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On being “dark” and promiscuous: The Dark Triad traits, mate value, disgust, and sociosexuality[☆]

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ABSTRACT

There is considerable evidence suggesting the Dark Triad traits (i.e., psychopathy, narcissism, & Machiavellianism) are associated with greater promiscuity, but the mechanisms linking them are poorly understood. In this study ($N = 379$) we replicated prior associations between the Dark Triad traits and sociosexuality and considered the potential mechanisms of mate value and (limited) sexual disgust in mediation and moderated-mediation models. The Dark Triad traits were correlated with short-term mating, but only narcissism was associated with more mate value and only psychopathy was associated with limited sexual disgust. Mate value moderated the relationship between psychopathy, sexual disgust, and short-term mating. Sexual disgust acted as a mediator between psychopathy and short-term mating. As such, people high in psychopathy who have high mate value are more promiscuous because they are less disgusted.

1. Introduction

The motivation to mate is a universal motive for all sexually dimorphic species (e.g., *Homo sapiens*) because it facilitates reproductive success. Human mating is can be explained by sexual strategies theory (Buss & Schmitt, 1993), which suggests that sex differences in mating psychology are moderated by the investment and duration of the courtship. Contrary to the popular misconception that humans are a monogamous species, humans are strategic pluralists (Gangestad & Simpson, 2000). Mating strategies are dependent on a vast array of individual differences such as sex, temporal contexts, personal characteristics such as personality traits, and characteristics of the ecology of the individual (Schmitt, 2016).

Short-term mating is characterized by frequently engaging in or the desire to engage in casual sex, less emotional investment in romantic relationships, and having many sexual partners and experiences (Schmitt, 2005). Individuals oriented to short-term mating prioritize mating effort detrimental to parenting effort (Geary, 2016). Long-term mating, in contrast, is characterized by high emotional investment and involvement in a relationship characterized by relatively more commitment (Buss, 1994). Individuals oriented to short-term mating prioritize parenting effort detrimental to mating effort (Mededovic, 2019). Mating behavior can also be understood as a reflection of the life

history strategies that characterize individuals. Organisms that develop in unstable (e.g., scarce resource availability) and unpredictable environments (e.g., high physical risks) develop fast life history strategies and should be more oriented to short-term mating orientation as it would facilitate the reproductive success of the individual, taking into account the ecological characteristics. Contrary, organisms that develop in stable and predictable environments tend to develop slow life history strategies and should be more oriented to long-term mating orientation (Figueredo et al., 2006).

Individual differences in mating behavior are associated with personality traits like the Dark Triad traits (i.e., Machiavellianism, narcissism, and psychopathy). The Dark Triad traits are considered socially undesirable traits because individuals with high scores on them are in general exploitative, egocentric, and lack empathy (for a review, see Furnham, Richards, & Paulhus, 2013). Machiavellianism is characterized by manipulateness, emotional coldness, and deceptiveness (Jones & Paulhus, 2009). Narcissism is characterized by a sense of entitlement and superiority (Campbell & Foster, 2002). Psychopathy is characterized by impulsivity, limited empathy, and thrill-seeking (Furnham et al., 2013).

Individuals characterized by the Dark Triad traits are usually oriented towards short-term mating (Jonason, Li, Webster, & Schmitt, 2009; Jones & de Roos, 2017a, 2017b). Sociosexuality describes

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individual differences in people's willingness to engage in uncommitted sexual relationships (Penke & Asendorpf, 2008). Knowing the mechanisms that link the Dark Triad traits and sociosexual orientation would lead to a better understanding of why those who are high in these traits engage in such behaviors.

1.1. The role of sexual disgust

We propose sexual disgust and mate value as explanatory variables for the associations between the Dark Triad traits and short-term mating. Disgust is a primary human emotion (Al-Shawaf, Lewis, & Buss, 2018) that protected human ancestors against pathogens (Schaller, 2016) that may be manifested in three large domains: pathogens, sexuality, and morality (Tybur, Lieberman, & Griskevicius, 2009). Disgust may be understood as an emotion well-suited to identify individuals with low intrinsic quality this function (Tybur et al., 2009). Individuals that are considered low in mate value and display characteristics that indicate low intrinsic quality (e.g., body shape) are usually avoided as sexual partners (Lieberman, 2006).

Beyond their proclivities for short-term mating, those high in the Dark Triad traits may have other features of relevance to the role of mate value and disgust. They are also impulsive, oriented towards risk-taking, and have callous affect (Furnham et al., 2013). These features should make individuals high in the Dark Triad traits less disgusted by sexual cues, attitudes, and behaviors. Individuals low on sexual disgust should be more successful in pursuing more sexual partners, as they tolerate a wide range of sexual attitudes and behaviors, being more oriented towards short-term mating (Al-Shawaf, Lewis, & Buss, 2015). Consequently, the Dark Triad traits should have an indirect effect on short-term mating through sexual disgust.

It is important to note that even though there is a strong conceptual overlap between the Dark Triad traits, there are some important differences between them (Jones & Paulhus, 2014). As such, it would be worthy to inspect how each trait relates to short-term mating and sexual disgust. Individuals high on Machiavellianism usually report an increased frequency of intimate sexual fantasies, but not sadomasochistic or exploratory fantasies (Baughman, Jonason, Veselka, & Vernon, 2014). Individuals with high scores on Machiavellianism have an increase sex drive, but not as high as people high on narcissism and psychopathy (Baughman et al., 2014). However, among the Dark Triad Traits, not all of them are strongly related to short-term mating. Individuals high on Machiavellianism report limited short-term sexual behavior compared to people high on narcissism and psychopathy (Jones & de Roos, 2017a, 2017b). Therefore, we expect that individuals with high scores on Machiavellianism would report limited sexual and an orientation to short-term mating, but not as much as people high on narcissism and psychopathy.

Individuals with high scores on narcissism are oriented to short-term mating, have a higher number of sexual partners, and seek short-term mates (Jonason et al., 2009; Schmitt et al., 2017). Individuals with high levels of narcissism are also involved in mate poaching and poaching success (both men and women; Kardum, Hudek-Knezevic, Schmitt, & Grundler, 2015). People with high scores on narcissism prefer one-night stands and friends-with-benefits relationships (Jonason, Luevano, & Adams, 2012; Koladich & Atkinson, 2016). People with high scores on narcissism report frequent sexual fantasies (intimate, exploratory, impersonal, and sadomasochistic) and an increased sex drive (Baughman et al., 2014). As such, we expect that individuals high on narcissism would report limited sexual disgust and would be oriented to short-term mating.

Individuals high on psychopathy have a high number of sexual partners, are also oriented to short-term mating, and seeking short-term mates (Jonason et al., 2009; Patch & Figueredo, 2017). Individuals high on psychopathy manifest to sexual deception behaviors in mating contexts (Brewer, De Griiffa, & Uzun, 2019). Psychopathy is also linked with a game-playing love style (Jonason & Kavanagh, 2010).

Individuals with high scores on psychopathy prefer booty-call relationships (Jonason et al., 2012). People with high scores on psychopathy report a higher sex drive compared to people high on narcissism and Machiavellianism (Baughman et al., 2014). Also, individuals high on psychopathy engage in risk-taking activities, are characterized by thrill-seeking, and low concern for physical integrity (Furnham et al., 2013). Therefore, we expect that individuals high on psychopathy would report lower sexual disgust and would be more oriented to short-term mating compared to people high on narcissism and Machiavellianism.

1.2. The role of mate value

We also would like to argue that another important characteristic in understanding the relationship between the Dark Triad traits, sexual disgust, and short-term mating is mate value. Mate value is an individual's sense of desirability as a partner on "the mating market" (Shackelford & Buss, 1997). Individuals with high mate value are aware of their qualities, being valued by others as potential mates, and have more opportunities for romantic and sexual relationships (Zeigler-Hill & Trombly, 2018). Individuals high on the Dark Triad traits invest more effort in contexts that permit them to satisfy the need for sexual variety as they have an increased sex drive (Baughman et al., 2014), and are willing to accept a wider range of partners (Jonason, Valentine, Li, & Harbeson, 2011; low sexual disgust should facilitate it). Therefore, those with high scores on the Dark Triad traits that also have high mate value should be more oriented to low sexual disgust because they are more confident and aware of their qualities and, thus, would not fear the possible rejection from partners when they manifest their interest in behaviors related to sexual disgust (as a function of their increased sex drive). As such, low sexual disgust may act as a mechanism that should facilitate their short-term mating orientation.

We also consider that mate value will change the direction of the relationship between the Dark Triad traits, sexual disgust, and short-term mating, as individuals high on the Dark Triad that also they think they have high mate value (especially individuals high on narcissism; Rauthmann & Kolar, 2013) are perceived as "good mates" by others (Haslam & Montrose, 2015), and have more opportunities and access to potential mates, allowing them to better satisfy their short-term mating desires, especially because if they tolerate behaviors related to sexual disgust may attract a wider range of possible mates. As such, we argue that there should be a moderated-mediation mechanism where mate value should moderate the indirect relationship between the Dark Triad traits, sexual disgust, and short-term mating.

1.3. Sex differences in the dark triad traits and mating behaviors

The sexes differ when it comes to sociosexuality (Schmitt, 2016). Compared to women, men are more characterized by a short-term mating strategy (Jonason et al., 2009; Schmitt, Shackelford, & Buss, 2001). This is mainly because, for men, addition having multiple offspring with different partners increases the likelihood that their genes will get into the next generation (Schmitt et al., 2001). Men possess an evolved desire for sexual variety, which leads them to pursue more partners (Buss & Schmitt, 2011). Women are usually more oriented to long-term mating contexts, having fewer sexual partners than men (Jonason et al., 2009). Also, men are characterized by an increased sex drive and sexual fantasies than women (Baughman et al., 2014). Men are more characterized by sociosexual attitudes and behaviors, being more inclined to infidelity (Wiederman, 1997), consume a higher quantity of pornography (Ogas & Gaddam, 2011), pay for sex (McGuire & Gruter, 2003). As such, we expect that sex would moderate the relationship between the Dark Triad Traits and sexual disgust and between the Dark Triad traits and short-term mating.

2. Method

2.1. Participants and procedure

Based on a *G*Power* analysis to detect a correlation of 0.25 ($\alpha = 0.05$, $1 - \beta = 0.95$), the necessary sample size was 197 participants; our sample consisted of 379 undergraduate students ($M_{\text{age}} = 21.44$, $SD = 5.52$, 100 men and 270 women) recruited on a voluntary basis during various lectures in a Personality course (i.e., nearly double the minimum given our desire to test moderation effects). Consent of all participants was obtained after they were informed about the aims of the study and their rights. Those who agreed to participate received a Google Forms link that contained all the measures. The participants were rewarded with extra credit.

2.2. Measures

Given the location of our sample and the first two authors, all the measures were translated into Romanian using a translation-back-translation procedure by two psychology researchers who are proficient in both Romanian and English. We tested the internal structure of each translated scale using Confirmatory Factor Analysis with Maximum Likelihood estimates. All loadings were > 0.40 and all items loading on their corresponding factor. We obtained acceptable fit indices for all the models, except for the Dark Triad measure, but this is to be expected based on previous failures to obtain the good fit (Atari & Chegeni, 2016).¹

We measured the Dark Triad traits using the Short Dark Triad (Jones & Paulhus, 2014). This is a 27-item measure of Machiavellianism, narcissism, and psychopathy with nine items for each dimension, where participants reported their agreement. Items were averaged to create indexes for Machiavellianism (Cronbach's $\alpha = 0.77$), narcissism ($\alpha = 0.67$), and psychopathy ($\alpha = 0.73$).

Sexual disgust was measured with the Sexual Disgust Inventory (Crosby, Durkee, Meston, & Buss, 2020), which consists of 31 items that measure eight dimensions of sexual disgust: taboo, incest, unusual sex, oral sex, BDSM, hygiene, same-sex attraction, and promiscuity. Participants reported their level of disgust (1 = *not at all sexually disgusting*; 7 = *extremely sexually disgusting*) with each item. We averaged the items to create an index of sexual disgust ($\alpha = 0.93$).

We measured short-term mating using the revised Sociosexual Orientation Inventory (Penke & Asendorpf, 2008). The measure consists of nine items that measure three dimensions of sociosexual orientation: sociosexual behavior, sociosexual attitude, and sociosexual desire. All scales operated on a 9-point response scale: Sociosexual behaviors (1 = 0; 9 = 20 or more), sociosexual attitudes (1 = *strongly disagree*; 9 = *strongly agree*); sociosexual desire (1 = *never*; 9 = *at least once a day*). We computed an index for each dimension by averaging their corresponding items which were then averaged to create a single sociosexuality index ($\alpha = 0.84$).

Mate value was measured using the short form of the Mate Value Inventory (Kirsner, Figueredo, & Jacobs, 2003). The short form of the measure contains 17 items where participants rate how much they were characterized by each mate value feature (0 = *low on this attribute*; 10 = *high on this attribute*). Items were averaged to create an index of self-perceived mate-value ($\alpha = 0.82$).

3. Results

Men had higher scores on psychopathy, sexual disgust, and short-term mating, whereas women had higher scores on mate value. In Table 1, we report the correlations between individual differences in the Dark Triad traits, sexual disgust, and short-term mating. Individuals high on the Dark triad traits had lower levels of sexual disgust and

higher scores on short-term mating. Machiavellianism was a weaker correlated of sexual disgust than psychopathy (Steiger's $z = 1.77$, $p < .05$), but not than narcissism ($z = 0.17$). The magnitude of the correlation with sexual disgust, was not significantly different for narcissism and psychopathy ($z = 1.38$).

Further, we tested the hypothesized moderated-mediation model with sexual disgust as a mediator, and mate value as a moderator between the Dark Triad Traits and short-term mating. We used the PROCESS 3.4 add-on for SPSS (Hayes, 2018) to test the moderated mediation. The significance of moderated-mediation was inspected with the bootstrapping method that relies on bias-corrected confidence estimates (5000 bootstrapped re-samples).

We found that psychopathy predicted sexual disgust ($b = 0.85$, $SE = 0.59$, $p < .03$, $95\%CI = 0.07, 0.27$). Also, the interaction between psychopathy and mate value was significant in predicting sexual disgust ($b = -0.31$, $SE = 0.16$, $p = .02$, $95\%CI = -0.60, -0.01$). Mate value affected the direction of the relationship between psychopathy and sexual disgust, showing a moderating effect at high levels of mate value ($[+1SD]$ $b = -0.54$, $SE = 0.13$, $p < .001$, $95\%CI = -0.80, -0.29$) whereas at low levels of mate-value ($[-1SD]$, $b = -0.18$, $SE = 0.12$, $p = .15$, $CI = -0.42, 0.06$) the relationship became nonsignificant. As such, individuals high in psychopathy that also have high mate value were less sexually disgusted.

Further, sexual disgust predicted short term mating ($b = -0.44$, $SE = 0.06$, $p < .001$, $95\%CI = -0.56, -0.32$). Also, psychopathy predicted short-term mating ($b = 0.85$, $SE = 0.11$, $p < .001$, $95\%CI = 0.63, 1.07$). The effect of psychopathy on short-term mating decreased when controlled for sexual disgust (mediating effect), at different levels of mate value at high mate value ($b = 0.24$, $95\%CI = 0.10, 0.39$), average mate value ($b = 0.16$, $95\%CI = 0.07$ to 0.27), and low mate value ($b = 0.07$, $95\%CI = -0.05$ to 0.23). The index of moderated-mediation suggested there was a partial effect (Coefficient = 0.14 [$95\%CI = 0.07, 0.27$]).

Individuals high on psychopathy manifested low sexual disgust, where sex did not moderate the relationship – the effect for men (for men $b = -0.54$, $z = -4.49$, $p = .001$, and for women $b = -0.34$, $z = -2.57$, $p = .01$). Also, those with high scores on psychopathy were oriented to short-term mating, and this effect was similar in men ($b = 0.87$, $z = 5.51$, $p < .001$) and women ($b = 1.02$, $z = 6.05$, $p = .001$).

4. Discussion

In this research, we replicated and extended what is known about the link between the Dark Triad traits and short-term mating by investigating the role of sexual disgust and mate value as explanatory mechanisms. We showed that individuals high on Machiavellianism, narcissism, and psychopathy had lower levels of sexual disgust. Further, we showed that low sexual disgust acts as a mediator between psychopathy and short-term mating orientation, whereas mate value alters the relationship between psychopathy, sexual disgust, and short-term mating.

Individuals high on Machiavellianism were less sexually disgusted. However, Machiavellianism was the weakest correlate of sexual disgust. This finding may be explained by the fact that individuals high on Machiavellianism only report high short-term beliefs and desires but not short-term sexual behaviors (Jones & de Roos, 2017a, 2017b). As sexual disgust implies sexual behaviors, individuals with high scores on Machiavellianism may be lesser oriented to sexually disgusted behaviors compared to individuals high on narcissism and psychopathy. This assumption is sustained by the fact the individuals high on Machiavellianism are less impulsive and less reckless compared to people with high scores on narcissism and psychopathy (Furnham et al., 2013).

People high on narcissism showed limited sexual disgust. This finding may be explained by the fact that individuals high on narcissism have an increased sex drive and frequent sexual fantasies (Baughman et al., 2014), being oriented to short-term mating (Jonason et al., 2009). However, the weak association between narcissism and sexual disgust

¹ Details on fit can be obtained by contacting the first author.

Table 1
Descriptive statistics, correlations, and sex differences among the study variables.

Variable	1	2	3	4	5	6
1. Machiavellianism	–					
2. Narcissism	0.38**	–				
3. Psychopathy	0.50**	0.35**	–			
4. Sexual Disgust	–0.11*	–0.12*	–0.20**	–		
5. Sociosexuality	0.22**	0.23**	0.40**	–0.39**	–	
6. Mate value	–0.02	0.46**	–0.09	–0.04	–0.03	–
Overall <i>M</i> (SD)	2.87 (0.72)	2.98 (0.62)	2.01 (0.64)	4.52 (1.17)	3.45 (1.59)	3.91 (0.56)
Men <i>M</i> (SD)	2.96 (0.68)	3.03 (0.64)	2.23 (0.64)	4.84 (1.26)	4.00 (1.45)	3.76 (0.63)
Women <i>M</i> (SD)	2.83 (0.74)	2.96 (0.61)	1.93 (0.62)	4.41 (1.12)	3.25 (1.60)	3.96 (0.52)
<i>t</i> -test	1.56	0.94	4.01**	3.05**	4.04**	–2.73**
Hedges' <i>g</i>	0.18	0.11	0.47	0.37	0.48	–0.36

Note. Hedges' *g* is used for effect size when cell sizes are imbalanced.

* $p < .05$.

** $p < .01$.

may be explained by the fact that individuals with high scores on narcissism feel ego-threatened when they confront with rejection (Stucke & Sporer, 2002). As such, even if they may desire to engage in behaviors related to sexual disgust with their partner, they may fear rejection, especially in the case of vulnerable narcissism (Besser & Priel, 2009).

Psychopathy was the strongest correlate of sexual disgust. The fact that individuals high on psychopathy had the lowest level of sexual disgust may be explained by the fact that psychopathy is characterized by low remorse, thrill-seeking behaviors, willingness to risk, anxiety, and low concern for physical integrity and health (Furnham et al., 2013). As such, individuals high on psychopathy are less likely to avoid the possible aversive outcomes of exposure to disgust-related environments, as pathogens or infections, and, might also be more indiscriminate when choosing sexual partners (Jonason, White, & Al-Shawaf, 2020). As such, sexual disgust can act as a facilitating mechanism for short-term mating, psychopathy exerting an indirect effect on short-term mating through low sexual disgust.

We also found that mate value moderated the relationship between psychopathy, sexual disgust, and short-term mating. A possible explanation of this mechanism may be that individuals high on psychopathy who also have high mate value may be perceived by others as “good mates” and have more opportunities and access to potential mates, allowing them to better satisfy their short-term mating orientation. Usually, only individuals high on narcissism (especially men) were perceived as good mates by others (Rauthmann & Kolar, 2013). However, this may also be the case if individuals high in psychopathy, especially in the case of individuals like them (high in psychopathy). This assumption is sustained by other research where authors found that individuals high on the Dark Triad traits are oriented to assortative mating (Jonason, Lyons, & Blanchard, 2015). For example, women with high levels of psychopathy perceived men with high levels of the Dark Triad traits as physically attractive and desirable for one-night stands, and as a potential husband as well. Therefore, mate value changes the direction of the relationship between psychopathy, sexual disgust, and short-term mating.

It should be noted that sex did not moderate the relationship between the Dark Triad traits and sexual disgust nor the relationship between the Dark Triad traits and short-term mating. These findings are contradictory to the convincing and robust evidence that sex is usually a moderator of the relationship between the Dark Triad traits and sexual outcome (Jonason et al., 2009, 2011). A possible explanation may be that other ecological variables such as sex ratio may affect the relationship.

5. Limitations and conclusions

Even if this research is among the first that offers two explanatory mechanism of the relationship between the Dark Triad traits and short-term mating relying on a non-W.E.I.R.D (Henrich, Heine, &

Norenzayan, 2010). sample, it also has some limitations. In this regard, we relied only on self-report measures which may lead to socially desirable responses. Also, our findings may be sample-dependent as we relied on only one non-probabilistic convenience sample. Further, considering that the design of the research is cross-sectional, we cannot make causal inferences regarding the studying relationships. Lastly, individuals high on Dark Triad traits (particularly narcissism) may have inflated perceptions of their mate value, which could be problematic considering mate value was self-reported. Further studies should assess mate value more objectively (e.g., as objective attractiveness ratings; Holtzman & Strube, 2013). Further research may replicate and extend the findings of this study by testing more complex explanatory mechanisms where possible relevant characteristics such as sex ratio, resource scarcity, or other dispositional factors such as sadism (Mededović & Petrović, 2015) or spitefulness (Marcus, Zeigler-Hill, Mercer, & Norris, 2014) may be included. Nevertheless, we showed that individuals characterized by high levels of psychopathy who also believe they have high mate value are more promiscuous because they get “grossed out” less.

CRedit authorship contribution statement

Vlad Burtáverde:Conceptualization, Data curation, Formal analysis, Methodology, Resources, Supervision, Writing - original draft, Writing - review & editing.**Peter K. Jonason:**Methodology, Formal analysis, Supervision, Writing - review & editing.**Cristina Ene:**Conceptualization, Data curation, Writing - original draft, Writing - review & editing.**Mădălina Istrate:**Methodology, Writing - review & editing.

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