

How Dark Personalities Perpetrate Partner and General Aggression in Sweden and the United Kingdom

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Abstract

Research has demonstrated, in Western nations, men and women are both perpetrators and victims of intimate partner violence (IPV). However, to the best of our knowledge, IPV and the Dark Tetrad (Machiavellianism, subclinical narcissism, subclinical psychopathy, and subclinical sadism) have not been included in this research fully. We investigated how these dark personalities influenced the perpetration of IPV in a cross-cultural study between Sweden and the United Kingdom through surveys with university students. We furthermore compared IPV perpetration with same-sex aggression of a non-romantic partner to explore sex- and aggression-specific effects. In a sample of 342 participants, our main findings were the following: (a) the only significant difference in IPV perpetration was women were more verbally aggressive; (b) men reported more verbal and physical same-sex aggression of a non-romantic partner; (c) men scored higher on all the Dark Tetrad personalities regardless of culture, while the Swedish sample scored significantly higher on subclinical narcissism and sadism; (d) the Dark Tetrad and aggression perpetration were significantly correlated; (e) different Dark

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Tetrad personalities predicted different forms of aggression perpetration with some gender differences; and (f) being high on subclinical psychopathy predicted most types of aggression regardless of target. Our study highlights that dark personalities engage in particular types of aggression, which helps to determine how and when distinctive personalities aggress for potential interventions.

Keywords

Dark Triad, subclinical sadism, intimate partner violence, domestic violence, perpetration, cross-culture

Feminist theorists maintain that intimate partner violence (IPV) is an asymmetrical problem of men's violence toward women (R. E. Dobash & Dobash, 1979; R. P. Dobash & Dobash, 2004); therefore, it should be studied on its own and not within the context of either other family violence or violence that occurs outside the home (Debbonaire & Todd, 2012). From this theoretical perspective, there is a focus on social, rather than psychological explanations; IPV is described as a method for men to inflict control over women to retain their patriarchal status (DeKeseredy, 2011). This approach views IPV as predominantly perpetrated by controlling, dominating men with women's violence being largely self-defensive. In contrast, Felson (2002) and other researchers (Dutton, 2012; Hamel, 2007) have advocated studying IPV within the context of violence in general, including advocating for a gender-inclusive approach to IPV, avoiding any stereotypical preconceptions around gender. This is supported by research that suggests there is parity in IPV perpetration (Archer, 2000), the prevalence of bidirectional IPV (Charles, Whitaker, Le, Swahn, & DiClemente, 2011), and other research detailing the multitude of risk factors associated with IPV for men and women (Moffitt, Caspi, Rutter, & Silva, 2001).

Within this general aggression perspective, there is a tendency to focus on studying IPV in comparison to other general aggression models. Studies that have explored IPV in this way have revealed the complexity in psychopathology and personality that forms the profiles of IPV perpetrators (Babcock, Miller, & Siard, 2003) and the overlap that exists with other types of aggression. For example, Bates, Archer, and Graham-Kevan (2017) explored a number of risk and protective factors in both IPV and same-sex aggression in non-romantic relationships (SSA) for men and women. They found a significant overlap between aggression type and gender. Specifically, within their series of studies, they found self-control was a significant predictor of both

Table 1. Dark Tetrad Similarities and Unique Features.

	Machiavellians	Narcissists	Psychopaths	Sadists
Commonalities	Self-promoting; Emotionally cold; Low agreeableness; Aggressive tendencies; malevolent			
Traits	Manipulatively cold; End justifies the means	Self enhancement; Sense of superiority and entitlement; Grandiosity; Dominance	Antisocial behavior; High impulsivity; Thrill seeking; Low anxiety and empathy	Callous tendency to enjoy others' suffering; <i>Schadenfreude</i>
When aggress	Only if benefits far out way costs; Afraid of being caught or retaliated against	Threatened ego	Instrumental with low cost to themselves	Any opportunity to indulge; Unprovoked, even at high cost to themselves and with time delay

types of aggression for both sexes, but in a subsequent study, primary psychopathy—having affective deficit—predicted men's IPV, whereas secondary psychopathy—having affective disturbance—predicted IPV and SSA for men and women (Karpman, 1941). Primary and secondary psychopathy are thought to be similar in their manifestation of antisocial and deceptive behavior. For these reasons, we have investigated both IPV and SSA within the same sample to determine whether IPV belongs as part of a general aggression model. We additionally incorporated the Dark Tetrad—Machiavellianism, subclinical narcissism, subclinical psychopathy, and subclinical sadism—to go beyond the well-researched psychopathy to explore their predictive power on verbal and explosive aggression as well as IPV and SSA between two countries with relatively high gender empowerment—Sweden and the United Kingdom.

The Dark Tetrad: Overlap, Uniqueness, and Aggression Expression

As we will discuss, the initial dark personality construct (Dark Triad, D3) consisted of Machiavellianism, subclinical narcissism, and subclinical psychopathy. Later subclinical sadism was added to create the Dark Tetrad (D4).

The core tendency of Machiavellianism is characterized by a propensity for interpersonal manipulation with a self-serving motivation (Christie & Geis, 1970; McHoskey, 1995; see Table 1 for a summary). Ultimately, they

put their own needs above others while using manipulation to achieve their goals (Kerig & Stellwagen, 2010). Those higher on Machiavellianism limit their aggression to situations where there are significant benefits to them and so long as they can go undetected and unpunished (Jones & Paulhus, 2011). Subclinical narcissism involves grandiosity, a sense of superiority and entitlement, and dominance (Raskin & Hall, 1979). They have an extremely self-centered focus where they expect special treatment and have the motivation to exploit other people to achieve it (McHoskey, 1995). They additionally lack self-insight, overestimating their own capabilities (Raskin & Hall, 1979). Narcissism is associated with the use of aggression nearly exclusively under an ego threat (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). The attributes of subclinical psychopathy include low anxiety and empathy, thrill seeking, and high impulsivity (Hare, 1985). Psychopathy is also strongly associated with predatory, antisocial behavior, and instrumental aggression, or the threat of it, with minimal automatic arousal, often “planned, purposeful, and emotionless violence” (Meloy, 1997, p. 630). Psychopathy can be seen as being well suited to predatory aggression because of their lack of fear and anxiety (Meloy, 1992). For instance, Reidy, Zeichner, and Martinez (2008) found men who had higher levels of psychopathic traits had 30% greater probability of becoming aggressive in the absence of provocation than those lower on psychopathic traits. Other researchers have posited that psychopathic aggression is due to the lack of empathy with high antagonism (Jones, Miller, & Lynam, 2011). Those high on subclinical sadism are motivated to inflict and enjoy others’ suffering (Chabrol, Melioli, Van Leeuwen, Rodgers, & Goutaudier, 2015). They tend to aggress even when unprovoked and even when it is delayed and personally costing (Buckels, Jones, & Paulhus, 2013; Campbell et al., 2004). Unlike those high on psychopathy, those high on sadism are willing to put in a high amount of effort to inflict pain. For sadism, there is a callous tendency for *schadenfreude* (Buckels et al., 2013). They are motivated by their appetite to inflict cruelty, which may or may not be sexualized, regardless of the cost to themselves or delay (Campbell et al., 2004). We hypothesize those high on the different D4 personalities will perpetrate IPV and SSA uniquely.

D4 share conceptual resemblance, and there is significant empirical overlap. However, while they demonstrate shared variance, the degree of relatedness is not high enough to warrant them being considered a singular construct. The four personality traits are a collection of subclinical personality traits that share tendencies of aggressiveness, grandiosity, malevolence, and emotional coldness (Paulhus & Williams, 2002). Paulhus and Williams (2002) sought to provide some academic clarity on personality traits that were aversive and antisocial but did not prevent people from

functioning in society, meaning clinical attributes remain but are not severe enough to become a clinical diagnosis. Research has also indicated that these personality traits are all associated with a propensity for aggression—each personality type expressing aggressive behavior uniquely and under a specific set of conditions or threats. As expected, the D3 do contain some correlational overlapping: Machiavellianism with narcissism (.25), narcissism with psychopathy (.50), and psychopathy with Machiavellianism (.31; Paulhus & Williams, 2002). As sadism was added to the dark personality construct recently (Chabrol, Van Leeuwen, Rodgers, & Séjourné, 2009; Reidy, Zeichner, & Seibert, 2011), there is ongoing research to determine the overlap with the other three dark personalities.

Comparatively less research has been done examining the Triad or Tetrad together as a construct. However, those who have done so have suggested a link between the dark personalities and aggression (Webster et al., 2016), bullying (Baughman, Dearing, Giammarco, & Vernon, 2012), and Internet trolling (Buckels, Trapnell, & Paulhus, 2014). Jones and Paulhus (2010) utilized an experimental paradigm to explore triggers to aggression within subclinical narcissists and psychopaths where negative feedback (an insult and ego threat) resulted in more aggressivity. However, a physical white noise blast triggered those higher on psychopathy to behave aggressively. Other research findings support these results (Barry, Chaplin, & Grafeman, 2006; Bushman & Baumeister, 1998).

The Dark Tetrad and IPV

The association between subclinical psychopathic traits and IPV has been examined quite extensively (Grann & Wedin, 2002). The research has established a clear link between the two as well as the importance psychopathy plays in predicting IPV perpetration recidivism for both men (Hilton, Harris, Rice, Houghton, & Eke, 2008) and women (Weizmann-Henelius, Viemerö, & Eronon, 2004). For instance, both Jacobson et al. (1994) and Tweed and Dutton (1998) determined there were two distinct groups of personalities that predicted IPV perpetration that correlated to psychopathic (instrumental) and sadistic (impulsive) personality traits. There is comparatively little research examining Machiavellianism and narcissism as predictors of IPV. One of the few studies that did so found that narcissism personality disorder and subclinical narcissism were associated with IPV in veterans entering treatment programs (Rothschild, Dimson, Storaasli, & Clapp, 1997).

While some of the individual traits have been explored within the area of IPV, the D4, as a cluster of personality traits, has not received the same empirical attention. As previous research has demonstrated the link between the traits

and aggression toward same-sex others (Webster et al., 2016), it is likely the subjective experience of conflict between these two types of targets—intimate partners and same-sex non-partners—is different. The interdependency that is created within intimate relationships means conflict is inevitable, particularly under provocation since anger and emotional arousal have been shown to be predictors of IPV (Finkel, 2007). Driscoll, Zinkivskay, Evans, and Campbell (2006) suggested people with better inhibitory control expressed their anger only when anger and emotional arousal were higher. However, people with dark personality traits, specifically psychopathy, may experience conflict differently due to less experienced emotionality (Wastell & Booth, 2003).

Research indicates people higher on the dark personalities are associated with short-term mating strategies that can increase conflict and, in turn, increase IPV perpetration (Jonason, Li, Webster, & Schmitt, 2009). Webster et al. (2016) examined the D3 and aggression in undergraduate dating couples. They found that by modeling participants' and their partners' aggression, the partner's D3 scores could be related to their partner's aggression score, indicating the importance of studying the D4 personality traits and their predictive power within IPV. There has been a link established with these dark personalities and aggressive behavior, but the interdependency and levels of conflict that exist within romantic relationships means we cannot necessarily assume these traits impact IPV in the same way. This is a gap that this study seeks to rectify.

Aims and Hypotheses

The first aim of the current study was to explore the predictive power of the D4 personalities on both IPV and SSA perpetration for men and women (Aim 1). Approaching the study of IPV in this way supports the view that IPV can be included in theories of aggression rather than a gender-specific model as feminist theories claim. Furthermore, we examined whether and how each D4 personality type—Machiavellianism, narcissism, psychopathy, and sadism—influenced their perpetration for each type of IPV—explosive, physical, and verbal—or SSA (Aim 2). These aspects were further examined in two cultures to determine any cultural influences. Sweden and the United Kingdom were chosen as they both are ranked relatively similarly on the Gender Empowerment ratings,¹ are located in Europe and members of the European Union (at the time of data collection), and have high levels of English. Despite these similarities, Sweden has a very low violent crime rate and was the first country to ban all corporal punishment at home and in school back in 1979 (Janson, 2009), indicating there may be culturally specific similarities and differences found within these results.

We hypothesized that there will be sex and cultural differences on SSA (men will perpetrate more) but not IPV perpetration, which will be bidirectional (Hypothesis 1); there will be gender differences on the D4 (Hypothesis 2); Dark Tetrad and aggression perpetration will be significantly correlated (Hypothesis 3); and the D4 personalities will predict different forms of IPV and SSA perpetration with psychopathy being the best predictor of perpetration (Hypothesis 4).

Method

Participants and Procedure

Participants were students recruited via email and lectures at Lund University (Sweden) and the University of Cumbria (UK). Questionnaires were available for completion online, and all participants were required to be in a romantic relationship, or have been in a romantic relationship, of at least 1 month's duration in the past year. Questionnaires were completed anonymously, and participants were not compensated for their time. Full ethical approval was gained from the University of Cumbria Ethics Committee before data collection commenced. To avoid priming effects, participants completed the IPV scales followed by the personality measures. Within each section, questions were randomized to avoid order effects.

The final sample included 342 participants² (204 women and 138 men) between 18 and 67 years ($M = 26.54$, $SD = 7.73$) with the men being significantly older ($M = 27.72$, $SD = 8.40$) than the women ($M = 25.74$, $SD = 7.16$): $t(340) = 2.34$, $p < .05$. The majority described themselves as White (90.6%); Asian, Asian English, or Asian British (2.9%); Black, Black English, or Black British (1.2%); or mixed background (2.0%). Most of the sample stated they had a current partner (73%) of which 42% were cohabitating. More participants had lived in Sweden (68%) than in the United Kingdom (32%).

Measures

For IPV and SSA, a modified version of the original Conflict Tactics Scales (CTS; Straus, 1979) was used. The modified CTS contains three aggression subscales, verbal (e.g., "insulted or swore at them"), explosive (also referred to as displaced aggression; e.g., "threw something [but not at the other one] or smashed something" and "destroyed/damaged something that belonged to them), and physical aggression (e.g., "hit or tried to hit with something"). Two items from the Richardson Conflict Response Questionnaire (RCRQ; Green, Richardson, & Lago, 1996), "yelled or screamed at them" and "tried

to make them look stupid” were added to the verbal subscale. Participants were asked how they solved conflict with an intimate partner (IPV) and then with someone of the same sex as them but not a romantic partner (SSA) during the past 12 months. The responses for these items were recorded on a 6-point Likert-type scale from 0 (this has never happened) to 6 (more than 20 times). The analysis involved the items being coded into the three perpetration subscales with levels of reliability of IPV (verbal $\alpha = .82$, explosive $\alpha = .64$, and physical $\alpha = .78$) and same-sex aggression (verbal $\alpha = .81$, explosive $\alpha = .56$, and physical $\alpha = .92$). According to Field (2005), there are reasons to dispute the usual .70 level of reliability depending on what is being measured (e.g., psychological constructs tend to have lower scores than personality or intelligence tests) and the number of items. Based on this, we deemed that the reliability levels for this study were acceptable.

We used the Short Dark Triad (Jones & Paulhus, 2014) to measure Machiavellianism (e.g., “I like to use clever manipulation to get my way”), narcissism (e.g., “Many group activities tend to be dull without me”), and psychopathy (e.g., “People often say I’m out of control”). Each subscale had 9 items with each item scored on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). They all achieved acceptable levels of reliability ($\alpha = .81$, $\alpha = .70$, $\alpha = .60$, for Machiavellianism, narcissism, and psychopathy, respectively; see above discussion around acceptability of reliability scores). Sadism was measured with two scales: The Short Sadistic Impulse Scale (SSIS; O’Meara, Davies, & Hammond, 2011), which consisted of 10 items (e.g., “I enjoy seeing people hurt”), scored from 1 (*strongly disagree*) to 5 (*strongly agree*). This scale had a good level of reliability ($\alpha = .71$). The second sadism scale consisted of the seven core relationship sadism items on the Varieties of Sadistic Tendencies (VAST; Paulhus & Jones, 2014). This was scored from 1 (*not at all*) to 7 (*very much*); however, the reliability was very poor, excluding it from further analysis ($\alpha = .25$).³ All measures were completed in English.

Results

Sex and Cultural Differences in Aggression

Sex differences were examined using multivariate analyses of covariance (MANCOVAs). This involved using sex as the independent variable and using the three aggression scales—verbal, explosive, and physical—as dependent variables for IPV and SSA. Because crime statistics and aggression questionnaires show a decrease in aggression with age (O’Leary, 2006), we controlled for age given that men were significantly older in our sample. We found women demonstrated significantly more verbal IPV perpetration

Table 2. Mean Frequency and (Standard Deviations), *F*, and *d* Values for Physical, Explosive, and Verbal Aggression Toward Partners and Same-Sex Others.

	Men (<i>n</i> = 138)	Women (<i>n</i> = 204)	Sample Mean (<i>n</i> = 342)	<i>d</i> Value ^a	<i>F</i> Value ^b
IPV Physical	.35 (1.58)	.56 (2.11)	.48 (1.92)	-.11	.79
IPV Explosive	.33 (1.21)	.32 (.96)	.32 (1.07)	.01	.01
IPV Verbal	6.14 (6.09)	8.74 (7.65)	7.69 (7.16)	-.38	9.99*
SSA Physical	.76 (3.34)	.26 (1.17)	.46 (2.31)	.22	4.45*
SSA Explosive	.13 (.69)	.16 (.73)	.15 (.71)	-.04	.04
SSA Verbal	5.31 (6.20)	4.22 (5.52)	4.66 (5.82)	.19	4.47*

Note. IPV = intimate partner violence; SSA = same-sex aggression.

^aA positive *d* value indicates a higher male score controlling for age.

^bThis is derived from a multivariate analysis of covariance controlling for age, with *df* of (1, 339) the *F* denotes univariate *F* values. The multivariate *F* was found to be significant: $F(6,334) = 5.19, p < .001$.

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

than men, while men showed significantly more SSA verbal and physical aggression than women (see Table 2). There were no significant sex differences in other forms of IPV or SSA, indicating that most IPV perpetration is bidirectional while men perpetrate more SSA. There were no distinctions in the amount of IPV perpetration between Sweden and the United Kingdom for verbal, $t(340) = 1.29, p = .197$; explosive, $t(340) = .80, p = .424$; and physical, $t(340) = .91, p = .366$.

Sex and Cultural Differences in Personality

Next, we explored differences between men and women by country in terms of the dark personalities. As can be seen in Table 3, men scored significantly higher on all the D4 personalities compared with women. Swedish participants scored significantly higher on narcissism and sadism, while Machiavellianism and psychopathy showed no significant cultural differences.

Sex Differences in Dark Tetrad as Predictors of Aggression

To explore whether the D4 had an impact on aggressive behavior, we explored their predictive power on each type of measured aggression perpetration for men and women and Sweden and the United Kingdom separately. In studies of physical aggression, the majority of participants are typically non-aggressive (Archer, Fernández-Fuertes, & Thanzami, 2010), thus creating a skewed,

Table 3. Mean Frequency and (Standard Deviations) of Dark Personality Measures for Men and Women and Sweden and the United Kingdom.

	Men (<i>n</i> = 141)	Women (<i>n</i> = 217)	<i>F</i> Value ^a	Sweden	UK	<i>F</i> Value ^b
Machiavellianism	23.48 (6.97)	20.61 (6.14)	16.23**	21.90 (6.58)	21.50 (6.65)	.28
Narcissism	23.70 (5.72)	22.17 (5.72)	5.87*	23.88 (5.62)	20.48 (5.37)	28.01**
Psychopathy	17.19 (4.34)	14.70 (4.12)	28.76**	15.97 (4.39)	15.16 (4.31)	2.55
Sadism	15.16 (4.91)	13.07 (3.56)	20.66**	14.45 (4.60)	12.78 (3.21)	11.70*

^aThis is derived from a multivariate analysis of covariance (MANCOVA), with *df* of (1, 339) the *F* denotes univariate *F* values. The multivariate *F* was found to be significant: $F(4,336) = 8.91, p < .001$.

^bThis is derived from a MANCOVA, with *df* of (1, 339) the *F* denotes univariate *F* values. The multivariate *F* was found to be significant: $F(4,336) = 10.69, p < .001$.

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

overdispersed data set (i.e., the standard deviation is higher than the mean). This makes standard regression models inappropriate. Instead, the preferred analytical technique is negative binomial regression (Hilbe, 2007). Prior to carrying out the analysis, we calculated the zero-order correlations between the measures of aggression. Table 4 shows that the majority of the relationships between aggression and personality variables were significant and positive; this was with the exception of some sex- and cultural-specific effects. Machiavellianism, narcissism, psychopathy, and sadism were regressed onto IPV and SSA perpetration, separately for men and women and then for Sweden and the United Kingdom.

IPV. Psychopathy emerged as the personality trait most predicting IPV perpetration for both men and women (see Table 5). It emerged as a significant positive predictor of men's verbal, explosive, and physical as well as women's verbal IPV perpetration. Narcissism was also a significant predictor of men's explosive IPV aggression while Machiavellianism predicted less physical IPV perpetration for men. Sadism predicted women's IPV physical aggression. The goodness of fit statistic, for men and women, respectively, was acceptable for verbal (deviance = 1.23 and 1.21), explosive (deviance = .35 and .43), and physical aggression (deviance = .33 and .47).

SSA. Table 6 displays the second regression with the same method and variables but onto SSA. Psychopathy again emerged as an important predictor of SSA; it positively predicted men's explosive and physical aggression and women's verbal and explosive aggression. As with IPV, sadism predicted women's physical aggression in SSA. The goodness of fit statistic, for men and women, respectively, was acceptable for verbal (deviance = 1.19 and 1.09), explosive (deviance = .47 and .46), and physical aggression (deviance = .36 and .80).

Table 4. Zero-Order Correlations Between IPV, SSA Perpetration, and Personality [Men/Women] and {Sweden/United Kingdom}.

	Machiavellianism	Narcissism	Psychopathy	Sadism
IPV Verbal	.12* [.09/.22**] {.12/.13}	.04 [−.07/.13] {.03/.11}	.22** [.23*/.31**] {.23**/.20*}	.15* [.17*/.24**] {.18*/.15}
IPV Explosive	.08 [−.05/.19*] {.03/.29*}	.02 [−.21*/.21*] {.03/−.04}	.19* [.10/.27**] {.18*/.19*}	.15** [.07/.26**] {.13*/.22*}
IPV Physical	.01 [−.12/.11] {−.03/.15}	−.01 [−.14/.07] {−.05/.05}	.10 [.09/.13] {.11/.09}	.12** [−.03/.26**] {.12/.06}
SSA Verbal	.67** [.26*/.24**] {.27**/.26*}	.07 [.10/.03] {.16*/−.01}	.36** [.39**/.36**] {.37**/.33**}	.31** [.29*/.30**] {.38**/.23*}
SSA Explosive	.21** [.13/.28**] {.22*/.23*}	.14* [.09/−.07] {.18*/−.01}	.24** [.26*/.30**] {.26**/.22*}	.18** [.08/.29**] {.19*/.06}
SSA Physical	.14* [.14/.13] {.13*/.21*}	.12* [.15*/−.05] {.15*/}	.23** [.21*/.19*] {.22*/.34**}	.16* [.10/.26**] {.15*/.21*}
Narcissism	.33** [.34**/.28**] {.30**/.39**}	—	—	—
Psychopathy	.49** [.49**/.46**] {.50**/.47**}	.36** [.29**/.38**] {.36**/.33**}	—	—
Sadism	.44** [.50**/.32**] {.47**/.39**}	.13 [.13/.21*] {.16*/.14}	.42** [.41**/.51**] {.49**/.51**}	—

Note. IPV = intimate partner violence; SSA = same-sex aggression.

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

Cultural Differences in Dark Tetrad as Predictors of Aggression

Machiavellianism, narcissism, psychopathy, and sadism were regressed onto IPV and SSA perpetration separately for Sweden and the United Kingdom.

IPV. Psychopathy emerged as the only significant predictor of all three types of IPV aggression for Sweden, but there were no significant predictors for the UK participants (see Table 7). The goodness of fit statistic, for Sweden and

Table 5. Negative Binomial Regression of Personality onto IPV Perpetration Separately for Men and Women.

Parameter	Men					Women				
	β	SE	Wald 95% CI		χ^2	β	SE	Wald 95% CI		χ^2
			LL	UL				LL	UL	
Verbal										
Intercept	1.25	.47	.33	2.17	7.06*	.96	.35	.26	1.65	7.27*
Machiavellianism	.01	.02	-.04	.02	.29	.02	.01	-.01	.04	1.33
Narcissism	-.03	.02	-.06	.01	2.54	-.01	.01	-.03	.02	.11
Psychopathy	.06	.02	.10	.10	5.35*	.04	.02	.00	.08	4.26*
Sadism	.03	.03	-.02	.07	1.45	.03	.02	-.02	.07	1.60
Explosive										
Intercept	-2.93	1.71	-6.28	.42	2.93	-4.51	1.10	-6.67	-2.36	16.83**
Machiavellianism	-.06	.06	-.17	.05	1.26	.03	.04	-.05	.11	.40
Narcissism	-.14 ^a	.06	-.25	-.03	5.99*	.03	.04	-.05	.12	.61
Psychopathy	.24	.10	.05	.44	5.92*	.09	.08	-.07	.24	1.22
Sadism	.11	.07	-.03	.26	2.32	.04	.07	-.10	.17	.33
Physical										
Intercept	-3.26	1.63	-6.46	-.05	3.97*	-4.42	1.37	-7.11	-1.73	10.37*
Machiavellianism	-.17 ^a	.08	-.32	-.01	4.23*	.06	.05	-.03	.15	1.91
Narcissism	-.09	.06	-.21	.02	2.45	-.02	.05	-.11	.08	.12
Psychopathy	.34 ^a	.11	.12	.55	9.67*	-.10	.07	-.16	.14	.02
Sadism	.11	.08	-.05	.27	1.88	.21	.07	.07	.35	8.33*

Note. IPV = intimate partner violence; CI = confidence interval; LL = lower limit; UL = upper limit.

^aDenotes significantly different Beta values between the two groups (see Paternoster, Brame, Mazerolle, & Piquero, 1998).

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

the United Kingdom, respectively, was acceptable for verbal (deviance = 1.19 and 1.25), explosive (deviance = .41 and .77), and physical aggression (deviance = .43 and .36).

SSA. Within the Swedish sample, psychopathy and sadism were significant predictors: Psychopathy for verbal, explosive, and physical aggression, and sadism for verbal and physical (see Table 8). However, the results for the UK sample were more complex. There were no significant predictors for verbal SSA, but narcissism and psychopathy predicted both explosive and physical aggression in the United Kingdom. Machiavellianism also significantly predicted explosive aggression. The goodness of fit statistic, for Sweden and the United Kingdom, respectively, was acceptable for verbal (deviance = 1.13 and 1.16), explosive (deviance = .50 and .45), and physical aggression (deviance = .26 and .31).

Table 6. Negative Binomial Regression of Personality onto Same-Sex Aggression Perpetration Separately for Men and Women.

Parameter	Men					Women				
	β	SE	Wald 95% CI		χ^2	β	SE	Wald 95% CI		χ^2
			LL	UL				LL	UL	
Verbal										
Intercept	-.11	.56	-1.21	1.00	.04	-.20	.58	-1.33	.93	.12
Machiavellianism	.01	.02	-.03	.05	.41	.02	.02	-.02	.06	.84
Narcissism	-.01	.02	-.05	.03	.12	-.04	.02	-.08	.00	3.41
Psychopathy	.06	.03	-.00	.12	3.64	.09	.03	.02	.15	6.62*
Sadism	.04	.03	-.02	.09	1.56	.06	.04	-.01	.13	2.58
Explosive										
Intercept	-7.88	1.80	-11.42	-4.35	19.10**	-7.06	1.07	-9.16	-4.95	43.20**
Machiavellianism	.04	.05	-.06	.15	.63	.10	.04	.02	.17	6.43*
Narcissism	.03	.05	-.06	.12	.36	.00	.04	-.08	.08	.00
Psychopathy	.23	.08	.07	.38	7.98*	.14	.06	.02	.25	5.18*
Sadism	-.02	.06	-.14	.09	.15	.04	.05	-.06	.13	.61
Physical										
Intercept	-9.60	2.63	-14.75	-4.45	13.34**	-5.40	.89	-7.14	-3.65	36.62**
Machiavellianism	-.04	.07	-.19	.11	.29	-.00	.03	-.06	.05	.02
Narcissism	.05	.08	-.10	.21	.42	.03	.03	-.04	.09	.69
Psychopathy	.34 ^a	.10	.14	.54	10.89*	.07	.05	-.02	.17	2.51
Sadism	.14	.12	-.09	.38	1.48	.16	.05	.07	.25	12.07*

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

^aDenotes significantly different Beta values between the two groups (see Paternoster, Brame, Mazerolle, & Piquero, 1998).

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

Discussion

The aim of the current study was to explore the predictive power of the D4 on both IPV and SSA for men and women between two cultures—Sweden and the United Kingdom—which are similarly high on gender empowerment scales, allowing for better cross-cultural comparisons. It involved measuring IPV and SSA within the same sample, adding to only a few studies (Bates, Graham-Kevan, & Archer, 2014; Swahn, Simon, Arias, & Bossarta, 2008) that have studied IPV and SSA in this way. While the dark personalities have been linked to aggressive behavior, we cannot assume these traits perpetrate IPV in the same manner. With this research design and results, we suggest that IPV perpetration should not be a gender-specific model but included into theories of general aggression. To the best of our knowledge, this study is first to look at the predictive power of the D4 as a construct on IPV and SSA perpetration in the same study.

Table 7. Negative Binomial Regression of Personality onto IPV Perpetration Separately for Sweden and the United Kingdom.

Parameter	Sweden					UK				
	β	SE	Wald 95% CI		χ^2	β	SE	Wald 95% CI		χ^2
			LL	UL				LL	UL	
Verbal										
Intercept	1.22	.37	.50	1.94	11.06*	1.41	.46	.51	2.31	9.34*
Machiavellianism	.00	.01	-.03	.03	.00	.00	.02	-.03	.04	.04
Narcissism	-.01	.01	-.04	.02	.70	.01	.02	-.03	.04	.06
Psychopathy	.04	.02	.01	.08	5.27*	.03	.03	-.03	.08	.88
Sadism	.02	.02	-.02	.06	1.31	.01	.03	-.05	.08	.15
Explosive										
Intercept	-2.97	1.00	-4.92	-1.02	8.91*	-3.40	1.09	-5.53	-1.27	9.79*
Machiavellianism	-.05	.04	-.13	.04	1.22	.04	.04	-.03	.12	1.41
Narcissism	-.02	.04	-.10	.06	.29	-.08	.04	-.16	.01	3.06
Psychopathy	.15	.06	.03	.27	5.70*	.10	.07	-.05	.24	1.75
Sadism	.06	.05	-.05	.17	1.25	.07	.07	-.07	.21	.90
Physical										
Intercept	-2.44	1.14	-4.67	-.20	4.56*	-3.55	1.76	-6.99	-.11	4.10*
Machiavellianism	-.06*	.04	-.15	.02	2.02	.13	.08	-.03	.28	2.62
Narcissism	-.05	.05	-.13	.04	1.02	-.01	.09	-.19	.16	.02
Psychopathy	.14	.06	.03	.26	5.73*	.02	.15	-.27	.30	.02
Sadism	.12	.06	.01	.23	4.45*	-.04	.13	-.30	.22	.08

Note. IPV = intimate partner violence; CI = confidence interval; LL = lower limit; UL = upper limit.

^aDenotes significantly different Beta values between the two groups (see Paternoster, Brame, Mazerolle, & Piquero, 1998).

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

There were no gender differences in IPV perpetration, save women were significantly more verbally aggressive toward their partners than men were toward theirs. This is consistent with previous literature in demonstrating parity in IPV perpetration where unselected samples and gender-neutral survey methods were utilized (Archer, 2000; Bates et al., 2014). Researchers have discovered while IPV incident rates are similar for men and women, female victims suffered more serious injuries (Archer, 2000). However, this can be problematic as men are less likely to report their injuries (Bates & Graham-Kevan, 2016; Felson & Paré, 2005). In a study in one emergency room, Mechem, Shofer, Reinhard, Hornig, and Datner (1999) found that 13% of all male patients had been IPV victims with 14% requiring medical attention for their injuries. While this has implications for the gendered models of IPV within the literature, it indeed has even more significant influence when considering the impact of this model within policy and interventions, as gendered models of perpetrator interventions are unlikely to be effective for

Table 8. Negative Binomial Regression of Personality Onto Same-Sex Aggression Perpetration Separately for Sweden and the United Kingdom.

Parameter	Sweden					UK				
	β	SE	Wald 95% CI		χ^2	β	SE	Wald 95% CI		χ^2
			LL	UL				LL	UL	
Verbal										
Intercept	-.69	.48	-1.63	.24	2.11	.37	.80	-1.20	1.94	.21
Machiavellianism	.01	.02	.02	.05	.45	.01	.02	-.03	.06	.34
Narcissism	-.01	.02	-.04	.03	.22	-.03	.03	-.09	.03	.92
Psychopathy	.07	.03	.01	.12	6.15*	.08	.04	-.00	.16	3.52
Sadism	.07	.03	.01	.11	6.10*	.02	.05	-.08	.13	.20
Explosive										
Intercept	-8.37	1.18	-10.69	-6.05	50.09**	-2.47	1.67	-5.73	.80	2.19
Machiavellianism	.06	.04	-.02	.14	2.29	.09	.04	.00	.18	4.13*
Narcissism	.07 ^a	.04	-.01	.15	2.65	-.14	.06	-.26	-.01	4.55*
Psychopathy	.16	.05	.05	.26	8.53*	.21	.09	.02	.39	4.92*
Sadism	.02	.04	-.07	.10	.16	-.20	.12	-.44	.04	2.68
Physical										
Intercept	-9.71	2.55	-14.71	-4.71	14.50**	-5.53	2.37	-10.18	-.89	5.45*
Machiavellianism	-.13 ^a	.07	-.27	.01	3.50	.08	.06	-.04	.20	1.59
Narcissism	.17 ^a	.09	-.01	.35	3.32	-.19	.09	-.38	-.01	4.20*
Psychopathy	.24	.10	.05	.43	6.27*	.36	.12	.11	.60	8.21*
Sadism	.22	.11	.00	.43	3.99*	-.03	.18	-.37	.32	.02

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

^aDenotes significantly different Beta values between the two groups (see Paternoster, Brame, Mazerolle, & Piquero, 1998).

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

violent women or bidirectional violence (see Bates, Graham-Kevan, Bolam, & Thornton, 2017, for a full review). The current study highlights the needs for significant changes in the way IPV interventions are approached in practice. In terms of SSA, as predicted, men perpetrated significantly more verbal and physical aggression. This contrasting pattern of sex differences has been found in other literature that has studied both types of aggression within the same sample (Cross, Copping, & Campbell, 2011).

As hypothesized, men scored significantly higher on all four of the D4 variables. This is consistent with previous literature (Paulhus & Williams, 2002). This further supports literature discussing men's propensity for more socially exploitative behavior (Jonason & Webster, 2010). Women's exploitative behavior could be costlier due to higher levels of empathy (Bates et al., 2017) and dependence on social networks (Jonason, Webster, & Lindsey, 2008), thereby inhibiting exploitative behavior and, in turn, inhibiting SSA perpetration.

In reference to D4 cultural differences, the Swedish sample scored significantly higher for both narcissism and sadism, but there were no differences between psychopathy and Machiavellianism. We had not hypothesized any cultural differences on the D4, and these need further investigation to tease apart potential factors contributing to these variances. For narcissism, one potential explanation is authentic pride as Tracy, Cheng, Trzesniewski, and Robins (2009) found participants who were both self-aggrandizing narcissists and displaying authentic pride tended to overclaim their knowledge. Therefore, as Sweden regularly tops “best in the world lists,” such as Forbes’ (2017) Best Country for Business, this could indicate the Swedish sample may be displaying authentic pride. Because we did not measure authentic pride, we cannot determine this. The variances in sadism are harder to explicate as theoretically there should be no difference in base rates between cultures. However, measurement issues could provide a potential explanation and that sadism requires more or less cultural sensitivity. While the SSIS reached a good reliability, the items from the VAST did not. Despite good results and reliability in North American samples (Buckels et al., 2013; Buckels et al., 2014), in a sample of 128 participants from Sweden (Tetreault & Hoff, in preparation), the VAST items also failed to reach useable reliability, raising the question of cultural measurement issues for subclinical sadism.

There were sex-specific and aggression-specific effects when exploring the predictive power of D4 on IPV and SSA. For both men and women, the most important predictor was being high on psychopathy. This predicted men’s verbal, explosive, and physical IPV and explosive and physical SSA. For women, being high on psychopathy predicted verbal IPV and verbal and explosive SSA. Psychopathy having the most predictive power over aggression is as hypothesized and consistent with previous literature that has shown the link between it and both IPV (Grann & Wedin, 2002) and general aggression (Reidy et al., 2008). As psychopaths in general aggress instrumentally, these results demonstrate their proclivity for aggression regardless of their target. Men’s propensity to score higher for this trait is also seen in previous literature (Dolan & Völlm, 2009); however, generally psychopathy within female samples is less often examined, and questions have been raised whether these same measures are thoroughly validated enough for use with women (Nicholls, Ogloff, Brink, & Spidel, 2005).

As well as sex differences, we also discovered cultural differences. Psychopathy in Sweden was again the best predictor and predicted all aggression forms—verbal, explosive, and physical—for both IPV and SSA. Being higher on sadism also predicted verbal and physical aggression but only for SSA perpetration. Interestingly, the United Kingdom had no predictors for IPV perpetration; however, for SSA, both narcissism and psychopathy

predicted explosive and physical aggression, and Machiavellianism predicted explosive. While psychopathy is as hypothesized in Sweden, its lack of predictive power in the United Kingdom, especially for IPV, is quite surprising. Again, sadism not being highly predictive underscores potential cultural differences in how it is expressed and/or measured. These highlight the need for further investigation into the traits' uniqueness in a cultural and aggression-specific perspective.

While psychopathic traits were the most predictive, there were other traits that were associated with sex-specific, and aggression-specific, effects, but only for IPV. Narcissism predicted men's explosive IPV perpetration while sadism predicted women's physical IPV aggression. In partial support of our hypothesis, men who were higher on Machiavellianism used less physical aggression against an intimate partner. As both cultures rank rather high on gender empowerment (United Nations Development Programme [UNDP], 2014) and there are resources to assist female IPV victims, it is possible there was enough fear of being caught, which would act as a deterrent for Machiavellians for physical aggression (Jones & Paulhus, 2011), which often leaves visible injuries. Unexpectedly, sadism was not a powerful predictor of aggression. This result is challenging to explain as those high on sadism generally aggress the most, especially physically (Buckels et al., 2013; Tweed & Dutton, 1998), and sadism has even been shown to mediate all the other D4 aggression (Buckels et al., 2014). This requires further investigation.

These findings around sex- and aggression-specific effects further present challenges to current policy and practice, specifically with respect to IPV. Current interventions lack a tailored approach to treatment, meaning the impact of traits, such as the D4, are not considered when attempting to change perpetrators' behavior. Evidence of the developmental origins of psychopathic traits (e.g., Dadds, Jambrak, Pasalich, Hawes, & Brennan, 2011) can be seen in the literature, highlighting the importance of callous and unemotional traits in terms of aggressive and antisocial behavior in adolescent and younger groups (see review by Frick & White, 2008). There are known links between these callous and unemotional traits and later psychopathy (e.g., Barry et al., 2000), leading to the suggestion that these traits, and the propensity for aggression, originate earlier in development. This further leads to the suggestion that the development of abusive behavior is complex and multifaceted, and it is often originating from a range of childhood developmental issues. Interventions aimed at reducing men's and women's violence need to capture this complexity and be tailored to individuals' needs and risks, rather than focusing on a one-size-fits-all approach that suggests its foundations lie in gender, inequality, and male privilege. Indeed, the "what works" evidence base indicates the most effective interventions and programs incorporate the

risk, need, and responsivity principles (Graham-Kevan & Bates, 2020). With an absence of effective IPV programs, service providers and practitioners should utilize best practice programs from interventions outside of this area, for example, in provisions for general violence or offending (Dixon, Archer, Graham-Kevan, 2012).

Limitations

While this study is novel and has its strengths in examining all four dark personality traits within men and women, IPV and SSA, as well as within two different cultures, it does have some limitations that should be noted. A limitation of the current study is the cross-sectional and correlational nature, not causal, of the design. This is the case with much of the personality and risk factor research in this area, and the recommendation would be to include longitudinal research to be able to look more closely at the causal direction of the relationships being studied. It is worth noting that the dark personalities were compared across the whole sample with quite small differences between the means (e.g., for men and women there was a mean difference of 1.53 and 2.09 for narcissism and sadism, respectively). Thus, there are some men who score higher on these traits that are not showing as being aggressive but could, for example, show higher levels of psychological or emotional abuse. In addition, while the correlations were significant, they were moderate and did not explain a large amount of variance. We feel this has implications to be considered and caution should be taken in extrapolating our conclusions. Another limitation lies in the use of a Western, undergraduate student sample despite utilizing two different samples in the Sweden and the United Kingdom. Sex differences in IPV perpetration vary across cultures. Those cultures that have more gender empowerment and equality, such as Sweden and the United Kingdom, find parity in perpetration, thus our results may not be generalizable to countries with lower gender empowerment, as they often have more stereotypical male IPV perpetration (Archer, 2006).

Conclusion

With the current study, we investigated how dark personalities—Machiavellianism, narcissism, psychopathy, and sadism—would predict both IPV and SSA in Sweden and the United Kingdom. Our results demonstrated that the dark personalities can, in fact, predict different types of aggression (verbal, explosive, and physical) within IPV and SSA with both gender and cultural variances. We found both sex-specific—women were more likely to verbally assault their partners while men were more likely to

aggress against same-sex other—and aggression-specific effects that again point to the complexity in the antecedents of violence, rather than an explanation that is more one size fits all. Our findings—most IPV perpetration was bidirectional, with the only significant difference being women perpetrate more verbal—refute some of the traditional and feminist models, which postulate that men’s violence toward women can be attributed to patriarchy and a sense of male privilege. As with previous research results, our study found overall that those higher on subclinical psychopathy demonstrated their propensity for aggression regardless of the target and culture but with some gender differences. Finally, we were unable to attain a usable reliability level with the VAST sadism scale that has consistently produced reliable results predominantly in North American samples, indicating that there are potential cultural differences either in measuring subclinical sadism and/or the trait itself. This highlights the importance of further assessment of subclinical sadism with a more cross-cultural perspective and sensitivity. Our results add to the existing research on the predictive power of the D4 and their individual propensity to aggress in unique ways in both IPV and SSA that should inform practice and interventions with offenders. The results also have implications for current practice in IPV intervention as many current interventions still have a strong feminist influence, but the results here support that IPV has complex antecedents that suggest a one-size-fits-all program would not be appropriate. It is instead recommended that IPV interventions utilize and mirror programs designed from more generally violent offending.

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Notes

1. Gender empowerment can be assessed by the number of women in leading posts, income, and parliamentary representation (UNDP, 2014). Gender-related Development Index assesses gender empowerment in terms of equality in health care, education, and knowledge (Archer, 2006).

2. Twelve were excluded because there were too few in same-sex relationships. Two were excluded due to the nature of the study for choosing not to identify their gender, and 22 were excluded because their country of origin/residency was unclear.
3. Completed in this order: CTS partner and RCRQ items, VAST, SSIS, Short Dark Triad (SD3), and CTS same-sex non-intimate partner and RCRQ items.

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