



Research Report

The personality profile of a cyberbully: Examining the Dark Triad



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ABSTRACT

The present study examined the relationships between the Dark Triad personality traits and self-reported cyberbullying behaviors. College students ($N = 227$) completed a questionnaire and reported on their trait Machiavellianism, psychopathy, and narcissism, and the degree to which they cyberbullied (i.e., both visual and text based bullying) others in the past year. Correlations revealed that all three Dark Triad traits were related positively with cyberbullying. However, multiple regression analysis revealed that of the three Dark Triad traits, psychopathy emerged as the unique predictor of cyberbullying. These findings reinforce extant research suggesting that personality traits are important predictors of computer-mediated behavior.

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1. Introduction

Unequivocally, various forms of bullying (e.g., physical, verbal, relational, damage to property, etc.) pose a serious problem for students and society in general (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014; Smith & Brain, 2000). Thankfully, bullying is becoming less accepted as a “normal part of childhood” and instead, is now being addressed by schools as a considerable threat (Limber & Small, 2003). Because of the harmful consequences of bullying, personality researchers frequently examine and explain the bullying problem, in part, as a manifestation of individual differences (e.g., Mynard & Joseph, 1997; Sutton & Keogh, 2000; Tani, Greenman, Schneider, & Fregoso, 2003). One form of bullying, cyberbullying, is particularly problematic because as schools, parents, and communities attempt to combat it, perpetrators find new and creative ways to victimize others through the use of evolving technologies (e.g., new cell phone apps, social networking websites, messaging programs). As Menesini and Spiel (2012) pointed out, “although some consistent findings have been reached so far, there is still a lack of knowledge about developmental processes of cyberbullying and on possible predictors and correlates, such as personality” (p. 164). Therefore, the current study examined cyberbullying behavior as an expression of undesirable personality traits (i.e., the Dark Triad).

1.1. Cyberbullying

Cyberbullying is considered “an aggressive, intentional act carried out by a group or individual, using electronic forms of contact,

repeatedly and over time against a victim who cannot easily defend him or herself” (Smith & Slonje, 2012, p. 249). Cyberbullying is a prevalent problem affecting between 20% and 40% of youths (Tokunaga, 2010), typically via mobile phones and the Internet (Slonje & Smith, 2008). Cyberbullying is communicated using channels such as text messages, website postings, emails, pictures, and video clips (Smith & Slonje, 2012) that attempt to harass, denigrate, impersonate, or ostracize others (Kowalski, Limber, & Agatston, 2012). Students report varying motivations for engaging in cyberbullying including revenge, jealousy, boredom, and seeking approval (Varjas, Talley, Meyers, Parris, & Cutts, 2010).

Most cyberbullies spend a considerable amount of time online and engage in risky online behaviors, but there are important individual/personality differences that predict this behavior beyond characteristics of Internet use (Görzig & Olafsson, 2013). For instance, cyberbullies tend to have personalities that lack self-control and sensitivity; they tend to be higher in psychoticism (Ozden & Icellioglu, 2014) and verbal aggressiveness (Roberto, Eden, Savage, Ramos-Salazar, & Deiss, 2014) and lower in empathy (Doane, Pearson, & Kelly, 2014). Preliminary evidence suggests that personality traits do predict cyberbullying behavior. The current study was designed to determine if cyberbullies have a personality profile inclusive of the Dark Triad traits.

1.2. Dark Triad

The Dark Triad refers to three distinct, yet undesirable (to other individuals) personality traits: (a) Machiavellianism, which refers to a tendency to strategically manipulate others, (b) psychopathy, which refers to a tendency to lack empathy and engage in impulsive and thrill-seeking behavior, and (c) narcissism, which refers to a tendency to feel superior, grandiose, and entitled (Paulhus &

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Williams, 2002). These three traits are considered to be exploitative and “show an indifference to the harm they cause to others in the course of achieving their goals” (Jones & Paulhus, 2011, p. 253). Jones and Figueredo (2013) revealed that all three traits share a common antagonistic core of callousness and manipulation. Other studies have highlighted similar commonalities in these traits such as deficits in empathy (Jonason & Krause, 2013; Wai & Tiliopoulos, 2012) and a lack of agreeableness (Jakobwitz & Egan, 2006).

The Dark Triad traits are heritable (Vernon, Villani, Vickers, & Harris, 2008) and are associated with numerous undesirable individual differences and behaviors including vengeance (Giammarco & Vernon, 2014), anger (Veselka, Giammarco, & Vernon, 2014), aggressive humor (Martin, Lastuk, Jeffery, Vernon, & Veselka, 2012), scholastic cheating (Williams, Nathanson, & Paulhus, 2010), social dominance orientation (Jones & Figueredo, 2013), prejudice (Hodson, Hogg, & MacInnis, 2009), and short term mating strategies (Jonason, Li, Webster, & Schmitt, 2009). Moreover, individuals who possess the Dark Triad traits experience psychosocial costs (Jonason, Li, & Czarna, 2013) due to a lack of self-control (Jonason & Tost, 2010), emotional intelligence (Petrides, Vernon, Schermer, & Veselka, 2011), and equity sensitivity (Woodley & Allen, 2014).

1.3. Rationale/hypotheses

There is ample reason to believe that students' Dark Triad traits should predict cyberbullying behavior. First, traditional forms of bullying have been directly linked to personality traits. For instance, traditional bullying (not electronically based, but rather physical, verbal, racial/ethnic, indirect, sexual) is associated negatively with honesty and agreeableness traits (Book, Volk, & Hosker, 2012) but positively with callous-unemotional traits (Ciucci & Baroncelli, 2014); those same callous-unemotional traits are also related to cyberbullying (Fanti, Demetriou, & Hawa, 2012). The first study to directly investigate the Dark Triad and traditional bullying (i.e., physical and verbal) revealed that all three traits were related positively with bullying, but psychopathy was most strongly related (Baughman, Dearing, Giammarco, & Vernon, 2012, see note). Undoubtedly, then, the extant research supports the link between personality and more traditional forms of bullying.

Second, there is empirical evidence to suggest that much like traditional bullying that is enacted face to face, cyberbullying too, should be associated with the Dark Triad traits. For instance, the Dark Triad traits predict negative Internet behavior including trolling on websites (Buckels, Trapnell, & Paulhus, 2014), posting negatively-valenced Facebook status updates (Garcia & Sikström, 2014), and using swear words and anger expressions on Twitter (Sumner, Byers, Bochever, & Park, 2012). Given the collective findings that suggest the Dark Triad traits predict traditional bullying and negative Internet behavior, we would expect that these traits would also predict cyberbullying. Therefore, we offered three hypotheses:

H1. Machiavellianism will be related positively to reports of cyberbullying.

H2. Psychopathy will be related positively to reports of cyberbullying.

H3. Narcissism will be related positively to reports of cyberbullying.

Consistent with previous research on the Dark Triad that considers these three exploitative traits to overlap statistically (e.g.,

Baughman et al., 2012; Williams et al., 2010), we were interested in determining the unique contribution of these traits as predictors for cyberbullying. Therefore, we posed the following research question:

RQ. To what extent do the Dark Triad traits (i.e., Machiavellianism, psychopathy, narcissism) uniquely predict reports of cyberbullying?

2. Method

2.1. Participants and procedures

The participants in this study were 227 undergraduate students (104 men, 112 women, 11 did not identify sex) who were enrolled in an introductory communication studies course. Participants' ages ranged from 18 to 40 years ($M = 20.97$, $SD = 2.32$). Most participants reported being online in the past month (97.8%, $n = 222$) and owning a cell phone (98.7%, $n = 227$). Participants also reported being frequent Internet and mobile phone users which are the most common channels for cyberbullying (Slonje & Smith, 2008); they reported using a variety of websites and applications including Facebook (86.8%, $n = 197$), YouTube (95.2%, $n = 216$), Instagram (76.7%, $n = 174$), Snapchat (73.1%, $n = 166$), and Twitter (80.2%, $n = 182$). After obtaining IRB approval, participants completed a questionnaire that measured their Dark Triad traits and their cyberbullying behavior in the past year.

2.2. Measures

2.2.1. Dark Triad

The Dark Triad was measured using Jonason and Webster's (2010) Dirty Dozen. The Dirty Dozen is 12 items and measures trait Machiavellianism (4 items, e.g., “I tend to manipulate others to get my way”), psychopathy (4 items, e.g., “I tend to lack remorse”), and narcissism (4 items, e.g., “I tend to want others to admire me”). Participants were asked to indicate the degree each item applied to them using a 5-point response format ranging from 1 (Not at all) to 5 (Very much). Several validity studies have been conducted for this measure providing support for the structural properties of this measure; including Jonason and Luévano (2013) findings for construct validity and Webster and Jonason's (2013) item response theory analysis of the measure. In this study, the Machiavellianism ($\alpha = .79$, $M = 10.00$, $SD = 3.51$), psychopathy ($\alpha = .80$, $M = 7.41$, $SD = 3.35$), and narcissism ($\alpha = .82$, $M = 13.27$, $SD = 4.39$) subscales performed reliably.

2.2.2. Cyberbullying

Cyberbullying was measured using Griesel, Finger, Bodkin-Andrews, Craven, and Yeung's (2012) Revised Adolescent Peer Relations Instrument (RAPRI). The RAPRI is 26 items and measures cyberbullying from both the bully's and target's perspectives. Only the 13 items (2 subscales) that measure the bully's perspective were included. These subscales included visual-based cyberbullying (5 items, e.g., “In the past year at this school, I used a mobile phone to send other students a video of a student I knew would embarrass them”) and text-based cyberbullying (8 items, e.g., “In the past year at this school, I wrote nasty things about a student on a profile page”). Participants responded using a 6-point format ranging from 1 (never) to 6 (every day). Griesel et al. (2012) report evidence for the structural validity of the scale. In this study, the visual ($\alpha = .84$, $M = 8.93$, $SD = 4.29$) and text ($\alpha = .87$, $M = 11.34$, $SD = 5.13$) cyberbullying subscales performed reliably.

3. Results

Intercorrelations among variables and reliability coefficients are presented in Table 1.

The hypotheses predicted that Machiavellianism (H1), psychopathy (H2), and narcissism (H3) would be related positively to reports of cyberbullying. Results of Pearson correlations provided support all three hypotheses (see Table 1). Machiavellianism was correlated positively with visual-based cyberbullying ($r = .25$, $p < .001$) and text-based cyberbullying ($r = .30$, $p < .001$); psychopathy was correlated positively with visual-based cyberbullying ($r = .34$, $p < .001$) and text-based cyberbullying ($r = .38$, $p < .001$); and narcissism was correlated positively with visual-based cyberbullying ($r = .19$, $p < .01$) and text-based cyberbullying ($r = .27$, $p < .001$).

To answer the research question, which inquired about which Dark Triad traits uniquely predict reports of cyberbullying, two multiple regressions were computed. Furnham, Richards, and Paulhus (2013, p. 209) suggested that multiple regression should be used in addition to correlations when examining Dark Triad influences “because of the common core they share” (p. 209). The first multiple regression, which predicted visual-based cyberbullying was statistically significant ($F(3,223) = 10.31$, $p < .001$; $R^2 = .12$), with psychopathy serving as the only significant predictor ($\beta = .27$, $t = 3.49$, $p < .001$). The second multiple regression, which predicted text-based cyberbullying was statistically significant ($F(3,223) = 14.73$, $p < .001$; $R^2 = .17$), with psychopathy serving as the only significant predictor ($\beta = .30$, $t = 3.97$, $p < .001$). There was no evidence of multicollinearity for each of the predictors: Machiavellianism (Tolerance = .57, VIF = 1.76), Psychopathy (Tolerance = .67, VIF = 1.49), and Narcissism (Tolerance = .72, VIF = 1.39).

Unstandardized betas, standard errors, and standardized betas for both regressions are presented in Tables 2 and 3. Therefore, among the Dark Triad traits which are intercorrelated (Jonason, Kavanagh, Webster, & Fitzgerald, 2011), psychopathy proved to be the unique predictor for both types of cyberbullying.

4. Discussion

This study examined the associations between the Dark Triad and cyberbullying behavior. Our hypotheses were supported as Machiavellianism, psychopathy, and narcissism were positive correlates of both visual-based and text-based cyberbullying reports. These associations were small to moderate, suggesting that dark personalities play some role in cyberbullying tendencies. Moreover, psychopathy was revealed to be the unique predictor of the three traits, which is consistent with previous research, suggesting that this trait may be more problematic than the others. For instance, Baughman et al. (2012) found that psychopathy was the strongest correlate of traditional bullying whereas Williams et al. (2010) found that psychopathy was a unique predictor of scholastic cheating.

Jones and Paulhus (2010) found that individuals with Dark Triad traits are predisposed toward aggression, but that psychopaths tend to be aggressive even when unprovoked;

Table 2

Multiple regression analysis for Dark Triad traits predicting visual-based cyberbullying.

	B	SEB	β
Machiavellianism	.11	.10	.09
Psychopathy	.34	.10	.27*
Narcissism	.05	.09	.05
$F(3,223) = 10.31$, $p < .001$, $R^2 = .12$, $R^2_{adj} = .11$			

* $p < .001$.

Table 3

Multiple regression analysis for Dark Triad traits predicting text-based cyberbullying.

	B	SEB	β
Machiavellianism	.11	.12	.07
Psychopathy	.46	.11	.30*
Narcissism	.16	.10	.12
$F(3,223) = 14.73$, $p < .001$, $R^2 = .17$, $R^2_{adj} = .15$			

* $p < .001$.

“psychopathic aggression appears to be less discriminating” (p. 16). Therefore, researchers should pay special attention to psychopathy in explaining bullying behavior. In the same study, narcissistic aggression was revealed to be a more predictable response to ego and self-image threats. Therefore, although it is possible that Machiavellian individuals engage in cyberbullying to strategically gain something, whereas narcissistic individuals engage in cyberbullying as revenge for face-restoration, psychopathic individuals may cyberbully without provocation or discernment. Of course, this is speculation because the participants’ motivations for cyberbullying were not measured, which is the main limitation of this study.

Another limitation was that emerging methods of cyberbullying were not examined beyond mobile phone use and Internet aggression (e.g., using Facebook groups for online aggression). Recent research has linked personality traits to Facebook use (e.g., Ross et al., 2009) and relational aggression (Abell & Brewer, 2014); this link deserves more attention. Future researchers may consider further exploring the role that personality and communication traits play in the encouraging electronic forms of bullying. Moreover, motivations for cyberbullying need to be examined (Slonje, Smith, & Frisén, 2013) because they range from external (e.g., no perceived consequences) to internal (e.g., trying out a new persona) motivations (Varjas et al., 2010), which may create interaction effects with personality traits. In summary, cyberbullying researchers should continue to consider the distal role that personality plays in encouraging perpetration as they continue to simultaneously consider proximal influences in tandem, and potential interactions between individual differences and the environment.

5. Note

1. The Baughman et al. study (2012) documented associations between the Dark Triad traits and general measures of bullying. The researchers used 2 items to measure cyberbullying as part of a composite measure of bullying. However, these items were coded as part of 4 subscales: (1) physical direct bullying, (2) verbal direct bullying, (3) direct bullying (summing physical and verbal direct bullying together), and (4) indirect bullying. Therefore, these 2 cyberbullying items were subsumed within a general bullying operationalization. This study did not specifically examine visual and text-based cyberbullying reports. To date, the Dark Triad traits have not been empirically linked to specific measures of cyberbullying.

Table 1

Intercorrelations and reliability coefficients for Dark Triad and cyberbullying variables.

Variables	α	1	2	3	4
<i>Dark Triad</i>					
1. Machiavellianism	.79	–			
2. Psychopathy	.80	.57*	–		
3. Narcissism	.82	.52*	.38*	–	
<i>Cyberbullying</i>					
4. Cyberbullying (visual)	.84	.26*	.34*	.19**	–
5. Cyberbullying (text)	.87	.30*	.38*	.27*	.70*

* $p < .001$.

** $p < .01$.

References

- Abell, L., & Brewer, G. (2014). Machiavellianism, self-monitoring, self-promotion and relational aggression on Facebook. *Computers in Human Behavior*, 36, 258–262. <<http://dx.doi.org/10.1016/j.chb.2014.03.076>>.
- Baughman, H. M., Dearing, S., Giammarco, E., & Vernon, P. A. (2012). Relationships between bullying behaviours and the Dark Triad: A study with adults. *Personality and Individual Differences*, 52, 571–575. <<http://dx.doi.org/10.1016/j.paid.2011.11.020>>.
- Book, A. S., Volk, A. A., & Hosker, A. (2012). Adolescent bullying and personality: An adaptive approach. *Personality and Individual Differences*, 52, 218–223. <<http://dx.doi.org/10.1016/j.paid.2011.10.028>>.
- Buckels, E. E., Trapnell, P. D., & Paulhus, D. L. (2014). Trolls just want to have fun. *Personality and Individual Differences*, 67, 97–102. <<http://dx.doi.org/10.1016/j.paid.2014.01.016>>.
- Ciucci, E., & Baroncelli, A. (2014). The emotional core of bullying: Further evidences of the role of callous-unemotional traits and empathy. *Personality and Individual Differences*, 67, 69–74. <<http://dx.doi.org/10.1016/j.paid.2013.09.033>>.
- Doane, A. N., Pearson, M. R., & Kelley, M. L. (2014). Predictors of cyberbullying perpetration among college students: An application of the theory or reasoned action. *Computers in Human Behavior*, 36, 154–162. <<http://dx.doi.org/10.1016/j.chb.2014.03.051>>.
- Fanti, K. A., Demetriou, A. G., & Hawa, V. V. (2012). A longitudinal study of cyberbullying: Examining risk and protective factors. *European Journal of Developmental Psychology*, 9, 168–181. <<http://dx.doi.org/10.1080/17405629.2011.643169>>.
- Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The Dark Triad of personality: A 10 year review. *Social and Personality Psychology Compass*, 7, 199–216. <<http://dx.doi.org/10.1111/spc312018>>.
- Garcia, D., & Sikström, S. (2014). The dark side of Facebook: Semantic representations of status updates predict the Dark Triad of personality. *Personality and Individual Differences*, 67, 92–96. <<http://dx.doi.org/10.1016/j.paid.2013.10.001>>.
- Giammarco, E. A., & Vernon, P. A. (2014). Vengeance and the Dark Triad: The role of empathy and perspective taking in trait forgiveness. *Personality and Individual Differences*, 67, 23–29. <<http://dx.doi.org/10.1016/j.paid.2014.02.010>>.
- Gladden, R. M., Vivolo-Kantor, A. M., Hamburger, M. E., & Lumpkin, C. D. (2014). *Bullying surveillance among youths: Uniform definitions for public health and recommended data elements, version 1.0*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, and U.S. Department of Education.
- Griezel, L., Finger, L. R., Bodkin-Andrews, G. H., Craven, R. G., & Yeung, A. S. (2012). Uncovering the structure of and gender and developmental differences in cyber bullying. *The Journal of Educational Research*, 105, 442–455. <<http://dx.doi.org/10.1080/00220671.2011.629692>>.
- Görzig, A., & Olafsson, K. (2013). What makes a bully a cyberbully? Unravelling the characteristics of cyberbullies across twenty-five European countries. *Journal of Children and the Media*, 7, 9–27. <<http://dx.doi.org/10.1080/17482798.2012.739756>>.
- Hodson, G., Hogg, S. M., & MacInnis, C. C. (2009). The role of Big Five personality factors and ideology in explaining prejudice. *Journal of Research in Personality*, 43, 686–690. <<http://dx.doi.org/10.1016/j.jrp.2009.02.005>>.
- Jakobwitz, S., & Egan, V. (2006). The Dark Triad and normal personality traits. *Personality and Individual Differences*, 40, 331–339. <<http://dx.doi.org/10.1016/j.paid.2005.07.006>>.
- Jonason, P. K., Kavanagh, P. S., Webster, G. D., & Fitzgerald, D. (2011). Comparing the measured and latent Dark Triad: Are three measures better than one? *Journal of Methods and Measurement in the Social Sciences*, 2, 28–44.
- Jonason, P. K., & Krause, L. (2013). The emotional deficits associated with the Dark Triad traits: Cognitive empathy, affective empathy, and alexithymia. *Personality and Individual Differences*, 55, 532–537. <<http://dx.doi.org/10.1016/j.paid.2013.04.027>>.
- Jonason, P. K., Li, N. P., & Czarna, A. Z. (2013). Quick and dirty: Some psychosocial costs associated with the Dark Triad in three countries. *Evolutionary Psychology*, 11, 172–185.
- Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2009). The Dark Triad: Facilitating a short-term mating strategy in men. *European Journal of Personality*, 23, 5–18. <<http://dx.doi.org/10.1002/per.698>>.
- Jonason, P. K., & Luévano, V. X. (2013). Walking the thin line between efficiency and accuracy: Validity and structural properties of the Dirty Dozen. *Personality and Individual Differences*, 55, 76–81. <<http://dx.doi.org/10.1016/j.paid.2013.02.010>>.
- Jonason, P. K., & Tost, J. (2010). I just cannot control myself: The Dark Triad and self-control. *Personality and Individual Differences*, 49, 611–615. <<http://dx.doi.org/10.1016/j.paid.2010.05.031>>.
- Jonason, P. K., & Webster, G. D. (2010). The Dirty Dozen: A concise measure of the Dark Triad. *Psychological Assessment*, 22, 420–432. <<http://dx.doi.org/10.1037/a0019265>>.
- 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. <<http://dx.doi.org/10.1002/per.1893>>.
- Jones, D. N., & Paulhus, D. L. (2010). Different provocations trigger aggression in narcissists and psychopaths. *Social Psychological and Personality Science*, 1, 12–18. <<http://dx.doi.org/10.1177/1948550609347591>>.
- Jones, D. N., & Paulhus, D. L. (2011). Differentiating the Dark Triad within the interpersonal circumplex. In L. M. Horowitz & S. Strack (Eds.), *Handbook of interpersonal psychology: Theory, research, assessment, and therapeutic interventions* (pp. 249–269). New York: Wiley & Sons.
- Kowalski, R. M., Limber, S. P., & Agatston, P. W. (2012). *Cyberbullying: Bullying in the digital age*. West Sussex, UK: Wiley-Blackwell.
- Limber, S. P., & Small, M. A. (2003). State laws and policies to address bullying in schools. *School Psychology Review*, 32, 445–455.
- Martin, R. A., Lastuk, J. M., Jeffery, J., Vernon, J. P., & Veselka, L. (2012). Relationships between Dark Triad and humor styles: A replication and extension. *Personality and Individual Differences*, 52, 178–182. <<http://dx.doi.org/10.1016/j.paid.2011.10.010>>.
- Menesini, E., & Spiel, C. (2012). Introduction: Cyberbullying: Development, consequences, risk and protective factors. *European Journal of Developmental Psychology*, 9, 163–167. <<http://dx.doi.org/10.1080/17405629.2011.652833>>.
- Mynard, H., & Joseph, S. (1997). Bully/victim problems and their association with Eysenck's personality dimensions in 8–13 year-olds. *British Journal of Educational Psychology*, 67, 51–54. <<http://dx.doi.org/10.1111/j.2044-8279.1997.tb01226.x>>.
- Ozden, M. S., & Icelioglu, S. (2014). The perception of cyberbullying and cybervictimization by university students in terms of their personality factors. *Procedia – Social and Behavioral Sciences*, 116, 4379–4383. <<http://dx.doi.org/10.1016/j.sbspro.2014.01.951>>.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36, 556–563. <[http://dx.doi.org/10.1016/S0092-6566\(02\)00505-6](http://dx.doi.org/10.1016/S0092-6566(02)00505-6)>.
- Petrides, K. V., Vernon, P. A., Schermer, J. A., & Veselka, L. (2011). Trait emotional intelligence and the Dark Triad traits of personality. *Twin Research and Human Genetics*, 14, 35–41. <<http://dx.doi.org/10.1375/twin.14.1.35>>.
- Roberto, A. J., Eden, J., Savage, M. W., Ramos-Salazar, L., & Deiss, D. M. (2014). Prevalence and predictors of cyberbullying perpetration by high school seniors. *Communication Quarterly*, 62, 97–114. <<http://dx.doi.org/10.1080/01463373.2013.860906>>.
- Ross, C., Orr, E. S., Sisic, M., Arseneault, J. M., Simmering, M. G., & Orr, R. R. (2009). Personality and motivations associated with Facebook use. *Computers in Human Behavior*, 25. <<http://dx.doi.org/10.1016/j.chb.2008.12.024>> 576–578.
- Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology*, 49, 147–154. <<http://dx.doi.org/10.1111/j.1467-9450.2007.00611.x>>.
- Slonje, R., Smith, P. K., & Frisén, A. (2013). The nature of cyberbullying, and strategies for prevention. *Computers in Human Behavior*, 29, 26–32. <<http://dx.doi.org/10.1016/j.chb.2012.05.024>>.
- Smith, P. K., & Brain, P. (2000). Bullying in schools: Lessons from two decades of research. *Aggressive Behavior*, 26, 1–9. <[http://dx.doi.org/10.1002/\(SICI\)1098-2337\(2000\)26:1<1::AID-AB1>3.0.CO;2-7](http://dx.doi.org/10.1002/(SICI)1098-2337(2000)26:1<1::AID-AB1>3.0.CO;2-7)>.
- Smith, P. K., & Slonje, R. (2012). Cyberbullying: The nature and extent of a new kind of bullying, in and out of school. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 249–262). New York: Routledge.
- Sumner, C., Byers, A., Bochever, R., & Park, G. J. (2012). Predicting Dark Triad personality traits from Twitter usage and a linguistic analysis of tweets. In *Paper presented at the International Conference of Machine Learning and Applications (IMCLA)*.
- Sutton, J., & Keogh, E. (2000). Social competition in school: Relationships with bullying, Machiavellianism and personality. *British Journal of Educational Psychology*, 70, 443–456. <<http://dx.doi.org/10.1348/000709900158227>>.
- Tani, F., Greenman, P. S., Schneider, B. H., & Fregoso, M. (2003). Bullying and the big five. *School Psychology International*, 24, 131–146. <<http://dx.doi.org/10.1177/0143034303024002001>>.
- Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior*, 26, 277–287. <<http://dx.doi.org/10.1016/j.chb.2009.11.014>>.
- Varjas, K., Talley, J., Meyers, J., Parris, L., & Cutts, H. (2010). High school students' perceptions of motivations for cyberbullying: An exploratory study. *Western Journal of Emergency Medicine*, 11, 269–273.
- Vernon, P. A., Villani, V. C., Vickers, L. C., & Harris, J. A. (2008). A behavioral genetic investigation of the Dark Triad and the Big 5. *Personality and Individual Differences*, 44, 445–452. <<http://dx.doi.org/10.1016/j.paid.2007.09.007>>.
- Veselka, L., Giammarco, E. A., & Vernon, P. A. (2014). The Dark Triad and the seven deadly sins. *Personality and Individual Differences*, 67, 75–80. <<http://dx.doi.org/10.1016/j.paid.2014.01.055>>.
- Wai, M., & Tiliopoulos, N. (2012). The affective and cognitive empathic nature of the Dark Triad of personality. *Personality and Individual Differences*, 52, 794–799. <<http://dx.doi.org/10.1016/j.paid.2012.01.008>>.
- Webster, G. D., & Jonason, P. K. (2013). Putting the "IRT" in "Dirty": Item response theory analyses of the Dark Triad Dirty Dozen – An efficient measure of narcissism, psychopathy, and Machiavellianism. *Personality and Individual Differences*, 54, 302–306. <<http://dx.doi.org/10.1016/j.paid.2012.08.027>>.
- Williams, K. M., Nathanson, C., & Paulhus, D. L. (2010). Identifying and profiling scholastic cheaters: Their personality, cognitive ability, and motivation. *Journal of Experimental Psychology: Applied*, 16, 293–307. <<http://dx.doi.org/10.1037/a0020773>>.
- Woodley, H. J. R., & Allen, N. J. (2014). The dark side of equity sensitivity. *Personality and Individual Differences*, 67, 103–108. <<http://dx.doi.org/10.1016/j.paid.2014.03.003>>.