Examining the dark tetrad and its links to cyberbullying

Abstract

Cyberbullying is a growing problem in the fast-evolving world of social media. Although this problem has been studied extensively, there is relatively little research examining it from the angle of the dark tetrad (i.e., Psychopathy, Machiavellianism, Sadism and Narcissism), especially across different ethnicities. In other words, this research makes original contribution by exploring the predictive ability of the dark tetrad traits in individuals of different ethnicities and their subsequent willingness to engage in cyberbullying. *The study (N=1464)* explores whether there is a positive association between the dark tetrad personality traits and cyberbullying. The results reveal that all four traits predict cyberbullying in participants from across three different ethnicities (Asian, Black and White). Furthermore, female participants score less than their male counterparts across all four traits. Researchers, academics and legislators might potentially benefit from this research by considering focusing their interventions on helping offenders minimize the display of certain personality traits, thus taking steps towards cyberbullying reduction.

Keywords: Dark tetrad; correlation; cyberbullying,

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Traditionally, the dark triad consists of three malevolent personality traits which includes; narcissism, psychopathy and Machiavellianism[1]. However, in recent years sadism has also been incorporated into the dark triad to form the dark tetrad[2] due to the similarities with the other three personality traits[3] [4].

Aggressive behavior is reportedly interlinked with narcissistic personality[5]. More specifically, narcissism can be categorized into two types: grandiose (i.e., an unrealistic sense of superiority) and vulnerable (i.e., a constant victimisation mentality requiring sympathetic attention), which are alternately dominant. Each type of narcissism predicts different types of violence, the former being more active denigration of others, and the latter being a form of apparent self-belittlement at the emotional cost of others (Afek, 2018). It was also found that cyber-aggression had a positive correlation to narcissism[6]. This is believed to be a defence mechanism against low self-esteem[5]. In addition to this, individuals experiencing social media addiction are more likely to score higher in narcissism[7] . Other research[8] [9] have revealed narcissism not be a strong predictor of cyberbullying. For example, only covert (i.e., less directly expressed), not overt (i.e., more directly expressed) form of narcissism was found to predict cyberbullying (Field, 2018).

It must be mentioned that deviant and risky behaviors were originally explained by Problem Behavior Theory (Boyd, Young, Grey, & McCabe, 2009; Jessor, 1987, 1991), its relevant essence here being that engaging in one form of cyberbullying increases the likelihood of engaging in another form of cyberbullying, Offline psychopathy can be amplified online; they also make better use of social media by engaging in severer antisocial behaviors[4] to satisfy their predatory desires without considering the wellbeing of other users[10]. Psychopathic individuals are manipulative, pathological liars and use

superficial charm to attract victims[11] both in the virtual and in the offline world. Results from previous research reported that psychopathy was a strong predictor of cyberbullying[5] [12].

Similarly, to narcissism, Machiavellians are selective when posting online, this is to promote their perfect-self on social media to gain trust of other users[13] , which is consistent with other related research[14] [9].

Sadism is a newly proposed trait in the dark triad which has now evolved into the dark tetrad, as it shared many similarities with psychopathic, narcissistic, Machiavellian traits[3] [15]. Those scoring high on Sadism are described as experiencing joy of others pain[16], having predatory tendencies and desire for power [17]. "Everyday sadism" was also the only dark personality trait linked with immense time and energy spent committing hostile actions against innocent individuals[2] [18].

In more recent research (Kircaburun, Jonason, Griffiths, 2018), , it was shown that whereas cyberbullying and cyberstalking fully mediated the relationship between Machiavellianism and problematic social media use (PSMU) in the total sample of men and women (total sample) and men alone, narcissism was indirectly associated with PSMU via cyberstalking in the total sample and among women. In the same research, it was also found that association between sadism and problematic social could be well explained by cyberbullying and cyberstalking in the total sample, and that even though cybertrolling was not associated with PSMU, it was associated with sadism, psychopathy, and Machiavellianism, although it was not related to PSMU.

The aim of this present research project is to take into account quite neglected ethnicity (potentially implying diverse cultural values) and investigate whether there is a predictive link between dark tetrad personality traits and subsequent tendency to engage in cyberbullying. Thus, although there is already substantial research on the relationship between personality and PSMU (Kuss & Griffiths, 2011), in this this paper we answer the call for neglected research on the Dark Triad in cyberspace (Kircaburun, Demetrovics, & Tosuntaş, 2018)

Based on previous research[4 9], it was hypothesized (H1) that sadism, Machiavellianism and psychopathy (but not narcissism) would be positively correlated with cyberbullying.

While previous studies have established a link between cyberbullying and ethnicity [19 20 21 22], there is a current lack of literature focusing on the role that ethnicity in mediating the relationship between cyberbullying and dark tetrad traits. Therefore, it was also hypothesized (H2) that ethnicity would be a moderating variable expected to influence the strength of correlation between dark tetrad scores and cyberbullying outcome.

2. Method

2.1. Design

The current study followed a correlational design using standard multiple regression, the predictor variables being personality types as determined by the dark tetrad characteristics, and the outcome variable being measured by scores on the cyberbullying scales described below.

Participants

Participants (Age: $M = 22.48$, $SD = 5.95$ years) were recruited through social media to maximise their diversity. Twitter was used to spread the study due to its popularity among young adults. Initially, a sample size power analysis was performed by G*Power which established that 260 male participants and 260 female participants were needed to reach a statistical significance with the five predictors (dark tetrad sub-scales and gender) of cyberbullying outcome variable with eighty percent of the time. However, once the survey was posted the number of participants exceeded the baseline required. Upon removal of repeat IP addresses, underage participants, unknown sex and ethnicities we had 1310 females and 790 males.

2.2. Materials

2.2.1. The Dark Tetrad Personality traits

The dark triad[23] was used to measure each participant's personality. The test comprises of 27 items that assess the three recognised personality traits (each trait consists of 9 items); Psychopathy, Narcissism and Machiavellianism. A five-point Likert rating is scale is used which ranges from 'disagree strongly' to 'agree strongly'. Moreover, an additional measure 'Sadism' was included due to its similarities with the other three traits of dark triad. With the inclusion of the Short Sadistic Impulse Scale (SSIS)[24], which has a further total of 10 items, evolved into the 'dark tetrad'[4]. A few examples of Machiavellianism, Narcissism, Psychopathy and Sadism are: *6. you should wait for the right time to get back at people, 7. have been compared to famous people, 6. People who mess with me always regret it, 9. I have fantasies which involve hurting people.* The Cronbach's alpha value = .88.

2.2.2. Cyberbullying Perpetration Scale

The sub-scale "Social exclusion perpetration" of Cyberbullying Perpetration (CBP) [25] constitutes 6 items , using the 5-point Likert-type response scale; its Cronbach's alpha value is .93. The scale featured the following items: *I have blocked someone in a chat room to harm the person; I have blocked someone on an instant messenger to upset the person; I have rejected someone's request playing online games together to harm the person; I have excluded someone from online community groups to make them feel left out; I have never excluded someone from online group activities to make them feel left out; I have ignored someone's comments on social community online to embarrass the person.*

2.2.3. Global Assessment of Internet Trolling

The Global Assessment of Internet Trolling (GAIT) [4] was also used in this current study. This measure consists of 4 items. The Cronbach's alpha value is .82, which demonstrated fine internal consistency. The scale featured the following items: *I have sent people to shock websites for the lulz; I like to troll people in forums or the comments section of websites; I enjoy griefing other players in multiplayer games; The more beautiful and pure a thing is, the more satisfying it is to corrupt.*

2.3. Procedure

The electronic survey was advertised through Twitter and Instagram using Qualtrics. Tweets were posted describing the study and requesting for participants, those that volunteered had the option to click on the link which directed them to the questionnaire.

3. Results

3.1. Influence of dark tetrad sub-scales on cyberbullying by gender

Narcissism. Unexpectedly, results indicate that there are significant simple positive associations between mean narcissism scores and total cyberbullying scores (Male = R^2 = .03, F (1, 788) = 24.40, $p <$ .001), (Female= R^2 = .03, F (1,1306) = 42.67, $p < .001$), implying that higher levels of narcissism is a significant predictor of cyberbullying.

Machiavellianism. Results indicate that there is a significant positive association between Machiavellianism and cyberbullying scores (Male = R^2 = .06, F (1,789) = 52.93, $p < .001$), (Female = R^2 = .09, F (1, 1308) = 129.70, $p < .001$), implying that higher levels of Machiavellianism is a significant predictor of cyberbullying. Thus, around 6.3% of the variation in cyberbullying scores could be accountable to Machiavellianism traits for male participants while approximately 9% of the variation could be accounted to Machiavellianism in females.

Psychopathy. Results indicate that there is a significant simple positive association between mean Psychopathy scores and mean cyberbullying scores (Male= R^2 = .09, F (1, 789) = 73.00, $p < .001$), (Female = R^2 = .08, F (1, 1307) = 118.10, $p < .001$), implying that higher levels of psychopathy is a significant predictor of cyberbullying.

Sadism. There was a significant (although weak) positive association between Psychopathy and cyberbullying scores in both sexes (Male = R^2= .03, F (1, 789) = 25.63, $p < .001$) and (Female = R^2 = .01, F (1, 1307) = 9.54, $p = .002$).

3.2 Dark tetrad (overall scores) and unique predictors of cyberbullying

Results indicate that there is a significant simple positive association between overall mean dark tetrad scores and mean cyberbullying scores (Male = R^2 = .08, F (1, 789) = 65.48, $p < .001$), (Female = R^2 = .05, F (1, 1308) = 63.99, $p < .001$) implying that a mean combination of sadism, Machiavellianism, Narcissism, and Psychopathy traits are positive predictors of cyberbullying. Secondary analyses suggest Machiavellianism and psychopathy are independent positive predictors of cyberbullying in both sexes, whilst narcissism and sadism are not (see Table 1).

3.3 Ethnicity

Tables 2-4 indicate little ethnic variation amongst Dark Tetrad, its sub-scales and cyberbullying. Specifically, results for individuals who identified as 'White' as demonstrated in Table 2 shows that mean cyberbullying scores demonstrated weak to moderate positive correlations with other traits: narcissism (male r = .25, p = .001, n = 294; female r = .16, p = .001, n = 371), Machiavellianism (male r = .24, p = .001, n = 294; female r = .28, p = .001, n = 371), psychopathy (male r = .34, p = .001, n = 294; female r = .29, p = .001, n = 371) and sadism trait (male r = .11, p = .051, n = 294; female r = .13, p = .01, n = 371). Finally, a significant positive correlation was found between mean cyberbullying scores and mean dark triad scores (male r = .25, p = .001, n = 294; female r = .24, p = .001, n = 371).

Results for individuals who identified as 'Black' as demonstrated in Table 3 show that mean cyberbullying scores demonstrated weak to moderate positive correlations with other traits: narcissism (male r = .25, p = .001, n = 90; female r = .30, p = .001, n = 350), Machiavellianism (male r = .24, p = .001, n = 90; female r = .28, p = .001, n = 350), psychopathy (male r = .48, p = .001, n = 90; female r = .37, p = .001, n = 350) and sadism trait (male r = .26, p = .003, n = 90; female r = .11, p = .01, n = 350). Finally, a significant positive correlation was found between mean cyberbullying scores and mean dark triad scores (male r = .40, p = .001, n = 90; female r = .24, p = .001, n = 350).

Results for individuals who identified as 'Asian' as demonstrated in Table 4 show that mean cyberbullying scores demonstrated weak to moderate positive correlations with other traits: narcissism (male r = .13, p = .02, n = 329; female r = .07, p = .13, n = 448), Machiavellianism (male r = .25, p = .001,

$n = 329$; female $r = .34$, $p = .001$, $n = 448$), psychopathy (male $r = .22$, $p = .001$, $n = 329$; female $r = .37$, $p = .001$, $n = 448$) and sadism trait (male $r = .24$, $p = .01$, $n = 329$; female $r = .11$, $p = .01$, $n = 448$). Finally, a significant positive correlation was found between mean cyberbullying scores and mean dark triad scores (male $r = .30$, $p = .001$, $n = 329$; female $r = .27$, $p = .001$, $n = 448$).

4. Discussion

Our results are consistent with the findings from a related study[5] showing that Dark Triad predicts cyberbullying. Our small associations between narcissim and cyberbullying are in line with other research showing that narcissism was also a predictor for cyberbullying tendencies[12]. The significant positive correlation between psychopathy and cyberbullying tendency was found in both genders, which is consistent with previous research[10][12][4][18]. Furthermore, related research investigating the link between dark triad personality trait and Twitter usage found that both Psychopathy and Machiavellianism were associated with the use of derogatory language including swear words and anger outbursts online[26]. This may explain why individuals who score highly on Psychopathy predicted cyberbullying on Twitter due to psychopathy influencing their malicious interpersonal communications[27][10].

Our results also showed that Machiavellianism was a significant predictor for cyberbullying for both genders, even though male participants often score higher, which is in line with other past research [7][12][26]. Consistent with previous work, the results found that sadism was (albeit weak) predictor of cyberbullying[18][10]. It appears, then, that sadistic individuals might be stimulated by hurting others and seeing the victims suffer as they find it gratifying[16], which becomes easier and anonymous in cyberspace.

The findings generalize across White, Black and Asian participations. This is surprising given cultural variation in personality and social behaviors, such as aggression[28][29]. It was found, for example, that Asians are from a collective society dislike narcissistic individuals[30], which is in line with a more recent study [28] demonstrating that participants from Japan scored lower in cyberbullying and interdependent self-construal compared to participants from United States. Nonetheless, given the very

weak correlation, the ethnicity results should be treated with extra caution as they seem to require more clarification in further research.

To sum up, the first hypothesis was partially supported as all four of Dark Tetrad traits were predictors of cyberbullying. However, findings indicate that in our ethnically diverse sample, Machiavellianism and Psychopathy are better predictors of cyberbullying than Narcissism or Sadism. Surprising there was little gender or ethnic variation in the associations between the Dark Tetrad and cyberbullying. Since females have been found to experience more sexual harassment than men online [31], future work may reveal gender differences in the associations between Dark Tetrad scales and being a victim of cyberbullying.

Despite some weaknesses of this research associated with survey-based research, like the lack of control over confounding variables, 'demand characteristics' or measuring intention rather than actual behavior, the results tie up with and contribute to the previous research[4][10]. In other words, the Dark Tetrad does appear to predict cyberbullying tendencies. The differences were small between ethnicities, which also seems consistent with past research[19][32]. Future studies could perhaps focus on analysing the predictive ability of more culturally diverse samples to determine if some cultures are at greater risk of being a victim of cyberbullying. Such studies might also examine the mediating role of antisocial online behaviors between the Dark Tetrad and other types of social interaction in cyberspace.

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