.intell.2016.01.001>.
- Webster, G. D., Gesselman, A. N., Crysel, L. C., Brunell, A. B., & Jonason, P. K. (2014). An actor–partner interdependence model of the Dark Triad and aggression in couples. *Personality and Individual Differences*, 60, S16. <http://dx.doi.org/10.1016/j.paid.2013.07.373>.
- Webster, G. D., & Jonason, P. K. (2013). Putting the “IRT” in “dirty”: Item response theory analyses of the Dark Triad Dirty Dozen—An efficient measure of narcissism, psychopathy, and Machiavellianism. *Personality and Individual Differences*, 54, 302–306. <http://dx.doi.org/10.1016/j.paid.2012.08.027>.
- Webster, G. D., Kirkpatrick, L. A., Nezelek, J. B., Smith, C. V., & Paddock, E. L. (2007). Different slopes for different folks: Self-esteem instability and gender as moderators of the relationship between self-esteem and attitudinal aggression. *Self and Identity*, 6, 74–94. <http://dx.doi.org/10.1080/15298860600920488>.
- Webster, G. D., Laurenceau, J. -P., Smith, C. V., Mahaffey, A. L., Bryan, A. D., & Brunell, A. B. (2015). An investment model of sociosexuality, relationship satisfaction, and commitment: Evidence from dating, engaged, and newlywed couples. *Journal of Research in Personality*, 55, 112–126. <http://dx.doi.org/10.1016/j.jrjp.2015.02.004>.
- Westhead, J., & Egan, V. (2015). Untangling the concurrent influences of the Dark Triad, personality and mating effort on violence. *Personality and Individual Differences*, 86, 222–226. <http://dx.doi.org/10.1016/j.paid.2015.05.031>.
- Widaman, K. F., Little, T. D., Preacher, K. J., & Sawalani, G. M. (2011). On creating and using short forms of scales in secondary research. In K. H. Trzesniewski, M. B. Donnellan, & R. E. Lucas (Eds.), *Secondary data analysis: An introduction for psychologists* (pp. 39–62). Washington, DC: American Psychological Association.