



Dark Triad traits, Facebook intensity, and intrasexual competition

Minna Lyons*, Naomi Gillies, Gayle Brewer

University of Liverpool, Liverpool L69 7ZA, UK



ARTICLE INFO

Keywords:

Competition
Dark triad
Facebook
Narcissism
Machiavellianism
Psychopathy
Social media

ABSTRACT

Intrasexual competition supports the acquisition of new mates and the maintenance of existing relationships. We investigated intrasexual competition in relation to Dark Triad traits (narcissism, Machiavellianism, and psychopathy) and intensity of Facebook use. Men ($n = 61$) and women ($n = 164$) completed measures assessing intrasexual competition (Buunk & Fisher, 2009), Dark Triad traits (Jones & Paulhus, 2014), and intensity of Facebook use (Ellison, Steinfield, & Lampe, 2007). Machiavellianism and psychopathy were positive predictors for endorsement of intrasexual competition. Narcissism and Facebook intensity did not predict intrasexual competition. Findings are discussed in relation to personality and mate competition.

1. Introduction

Intrasexual competition is a common sexual strategy, which functions to increase access to new partners and supports the maintenance of existing relationships. In humans, there is considerable within-sex variation in how competitive individuals are and the way in which people engage in competition. For example, gossip through social networks (Davis, Dufort, Desrochers, Vaillancourt, & Arnocky, 2017), or in online social media (Hendrickse, Arpan, Clayton, & Ridgway, 2017) are strategies that can be useful in intrasexual competition. Personality is another one important factor associated with competitive behaviour (Buunk, Bucksath, & Cordero, 2017; Goncalves & Campbell, 2014). In this brief report, we investigated intrasexual competition in relation to the Dark Triad personality traits (i.e., narcissism, Machiavellianism, and psychopathy) and intensity of Facebook use.

The Dark Triad (Paulhus & Williams, 2002) is a widely researched personality constellation. The traits share a common core of manipulation and callousness (Jones & Figueredo, 2013) and influence a range of relationship types (Lyons, 2019). In particular, individuals at the higher end of the continuum have increased motivations for sexual partners (Lee et al., 2013), which appear to impact intrasexual competition (Carter, Montanaro, Linney, & Campbell, 2015). Each trait has been associated with a unique style of same-sex competition. For example, psychopathy is related to the use of deception (e.g., trying to impress a same-sex competitor by greeting an attractive member of the opposite sex; Jonason, Lyons, Baughman, & Vernon, 2014), as well as employing gossiping tactics that are aimed at damaging the reputation of the rival (Goncalves & Campbell, 2014). Narcissism has been connected to trying to outshine a competitor, and Machiavellianism to rude

derogation of the competitor (Goncalves & Campbell, 2014).

It is possible that social networking sites such as Facebook are also used as a forum for intrasexual competition (Wyckoff, Buss, & Markman, 2018). Social comparison and self-promotion are important features of social networking sites, especially amongst those who are younger or more intense users of these sites (Lee, 2014; Ozimek & Bierhoff, 2016). Aggressive behaviour such as cyberbullying and relational aggression are also commonplace online (Abell & Brewer, 2014; Slonje & Smith, 2008). Previous research demonstrates that relationship status influences men's behaviour on such sites (McAndrew & Jeong, 2012), and attractiveness appears to influence the responses of other users (Wang, Moon, Kwon, Evans, & Stefanone, 2010). It is therefore possible that exposure to online promotion, comparison, and aggression encourages intrasexual competition. It is also plausible that those with an elevated drive for competition spend more time using these sites.

Previous research has established sex differences in the intensity of Facebook use, indicating that women use it more than men do (McAndrew & Jeong, 2012). Yet, it is not clear whether the sexes use social media differently as a tool in intrasexual competition, which is something that we will explore in this research. Furthermore, men tend to score higher than women on the Dark Triad instruments (Paulhus & Williams, 2002). However, rather than the sex of the individual, it is possible that the Dark Triad traits are more influential in intrasexual competition (Jonason et al., 2014). Therefore, we predict that irrespective of the sex of the participant, those high in the Dark Triad traits display greater levels of intrasexual competition.

* Corresponding author at: School of Psychology, University of Liverpool, Liverpool L69 7ZA, UK.
E-mail address: M.Lyons@liverpool.ac.uk (M. Lyons).

2. Method

2.1. Participants

Men ($n = 61$) and women ($n = 164$) aged 17 to 40 years ($M = 22.18$, $SD = 4.87$) were recruited via social media and online participation forums.

2.2. Materials and procedure

Participants completed a series of self-report questions online. The original Intrasexual Competition Scale (Buunk & Fisher, 2009) is a 12 item measure of willingness to compete with members of the same-sex. Participants respond to statements on a 7 point scale (1 = not applicable at all to 7 = very applicable). Because the results reported here are part of a wider project on personality and social media behaviour, we wanted to reduce respondent fatigue by selecting only six items from the scale. The items included “I always want to beat other men/women” and “I like to be funnier and more quick-witted than other men/women”. The Short Dark Triad (SD-3) questionnaire is a 27 item measure of narcissism, Machiavellianism, and psychopathy (Jones & Paulhus, 2014). Participants respond to each item (nine items per Dark Triad trait) on a 5 point scale (1 = strongly disagree to 5 = strongly agree). Example items include “I know that I am special because everyone keeps telling me so” (narcissism), “I like to use clever manipulation to get my way” (Machiavellianism), and “It’s true that I can be mean to others” (psychopathy). Five items are reverse scored.

The Facebook Intensity Scale (Ellison, Steinfield, & Lampe, 2007) is an eight item measure of Facebook use. Six items are answered on a 5 point Likert scale (1 = strongly disagree to 5 = strongly agree). These include “Facebook has become part of my daily routine” and “I would be sorry if Facebook shut down”. Two further questions “How many Facebook friends to you have?” (0 = 10 or less, 1 = 11–50, 2 = 51–100, 3 = 101–150, 4 = 151–200, 5 = 201–250, 6 = 251–300, 7 = 301–400, 8 = more than 400), and “In the past week, on average, approximately how much time per day have you spent on Facebook?” (0 = less than 10, 1 = 10–30, 2 = 31–60, 3 = 1–2 h, 4 = 2–3 h, 5 = more than 3 h) are included.

In the present study, Cronbach’s alphas were: intrasexual competition ($\alpha = 0.74$); narcissism ($\alpha = 0.70$); Machiavellianism ($\alpha = 0.74$); psychopathy ($\alpha = 0.76$); and Facebook intensity ($\alpha = 0.81$).

3. Results

In order to explore sex differences, we conducted independent sample’s t -tests for the Dark Triad, Facebook intensity, and intrasexual competition. Men scored significantly higher than women on all of the three Dark Triad variables. Women scored higher than men on the Facebook intensity. There were no significant sex differences in the intrasexual competition. In both sexes, Machiavellianism and psychopathy were significant positive correlates of intrasexual competition. Therefore, we combined the male and female samples for subsequent

analyses. The data for descriptive statistics, t -tests, and cross-correlations are shown in Table 1.

We conducted a standard linear multiple regression to determine whether the Dark Triad traits and Facebook intensity predicted intrasexual competition. We found that the Dark Triad traits and Facebook intensity significantly predicted intrasexual competition, $F(4, 220) = 25.77$, $p < .001$, accounting for 32% ($R^2 = 0.32$, $AdjR^2 = 0.31$) of the intrasexual competition variance. Machiavellianism ($\beta = 0.23$, $t = 3.50$, $p = .001$), and psychopathy ($\beta = 0.40$, $t = 6.09$, $p = .001$) were significant individual predictors, such that participants with higher Machiavellianism and psychopathy were more likely to engage in intrasexual competition. Facebook intensity ($\beta = 0.06$, $t = 1.10$, $p = .27$) and narcissism ($\beta = 0.02$, $t = 0.27$, $p = .79$) were not significant predictors of intrasexual competition.

4. Discussion

The present study demonstrates that men and women high on Machiavellianism and psychopathy are more likely to engage in intrasexual competition. Findings are consistent with previous research indicating that Machiavellianism is associated with increased intrasexual competition (Brewer & Abell, 2015) and suggestions that Machiavellian behaviour is evoked when people are exposed to romantic rivals (Kilduff & Galinsky, 2017). Our results are also consistent with prior reports that those high on psychopathy are highly competitive, and willing to damage the reputation of a rival (Goncalves & Campbell, 2014). Our results also support a general trend suggesting that those high on Dark Triad traits are more competitive (Carter et al., 2015). Our findings were, of course, limited by the reliance on self-report questionnaires. Future research may include behavioural observations or collect data from both the target individual and their perceived rival.

Narcissism did not predict intrasexual competition. Findings are not consistent with our initial predictions or previous research suggesting that narcissism is related to elevated competitiveness (Luchner, Houston, Walker, & Houston, 2011). Our results are consistent with reports that whilst that Machiavellianism and psychopathy do predispose individuals to perceive their environment to be competitive, narcissism does not (Jonason, Wee, & Li, 2015). Those high in narcissism may use more self-promoting strategies in attracting potential partners (Monteiro et al., 2017), but according to our results, they may not have a need to engage in a competition with potential rivals.

Facebook intensity was also unrelated to intrasexual competition. We predicted that exposure to online promotion, comparison, and aggression would encourage intrasexual competition or that those with an elevated drive for competition would use these sites more intensively. Selective self-presentation and social comparison are common features of social media use (Fox & Vendemia, 2016) and research indicates that intrasexual competition is associated with engagement in social comparisons online (Hendrickse et al., 2017). Rather than intensity of Facebook use, intrasexual competition may be associated with the types of activities performed on social media.

Table 1

Descriptive statistics, sex differences, and correlations for intrasexual competition, dark triad traits, and Facebook intensity.

	Competition	Narcissism	Machiavellianism	Psychopathy	Facebook	M (SD)	t
Competition							
Narcissism	0.10	0.25**	0.41**	0.51*	0.06	19.53 (6.70)	1.60
Machiavellianism	0.50**	0.30*	0.28**	0.29*	0.23*	24.74 (5.34)	3.58**
Psychopathy	0.52**	0.26*	0.50**	0.47**	-0.02	28.54 (5.45)	2.34*
Facebook	0.18	0.12	0.36**	0.07	0.01	17.01 (5.21)	4.14**
M (SD)	21.11 (6.28)	27.72 (6.10)	30.56 (6.46)	20.43 (6.23)	28.10 (7.85)	31.39 (7.35)	2.93**

Correlations for male and female participants are displayed in the bottom left and top right of the table respectively.

* $p < .05$.

** $p < .001$.

To conclude, we investigated intrasexual competition in relation to Dark Triad traits and intensity of Facebook use. Results indicate that men and women high on Machiavellianism and psychopathy are more likely to engage in intrasexual competition. Narcissism and intensity of Facebook use were not related to intrasexual competition. Future research should consider responses to the competitive behaviour, for example, retaliation from others and the impact of this competition on their mating success.

References

- Abell, L., & Brewer, G. (2014). Machiavellianism, self-promotion and relational aggression on Facebook. *Computers in Human Behavior*, *36*, 258–262.
- Brewer, G., & Abell, L. (2015). Machiavellianism in long-term relationships: Competition, mate retention and sexual coercion. *Scandinavian Journal of Psychology*, *56*, 357–362.
- Buunk, A. P., Bucksath, A. F., & Cordero, S. (2017). Intrasexual competitiveness and personality traits: A study in Uruguay. *Personality and Individual Differences*, *108*, 178–181.
- Buunk, A. P., & Fisher, M. (2009). Individual differences in intrasexual competition. *Journal of Evolutionary Psychology*, *7*, 37–48.
- Carter, G. L., Montanaro, Z., Linney, C., & Campbell, A. C. (2015). Women's sexual competition and the Dark Triad. *Personality and Individual Differences*, *74*, 275–279.
- Davis, A. C., Dufort, C., Desrochers, J., Vaillancourt, T., & Arnocky, S. (2017). Gossip as an intrasexual competition strategy: Sex differences in gossip frequency, content, and attitudes. *Evolutionary Psychological Science*, *4*, 1–13.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends:” social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, *12*, 1143–1168.
- Fox, J., & Vendemia, M. A. (2016). Selective self-presentation and social comparison through photographs on social networking sites. *Cyberpsychology, Behavior and Social Networking*, *19*, 593–600.
- Goncalves, M. K., & Campbell, L. (2014). The Dark Triad and the derogation of mating competitors. *Personality and Individual Differences*, *67*, 42–46.
- Hendrickse, J., Arpan, L. M., Clayton, R. B., & Ridgway, J. L. (2017). Instagram and college women's body image: Investigating the roles of appearance-related comparisons and intrasexual competition. *Computers in Human Behavior*, *74*, 92–100.
- Jonason, P. K., Lyons, M., Baughman, H. M., & Vernon, P. A. (2014). What a tangled web we weave: The Dark Triad traits and deception. *Personality and Individual Differences*, *70*, 117–119.
- Jonason, P. K., Wee, S., & Li, N. P. (2015). Competition, autonomy, and prestige: Mechanisms through which the Dark Triad predict job satisfaction. *Personality and Individual Differences*, *72*, 112–116.
- Jones, D. N., & Figueredo, A. J. (2013). The core of darkness: Uncovering the heart of the Dark Triad. *European Journal of Personality*, *27*, 521–531.
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3): A brief measure of dark personality traits. *Assessment*, *21*, 28–41.
- Kilduff, G. J., & Galinsky, A. D. (2017). The spark that ignites: Mere exposure to rivals increases Machiavellianism and unethical behavior. *Journal of Experimental Social Psychology*, *69*, 156–162.
- Lee, K., Ashton, M. C., Wiltshire, J., Bourdage, J. S., Visser, B. A., & Gallucci, A. (2013). Sex, power, and money: Prediction from the Dark Triad and Honesty–Humility. *European Journal of Personality*, *27*, 169–184.
- Lee, S. Y. (2014). How do people compare themselves with others on social network sites?: The case of Facebook. *Computers in Human Behavior*, *32*, 253–260.
- Luchner, A. F., Houston, J. M., Walker, C., & Houston, M. A. (2011). Exploring the relationship between two forms of narcissism and competitiveness. *Personality and Individual Differences*, *51*, 779–782.
- Lyons, M. (2019). *The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy in everyday life*. London: Academic Press 81–136.
- McAndrew, F. T., & Jeong, H. S. (2012). Who does what on Facebook? Age, sex, and relationship status as predictors of Facebook use. *Computers in Human Behavior*, *28*, 2359–2365.
- Monteiro, R. P., Lopes, G. S., Nascimento, B. S., Gouveia, V. V., Shackelford, T. K., & Zeigler-Hill, V. (2017). Dark Triad predicts self-promoting mate attraction behaviors. *Personality and Individual Differences*, *119*, 83–85.
- Ozimek, P., & Bierhoff, H. W. (2016). Facebook use depending on age: The influence of social comparisons. *Computers in Human Behavior*, *61*, 271–279.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, *36*, 556–563.
- Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying. *Scandinavian Journal of Psychology*, *49*, 147–154.
- Wang, S. S., Moon, S., Kwon, K. H., Evans, C. A., & Stefanone, M. A. (2010). Face off: Implications of visual cues on initiating friendship on Facebook. *Computers in Human Behavior*, *26*, 226–234.
- Wyckoff, J. P., Buss, D. M., & Markman, A. B. (2018). *Sex differences in victimization and consequences of cyber aggression: An evolutionary perspective*. Evolutionary Behavioral Sciences. (In Press).