



Psychopathy Predicts the Use of Physical, Verbal, and Indirect Aggression in Women

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Intrasexual selection is a mechanism of evolution that explains same-sex competitive behaviors. For women, the use of nonphysical competitive strategies is thought to be selected for due to the high cost associated with direct physical competition. Women incorporate competitive strategies, such as verbal and indirect aggression (i.e., gossiping and rumor spreading), to be able to target and compete with same-sex counterparts. Nonetheless, dark personality traits also correlate with competitive sexual behaviors, as individuals who score higher on psychopathy and Machiavellianism are more likely to engage in intrasexual competition due to their reliance on the use of manipulation and derogative behaviors. The current study investigated women's use of aggressive strategies in a Hispanic sample. Women ($N = 136$) completed the Intrasexual Competition Scale, Dark Tetrad (i.e., psychopathy, sadism, narcissism, and Machiavellianism), and Direct/Indirect Aggression Scale (Mini-DIAS). The findings showed that psychopathy predicted women's use of physical, verbal, and indirect aggression, while sadism predicted the use of verbal aggression. These findings add to research on the type of aggressive strategies that women utilize in intrasexual competitive contests and account for the unique role of dark personality traits.

Public Significance Statement

This study suggests that women's use of physical, verbal, and indirect aggressive behaviors is associated with higher levels of psychopathy.

Keywords: intrasexual competition, dark tetrad traits, personality, sociality, aggression

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Intrasexual competition is a mechanism of evolution where members of the same sex compete for access to members of the opposite sex (Andersson, 1994). In women, competitive tactics are less direct and physical, and they often rely on using more indirect and covert strategies (Campbell, 2013). These include relying on verbal aggression and indirect aggression, such as spreading rumors and gossiping about other

women (Davis et al., 2019). Furthermore, personality factors, such as the “dark personality traits,” have been associated with intrasexual competition (Carter et al., 2014; M. Lyons et al., 2019), perhaps aiding in the implementation of rival derogation strategies. In the current study, we investigate the role of dispositional intrasexual competition and dark tetrad traits (i.e., sadism, psychopathy, Machiavellianism, and narcissism) associated

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with women's aggressive strategies. Considering that women who are more competitive derogate their rivals more (M. Fisher et al., 2009), understanding how this relationship exists sheds new insight into women's sociality.

Obligatory parental investment (e.g., 9-month gestational process) in women makes using direct physical confrontation costly (Björkqvist, 1994; Campbell & Cross, 2012), as women may harm themselves and their offspring in a competitive confrontation. Indirect methods that can maximize harm with little cost to the perpetrator would have been a more favorable approach in intrasexual competition. These strategies (verbal & indirect aggression) can have long-lasting consequences to a target, which may benefit the perpetrator when competing intrasexually. For instance, women are more likely to use gossip as an indirect strategy to spread rumors and harm a potential target (Davis et al., 2019). Rumor spreading has been shown to be effective, as men are more likely to consider the perpetrator of an indirect act as more attractive and be less likely to interact with the woman at the receiving end of the strategy (M. L. Fisher & Cox, 2009).

Because men prioritize attractive features in women, women may directly target competitors who are attractive (Fink et al., 2014). By directly targeting attractive women, competitive women may be eliminating potential threats to themselves, which may in turn provide more opportunities in mate choice. Cues of same-sex competition have been suggested to drive the use of verbal and indirect competitive tactics in women. Research shows that women are less likely to consider other women as attractive, intelligent, and friendly and are more likely to guard their partners if primed with information about a partner threat scenario (M. L. Fisher & Archibald, 2022). They are also more likely to derogate others, allocate blame to targeted women, and less likely to befriend them (M. L. Fisher & Archibald, 2022). Moreover, women are less likely to introduce their current partner to another woman with attractive breast morphology when primed with information about their partners interested in another woman (Garza et al., 2021). In addition to cues of same-sex competition, individual differences in women's dispositional intrasexual competition, as measured by the intrasexual competition scale (Buunk & Fisher, 2009), have been shown to facilitate derogation tactics. Dispositional traits

of intrasexual competition include attitudes and beliefs about considering attractive women threatening, derogating other women, and preferring that men find oneself more attractive than other women (Buunk & Fisher, 2009). Higher competition levels correlate with increased gossip and favorable attitudes toward it (Davis et al., 2018). Women who score higher on intrasexual competition are more likely to consider other women as sexually receptive, which may in turn trigger derogation strategies (Pazhoochi et al., 2022). Other research also shows that women who rate themselves higher on attractiveness are more likely to use competitor derogation and self-promotion strategies when competing intrasexually (M. Fisher et al., 2009). Overall, the use of covert methods of competing with members of the same sex can serve as a useful strategy that may work well at harming rivals and mitigating potential threats.

Physical aggression in women is less favored compared to indirect or verbal derogation tactics. Compared to men, women are less likely to be involved in a physical fight (Nivette et al., 2019), but physical retaliation is often predicated on being targeted or attacked by other women using covert strategies. For instance, being targeted using verbal tactics about one's body appearance (e.g., being called ugly and fat) may trigger physical confrontation (Campbell, 2013). Other factors that contribute to women's physical aggression are attacks on one's sexual reputation (e.g., slut and whore; Campbell, 1995), jealousy (Ness, 2004), and competition for desirable mates (Ness, 2004). One study showed that female physical aggression was associated with other females showing interest in their current partner (Irwin & Adler, 2012). A lack of available mates coupled with ecological scarcity (i.e., low socioeconomic status) may drive physical confrontation, as women competing for mates with resources may benefit from physical aggression (Taylor, 1993). In the present study, we add the use of physical aggression as an outcome variable to better comprehend women's strategies in relation to personality and intrasexual competition factors.

Personality factors also correlate with the propensity to be competitive and target others (Buunk et al., 2017). Research has shown that "dark" personality traits, including Machiavellianism, psychopathy, and narcissism, are associated with intrasexual competitive behaviors (M. Lyons et al., 2019). Dark traits include manipulation

and callousness, which are traits that are considered important in competing with same-sex rivals. Machiavellianism involves manipulation and deception (Paulhus & Williams, 2002), psychopathy is linked to impulsivity and emotional detachment (Goncalves & Campbell, 2014), and narcissism is characterized by entitlement and a need for attention (Goncalves & Campbell, 2014). Recently, the incorporation of sadism, or the propensity to enjoy violent entertainment and inflict minor societal harms, has been included to form the Dark Tetrad (Jones & Paulhus, 2014).

From an evolutionary perspective, dark personality traits can be adaptive, as individuals who score high on these traits may be better at exploitative strategies and manipulate their environments more successfully, resulting in more control of the outcomes (Jonason et al., 2010). Those high on dark traits may overlook reciprocity, lack emotional commitment, outperform others, and act in a manner that harms others (Furnham et al., 2013). Given their degree of genetic heritability (Vernon et al., 2008), dark traits are considered to confer fitness advantages in some circumstances.

Elements of the dark tetrad traits can amplify the use of competitive behaviors. Individuals with dark tetrad traits may be better able to implement competitive mating strategies and utilize them more frequently due to their personality styles (Carter et al., 2014). Dark triad traits positively predict intrasexual competitiveness in a social media setting (M. Lyons et al., 2019). Machiavellianism has been shown to be associated with utilizing more rude comments, while those high in narcissism are more likely to use attention-seeking behaviors, such as wanting to outshine others (Goncalves & Campbell, 2014). Psychopathy has been shown to be associated with damaging the reputation of others (Goncalves & Campbell, 2014), in addition to using more intrasexual competitive tactics (Jonason et al., 2014). Moreover, women who score high on the dark triad traits are more likely to engage in sexual competitiveness, such as using enhancement behaviors and coercive behaviors to access mates at the expense of other women (Carter et al., 2014). Previous research suggests that women's same-sex competitive behavior is interconnected with intrasexual competition, dark tetrad traits, and aggressive behaviors. While existing literature

indicates bidirectional relationships among these factors, research on the role of dark tetrad traits and dispositional intrasexual competition on women's aggressive behaviors is limited. Thus, this study investigates women's aggressive behaviors as a function of dispositional intrasexual competition and dark tetrad traits. The present study examines the associations between intrasexual competition, dark tetrad traits, and aggressive behaviors (i.e., physical, verbal, and indirect aggression). Although past research has suggested that women resort to nonphysical aggression compared to men in same-sex contests, we included the physical aggression measure for this study as an added component. Some research has pointed to women's use of physical aggression as a retaliatory measure when facing derogation (Campbell, 2013), and dark tetrad traits, such as psychopathy, correlate with physical aggression in women (Thomson et al., 2021). Although we acknowledge that women are less likely to implement physical aggression (Björkqvist, 2018), we included the physical aggression component of the indirect/aggression scale to provide a comprehensive overview of overall aggression. We test whether intrasexual competition and dark tetrad traits predict aggressive behaviors in women, and we hypothesize that intrasexual competition and dark tetrad traits will positively predict the use of physical, verbal, and indirect aggression.

Method

Participants

A G*Power analysis using five predictors (intrasexual competition and four dark tetrad traits) with an α of .05 and 80% power indicated a sample size of 135 participants would be sufficient to detect a small to medium effect size ($f^2 = 0.10$, $r = .30$). One-hundred and thirty-six ($M = 23.18$, $SD = 6.11$) self-identified heterosexual women participated in this online study. Participants were from a predominantly Hispanic-serving undergraduate institution in South Texas (Texas A&M International University), and they received course credit for their participation. One hundred and thirty-two women identified as being Hispanic of Mexican descent, and four participants indicated other in their ethnic identification.

Materials

Intrasexual Competition Scale

We assessed individual differences in intrasexual competition in women using the Intrasexual Competition Scale (Buunk & Fisher, 2009). It is a 12-item measure, which includes items such as “I can’t stand it when I meet another woman who is more attractive than I am,” with response options varying from 1 = *strongly disagree* to 7 = *strongly agree*. Higher scores on this measure indicate more competitive behaviors within the same sex. The measure demonstrated good reliability, Cronbach’s $\alpha = .88$. We used the average score of the Intrasexual Competition Scale to indicate intrasexual competition.

Short Dark Tetrad (SD4)

The SD4 (Paulhus et al., 2021) is a 28-item scale that measures the traditional dark triad traits (i.e., psychopathy, narcissism, and Machiavellianism) with the inclusion of sadism. It includes items that create four separate subscales, such as “Manipulating the situation takes planning” (Machiavellianism), “I have exceptional qualities” (narcissism), “I’ve been in trouble with the law” (psychopathy), and “Some people deserve to suffer” (sadism). All items are measured on a 1–5 Likert scale where response options vary from 1 = *strongly disagree* to 5 = *strongly agree*. Cronbach’s alpha values were $\alpha = .68$ for Machiavellianism, $\alpha = .74$ for narcissism, $\alpha = .71$ for psychopathy, and $\alpha = .81$ for sadism, supporting the reliability of the instrument for assessing the dark tetrad traits.

Direct and Indirect Aggression Scale (Mini-DIAS)

The Mini-DIAS (Österman, 2010) was used to measure women’s experiences with being a perpetrator of aggressive tactics such as physical, verbal, and indirect aggressiveness. It is a three-item measure that includes items, such as “have you, for example, hit, kicked, or shoved someone else?” (physical), “have you, for example, yelled at someone, called someone bad names, or said hurtful things to someone?” (verbal), and “have you, for example, gossiped maliciously about someone, spread harmful rumors about someone, or tried to socially exclude someone?” (indirect). The response options for the scale vary from 1 = *never* to 5 = *very often*. The instrument can

be assessed individually, as each item pertains to a different type of aggression, or it can be assessed as a composite to indicate overall aggression.

Procedure

The study was approved by the institutional review board (2023-10-10). Participants were allowed to sign up for the study using the university’s SONA recruitment system. Upon consent, they completed a series of demographic questions, which assessed age, biological sex (male, female, nonbinary, prefer not to answer), sexual orientation (heterosexual, bisexual, homosexual, prefer not to disclose), and ethnicity (American Indian, Black, Pacific Islander, White, and Hispanic). Once complete with demographic questions, they were directed to complete the intrasexual competition scale, SD4, and the Mini-DIAS. The study took approximately 15 min to complete.

Results

Table 1 presents the descriptive statistics and zero-order correlations between intrasexual competition, dark tetrad, and aggression measures. All subscales for the dark tetrad measures were significantly different from each other, $F(3, 405) = 187.00, p < .001, \eta_p^2 = .51$, where women scored higher on Machiavellianism compared to narcissism (Cohen’s $d = 0.59, p < .001$), sadism (Cohen’s $d = 1.75, p < .001$), and psychopathy (Cohen’s $d = 2.06, p < .001$). Narcissism was significantly different compared to psychopathy (Cohen’s $d = 1.46, p < .001$) and sadism (Cohen’s $d = 1.15, p < .001$), and psychopathy and sadism (Cohen’s $d = -0.30, p = .007$) were significantly different from each other. Intrasexual competition was positively associated with Machiavellianism, sadism, and psychopathy but not narcissism. Additionally, intrasexual competition was positively associated with verbal and indirect aggression, but not physical aggression. Women’s self-reported use of verbal aggression was positively associated with the use of physical aggression but not indirect aggression. Furthermore, Machiavellianism, psychopathy, and sadism were positively associated with being verbally and physically aggressive, while psychopathy and narcissism were positively associated with using indirect aggression. Lastly,

Table 1
Descriptive Statistics and Zero-Order Correlations Between Intrasexual Competition, Dark Tetrad Traits, and Aggression Measures

Variable	1	2	3	4	5	6	7	8
1. Intrasexual competition	—							
2. Machiavellianism	.25***	—						
3. Narcissism	.14	.25**	—					
4. Psychopathy	.30***	.50***	.31***	—				
5. Sadism	.41***	.42***	.05	.46***	—			
6. Verbal aggression	.27***	.22**	.35***	.36***	.38***	—		
7. Indirect aggression	.20*	.12	.35***	.35***	.13	.33***	—	
8. Physical aggression	.08	.26**	.03	.42***	.32***	.43***	.03	—
<i>M</i>	1.77	3.24	2.81	1.75	1.97	2.33	1.69	1.49
<i>SD</i>	0.90	0.65	0.72	0.65	0.94	0.87	0.83	0.69

* $p < .05$. ** $p < .01$. *** $p < .001$.

sadism was positively associated with verbal and physical aggression.

Regression Analyses

A regression analysis was conducted to understand the unique contributions of intrasexual competition and dark tetrad traits predicting women’s aggression. All variables were mean-centered, and there were no issues with multicollinearity ($VIFs < 2$). All three models significantly predicted overall aggression. Table 2 presents the summary of the regression models. Psychopathy remained a significant predictor, where high levels of psychopathy were associated with the use of physical, verbal, and indirect aggression. Additionally, for verbal aggression, narcissism was a negative predictor, suggesting that higher levels of narcissistic traits were associated with less use of verbal aggression. Sadism

was predictive of the use of verbal aggression, and marginally ($p = .05$) associated with using physical aggression.

As an exploratory analysis, we ran a series of mediation models to test if the mechanism of intrasexual competition would explain the relationship between the dark tetrad traits and women’s aggressive behaviors. Because dark tetrad traits are heritable (Vernon et al., 2008), and intrasexual competition is a mating-related variable associated with reproductive potential, we included the dark tetrad traits as the first variable in the mediation chain (DT → Intrasexual Competition Scale → aggressive behaviors), intrasexual competition as the mediator, and aggressive behaviors as dependent variables. The mediation models were run using the jamovi Advanced Mediation Models module in JAMOVİ. All mediation models were not significant (indirect pathways $ps > .05$), which indicated that the pathway of the dark tetrad

Table 2
Multiple Regression Using Intrasexual Competition and Dark Tetrad Traits Predicting Each Aggressive Behavior (Physical, Verbal, and Indirect Aggression)

Variable	Physical aggression		Verbal aggression		Indirect aggression	
	<i>b</i> (<i>SE</i>)	<i>p</i>	<i>b</i> (<i>SE</i>)	<i>p</i>	<i>b</i> (<i>SE</i>)	<i>p</i>
Intercept	1.48 (0.05)	<.001***	2.33 (0.06)	<.001***	1.69 (0.06)	<.001***
Intrasexual competition	−0.007 (0.006)	.21	0.01 (0.007)	.16	0.01 (0.007)	.15
Machiavellianism	0.008 (0.01)	.55	0.003 (0.01)	.85	−0.01 (0.01)	.35
Narcissism	−0.01 (0.01)	.29	−0.03 (0.01)	.04*	0.005 (0.01)	.73
Psychopathy	0.05 (0.01)	<.001***	0.05 (0.01)	.006**	0.06 (0.01)	<.001***
Sadism	0.02 (0.01)	.05	0.03 (0.01)	.03*	−0.007 (0.01)	.15
<i>F</i>	7.12	<.001***	7.26	<.001***	4.29	.001**
<i>R</i> ²	.19		.19		.11	

* $p < .05$. ** $p < .01$. *** $p < .001$.

traits to aggressive behaviors was not explained via the pathway of intrasexual competition (see the online supplemental materials).

Discussion

The current study examined the relationships between intrasexual competition, dark tetrad traits, and aggression (i.e., physical, verbal, and indirect) in women. Similar to previous research (Carter et al., 2014; Goncalves & Campbell, 2014; M. Lyons et al., 2019; Semenyna et al., 2019), we found that intrasexual competition was positively associated with dark tetrad traits, psychopathy, Machiavellianism, and sadism. Intrasexual competition was not associated with narcissism. This is in line with previous work suggesting that narcissism is associated with self-promotion strategies in attracting mates (M. Lyons et al., 2019), rather than considering other women as potential threats.

Moreover, our model showed that psychopathy was a significant positive predictor of physical, verbal, and indirect aggression, while narcissism and sadism were significant predictors of verbal aggression. Regarding the former, women with higher levels of psychopathy were more likely to self-report using all three aggressive behaviors. Psychopathy has been shown to be associated with being cold and emotionally void, and due to their lack of empathy and concern for others, some women may be better at implementing their use of derogating other women (Hare, 2003). This finding is in line with other research showing that women who score high on psychopathy are more likely to attempt to damage the reputation of their rivals (Goncalves & Campbell, 2014). Additionally, women who scored high on psychopathy also reported using more physical aggression toward other women. Although there is a cost associated with overt aggression in women compared to men (Björkqvist, 1994), research has shown that psychopathy in women is associated with more physical aggressive tactics, albeit dependent upon a history of abuse (Thomson et al., 2021). Furthermore, we showed that sadism was associated with intrasexual competition and using verbal but not indirect aggression. Sadist traits are associated with enjoying the suffering and harming of others (Jones & Paulhus, 2014). This discrepancy in verbal and indirect aggression may be due to the presence of enjoying the harm directed at another

individual. In verbal aggression, women may see the effects of their actions targeting another woman, such as yelling at her in the present. However, indirect aggression may be more covert and rely on time for its effectiveness, such as waiting for a rumor or gossip to spread, therefore delaying its gratification.

The findings from the current study shed light on women's use of aggressive strategies. These strategies are more common in women who have a psychological system that aids in engaging in competitive tactics. That is, psychopathy may motivate women to use physical, verbal, and indirect aggressive tactics in same-sex competition. Psychopathy is associated with placing less value on moral foundations and collective interests (Jonason et al., 2015); therefore, this may imply that psychopathy may ease social repercussions from derogating other women. Psychopathy has been shown to be associated with intrasexual competition (Jonason et al., 2014) and with willingness to damage others' reputations (Goncalves & Campbell, 2014). These derogation tactics are known to be effective because the use of direct physical confrontation may be more costly in women compared to men (Björkqvist, 1994). It could also be argued that if there are repercussions from other women for using physical, verbal, and indirect aggression, then women with dark tetrad traits may be more likely to mitigate repercussions received from others. Psychopathy and narcissism have been shown to be related to using gossip as a form of group protection and in damaging the reputation of other women (M. T. Lyons & Hughes, 2015). Therefore, it is possible that women with these dark traits may be more likely to retaliate if targeted or when being the aggressor against other women.

To the best of our knowledge, the associations between intrasexual competition, dark tetrad traits, and types of aggression (i.e., physical, verbal, and indirect) have not been explored. The findings add to existing literature on how women use aggressive tactics as a function of dispositional intrasexual competition and dark personality traits. These findings suggest that some women who hold traits that promote a lack of empathy are more prone to act out aggressively, perhaps to be successful in an intrasexual competitive display. Additionally, research on sadism and its role in rival derogation remains unexplored. It has been shown that sadism is

associated with traditional bullying and cyberbullying behaviors (van Geel et al., 2017), but its link to types of aggressive behaviors targeted toward rivals is limited. Here, we add that sadism is associated with dispositional levels of intrasexual competition, and sadism predicts the use of verbal aggression.

The current study relied on a small female sample, limiting generalizability across sexes. A much larger sample would be beneficial in making stronger predictions and in assessing potential mechanisms involved in these relationships. Previous studies have shown that intrasexual competition is associated with dark triad traits in both sexes (M. Lyons et al., 2019); therefore, exploring the links between men's and women's intrasexual competition, dark tetrad traits, and rival derogation measures is warranted. This study only used dispositional measures of intrasexual competition and aggression that assessed previous uses of physical, verbal, and indirect aggression. Future research can incorporate experimental primes to increase the saliency of competition and assess the use of derogation tactics on a potential rival. Another limitation is the use of self-report measures, making responses confounded by social desirability. Avoiding detection is instrumental in women's competition (Benenson, 2013); however, it is possible that women higher on dark tetrad traits may be more comfortable in reporting their use of aggression. Assessing implicit methods of aggression to avoid social desirability would be a fruitful avenue of research to consider. It is also important to note that women use covert methods in gossiping and intrasexual competition, such as displaying nonverbal cues (i.e., disgust) to express exclusion (Krems et al., 2024) and sharing information about other women while expressing concern rather than malice (Reynolds et al., 2025). Furthermore, the use of a college-aged sample limits generalizability to nonstudent populations. Another avenue for future studies would be to investigate the different types of competition, such as comparing the use of rival derogation (verbal & indirect) and self-promotion as a function of dispositional levels of intrasexual competition and dark tetrad traits. In conclusion, our findings suggest that dark personality traits, more specifically psychopathy, are uniquely associated with predicting the use of aggressing against rivals.

References

- Andersson, M. B. (1994). *Sexual selection*. Princeton University Press.
- Benenson, J. F. (2013). The development of human female competition: Allies and adversaries. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 368(1631), Article 20130079. <https://doi.org/10.1098/rstb.2013.0079>
- Björkqvist, K. (1994). Sex differences in physical, verbal, and indirect aggression: A review of recent research. *Sex Roles*, 30(3-4), 177-188. <https://doi.org/10.1007/BF01420988>
- Björkqvist, K. (2018). Gender differences in aggression. *Current Opinion in Psychology*, 19, 39-42. <https://doi.org/10.1016/j.copsyc.2017.03.030>
- Buunk, A. P., Bucksath, A. F., & Cordero, S. (2017). Intrasexual competitiveness and personality traits: A study in Uruguay. *Personality and Individual Differences*, 108, 178-181. <https://doi.org/10.1016/j.paid.2016.11.060>
- Buunk, A. P., & Fisher, M. (2009). Individual differences in intrasexual competition. *Journal of Evolutionary Psychology*, 7(1), 37-48. <https://doi.org/10.1556/JEP.7.2009.1.5>
- Campbell, A. (1995). A few good men: Evolutionary psychology and female adolescent aggression. *Ethology and Sociobiology*, 16(2), 99-123. [https://doi.org/10.1016/0162-3095\(94\)00072-F](https://doi.org/10.1016/0162-3095(94)00072-F)
- Campbell, A. (2013). The evolutionary psychology of women's aggression. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 368(1631), Article 20130078. <https://doi.org/10.1098/rstb.2013.0078>
- Campbell, A., & Cross, C. (2012). Women and aggression. In T. K. Shackelford & V. A. Weekes-Shackelford (Eds.), *The Oxford handbook of evolutionary perspectives on violence, homicide, and war* (pp. 197-217). Oxford University Press.
- Carter, G. L., Campbell, A. C., & Muncer, S. (2014). The dark triad personality: Attractiveness to women. *Personality and Individual Differences*, 56, 57-61. <https://doi.org/10.1016/j.paid.2013.08.021>
- Davis, A. C., Dufort, C., Desrochers, J., Vaillancourt, T., & Arnocky, S. (2018). "Gossip as an intrasexual competition strategy: Sex differences in gossip frequency, content, and attitudes": Correction. *Evolutionary Psychological Science*, 4(2), Article 154. <https://doi.org/10.1007/s40806-017-0124-6>
- Davis, A. C., Vaillancourt, T., Arnocky, S., & Doyle, R. (2019). Gossip and reputation management: An evolutionary approach to sex differences in discrimination. In F. Giardini & R. Wittek (Eds.), *The Oxford handbook of gossip and reputation* (pp. 303-321). Oxford University Press.
- Fink, B., Klappauf, D., Brewer, G., & Shackelford, T. K. (2014). Female physical characteristics and intrasexual competition in women. *Personality and*

- Individual Differences*, 58, 138–141. <https://doi.org/10.1016/j.paid.2013.10.015>
- Fisher, M., Cox, A., & Gordon, F. (2009). Self-promotion versus competitor derogation: The influence of sex and romantic relationship status on intrasexual competition strategy selection. *Journal of Evolutionary Psychology*, 7(4), 287–308. <https://doi.org/10.1556/JEP.7.2009.4.6>
- Fisher, M. L., & Archibald, N. (2022). A thousand times more beautiful: Priming competitor derogation in women. *Current Psychology*, 41(1), 338–346. <https://doi.org/10.1007/s12144-019-00551-z>
- Fisher, M. L., & Cox, A. (2009). The influence of female attractiveness on competitor derogation. *Journal of Evolutionary Psychology*, 7(2), 141–155. <https://doi.org/10.1556/JEP.7.2009.2.3>
- 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. <https://doi.org/10.1111/spc3.12018>
- Garza, R., Pazhoohi, F., & Byrd-Craven, J. (2021). Does ecological harshness influence men's perceptions of women's breast size, ptosis, and intermammary distance? *Evolutionary Psychological Science*, 7(2), 174–183. <https://doi.org/10.1007/s40806-020-00262-w>
- Goncalves, M. K., & Campbell, L. (2014). The Dark Triad and the derogation of mating competitors. *Personality and Individual Differences*, 67, 42–46. <https://doi.org/10.1016/j.paid.2014.02.003>
- Hare, R. D. (2003). *The hare psychopathy checklist-revised (PCL-R)* (2nd ed.). Multi-Health Systems.
- Irwin, K., & Adler, C. (2012). Fighting for her honor: Girls' violence in distressed communities. *Feminist Criminology*, 7(4), 350–380. <https://doi.org/10.1177/1557085112436837>
- Jonason, P. K., Koenig, B. L., & Tost, J. (2010). Living a fast life. *Human Nature*, 21(4), 428–442. <https://doi.org/10.1007/s12110-010-9102-4>
- Jonason, P. K., Lyons, M., Baughman, H. M., & Vernon, P. A. (2014). What a tangled web we weave: The Dark Triad traits and deception. *Personality and Individual Differences*, 70, 117–119. <https://doi.org/10.1016/j.paid.2014.06.038>
- Jonason, P. K., Strosser, G. L., Kroll, C. H., Duineveld, J. J., & Baruffi, S. A. (2015). Valuing myself over others: The Dark Triad traits and moral and social values. *Personality and Individual Differences*, 81, 102–106. <https://doi.org/10.1016/j.paid.2014.10.045>
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the short Dark Triad (SD3). *Assessment*, 21(1), 28–41. <https://doi.org/10.1177/1073191113514105>
- Krems, J. A., French, J., & Filip-Crawford, G. (2024). A secret language of aggression: Disgust expressions are treated as cues of impending social exclusion among women. *Frontiers in Social Psychology*, 2, Article 1335368. <https://doi.org/10.3389/frsps.2024.1335368>
- Lyons, M., Gillies, N., & Brewer, G. (2019). Dark triad traits, Facebook intensity, and intrasexual competition. *Personality and Individual Differences*, 141, 157–159. <https://doi.org/10.1016/j.paid.2019.01.012>
- Lyons, M. T., & Hughes, S. (2015). Malicious mouths? The Dark Triad and motivations for gossip. *Personality and Individual Differences*, 78, 1–4. <https://doi.org/10.1016/j.paid.2015.01.009>
- Ness, C. D. (2004). Why girls fight: Female youth violence in the inner city. *Annals of the American Academy of Political and Social Science*, 595, 32–48. <https://doi.org/10.1177/0002716204267176>
- Nivette, A., Sutherland, A., Eisner, M., & Murray, J. (2019). Sex differences in adolescent physical aggression: Evidence from sixty-three low- and middle-income countries. *Aggressive Behavior*, 45(1), 82–92. <https://doi.org/10.1002/ab.21799>
- Österman, K. (2010). The mini direct indirect aggression inventory (Mini-DIA). In K. Österman (Ed.), *Indirect and direct aggression* (pp. 103–111). Peter Lang Verlag.
- Paulhus, D. L., Buckels, E. E., Trapnell, P. D., & Jones, D. N. (2021). Screening for dark personalities: The Short Dark Tetrad (SD4). *European Journal of Psychological Assessment*, 37(3), 208–222. <https://doi.org/10.1027/1015-5759/a000602>
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism and psychopathy. *Journal of Research in Personality*, 36(6), 556–563. [https://doi.org/10.1016/S0092-6566\(02\)00505-6](https://doi.org/10.1016/S0092-6566(02)00505-6)
- Pazhoohi, F., Garza, R., & Kingstone, A. (2022). Sexual receptivity signal of lordosis posture and intrasexual competition in women. *Sexes*, 3(1), 59–67. <https://doi.org/10.3390/sexes3010005>
- Reynolds, T. A., Maner, J. K., & Baumeister, R. F. (2025). Bless her heart: Gossip phrased with concern provides advantages in female intrasexual competition. *Journal of Experimental Social Psychology*, 116, Article 104670. <https://doi.org/10.1016/j.jesp.2024.104670>
- Semenyina, S. W., Vasey, P. L., & Honey, P. L. (2019). Replicating the relationships between Dark Triad traits and female mate-competition tactics in undergraduate women. *Personality and Individual Differences*, 147, 73–78. <https://doi.org/10.1016/j.paid.2019.04.028>
- Taylor, C. (1993). *Girls, gangs, women and drugs*. Michigan State University Press.
- Thomson, N. D., Bozgunov, K., Psederska, E., Aboutanos, M., Vasilev, G., & Vassileva, J. (2021). Physical abuse explains sex differences in the link between psychopathy and aggression. *Journal of Interpersonal Violence*, 36(19–20), 9208–9231. <https://doi.org/10.1177/0886260519865956>

- van Geel, M., Goemans, A., Toprak, F., & Vedder, P. (2017). Which personality traits are related to traditional bullying and cyberbullying? A study with the Big Five, Dark Triad and sadism. *Personality and Individual Differences*, 106, 231–235. <https://doi.org/10.1016/j.paid.2016.10.063>
- Vernon, P. A., Villani, V. C., Vickers, L. C., & Harris, J. A. (2008). A behavioral genetic investigation of

the Dark Triad and the Big 5. *Personality and Individual Differences*, 44(2), 445–452. <https://doi.org/10.1016/j.paid.2007.09.007>

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