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Sensation-seeking in women does not affect their preference for Dark Triad male faces

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Highlights

- Women showed aversion to high Dark Triad faces
- Aversion occurred for both short- and long-term relationships
- Sensation-seeking did not predict preference for Dark Triad faces

Abstract

Women (*N* = 356) aged 16-68 years were recruited via online social networking sites and research participation websites. Participants were presented with 15 facial composite pairs (each pair including a high and low Dark Triad trait facial morph), and were asked to identify the most attractive individual either in the context of a short-term (*n* = 171) or long-term relationship (*n* = 185). Women also completed the Sensation-Seeking Scale (SSS-V, Zuckerman, 1994), containing boredom susceptibility, disinhibition, experience-seeking, thrill- and adventure-seeking subscales. Results indicate that women are averse to faces with high levels of narcissism, Machiavellianism, and psychopathy for both short- and long-term romantic relationships. Sensation-seeking does not predict preference for Dark Triad traits as a short-term or long-term partner. Findings replicate previous research indicating that women dislike male faces high on Dark Triad traits for both short- and long-term relationships and are consistent with research suggesting that the aversion to men high on Dark Triad traits is resistant to individual variation.

Keywords: Dark Triad; Facial preference; Machiavellianism; Narcissism; Psychopathy; Sensation-Seeking

1. Introduction

Dark Triad traits (narcissism, Machiavellianism, and psychopathy,) are related but distinct personality traits (Paulhus & Williams, 2002), characterised by disagreeable, manipulative, and callous behaviour (Jones & Figueredo, 2012). Narcissism is associated with an elevated sense of self-worth and entitlement (Emmons, 1984), Machiavellianism is associated with a willingness to exploit others and a lack of faith in humanity (Christie & Geis, 1970), and psychopathy is characterised by emotional coldness, impulsivity, and antisocial behaviour (Hare, 1996). Those high on Dark Triad traits display a preference for short-term mating (Jonason, Li, Webster, & Schmitt, 2009), insecure attachment to relationship partners (Brewer et al. 2018a), and are more likely to engage in infidelity (Brewer, Hunt, James, & Abell, 2015). Hence, the selection of partners high on Dark Triad traits may impact on important relationship outcomes such as reproductive success (Marcinkowska, Lyons, & Helle, 2016).

A number of studies have suggested that it is possible to successfully identify those with high levels of Dark Triad traits from facial composites alone (Holtzman, 2011). Such research is consistent with evidence that faces convey a range of evolutionarily-relevant information (e.g., health, reproductive status, and trustworthiness), and may provide an indication of past, current, or future behaviour (Carré, & McCormick, 2008; Carré, McCormick, & Mondloch, 2009). Previous research indicates that women display an aversion to male composite faces high on Dark Triad traits as both short- and long-term relationship partners (Lyons, Marcinkowska, Helle, & McGrath, 2015). Individual differences may, however, influence facial preference (Brown & Sacco, 2017a,b). For example, women believing the world to be a dangerous place display a stronger aversion to faces high on psychopathy (Brown, Sacco, Lolley, & Block, 2017), suggesting that attitudes to risk or engagement in risky behaviour may influence women's perceptions of male faces high or low on Dark Triad traits.

Sensation-seeking can be conceptualised as "a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience" (Zuckerman, 1994, p.27), may also influence a

preference for Dark Triad traits. It is related to the preference for dominant partners (Giebel, Moran, Schawohl, & Weierstall, 2015) and sexual risk taking (Bancroft, et al. 2003), suggesting that those high on sensation-seeking may be less averse to Dark Triad faces. Previous research employing vignettes and questionnaires administered to each member of a relationship pair suggests that sensation-seeking predicts attraction to those high on narcissism (Grosz, Dufner, Back, & Denissen, 2015), though the influence of sensation-seeking on perception of Dark Triad faces alone is less clear.

In the present study, we investigate the influence of sensation-seeking on women's preferences for facial composites displaying high or low levels of Dark Triad traits. We predict women will be averse to high Dark Triad faces, for both short- and long-term relationships, and those with high levels of sensation-seeking will be less averse to high Dark Triad men.

2. Method

2.1 Participants

Women (N = 356) aged 16-68 years (M = 29.60, SD = 10.70) were recruited via online social networking sites and research participation websites. Participants were typically American (44.1%) or British (34.3%). All participants were heterosexual or bisexual (i.e., had a sexual attraction to men). Participants were aged 16-68 years (M = 29.12, SD = 10.22) and 16-61 years (M = 30.03, SD = 11.14) in the short- and long-term conditions respectively. There was no significant difference in participant age between groups, $t(354) = -.80$, $p = .424$. In both conditions, participants were most likely to be in a relationship at the time of the study (short-term condition: 63.2%; long-term condition: 61.6%).

2.2 Materials and procedure

Participants answered initial demographic questions (e.g., age, relationship status) and were presented with 15 facial composite pairs. Face pairs were created by imposing prototype morphs of high and low Dark Triad individuals (Holtzman, 2011) onto base faces using the Psychomorph program (see Lyons, Marcinkowska, Helle, & McGrath, 2015 for more information). Each pair contained a high and low trait facial morph, and presentation was counterbalanced. Presentation order and positioning were consistent for all participants. Five face pairs were employed per Dark Triad trait (narcissism, Machiavellianism, and psychopathy). For each pair, participants were asked to

identify the most attractive individual either in the context of a short-term (n = 171) or long-term relationship (n = 185).

The instructions for short and long-term conditions were adopted from Little, Jones, Cohen, and Belsky (2007). In the short-term relationship condition, participants were instructed "Imagine that you are looking for the type of person who would be attractive in a short-term relationship. This implies that the relationship may not last a long time. Examples of this type of relationship would include a single date accepted on the spur of the moment, an affair within a long-term relationship, and possibility of a one-night stand." In the long-term relationship condition, participants were instructed "Imagine that you are looking for the type of person who would be attractive in a long-term relationship. Examples of this type of relationship would include someone you may want to move in with, someone you may consider leaving a current partner to be with, and someone you may, at some point, wish to marry (or enter into a relationship on similar grounds as marriage)."

Participants then completed the Sensation-Seeking Scale (SSS-V, Zuckerman, 1994). This scale contains 40 forced-choice statement pairs. Sensation-seeking responses are coded as 1 and non-sensation-seeking responses are coded as 0. The scale contains four subscales: Thrill- and Adventure-Seeking (e.g., desire for activities involving danger); Disinhibition (e.g., lack of restraint); Experience-Seeking (e.g., preference for travel and new opportunities); and Boredom Susceptibility (e.g., dislike of routine). Each subscale contains 10 items. Example statement pairs include "I like "wild" uninhibited parties" vs "I prefer quiet parties with good conversation" (Disinhibition) and "There are some movies I enjoy seeing a second or even third time" vs "I can't stand watching a movie that I've seen before" (Boredom Susceptibility). Ratings of facial photographs and questionnaire responses were completed online via a Qualtrics survey.

3. Results

One-sample *t*-tests were conducted to determine whether women preferred, or were averse to, male faces reflecting high levels of Dark Triad traits. A score of 1 indicated a preference for high Dark Triad faces in all pairs and 0 indicated an aversion to high Dark Triad faces in all pairs. Analyses compared participant responses with chance (.5). One-sample *t*-tests revealed that participants were averse to faces with high levels of narcissism (t (170) = -11.65, $p < .001$),

Machiavellianism (t (170) = -9.75, $p < .001$), and psychopathy (t (170) = -5.82, $p < .001$), for short-term relationships. Participants were also averse to male faces displaying high levels of narcissism (t (184) = -11.05, $p < .001$), Machiavellianism (t (184) = -8.23, $p < .001$), and psychopathy (t (184) = -7.43, $p < .001$) for long-term relationships. Descriptive statistics are displayed in Table 1. A series of standard linear multiple regressions were then conducted to examine the influence of sensation-seeking (Boredom Susceptibility, Disinhibition, Experience-Seeking, Thrill- and Adventure-Seeking) on perceived attractiveness of (high- or low-Dark Triad trait) male faces as short- or long-term relationship partners. Analyses revealed that sensation-seeking did not predict a preference for Dark Triad traits as a short- or long-term partner. These data are shown in Tables 2 and 3. Controlling for age and relationship status did not alter the pattern of results.

4. Discussion

Results demonstrate a female aversion to facial morphs high on Dark Triad traits when considering male faces for both short- and long-term relationships. Findings are consistent with trends previously reported by Lyons and Blanchard (2016) and Lyons and Simeonov (2016). This aversion may facilitate women's avoidance of partners who are insecurely attached or likely to engage in undesirable behaviour (Brewer et al. 2018a). Findings are not consistent with studies suggesting that those high on Dark Triad traits (and narcissistic individuals in particular) are perceived as attractive during short-term encounters (Jauk et al. 2016; Paulhus, 1998). This may reflect greater self-presentation behaviour, e.g., editing photographs posted on social networking sites and selection of expensive or stylish clothing (i.e., 'peacocking'; Fox & Rooney, 2015; Holtzman & Strube, 2012). Indeed, observer ratings of target narcissism are correlated with the presence of specific cues (such as the presence of stylish and expensive clothing) suggesting that these contribute to observer judgements of narcissism (Vazire, Naumann, Rentfrow, & Gosling, 2008).

Previous research suggests that individual differences influence partner preference (Brown & Sacco, 2017a,b) and the perceived desirability of those high on Dark Triad traits (Marcinkowska, Helle, & Lyons, 2015). We predicted that women high on sensation-seeking, and thus more prone to risky behaviour, may be less averse to high Dark Triad faces. However, the aversion to faces high on

Dark Triad traits did not alter in relation to rater sensation-seeking levels. Therefore though previous research suggests that individual differences may exacerbate women's aversion to high Dark Triad faces (e.g., Brown, et al. 2017) it may be less feasible to reduce aversion to high Dark Triad traits (e.g., Brewer et al. 2018b).

4.1 Limitations and future research

Current findings are limited by reliance on self-report sensation-seeking measures, which may be susceptible to social desirability. We also utilised a limited set of facial stimuli, which presented Caucasian faces only and did not assess participant ethnicity. Though physical attractiveness ratings are consistent across cultural groups, some variation does occur (Cunningham, Roberts, Barbee, Fruen, & Wu, 1995). Therefore, though it has been argued that manipulation using own-race, other-race, or mixed-race composites demonstrates little difference when conducting attractiveness research (Rhodes, et al. 2001), future research should consider presenting a broader array of facial stimuli. The present study did not measure the menstrual cycle phase during which women rated the facial composites. It has been argued that women experience an ovulatory-induced perceptual shift, with characteristics most suited to a short-term relationship rated as more attractive during the fertile phase (Durante, Griskevicius, Simpson, Canfu, & Li, 2012). However, though Aitken, Lyons, and Jonason (2013) suggest that women show some preference for highly-Machiavellian men as short-term partners at peak fertility, other researchers (e.g., Marcinkowska, et al. 2016) report no relationship between facial preference and hormonal status. Future research may consider whether aversion to male faces high on Dark Triad traits varies across the menstrual cycle.

To conclude, the current study indicates that women are averse to male faces presenting high levels of, narcissism, Machiavellianism, and psychopathy. The aversion to men high on Dark Triad traits is evident for both short- and long-term romantic relationships and is not influenced by women's self-reported sensation seeking. Findings are consistent with previous research reporting that women reject male faces high on Dark Triad traits for both short- and long-term relationships. Findings are consistent with the suggestion that aversion to men high on Dark Triad traits is resistant to individual

variation, though future studies may consider women's aversion to male faces high on Dark Triad traits across the menstrual cycle.

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Table 1: Descriptive Statistics for Short-Term and Long-Term Partner Preference

Relationship	Dark Triad Trait	*M*	*SD*
Short-Term			
	Narcissism	.29	.24
	Machiavellianism	.35	.20
	Psychopathy	.39	.24
Long-Term			
	Narcissism	.30	.25
	Machiavellianism	.38	.20
	Psychopathy	.37	.24

Table 2: Multiple Regression Results for Short-Term Partner Preference

Dark Triad Trait	ANOVA	Individual Predictor	*B*	*t*	*p*
Narcissism	F (4,166) = 1.07, p =.375	Boredom	-.13	-1.56	.120
		Disinhibition	.07	.77	.443
		Experience	.10	1.24	.217
		Thrill	.03	.34	.731
Machiavellianism	F (4,166) = 1.20, p =.312	Boredom	-.08	-.94	.351
		Disinhibition	.06	.73	.467
		Experience	-.15	-1.78	.078
		Thrill	.01	.17	.862
Psychopathy	F (4,166) = .96, p =.432	Boredom	-.03	-.32	.753
		Disinhibition	-.03	-.36	.719
		Experience	.06	.75	.456
		Thrill	.13	1.64	.102

Table 3: Multiple Regression Results for Long-Term Partner Preference

Dark Triad Trait	ANOVA	Individual Predictor	*B*	*t*	*p*
Narcissism	F (4,180) = 1.99, p =.099	Boredom	-.08	-1.03	.304
		Disinhibition	-.06	-.78	.435
		Experience	-.15	-1.92	.056
		Thrill	.01	.09	.932
Machiavellianism	F (4,180) = 1.08, p =.368	Boredom	.02	.28	.779
		Disinhibition	-.09	-1.11	.269
		Experience	-.11	-1.41	.162
		Thrill	.07	.84	.401
Psychopathy	F (4,180) = 1.38, p =.241	Boredom	-.05	-.66	.510
		Disinhibition	.14	1.77	.079
		Experience	-.13	-1.70	.091
		Thrill	-.04	-.57	.572