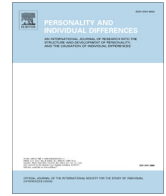




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Dark Triad traits, infidelity and romantic revenge



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ABSTRACT

Dark Triad traits (narcissism, Machiavellianism and psychopathy) are characterized by manipulation, emotional coldness, and a lack of empathy. The current studies investigated the influence of Dark Triad traits on heterosexual women's infidelity and romantic revenge. For Study 1, women ($N = 102$) completed the Mach IV, NPI-16, Levenson Self-Report Psychopathy Scale, bespoke Infidelity Experience Scale, Intentions Towards Infidelity Scale, and Susceptibility to Infidelity Instrument. Findings demonstrated that Dark Triad traits predict prior experience of infidelity, intentions to engage in infidelity and perceived susceptibility to a partner's infidelity. Narcissism and secondary psychopathy were the most influential traits. For Study 2, women ($N = 108$) completed the aforementioned Dark Triad trait measures and responded to a hypothetical scenario describing a partner's infidelity. Dark Triad traits predicted each type of revenge assessed except willingness to terminate the relationship. Secondary psychopathy was the only Dark Triad trait to emerge as a significant individual predictor. Together, these studies demonstrate that Dark Triad traits predict women's own infidelity, their perceived vulnerability to a partner's infidelity and revenge in response to this infidelity. Findings also highlight the importance of distinguishing between primary and secondary psychopathy.

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1. Introduction

Dark Triad traits (narcissism, Machiavellianism and psychopathy) are distinct but related personality traits characterized by manipulation, exploitation, emotional coldness, and a lack of empathy (Jonason, Lyons, Bethell, & Ross, 2013; McHoskey, Worzel, & Szyarto, 1998). Previous research indicates that Dark Triad traits influence platonic, romantic and sexual relationships (Brewer & Abell, 2015; Brewer, Abell, & Lyons, 2014; Ragsdale & Brandau-Brown, 2005). The current studies extend these findings and investigate the influence of each Dark Triad trait on infidelity (including susceptibility to a partner's infidelity) and willingness to engage in romantic revenge.

1.1. Infidelity

Previous research indicates that Dark Triad traits are associated with greater personal experience of infidelity (e.g., Adams, Luevano, & Jonason, 2014; Campbell, Foster, & Finkel, 2002; Visser, Pozzebon, Bogaert, & Ashton, 2010). This is consistent with the lower levels of

relationship commitment (Ali & Chamorro-Premuzic, 2010) displayed by those with high levels of Dark Triad traits and the increased use of deception (Paulhus & Williams, 2002), exploitation of trust (Leary, Knight, & Barnes, 1986) and interest in alternate partners (Campbell et al., 2002) exhibited. It is unclear however whether those with high levels of Dark Triad traits intend to engage in infidelity, or if other factors associated with the Dark Triad such as attractiveness (Holtzman & Strube, 2010), charisma (Christie & Geis, 1970), impulsivity (Vazire & Funder, 2006) and risk taking (Crysel, Crosier, & Webster, 2013) present greater opportunities for infidelity or influence reactions to those opportunities. Recent research (Brewer & Abell, 2015) indicates that one Dark Triad trait (Machiavellianism) is associated with greater intentions to engage in infidelity, suggesting that intent contributes to the relationship between Dark Triad traits and infidelity.

Previous studies investigating Dark Triad traits and infidelity have focused on the manner in which Dark Triad traits may influence the propensity to be unfaithful, rather than vulnerability to a partner's infidelity. Dark Triad traits are associated with poor quality relationships (e.g., low levels of commitment and intimacy, Ali & Chamorro-Premuzic, 2010) which may increase the likelihood of a partner's infidelity. Furthermore, Dark Triad traits influence perceptions of other people's behavior. In particular, Machiavellianism is associated with cynicism and distrust (Christie & Geis, 1970), suggesting a greater perceived susceptibility to infidelity. In

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contrast, narcissism is characterized by an elevated sense of self worth and entitlement (Emmons, 1984; Raskin & Hall, 1981) which may lead to the belief that a partner would not seek alternative partners. Hence, the present studies also consider the extent to which Dark Triad traits influence vulnerability to a partner's infidelity.

1.2. Revenge

Those confronted with a partner's infidelity may display a range of behavioral responses including distress, forgiveness and revenge (targeted at either a partner or rival). Whilst a number of situational factors influence the propensity to seek revenge, dispositional factors such as personality (Brown, 2003; Emmons, 2000) are also important. Dark Triad traits in particular, may increase the likelihood of revenge as all traits are related to anger and envy (Veselka, Giammarco, & Vernon, 2014). Furthermore, a lack of empathy, central to Dark Triad traits (Jonason et al., 2013), reduces the tendency to forgive (Fincham, Paleari, & Regalia, 2002). Psychopathy may be especially influential. Revenge can lead to a range of negative consequences such as guilt, reputational damage and risks to personal safety (Boon, Alibhai, & Deveau, 2011; Cota-McKinley, Woody, & Bell, 2001; Fitness, 2001). Those with high levels of psychopathy underestimate negative and overestimate positive consequences of their actions (Ferrigan, Valentiner, & Berman, 2000). Combined with greater impulsivity and risk taking behavior (Crysel et al., 2013; Hare, 1985), these findings suggest that those with high levels of psychopathy may be most likely to seek revenge, regardless of the risk.

Narcissists are also susceptible to revenge. Narcissistic entitlement is positively associated with motivation to protect reputation, and seeking retribution and negatively related to forgiveness (Exline, Baumeister, Bushman, Campbell, & Finkel, 2004). Those with high levels of narcissism react with greater aggression when offended by others (Bushman & Baumeister, 1998) and engage in impulsive behavior that provides short-term benefits but leads to long-term costs (Vazire & Funder, 2006). Thus explicit (i.e., direct) forms of revenge are most likely. Furthermore, while narcissists display elevated self-worth and entitlement, their self-esteem is easily threatened (Morf & Rhodewalt, 2001) and they are motivated to outperform competitors (Goncalves & Campbell, 2014), suggesting that these individuals may seek revenge against romantic rivals. In contrast whilst Machiavellianism is negatively related to forgiveness and positively related to emotional vengeance (Giammarco & Vernon, 2014), those with high levels of Machiavellianism display a long-term orientation (Jones & Paulhus, 2009). Thus, those with high levels of Machiavellianism may respond to infidelity in a manner that reduces the risk of retaliation (e.g., adopting indirect rather than direct aggression).

Therefore, Study 1 investigated the influence of Machiavellianism, primary and secondary psychopathy and narcissism on previous incidence of infidelity, intentions to engage in infidelity and perceived likelihood that a partner will be unfaithful. It was predicted that women with higher levels of Dark Triad traits would report greater prior incidence of infidelity and intentions to engage in infidelity. It was further predicted that women with higher levels of Machiavellianism and narcissism would report higher and lower susceptibility to a partner's infidelity respectively. No prediction was made for the relationship between psychopathy and perceived vulnerability to a partner's infidelity. Study 2 investigated the influence of Machiavellianism, psychopathy and narcissism on likelihood of revenge in response to a partner's infidelity. It was predicted that women with higher levels of each Dark Triad trait would be most likely to engage in romantic revenge directed at both the partner and rival.

2. Study 1 method

2.1. Participants

Heterosexual women ($N = 102$) aged 18–42 years ($M = 22.53$, $SD = 4.99$) were recruited online and from the campus of a British University. All participants were in a (casual: 6.9%; serious: 93.1%) romantic relationship at the time of the study. Average relationship length was 3 years and four months.

2.2. Materials and procedure

Participants completed initial demographic questions followed by the Mach IV (Christie & Geis, 1970), NPI-16 (Ames, Rose, & Anderson, 2006), Levenson Self-Report Psychopathy Scale (Levenson, Kiehl, & Fitzpatrick, 1995), bespoke Infidelity Experience Scale, Intentions Towards Infidelity Scale (Jones, Olderbak, & Figueredo, 2011), and Susceptibility to Infidelity Instrument (Buss & Shackelford, 1997).

The Mach IV (Christie & Geis, 1970) is a 20 item measure of Machiavellianism. Items are rated on a 7 point scale (1 = *strongly disagree* to 7 = *strongly agree*). The scale assesses interactions with others, morality and cynicism. Example items include "Anyone who completely trusts anyone else is asking for trouble". Ten items are reverse coded. The NPI-16 (Ames et al., 2006) is a 16 item measure of narcissism, comprised of items selected from the larger NPI-40 (Raskin & Terry, 1988). Participants are presented with 16 statement pairs and select the statement which most accurately relates to their own feelings. Example items include "I prefer to blend in with the crowd" vs "I like to be the centre of attention". Narcissistic responses are coded as 1 and non-narcissistic responses are coded as 0. The Levenson Self-Report Psychopathy Scale (Levenson et al., 1995) contains 26 items (7 reverse coded) and is intended for use with non-institutionalized samples. The scale is separated into the primary psychopathy subscale (16 items) assessing manipulative, selfish, and uncaring traits and the secondary psychopathy subscale (10 items) measuring anti-social behavior. Example items include "For me, what's right is whatever I can get away with" (primary psychopathy) and "I have been in a lot of shouting matches with other people" (secondary psychopathy). Items are rated on a 5 point scale (1 = *disagree strongly* to 5 = *agree strongly*).

To assess previous experience of infidelity a bespoke Infidelity Experience Scale was created. Participants were asked to report whether they had engaged in five behaviors (e.g., gone on a date with another person, had a one night stand) whilst in a committed romantic relationship. Participants responded to each item on a Yes (scored as 1) or No (scored as 0) basis and these were summed to provide a total infidelity experience score. The Intentions Towards Infidelity Scale (Jones et al., 2011) contains 7 items (1 reverse coded) answered on a 7 point scale of -3 (*not at all likely*) to $+3$ (*extremely likely*). The scale measures intentions to be unfaithful and example items include "How likely do you think you are to be unfaithful to future partners". Finally, participants reported the likelihood that their partner would engage in six forms of extramarital behavior using the Susceptibility to Infidelity Instrument (Buss & Shackelford, 1997). For each behavior type, participants report the probability (0–100%) that the event will occur during the next year, and the probability that if the event occurred, they or their partner would end the relationship.

Higher scores indicate greater levels of each Dark Triad trait measured (Machiavellianism, narcissism, primary and secondary psychopathy) and infidelity (experience, intentions, susceptibility). In the present study, Dark Triad measure reliabilities were: Machiavellianism: $\alpha = .59$; narcissism: $\alpha = .89$; primary psychopathy: $\alpha = .72$; secondary psychopathy: $\alpha = .72$. Infidelity measure

reliabilities were: experience: $\alpha = .62$; intentions: $\alpha = .74$; and susceptibility: $\alpha = .77$.

3. Study 1 results

Pearsons correlations revealed significant positive correlations between Dark Triad traits and infidelity. Previous experience of infidelity was related to narcissism, primary and secondary psychopathy. The intention to engage in infidelity was positively associated with Machiavellianism, narcissism, primary and secondary psychopathy. Perceived susceptibility to a partner's infidelity was significantly positively correlated with narcissism and primary and secondary psychopathy. These data are shown in Table 1. There was no evidence of multicollinearity (all VIF < 1.6).

Linear multiple regression analyses were conducted with Dark Triad traits entered as predictor variables and previous incidence of infidelity, intentions to engage in infidelity and perceived likelihood that a partner will be unfaithful as criterion variables. The overall model predicted previous incidence of infidelity ($F(4, 97) = 3.887, p = .006$), explaining 13.8% of the overall variance ($R^2 = .138$; Adj $R^2 = .103$). Narcissism was the only significant individual predictor ($B = .287, t = 2.678, p = .009$), such that women with higher levels of narcissism were most likely to report previous incidence of infidelity.

The model also predicted intentions to engage in infidelity ($F(4, 97) = 14.945, p = .000$), explaining 38.1% of the overall variance ($R^2 = .381$; Adj $R^2 = .356$). Narcissism ($B = .270, t = 2.972, p = .004$) and secondary psychopathy ($B = .316, t = 3.215, p = .002$) were the only significant individual predictors. Women with higher levels of narcissism and secondary psychopathy were most likely to report the intention to engage in infidelity. Finally, the model predicted perceived susceptibility to a partner's infidelity ($F(4, 97) = 4.450, p = .002$), explaining 15.5% of the overall variance ($R^2 = .155$; Adj $R^2 = .120$). Secondary psychopathy was the only significant individual predictor ($B = .355, t = 3.093, p = .003$), such that women with higher levels of secondary psychopathy reported being most susceptible to a partner's infidelity.

4. Study 1 discussion

Study 1 revealed that Dark Triad traits collectively predicted each aspect of infidelity investigated. Narcissism and secondary psychopathy were the most influential traits. Specifically, women with high levels of narcissism, characterized by feelings of superiority, entitlement, excessive self love and grandiosity (Emmons, 1984; Raskin & Hall, 1981), reported greater prior

Table 1

Descriptive statistics and correlations for Dark Triad traits (Machiavellianism, narcissism, primary psychopathy and secondary psychopathy) and infidelity (experience, intentions and susceptibility).

	1	2	3	4	5	6	7
1. MA		.288**	.418**	.536**	.100	.386**	.159
2. NA			.444**	.331**	.339**	.465**	.234*
3. PP				.403**	.210*	.433**	.208*
4. SP					.233*	.507**	.368**
5. PI						.420**	.371**
6. II							.331**
7. PS							
<i>M</i>	62.128	3.961	35.128	25.186	1.177	-13.765	64.333
<i>SD</i>	10.353	4.226	9.189	6.310	1.103	7.288	77.809

MA: Machiavellianism, NA: Narcissism, PP: Primary psychopathy, SP: Secondary psychopathy, PI: Previous experience of infidelity, II: Intentions to engage in infidelity, PS: Perceived susceptibility to partner's infidelity.

* $p < .05$.

** $p < .01$.

incidence of infidelity and greater intentions to engage in infidelity in the future. These women may believe that they can engage in infidelity but avoid detection by their partner, and thus avoid the consequences (e.g., conflict, retaliation, relationship dissolution or reputational damage) associated with infidelity. These findings are consistent with previous research indicating increased risk taking and infidelity amongst those with high levels of narcissism (Adams et al., 2014; Campbell et al., 2002; Crysel et al., 2013).

Women with higher levels of secondary psychopathy reported greater intentions to engage in infidelity and susceptibility to their partner's infidelity. Increased willingness to engage in infidelity is consistent with the low levels of relationship intimacy and commitment reported by those with high levels of secondary psychopathy and the relationships between psychopathy and deception, risk taking and infidelity (e.g., Adams et al., 2014; Baughman, Jonason, Lyons, & Vernon, 2014; Crysel et al., 2013) previously reported. Increased susceptibility to infidelity may reflect the negative affect, anxiety and low self-esteem reported by those with those with high levels of the trait (Vassileva, Kosson, Abramowitz, & Conrad, 2005). The findings highlight the importance of distinguishing between primary and secondary psychopathy and require further study.

5. Study 2 method

5.1. Participants

Heterosexual women ($N = 108$) aged 18–40 years ($M = 20.56, SD = 4.21$) participated in Study 2, the majority of whom were in an exclusive romantic relationship (57.4%) at the time of the study. Women reported their experience of a partner's infidelity (5.6% current partner only, 44.4% previous partner only, 2.8% both a current and previous partner). For those whose previous partner had been unfaithful, 79.2% of these reported that infidelity led to relationship dissolution. The majority of participants (69.43%) reported that they had never been unfaithful. Remaining participants revealed infidelity during a current (3.7%), previous (25.0%) or both a current and previous (1.9%) relationship. The majority (60.9%) of women stating that they had been unfaithful in a previous relationship reported that this did not lead to relationship dissolution. Participants were recruited from both the campus of a British University and online.

5.2. Materials and procedure

Participants first reported whether they had direct experience of infidelity (i.e., whether they or a partner had been unfaithful) and if so, whether the infidelity had been the primary cause of relationship dissolution. Participants then completed the Mach IV (Christie & Geis, 1970), NPI-16 (Ames et al., 2006), and Levenson Self-Report Psychopathy Scale (Levenson et al., 1995). These measures are described in Section 2.2. Finally, women were presented with a hypothetical scenario describing a partner's infidelity. Participants reported the likelihood that they would seek revenge, and specifically the likelihood that they would seek direct (e.g., shouting) or indirect (e.g., spreading a rumor) revenge against the partner and romantic rival. Participants also reported the likelihood that they would end the relationship in response to the infidelity. All responses were scored on a 7 point scale (1 = *not at all likely* to 7 = *extremely likely*). Higher scores indicate greater levels of each Dark Triad trait measured and willingness to engage in revenge or end the relationship. Each Dark Triad measure demonstrated acceptable reliability in the present study (Machiavellianism: $\alpha = .67$; narcissism: $\alpha = .72$; primary psychopathy: $\alpha = .89$; secondary psychopathy: $\alpha = .66$).

6. Study 2 results

Pearson's correlations revealed significant positive associations between willingness to seek revenge against a romantic partner or female rival, indirect revenge against a partner or rival and direct revenge against a rival with each Dark Triad trait. Perceived likelihood of direct revenge against a partner was positively related to primary psychopathy, secondary psychopathy and narcissism only. Willingness to end a relationship in response to infidelity was not related to any of the Dark Triad measures. These data are shown in Table 2. There was no evidence of multicollinearity (all VIF < 2.7).

Linear multiple regression analyses were conducted with Dark Triad traits and relationship status entered as predictor variables Perceived likelihood of revenge targeted at a partner; direct revenge targeted at a partner; indirect revenge targeted at a partner; revenge targeted at a female rival; direct revenge targeted at a female rival; indirect revenge targeted at a female rival and willingness to end a relationship in response to infidelity were entered as criterion variables.

The overall model predicted willingness to seek revenge against a partner ($F(5, 100) = 4.745, p = .001$), explaining 19.2% of the overall variance ($R^2 = .192$; Adj $R^2 = .151$). Secondary psychopathy was the only significant individual predictor ($B = .281, t = 2.370, p = .020$), such that women with higher levels of secondary psychopathy were most willing to seek revenge against a partner. The model predicted likelihood of direct revenge against a partner ($F(5, 100) = 3.346, p = .008$), explaining 14.3% of the overall variance ($R^2 = .143$; Adj $R^2 = .101$) and likelihood of indirect revenge against a partner ($F(5, 100) = 2.317, p = .049$), explaining 10.4% of the overall variance ($R^2 = .104$; Adj $R^2 = .059$). No significant individual predictors emerged.

The overall model predicted likelihood of revenge against a female rival ($F(5, 100) = 8.913, p = .000$), explaining 30.8% of the overall variance ($R^2 = .308$; Adj $R^2 = .274$). Secondary psychopathy ($B = .263, t = 2.403, p = .018$) and relationship status ($B = -.280, t = -3.268, p = .001$) were significant individual predictors, such that women with higher levels of secondary psychopathy and partnered women were most willing to seek revenge against a rival. The model also predicted likelihood of direct revenge against a female rival ($F(5, 100) = 5.752, p = .000$), explaining 22.3% of the overall variance ($R^2 = .223$; Adj $R^2 = .185$) and indirect revenge against a rival ($F(5, 100) = 5.474, p = .000$), explaining 21.5% of the overall variance ($R^2 = .215$; Adj $R^2 = .176$). Relationship status was a significant individual predictor; partnered women were more likely to seek direct ($B = -.325, t = -3.579, p = .001$) or indirect

($B = -.225, t = -2.460, p = .016$) revenge against a rival. Finally, the model did not predict willingness to end the relationship in response to infidelity ($F(5, 100) = 1.109, p = .360$; $R^2 = .053$; Adj $R^2 = .005$).

7. Study 2 discussion

Overall, Dark Triad traits predicted willingness to seek revenge against a partner or rival in either a direct or indirect manner. Romantic revenge may lead to a range of consequences such as relationship damage, guilt, a loss of social standing and risks to personal safety (Boon et al., 2011; Cota-McKinley et al., 2001; Fitness, 2001). Hence, the willingness to engage in potentially harmful behavior may reflect the impulsivity, anger and lack of regard for the consequences of this behavior which are also associated with Dark Triad traits (Veselka et al., 2014). The greater willingness to behave aggressively towards a partner or rival is also consistent with the emotionally detached relationship style and lack of empathy (Jonason et al., 2013) displayed by those with high levels of Dark Triad traits.

Secondary psychopathy was the only Dark Triad trait to emerge as a significant individual predictor, which predicted likelihood of revenge against a partner and rival. The willingness to engage in revenge, in which damaging repercussions may occur, may reflect the underestimation of negative and overestimation of positive consequences of actions demonstrated by those with high levels of psychopathy (Ferrigan et al., 2000) and the risky decision making characteristic of secondary but not primary psychopathy (Dean et al., 2013). In particular, secondary psychopathy is more closely associated with negative urgency, i.e., the propensity to act in an impulsive manner in order to lower negative affect (such as the distress following a partner's infidelity) than primary psychopathy (Anestis, Anestis, & Joiner, 2009). Furthermore, previous research indicates that psychopathy is positively associated with emotional vengeance and negatively related to forgiveness (Giammarco & Vernon, 2014). It is unclear however why Dark Triad traits did not emerge as significant individual predictors for direct and indirect revenge specifically.

Relationship status predicted willingness to seek revenge against a female rival, with partnered women more likely to engage in direct or indirect revenge. This may reflect difficulty focusing on a hypothetical scenario distinct from their current relationship. Specifically, women in a current relationship may infer that their romantic partner would be unlikely to engage in infidelity and thus disproportionately blame the rival.

Table 2

Descriptive statistics and correlations for Dark Triad traits (Machiavellianism, narcissism, primary psychopathy and secondary psychopathy) and willingness to engage in revenge.

	1	2	3	4	5	6	7	8	9	10	11
1. MA		.468**	.596**	.442**	.279**	.172	.277**	.367**	.223*	.341**	.131
2. NA			.650**	.404**	.238**	.238*	.194*	.247*	.226*	.293**	.083
3. PP				.620**	.268**	.344**	.294**	.431**	.334**	.344**	.055
4. SP					.373**	.254**	.235*	.381**	.272**	.299**	.037
5. RP						.577**	.518**	.631**	.529**	.567**	.152
6. DP							.238*	.495**	.692**	.332**	.149
7. IP								.390**	.166	.543**	.187
8. RR									.756**	.715**	-.013
9. DR										.534**	.050
10. IR											-.035
11. ER											
M	72.16	3.22	29.71	22.29	3.50	3.63	2.66	3.49	3.62	3.39	5.74
SD	11.61	2.79	8.62	4.76	2.12	2.18	1.91	2.23	2.23	2.22	1.71

MA: Machiavellianism, NA: Narcissism, PP: Primary psychopathy, SP: Secondary psychopathy, RP: Revenge targeted at a partner, DP: Direct revenge targeted at partner, IP: Indirect revenge targeted at a partner, RR: Revenge targeted at a rival, DR: Direct revenge targeted at a rival, IR: Indirect revenge targeted at a rival, ER: Willingness to end a relationship.

* $p < .05$.

** $p < .01$.

Furthermore, those in current relationships are more likely to be conscious of the presence of a rival (in order to engage in mate retention behaviors) and thus this aspect of the scenario may be more salient. Further research investigating differences between single and partnered women is recommended.

8. General discussion

The current studies investigated the influence of Dark Triad traits on infidelity and romantic revenge. Consistent with previous research (e.g., Adams et al., 2014; Campbell et al., 2002), Dark Triad traits were associated with greater prior incidence of infidelity. Furthermore, Dark Triad traits predicted intentions to engage in infidelity, a finding previously investigated in reference to one Dark Triad trait only (Machiavellianism, Brewer & Abell, 2015). Hence, the relationship between Dark Triad traits and infidelity appears to reflect a motivation to pursue extra-pair relationships rather than a lack of control when presented with sexual opportunities. Furthermore, findings also indicate that Dark Triad traits are associated with perceived susceptibility to a partner's infidelity. Thus those with high levels of these traits are both willing to exploit others and (at least from their perspective) vulnerable to exploitation. This cynicism may encourage these individuals to remain detached even within close romantic relationships. Longitudinal research is therefore required to determine the extent to which these traits and behavioral outcomes develop (Abell, Lyons, & Brewer, 2014).

Previous research has highlighted the manner in which psychopathy influences a range of relationship relevant behavior. There is however an important distinction between primary and secondary psychopathy (Karpman, 1941, 1948) not sufficiently considered by prior research. Primary psychopathy is primarily heritable and characterized by emotional coldness, manipulation and a lack of empathy. Secondary psychopathy, is influenced by both heritable and environmental factors and consists of anxiety, arousal in response to threat, risky decision making, the propensity to act impulsively in order to reduce negative affect and remorse (Anestis, Anestis, & Joiner, 2009; Blackburn & Lee-Evans, 1985; Dean et al., 2013). The current studies indicate that secondary but not primary psychopathy influences infidelity and further research investigating the impact of each psychopathy type on romantic relationships is required.

Collectively, the Dark Triad traits predicted willingness to engage in a range of romantic revenge types. This is consistent with previous research demonstrating that personality influences attitudes towards romantic revenge (Sheppard & Boon, 2012). However, significant individual predictors did not emerge, with the exception of revenge against a partner and rival. Hence, the core cognitions, emotions and behaviors characteristic of each Dark Triad trait (e.g., lack of empathy and emotional coldness) may be most important. Additional research is required to investigate this issue further. In particular, future studies may consider the influence of Dark Triad traits on forgiveness and responsiveness to cues such as the presence of an apology which often increases the likelihood of forgiveness. For example, alexithymia is associated with secondary but not primary psychopathy (Lander, Lutz-Zois, Rye, & Goodnight, 2012). Hence women with high levels of secondary psychopathy that become aware of infidelity may be less likely to perceive or respond to signs of distress indicating forgiveness.

The only aspect of revenge that Dark Triad traits did not predict was the willingness to end a relationship in response to a partner's infidelity. This is perhaps surprising as those with high levels of Dark Triad traits are most likely to leave a partner in order to begin a new romantic relationship (Campbell et al., 2002). However, women may intend to remain in the relationship for reasons other

than a close personal attachment to their partner. For example, relationships in which one partner feels a sense of guilt and continually attempts to obtain their partner's forgiveness present considerable opportunities for exploitation. This situation may be particularly appealing for those with high levels of Machiavellianism that exploit the trust of others for personal gain (Leary et al., 1986). Furthermore, women may remain in a romantic relationship to avoid the negative consequences of dissolution, e.g., it may be more difficult for women to obtain a new partner following a partner's infidelity. Narcissists may be particularly reluctant to create a situation in which others discover that their partner preferred another woman. Future research should investigate reasons for remaining in romantic relationships which may differ for those with high levels of Machiavellianism, narcissism and psychopathy.

Reflecting the subject area investigated, the current studies were reliant on self-report questionnaires and responses to a hypothetical scenario. Therefore data are susceptible to inaccurate recall, willingness to disclose socially undesirable behavior and participant insights into how they would respond to a particular situation (Groble et al., 2012; Holden, Wheeler, & Marjanovic, 2012). All studies (whilst available online) were also reliant on English speaking participants. Further cross-cultural studies are required. In particular, researchers may consider the relationship between Dark Triad traits, infidelity and revenge in countries that exert more severe sanctions against those engaging in infidelity or cultures in which women seeking revenge against a partner or rival or ending a relationship suffer greater reputational damage.

To conclude, the present studies investigated the influence of Dark Triad traits (Machiavellianism, narcissism and psychopathy) on infidelity and romantic revenge. Dark Triad traits predicted prior experience of infidelity, intentions to engage in infidelity and perceived susceptibility to a partner's infidelity. Hence, women with higher levels of Dark Triad traits not only display greater infidelity themselves but believe that they are more vulnerable to a partner's infidelity than women with low levels of Dark Triad traits. Narcissism and secondary psychopathy exerted the greatest influence on infidelity outcome measures. Dark Triad traits also predicted each form of romantic revenge investigated. Secondary psychopathy was the only Dark Triad trait to emerge as a significant individual predictor in relation to revenge.

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