THE DARK TRIAD AND INTIMATE PARTNER VIOLENCE

Hannah Carton, Vincent Egan*

Centre for Forensic and Family Psychology,

YANG Fujia Building,

University of Nottingham,

Wollaton Road,

Nottingham,

NG8 1BB, UK

*Corresponding author

Email: vincent.egan@nottingham.ac.uk

ABSTRACT

Psychological abuse within Intimate Partner Violence (IPV) is poorly researched. We investigated the impact of Dark Triad (DT) traits and personality on psychological, physical and sexual abuse, and whether DT traits have incremental validity over general personality dimensions in the prediction of IPV expressed psychologically, physically, and sexually. IPV was measured via the Multidimensional Measure of Emotional Abuse (MMEA) and the short form of the revised Conflict Tactics Scale, version 2 (CTS2S) in a general community sample (N=128). Correlation and regression analysis indicated that low agreeableness and psychopathy had the strongest associations and most predictive relationships with both psychological abuse and physical/sexual abuse. Low agreeableness was predictive of both the participants' and their partners' perpetration of physical/sexual abuse. A significant positive relationship was also found between high scores on the MMEA and high scores on the CTS2S. A significant positive relationship was found between participants' high psychopathy scores and perpetration of psychological abuse, but this had a smaller effect than a measure of agreeableness alone. We did not find that the DT provides incremental validity for the prediction of either psychological abuse or physical/sexual abuse over basic low Agreeableness.

[189 words]

Keywords: DARK TRIAD, BIG FIVE PERSONALITY, INTIMATE PARTNER VIOLENCE, PSYCHOLOGICAL ABUSE

INTRODUCTION

The Dark Triad (DT) of personality comprises three socially aversive personality dimensions: Machiavellianism, narcissism, and psychopathy (Paulhus & Williams, 2002). These dimensions are positively correlated and share the common expression of callous manipulation (Furnham, Richards & Paulhus, 2013). The DT has been used to research antisocial behaviour in sub-clinical populations and provides additional value in predicting antisocial outcomes such as moral disengagement justifying unethical consumer behaviour, community violence, and sexual harassment proclivity (Pailing, Boon & Egan, 2014; Egan, Hughes & Palmer, 2015; Zeigler-Hill et al., 2016). The current study explores the influence of the DT and general personality traits on Intimate Partner Violence (IPV), another antagonistic behaviour common in population samples.

The Big Five model of personality comprises five traits; Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness (Costa & McCrae, 1992). The DT traits is based on this foundation, and elements of all the Big Five Personality traits can be found across the three components of the DT, especially low agreeableness (Jakobwitz & Egan, 2005; Egan, Chan, & Shorter, 2014). The DT is well operationalised; Machiavellianism indicates manipulative social behaviour for personal gain, often against the interests of others (Wilson, Near & Miller, 1996). Psychopathy divides into primary and secondary forms; engaging in antisocial (but not necessarily illegal) behaviours motivated by a lack of conscience and a fearless temperament, are regarded as primary, whereas secondary psychopathy involves similar behaviours, but driven by neurotic expressions of conflict and impulsivity (Hicks et al., 2004). Narcissism is a multidimensional construct that splits into grandiose and vulnerable forms (Wink, 1991; Dickinson & Pincus, 2003; Pailing, Boon & Egan, 2014). Grandiose

narcissism involves an exaggerated sense of self-importance, while vulnerable narcissism is characterised by social withdrawal and hypersensitivity (Campbell & Miller, 2011).

There has been much empirical research into the correlation between the DT and aggression and violence (Bushman & Baumeister 1998; Paulhus & Williams, 2002; Jones & Paulhus, 2010; Baughman et al., 2012; Pailing, Boon & Egan, 2014; Westhead & Egan, 2015). Some studies have investigated associations between individual DT traits and IPV (Hamberger & Hastings, 1990; Rosen, 1991; Baumeister, Smart & Boden, 1996; Juodis et al., 2014), but there has been less investigation of the relationship between the full DT and IPV. Understanding the associations between the DT and IPV may help inform treatment programmes for the perpetrators of IPV.

IPV can be expressed as psychological, physical or sexual abuse; all harm the well-being of its victims (WHO, 2012). This study will define IPV as the use of exploitative strategies such as deception, manipulation, coercion, intimidation and violence within an Intimate Partner Relationship (IPR) (Buss & Duntley, 2008; Buss & Duntley, 2011). The majority of literature and research on IPV focuses on the physical and sexual elements of the behaviour (Campbell, 2002; Campbell et al., 2002; Abramsky et al., 2011). We extend earlier work on the DT and IPV by also examining associations with psychological abuse. Psychological abuse involves deception, manipulation, coercion and intimidation in the context of IPV, but can also involve the threat of physical or sexual violence; the thought of such violence sometimes has a greater impact on a victim's psychological functioning than the abuse itself (O'Leary, 1999; Pico-Alfonso, 2005), and while increasingly recognised as problematic (PicoAlfonzo et al., 2006; Gentry & Bailey, 2014) is relatively under-researched. Psychological abuse is now addressed by new UK legislation, as "Controlling or coercive behaviour in an intimate or family relationship" was introduced to the Serious Crime Act 2015. This law

criminalises behaviours which stop short of serious physical violence but cause extreme psychological or emotional harm (Home Office, 2014).

It was hypothesised that persons who score highly on all aspects of the DT will score higher on measures of psychological and physical/sexual abuse. There were good reasons for anticipating all three elements of the DT could be associated with IPV. Firstly, manipulation of others is a psychological process; secondly, there is a clear previously documented relationship between antagonistic and antisocial qualities and IPV (White & Widom, 2003); and thirdly, due to its association with hostility and verbal aggression, emotional instability would be expected to raise vindictiveness, and so contribute to IPV (Hellmuth & McNulty, 2008; Egan & Lewis, 2012). The current study tests whether or not DT adds to the prediction of IPV over general dispositional traits. We therefore sought to determine: (1) the impact of individual DT traits have on an individual's propensity towards psychological IPV, (2) the incremental validity of the DT on the relationship between general personality characteristics and IPV; and (3) which combination of specific individual dispositional and DT traits, best predicted physical, sexual and psychological IPV.

METHODS

PARTICIPANTS AND PROCEDURE

Given a desired moderate effect size (0.15) and a p=0.05 significance level using a multiple regression, power analysis revealed a minimum of 111 participants required to achieve a power of 0.95. Inclusion criteria were being over 18 years, fluency in English, being currently or previously involved in a relationship of one year or longer, and providing informed consent. The study recruited 128 participants through advertisements (social media, posters and flyers). The sample comprised 105 females and 23 males. Participants were mostly white (n = 115),

with 6 Black, 6 Asian, and 11 Hispanic participants; 93 persons were involved in an intimate relationship of over one year at the time of testing (n = 93), and 35 had previously been involved a relationship of a year or more. These relationships comprised 119 that were heterosexual, 6 homosexual, and 1 polyamorous. Of the relationships, 31 were married, 44 co-habiting, 2 in a civil partnership, and 51 dating.

This study employed a regression design in which psychological and physical/sexual abuse were criterion outcomes, and the predictor variables were gender, age, the DT, and the Big Five personality traits. Participants provided informed consent then completed the background questions and questionnaires listed above (in the following order: BFAS, SD3, MMEA, CTS2S). At the end persons were given information including details of organisations, help lines and charities associated with IPV. The online survey took approximately 15 minutes to complete.

MEASURES

All participants completed four psychometric questionnaires, and gave information regarding their gender, age, ethnicity, number of years in education and the status and type of relationship they were in at the time. The scales comprised:

1. THE BIG FIVE ASPECTS SCALE (BFAS) (DeYoung & Quilty, 2007)

The BFAS is a 100-item scale that measures the Big Five domains of personality: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness (Costa & McCrae, 1992). Responses are made using a 5-point Likert scale. The BFAS has demonstrated good validity, correlating with other measures of the Big Five; the BFAS's individual dimensions show good internal reliabilities: Extraversion $\alpha = .85$, Agreeableness $\alpha = .84$, Conscientiousness $\alpha = .84$, Neuroticism $\alpha = .89$ and Openness $\alpha = .85$ (DeYoung & Quilty, 2007).

2. <u>THE REVISED CONFLICT TACTICS SCALE SHORT FORM (CTS2S) (Straus & Douglas, 2004)</u>

The CTS2S is a 20-item measure of IPV adapted from the longer 39-item measure version of the CTS2 (Straus et al., 1996). The CTS2S uses an 8-point Likert scale to look at tactics (negotiation, physical assault and psychological aggression) used during conflict within IPRs (Straus & Douglas, 2004). It measures the number of times a particular aspect of IPV has occurred within a relationship and records whether it was instigated by the participant to their partner, or vice versa. The CTS2S has demonstrated good construct and concurrent validity (Archer, 1999; Straus & Douglas, 2004). There are many possible ways to score the CTS2S, this study chose to score based on prevalence. Using this method, if the participant reported the occurrence of any physical violence by the partner in the course of their relationship, they were classified as having been a victim of IPV; if they reported using any of the violent acts they were classified as being a perpetrator of IPV. In the Strauss and Douglas (2004) paper it was stated CTS2S reliability cannot be calculated due to their method of scoring.   Sacchetti and Lefler (2014) scored the CTS2S, and found perpetrator reliability was $\alpha = 0.59$, Victim reliability $\alpha = 0.67$.   The CTS2S does not sample psychological abuse in depth, and for this reason we measured psychological abuse separately. The following are examples of questions in the CTS2S "I/My partner went to see a doctor (M.D.) or needed to see a doctor because of a fight" and "I/My partner used force (like hitting, holding down, or using a weapon) to make the other have sex".

3. <u>THE MULTIDIMENSIONAL MEASURE OF EMOTIONAL ABUSE (MMEA) (Murphy & Hoover, 1999)</u>

The MMEA is a 28-item scale that specifically measures emotionally abusive aspect of IPV. It uses a 10-point Likert scale to measure the number of times a particular aspect of emotional

abuse (Restrictive Engulfment, Denigration, Hostile Withdrawal, and Dominance/Intimidation) has occurred within a relationship, instigated by either the participant or their partner. The total MMEA score has a Cronbach alpha of $\alpha = .91$ and is statistically valid as an index of psychological aggression for both clinical and research purposes (Murphy & Hoover, 1999). The following are examples of questions in the MMEA "You/your partner belittled the other person in front of other people" and "You/your partner drove recklessly to frighten the other person"

4. SHORT DARK TRIAD (SD3) (Jones & Paulhus, 2014)

The SD3 is a 27-item measure that uses a 5-point Likert scale to look at the personality traits associated with the DT. It is broken down into three parts each with 9 items which examines Machiavellianism, Narcissism and Psychopathy. The SD3 has demonstrated good reliability, with the subscales showing reliabilities of: Machiavellianism $\alpha = .71$, Narcissism $\alpha = .74$ and Psychopathy $\alpha = .77$ (Jones & Paulhus, 2014).

STATISTICAL ANALYSIS

Data were analysed using SPSS 22.0 (SPSS Inc.) for Windows, initially testing for reliability and normal distribution. Correlations (Spearman's Rho) were run to assess concurrent validities between the SD3 and the BFAS, and between the CTS2S and the MMEA. The regressions all took the same form in which demographics, followed by the BFAS, then the SD3 were entered as separate blocks thus enabling the incremental validity associated with the DT to be calculated. The significance of individual standardised beta weights indicated which measures in the separate blocks were influencing the criterion outcomes.

RESULTS

Data for this study were analysed to examine the relationship between the DT, as a whole and individual constructs, and IPV as defined by the CTS2S and MMEA.

PRELIMINARY ANALYSIS

Preliminary analysis on the data indicated that a number of variables (psychopathy, openness, CTS_perpetration, CTS_victimisation, MMEA_perpetration and MMEA_victimisation) were positively skewed and, therefore, not normally distributed. Although attempts were made to transform non-normally distributed items using square root and log transformations, openness, CTS_victimisation, MMEA_perpetration and MMEA_victimisation remained non-normally distributed. As such, non-parametric tests were utilised throughout subsequent analyses. All scales demonstrated very good reliability.

--- Insert table 1 here ---

CORRELATIONS BETWEEN MEASURES

Spearman's Rho correlational coefficient tests were run to test for the expected patterns of association between the BFAS, SD3, CTS2, and MMEA. These revealed that low agreeableness was associated with greater Machiavellianism and greater psychopathy, as was, at a lesser magnitude, low openness. Narcissism was significantly associated with greater extroversion, and, marginally, with lower neuroticism. These observations reiterate previous associations observed between personality and the DT, but with a different measure of personality, and within a different cohort (table 2 and 3). These personality measures were correlated with total scores for the CTS2S and MMEA. Lower agreeableness was associated with greater total scores on the CTS2S, but not with higher scores on the MMEA. The MMEA was associated with higher Machiavellianism and psychopathy, and lower openness.

--- Insert tables 2 and 3 here ---

REGRESSION STATISTICS

More sophisticated analyses using multiple regression models tested the ability of the DT and personality characteristics to predict psychological and physical/sexual abuse, building into the model possible demographic influences on these effects (table 4). In all cases, hierarchical blockwise regression models were used, employing ranked outcome data to satisfy the needs of non-parametric testing. Age and gender ('demographics') were entered as step 1 of the hierarchy, all five dimensions of the BFAS as step 2, and the three DT traits as step 3. The following reports on the third and final model of each regression, identifying variables which made significant contributions throughout each preceding stage where relevant.

--- Insert table 4 here ---

The regression predicted CTS2S perpetration scores, with the significance increasing following the addition of BFAS personality trait scores ($F_{(7, 120)} = 3.281$, $p<0.01$).

Both age and low agreeableness were significant positive predictors of CTS2S perpetration scores at the final stage of the model (age $\beta = -0.293$, $t_{(117)} = -3.226$, $p <0.01$, agreeableness $\beta = -0.383$, $t_{(117)} = -3.535$, $p <0.01$).

Regression was used to predict CTS2S victimisation scores, finding a significant regression equation was found at each stage, with the significance again increasing following the addition of BFAS personality trait scores ($F_{(7, 120)} = 3.778$, $p <0.01$).

Again, both age and low agreeableness were significant positive predictors of CTS2S victimisation scores at the final stage of the model (age $\beta = -0.293$, $t_{(117)} = -3.267$, $p <0.01$, agreeableness $\beta = -0.401$, $t_{(117)} = -3.749$, $p <0.01$).

When this regression was used to predict overall MMEA perpetration and victimisation scores, no significant effects were found at any level. However when the specific sub-dimensions of the MMEA were examined, a significant regression equation for restrictive engulfment was found at the final stage ($F_{(10, 117)} = 2.049$, $p < 0.034$), finding narcissism and psychopathy made individually significant contributions to the outcome (narcissism $\beta = 0.231$, $t_{(117)} = 2.132$, $p < 0.05$, psychopathy $\beta = 0.206$, $t_{(117)} = 1.987$, $p < 0.05$).

Although overall regressions for both perpetration and victimisation of denigration were non-significant at all stages, psychopathy as an individual predictor was significantly predictive of both the perpetration ($\beta = 0.263$, $t_{(117)} = 2.495$, $p < 0.01$) and receipt ($\beta = 0.284$, $t_{(117)} = 2.263$, p $p<0.01$) of denigration. These results indicate psychopathy predicts specific types of psychological abuse, but no more than the use of agreeableness alone.

DISCUSSION

We sought to establish the relationship between personality and DT traits, and measures of psychological and physical/sexual abuse associated with IPV. The hypothesis that scores on the SD3 would positively correlate with scores on the MMEA and CTS2S was upheld. Replicating previous findings, low agreeableness was associated with Machiavellianism and psychopathy, and extroversion was associated with narcissism (Paulhus & Williams, 2002). However, the associations between the DT, low agreeableness and scores on the CTS2S and the MMEA were lower than expected. The hypothesis, in line with previous research, that there would be a stronger relationship between reported incidences of psychological abuse and scores on the Machiavellianism and psychopathy dimensions of the SD3, than with the narcissism dimension (Kiire, 2016), was shown to be partially correct. However, there was an association between Machiavellianism and narcissism and the participant's perpetration of psychological abuse as a whole. When this was broken down and analysed further, a significant

association was found between psychopathy and the use of dominance/intimidation, and between Machiavellianism and narcissism and the use of restrictive engulfment. Narcissism and psychopathy were significant predictors of the use of restrictive engulfment, while psychopathy was the sole predictor for the use of denigration. Previous investigations into the associations between psychopathy and physical forms of domestic violence have yielded similar findings (Joudis et al., 2014). There were no systematic effects of low agreeableness in relation to the subscales of the MMEA. Results suggested psychopathy scores were positive predictors of some elements of the MMEA, specifically denigration and restrictive engulfment. As hypothesised, and in line with previous research, of the five dimensions of the BFAS, lower agreeableness was the best predictor for IPV (Hellmuth & McNulty, 2008).

A significant association was found between the participants' self-reports of their own lower agreeableness and lower openness, and their partners' perpetration of physical/sexual abuse against them. Further associations were found between the participant's own lower neuroticism and their partner's perpetration of psychological abuse (as a general construct) against them, specifically restrictive engulfment. Although this is a controversial finding for research into IPV, as emphasis is generally placed on the characteristics of the perpetrators, Archer (2000) observed that the dyads within a relationship defined by IPV are often reciprocally antagonistic. This reciprocity of IPV may well be provoked by the other party, but nevertheless helps maintain mutual perceptions of grievance.

We did not find Machiavellianism contributed to prediction of psychological or physical/sexual abuse. While some argue the independence of Machiavellianism as a trait (Rauthmann, 2012) others believe that Machiavellianism is not genuinely separate from psychopathy except in highly artificial conditions (McHoskey, Worzel, & Syzarto, 1998). It is likely that the socially manipulative nature of Machiavellianism may be less relevant to

understanding coarse expressions of IPV compared to psychopathy. This study reiterates that persons who score highly on DT measures use violence more frequently (Jonason, Li & Buss, 2009). This is the first study to explicitly research the perpetration of psychological abuse and its links with personality and the DT using a strong measure of psychological abuse. Though widely used in other studies, this is the first time the MMEA has been examined in relation to the DT or personality, and it was found to be highly reliable, as, in our case, was the CTS2S.

Our study was limited by a focus on those who had been in a relationship for more than one year, and most participants were female, heterosexual, and white. There is a perennial need to gather data from non-WEIRD (Western, Educated, Industrialized, Rich and Democratic) samples (Henrich, Heine, & Norenzayan, 2010), and the ubiquity of internet technology affords us this possibility. The relative newness of the MMEA measure must be considered. Although it demonstrated good reliability scores, its psychometric properties need further exploration. Participants for this study were recruited opportunistically, though advertisement and social media, so only willing persons with access to a computer and the Internet could be recruited. The nature of the topic and the sensitivity of the subject matter could have impacted on those willing to complete the survey; for example, those who recently experienced or were currently experiencing IPV may have been reluctant to address this, even in survey form.

Future research is needed to develop the growing evidence base in the area. One novel sample to target specifically is the LGBT community, as they are a population underrepresented in IPV/ personality research (West, 2012). The personalities, similarities, and differences in IPV treatment needs or sources of support for this population is currently minimal.

We conclude that it is psychopathic elements of the DT that accounts for the association with IPV and psychological abuse, but that the main source of the effect is the foundation of lower agreeableness. This emphasises that IPV and psychological abuse are not something

committed specifically by mentally disordered offenders, but by persons in the general population expressing common dispositional traits.

ACKNOWLEDGEMENT

REFERENCES

Abramsky, T., Watts, C. H., Garcia-Moreno, C., Devries, K., Kiss, L., Ellsberg, M., Jansen, H. & Heise, L. (2011). What factors are associated with the recent intimate partner violence? Findings form the WHO multi-country study on Women's Health and Domestic Violence, *BMC Public Health,* 11(109), 1-17 doi: 10.1186/14712458-11-109

Archer, J. (1999). Assessment of the reliability of the conflict tactics scales: A meta-analytic review, *Psychological Bulletin,* 126(5), 651-680, doi: 10.1177/088626099014012003

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 Difference,* 52(5), 571-575, doi: 10.1016/j.paid.2011.11.020

Baumeister, R.F., Smart, L. & Boden, J.M (1996). Relation of threatened egotism to violence and aggression: the dark side of high self-esteem, *Psychology review,* 103(1), 5-33, doi: 10.1037/0033-295X.103.1.5

Bushman, B. J. & Baumeister, R. F. (1998). Threatened egotism, Narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology,* 75(1), 219-229, doi: 10.1037/0022-3514.75.1.219

Buss, D. M. & Duntley, J. D. (2008). Adaptations for exploitation, *Group Dynamics: Theory, Research and Practice*, 12(1), 53-62, doi: 10.1037/1089-2699.12.1.53

Buss, D. M. & Duntley, J. D. (2011). The evolution of intimate partner violence, *Aggression and Violent Behaviour,* 16(2011), 411419, doi: 10.1016/j.avb.2011.04.015

Campbell, K.W. & Miller, J. D. (2011). *The handbook of Narcissism and narcissistic personality disorder,* USA, New Jersey: John Wiley & Sons

Campbell, J. C. (2002). Health Consequences of intimate partner violence, *The Lancet,* 359(9314), 1331-1336, doi: 10.1016/S01406736(02)08336-8

Campbell, J. C. & Jones, A. S., Dienemann, J., Kub, J., Schollenberger, J., O'Campo, P., Gielen, A. C. & Wynne, C. (2002). Intimate partner violence and physical health consequence, *Archives of Internal Medicine,* 162(10), 1157-1163, doi: 10.1177/0886260504269685

Costa, P.T. & McCrae, R. R. (1992). Four ways five factors are basic, *Personality and Individual Difference,* 13(6), 653-665, doi: 10.1016/0191-8869(92)90236-I

DeYoung, C.G. & Quilty, L.C. (2007). Between facets and domains: 10 aspects of the big five, *Journal of Personality and Social Psychology,* 93(5), 880-896, doi: 10.1037/0022-3514.93.5.880

Dickinson, K. A. & Pincus, A. L. (2003). Interpersonal analysis of grandiose and vulnerable Narcissism, *Journal of Personality Disorders,* 17(3), 188-207, doi: 10.1521/pedi.17.3.188.22146

Egan, V., Chan, S., & Shorter, G. (2014). The dark triad, happiness and subjective well-being. *Personality and Individual Differences*, 67 (9), 17–22. DOI: http://dx.doi.org/10.1016/j.paid.2014.01.004

Egan, V., Hughes, N. and Palmer, E., (2015). Moral Disengagement, the dark triad and unethical consumer behaviour. *Personality and Individual Differences*. 76 (4), 123–128, doi: 10.1016/j.paid.2014.11.054.

Egan, V. & Lewis, M. (2012). Neuroticism and Agreeableness differentiate emotional and narcissistic expressions of aggression, *Personality and Individual Differences,* 50(6), 845-850, doi: 10.1016/j.paid.2011.01.007

Furnham, A., Richards, S. C. & Paulhus, D. L (2013). The dark triad of personality: A 10 year review, *Social and Personality Psychology,* 7(3), 199-216, doi: 10.1111/spc3.12018

Gentry, J. & Bailey, B. A. (2014). Psychological intimate partner violence during pregnancy and birth outcomes: Threat of violence versus other verbal and emotional abuse, *Violence and Victims,* 29(3), 383-392, doi: 10.1891/0886-6708.VV-D-13-00020

Hamberger, L.K. & Hastings, J. E. (1990). Recidivism following spouse abuse abatement counselling: treatment program implications, *Violence and Victims,* 5(3), 157-170

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Beyond WEIRD: Towards a broad-based behavioural science. *Behavioural and Brain Sciences*, 33(2-3), 111-135, doi: http://dx.doi.org/10.1017/S0140525X10000725.

Hellmuth, J. C., & McNulty, J. K. (2008). Neuroticism, marital violence, and the moderating role of stress and behavioural skills. *Journal of Personality and Social Psychology*, *95*(1), 166-180, doi: 10.1037/0022-3514.95.1.166

Hicks, B. M., Markon, K. E., Patrick, C. J., Krueger, R. F. & Newman, J. P. (2004), Identifying Psychopathy subtypes on the basis of personality structure, *Psychological Assessment,* 16(3), 276-288, doi: 10.1037/1040-3590.16.3.276

Home Office (2014, December). Government to create new domestic abuse offence, retrieved from https://www.gov.uk/government/news/government-to-create-new-domestic-abuse-offence (last accessed July 1st 2015)

Jakobwitz, S. & Egan , V. (2006). The dark triad and normal personality traits, *Personality and Individual Differences,* 40(2), 331-339, doi: 10.1016/j.paid.2005.07.006

Jonason, P.K., Li, N. P. & Buss, D.M. (2009). The costs and benefits of the dark triad: implications for mate poaching and mate retention tactics, *Personality and Individual Differences,* 48(4), 373378, doi: 10.1016/j.paid.2009.11.003

Jones, D. N. & Paulhus, D. L. (2010). Different provocations trigger aggression in narcissists and psychopaths. *Social Psychological and Personality Science*, 1(1), 12–18, doi: 10.1177/1948550609347591

Jones, D. N. & Paulhus, D. L. (2014). Introducing the short dark triad (SD3): A brief measure of dark personality traits, *Assessment,* 21(1), 28-41, doi: 10.1177/1073191113514105

Juodis, M., Starzomski, A., Porter, S. & Woodworth, M. (2014). What can be done about high-risk perpetrators of domestic violence?, *Journal of Family Violence,* 29(4), 381-390, doi : 10.1007/s10896-014-9597-2

Kiire, S. (2016). Psychopathy rather than Machiavellianism or narcissism facilitates intimate partner violence via fast life strategy, *Personality and Individual Difference,* 104(2017), 401-406, doi: 10.1016/j.paid.2016.08.043

Legislation.gov.uk (2015). *Serious Crime Act (2015; chapter 9).* UK, London: TSO Available:

http://www.legislation.gov.uk/ukpga/2015/9/pdfs/ukpga_20150009_en.pdf (last accessed 14th June 2015)

McHoskey J. W., Worzel W., Szyarto C. (1998). Machiavellianism and Psychopathy. *Journal of Personality and Social Psychology* 74 (1), 192–210. doi:10.1037/0022-3514.74.1.192

Murphy, C. M. & Hoover, S.A. (1999). Measuring emotional abuse in dating relationships as a multifactorial construct, *Violence and Victims,* 14(1), 39-53, doi: 10.1177/0886260509334404

O'Leary, K.D. (1999). Psychological abuse: a variable deserving critical attention in domestic violence, *Violence and victims,* 14(1), 3-23

Pailing, A., Boon, J. & Egan, V. (2014). Personality, the dark triad and violent behaviour, *Personality and Individual Differences, 67(9), 81- 86, doi: 10.1016/j.paid.2013.11.018*

Paulhus, D. & Williams, K.M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and Psychopathy, *Journal of Researchin Personality,* 36(6), 556-563, doi: 10.1016/S0092-6566(02)00505-6

Pico-Alfonso, M. A. (2005). Psychological intimate partner violence: the major predictor of post-traumatic stress disorder in abused women, *Neuroscience and Behavioural Reviews,* 29(1), 181-193, doi: 10.1016/j.neubiorev.2004.08.010

Pico-Alfonzo, M. A., Garcia-Linares, M. I., Celda-Navarro, N., Blasco-Ros, C., Echeburua, E. & Matrinez, M. (2006). The Impact of physical, psychological, and sexual intimate male partner violence on women's mental health: Depressive symptoms, post-traumatic Stress Disorder, State Anxiety, and Suicide, *Journal of Women's Health,* 15(5), 599-611, doi: 10.1089/jwh.2006.15.599

Rauthmann, J. F. (2012). The Dark Triad and interpersonal perception: Similarities and differences in the social consequences of narcissism, Machiavellianism, and psychopathy, *Social Psychological and Personality Science,* 3(4), 487-496, doi: 10.1177/1948550611427608

Rosen, I. (1991). Self-esteem as a factor in social and domestic violence, *British Journal of Psychiatry,* 158(1), 18-23, doi: 10.1192/bjp.158.1.18

Sachetti, G. M. & Lefler, E. K. (2014). ADHD symptomology and social functioning in college students, *Journal of Attention Disorders,* 1-11, doi: 10.1177/1087054714557355

Straus, M. A., Hamby, S. L., Buncy-McCoy, S. & Sugarman, D. B. (1996). The revised Conflict Tactics Scale (CTS2): Development and preliminary psychometric data, *Journal of Family Issues,* 17(3) 283-316, doi: 10.117/019251396017003001

Straus, M. A. & Douglas, E. M. (2004). A short form of the revised conflict tactics scales, and typologies for severity and mutuality, *Violence and Victims,* 19 (5), 507-520, doi: 10.1891/088667004780927800

West, C. M. (2012). Partner abuse in ethnic minority and gay, lesbian, bisexual, and transgender populations. *Partner Abuse*, 3(3), 336-357. DOI: 10.1891/1946-6560.3.3.336

Westhead, J. & Egan, V. (2015). Untangling the concurrent influences of the Dark Triad, personality and mating effort on violence, *Personality and Individual Differences,* 86(2015), 222-226, doi: 10.1016/j.paid.2015.05.031

White, H. R. & Widom, C. S. (2003). Intimate partner violence among abused and neglected children in young adulthood: the mediating effects of early aggression, antisocial personality, hostility and alcohol problems, *Aggressive Behaviour,* 29(4), 332-345, doi: 10.1002/ab.10074

Wilson, D. S., Near, D. & Miller, R. R. (1996). Machiavellianism: A synthesis of the evolutionary and psychological literatures, *Psychological Bulletin,* 119(2), 285-299

Wink, P. (1991). Two Faces of Narcissism, *Journal of Personality and Social Psychology,* 61(4), 590-597, doi: 10.1037/0022-3514.61.4.590

World Health Organisation (2012). Understanding and Addressing violence against women: Intimate Partner Violence. http://apps.who.int/iris/bitstream/10665/77432/1/WHO _RHR_12.36_eng.pdf (last accessed 10 December 2014)

Zeigler-Hill, V., Besser, A., Morag, J. & Campbell, K. W. (2016). The Dark Triad and sexual harassment proclivity, *Personality and Individual Differences,* 89(2016, 47-54, doi: /10.1016/j.paid.2015.09.048

Table 1: Summary psychometric data for entire cohort

MEASURE/SUBTEST	MEAN	SD	RELIABILITY
Machiavellianism	2.80	0.56	0.71
Narcissism	2.64	0.60	0.72
Psychopathy	1.91	0.56	0.70
Neuroticism	40.30	8.57	0.67
Agreeableness	60.03	7.91	0.84
Conscientiousness	50.69	8.49	0.87
Extroversion	53.73	10.35	0.88
Openness	61.40	10.56	0.88
Total CTS2S_perpetration (victimisation)	8.84 (8.21)	6.18 (5.71)	0.95 (0.97)
Total MMEA_perpetration (victimisation)	25.60 (36.67)	25.31(26.94)	0.90 (0.91)
Restrictive Engulfment perpetration (victimisation)	8.30 (16.66)	9.25 (12.19)	0.67 (0.74)
Denigration perpetration (victimisation)	4.45 (5.37)	7.07/ (9.23)	0.79 (0.78)
Hostile Withdrawal perpetration (victimisation)	10.14 (12.11)	9.36 (10.16)	0.72 (0.78)
Dominance/Intimidation perpetration (victimisation)	2.73 (6.78)	2.54 (6.19)	0.83 (0.85)

Table legend: MMEA = Multidimensional Measure of Emotional Abuse (MMEA); CTS2S = short form of the revised Conflict Tactics Scale, version 2.

Table 2: Internal correlations between measures (Spearman's rho, n = 128)

	Machiavellianism	Narcissism	Psychopathy
Neuroticism	0.16	**-0.18***	**0.18***
Agreeableness	**-0.38****	-0.11	**-0.42****
Conscientiousness	0.11	0.11	-0.03
Extroversion	-0.03	**0.49****	-0.12
Openness	**-0.27****	0.06	**-0.24****

**p is significant at 0.01 level (2-tailed)
*p is significant at 0.05 level (2-tailed)

Table 3: Correlations between measures of personality and IPV

	CTS2S_ Perpetration total	CTS2S- Victimisation total	MMEA_ Perpetration total	MMEA_ Victimisation total
Neuroticism	.08	.10	.11	-.03
Agreeableness	**-.18 ***	**-.19 ***	-.12	-.06
Conscientiousness	-.09	-.07	.01	.01
Extroversion	.05	-.02	.07	-.10
Openness	.03	-.07	**-0.20***	-0.07
Machiavellianism	0.09	0.10	**0.20***	0.07
Narcissism	0.10	-0.07	0.15	-0.06
Psychopathy	-0.10	0.02	**0.22 ****	0.14

**p is significant at 0.01 level (2-tailed)
*p is significant at 0.05 level (2-tailed)

Table legend: MMEA = Multidimensional Measure of Emotional Abuse (MMEA); CTS2S = short form of the revised Conflict Tactics Scale, version 2.

TABLE 4: Hierarchical regression models predicting CTS2 and MMEA scores using demographics, and BFAS and SD3 scores

a. OUTCOME - CTS2S_PERPETRATION total

Block	R	Adj R^2	R^2 change	F-ratio of change	P<
1. Demographics	0.27	0.06	/	F (2, 125) = 4.95	**0.01**
2. BFAS	0.40	0.11	0.05	F (7, 120) = 3.28	**0.01**
3. SD3	0.42	0.11	0.00	F (10, 117) = 2.53	**0.01**

b. OUTCOME - CTS2S_VICTIMISATION total

Block	R	Adj R^2	R^2 change	F-ratio of change	P<
1. Demographics	0.27	0.06	/	F (2, 125) = 4.90	**0.01**
2. BFAS	0.43	0.13	0.07	F (7, 120) = 3.78	**0.01**
3. SD3	0.45	0.13	0.00	F (10, 117) = 2.94	**0.01**

c. OUTCOME – MMEA RESTRICTIVE ENGULFMENT PERPETRATION

Block	R	Adj R^2	R^2 change	F-ratio of change	P<
1. Demographics	0.17	0.01	/	F (2, 125) = 1.86	n.s.
2. BFAS	0.27	0.02	0.01	F (7, 120) = 1.35	n.s.
3. SD3	0.39	0.08	0.06	F (10, 117) = 2.05	**0.05***

**p is significant at 0.01 level (2-tailed)
*p is significant at 0.05 level (2-tailed)