The dark side of love and life satisfaction: Associations with intimate relationships, psychopathy and Machiavellianism

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**ABSTRACT**

This study examines, for the first time, the psychopathy subtypes and Machiavellianism in relation to life satisfaction and intimate relationships. Using structural equation modelling (SEM) in a male and female non-clinical sample, we investigated the degree to which primary psychopathy, secondary psychopathy, Machiavellianism, gender, sociosexual orientation and the relationship components of intimacy, commitment and passion, accounted for variance in life satisfaction. Results indicated that Machiavellianism was negatively associated with the relationship components. Unexpectedly, primary psychopathy was positively associated with the relationship components. Secondary psychopathy was negatively associated with life satisfaction and intimacy. Implications for the conceptualisation of “dark side” traits and their effects on inter- and intra-personal relations are considered.

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1. Introduction

Non-clinical psychopathy and Machiavellianism are personality traits with a particularly nefarious reputation; they are associated with callousness, manipulation, deception, egocentricity, emotional coldness, superficial charm and exploitation (e.g., Austin, Farrelly, Black, & Moore, 2007; Hare, 1991; McHoskey, Worzel, & Szyarto, 1998). Research into aversive or “dark side” personality traits tends to focus on the external manifestations of these traits, with particular interest directed towards the emotional deficits endemic in non-clinical psychopathy and Machiavellianism, such as anxiety, emotion modulated startle response, emotion perception, empathy, aggression and emotional intelligence (e.g., Ali, Amorim, & Chamorro-Premuzic, 2009; Austin et al., 2007; Del Gaizo & Falkenbach, 2008).

Theoretically, psychopathy is dyadic as it consists of primary psychopathy and secondary psychopathy (Levenson, Kiehl, & Fitzpatrick, 1995) and research has confirmed the heterogeneity of psychopathy (e.g., Blackburn, Logan, Donnelly, & Renwick, 2008), with primary psychopathy and secondary psychopathy thought to be distinguishable by negative affectivity (e.g., Brinkley, Newman, Widiger, & Lynam, 2004; Newman, MacCoon, Vaughn, & Sadeh, 2005). The Anti-social Personality Questionnaire (APQ: Blackburn & Fawcett, 1999) indicates that primary psychopathy is characterised by impulsivity, aggression, hostility, extraversion, self-confidence and low to average anxiety. Secondary psychopathy, like primary psychopathy, is characterised by hostility, impulsivity and aggression, but unlike primary psychopathy, it is associated with social anxiety, introversion, moodiness and low self-esteem.

Psychopathy and Machiavellianism do not fare well in the interpersonal domain, as exemplified in the interpersonal circle structural model (see Leary, 1957; Wiggins, 1982), which consists of two dimensions, namely power/controlling (dominance vs. submission) and affiliation (hostility vs. nurturance). Psychopathy is represented by a hostile interpersonal style involving subtle forms of humiliating, retaliatory and critical interactions designed to inspire fear in others (Leary, 1957). Empirical research provides support for the associations between psychopathy and a hostile dominance interpersonal style (e.g., Blackburn, 1998; Kosson, Steuerwald, Forth, & Kirkhart, 1997). In relation to Machiavellianism, several studies indicate that high Machiavellianism scorers are high on dominance and low on affiliation (e.g., Gurman, 1992; Locke & Christensen, 2007).

Life satisfaction has been positively associated with happy intimate relationships (e.g., Arrindell, van Nieuwenhuizen, & Luteijn, 2001) and successful intimate relationships tend to be characterised by high intimacy, passion and commitment (Sternberg, 1998). Considering the deficiency in affect and antagonistic behavioural style manifested in both psychopathy and Machiavellianism, it is unsurprising that these personality styles are associated with poor intimate relationship quality. Psychopathic traits (in clinical and non-clinical samples) are associated with relationship distress and breakdown (Han, Weed, & Butcher, 2003; Savard, Sabourin, & Lussier, 2006), infidelity (Egan & Angus, 2004), domestic violence (Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, 2003).
and acts of sexual aggression (Hersh & Gray-Little, 1998). As stated by Ullrich, Farrington, and Coid (2008) ‘lack of remorse, lack of empathy, and callousness are counterproductive for status and wealth and successful intimate relationships’ (p. 1169).

Although much less research has examined Machiavellianism and intimate relationships, research indicates that Machiavellianism is associated with promiscuity, hostile sexual attitudes and various selfish and deceptive sexual tactics such as cheating, divulging intimate sexual secrets to others, feigning love, inducing intoxication to secure sex and an endorsement of using sexual force (Jonason, Li, Webster, & Schmitt, 2009; McHoskey, 2001), though these effects seem to be attenuated or absent in females (McHoskey, 2001).

The current study examined life satisfaction in psychopathy and Machiavellianism; an area which so far has been neglected in the research literature. Potential differences between primary and secondary psychopathy in relation to life satisfaction have never been investigated, even though research has demonstrated that the two subtypes can be differentiated on the basis of affective experience (e.g., Blackburn, 2009). Because the quality of a relationship contributes to life satisfaction, the current study also expands research investigating maladaptive traits and intimate relationships by examining psychopathy and Machiavellianism alongside sexual strategy (sociosexual orientation) and the relationship components of intimacy, commitment and passion, in a non-clinical sample.

Research with non-clinical samples has found that despite lower base-rates, there is evidence for diverse expressions of psychopathic traits across the population (Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003) and investigators (e.g., Lilienfeld, 1998; Williams & Paulhus, 2004) argue that research on non-clinical samples is necessary for findings to generalise to more individuals.

Most studies using self-report based measures of psychopathy and Machiavellianism suggest that males tend to score higher on these measures than females (e.g., Wilson, Frick, & Clements, 1999; Zagon & Jackson, 1994), although a few studies have shown no significant gender differences in self-reported psychopathy scores (e.g., Hamburger, Lilienfeld, & Hogben, 1996). Psychopathy and intimate relationship research tends to focus on males (e.g., Savard et al., 2006) yet assessing non-clinical psychopathy and Machiavellianism in females could enhance knowledge on the potential theoretical relevance of these traits in both genders. With regards to intimate relationships, past research has sometimes relied on one-dimensional global measures of psychopathy (e.g., Han et al., 2003; Holtzworth-Munroe et al., 2003), which ignore potential differences between primary and secondary psychopathy.

The current study employed a mixed-gender, non-clinical and adult (non-student) sample to investigate life satisfaction and intimate relationships in primary psychopathy, secondary psychopathy and Machiavellianism. It was hypothesised that these dark traits would be negatively associated with the relationship components and satisfaction with life, but positively associated with a promiscuous sociosexual orientation. It was also hypothesised that the relationship components would be positively associated with greater life satisfaction. Finally, it was hypothesised that males would be positively associated with higher levels of these dark traits and a promiscuous sociosexual orientation.

2. Method

2.1. Participants and procedure

The sample initially consisted of 297 individuals; however, 6 participants above 65 were removed from the data set as outliers. Therefore, in total 291 participants took part in this study; 58.1% were female (169) and 41.9% were male (122). The mean age of the sample was 31 (range: 18–60 years). Participants were invited to participate in a web-based study investigating ‘personality and relationships’ open to individuals from all nations. The study was advertised on a popular psychology website through a blog written by the second author (apply to author for details). Before starting the survey participants were given information in an introductory web page that informed them of the aim of the study and all the relevant ethical issues. Participants completed the questionnaires without any time limit and were given the option of receiving feedback on their scores by email. The web-link remained active for 5 weeks. IP addresses were recorded to prevent multiple submissions and the data was loaded and stored automatically onto a spreadsheet, which was then transferred into SPSS v.16 for analyses. Evidence suggests that results obtained using internet methods are often consistent with the effects from studies using traditional methods (Gosling, Vazire, Srivastava, & John, 2004).

2.2. Materials

2.2.1. Mach-IV

Machiavellianism was assessed with the Mach-IV inventory (Christie & Geis, 1970), which has 20 items covering the use of deceit in interpersonal relationships, a cynical attitude to human nature and a lack of concern for conventional morality. Higher scores are indicative of higher levels of Machiavellianism. The reliability and the validity of the Mach-IV are well documented (e.g., Fehr, Samsom, & Paulhus, 1992). In the present study the Cronbach’s α was .86, showing good internal consistency.

2.2.2. Levenson self-report psychopathy scale (LSRP)

The LSRP scale (Levenson et al., 1995) is a 26-item self-report measure designed to assess psychopathic attributes in non-institutionalised samples and to evaluate both the behavioural and personality traits commonly associated with psychopathy in the literature. Levenson et al.’s (1995) analyses revealed a two-factor structure equivalent to the two factors of the “gold standard” of clinical psychopathy research, the Revised Psychopathy Checklist (PCL-R; Hare et al., 1990). The primary psychopathy scale consists of 16 items designed to assess the core personality features described by Cleckley (1988), such as being selfish, uncaring, and manipulative. It is related to Factor 1 of the PCL-R, while the secondary psychopathy scale is conceptually related more to PCL-R Factor 2 and consists of 10 items assessing anti-social behaviour, a self-defeating lifestyle, and impulsivity. Cronbach’s α in the current study were .84 for the primary psychopathy scale and .72 for the secondary psychopathy scale. The LSRP has demonstrated reliability (Brinkley, Schmitt, Smith, & Newman, 2001) and divergent validity (McHoskey et al., 1998) and was used in this study because it is specifically designed to assess primary and secondary psychopathy. For the present sample Cronbach’s α was .88 for the primary psychopathy scale and .74 for the secondary psychopathy scale.

2.2.3. Sociosexual orientation inventory (SOI)

The SOI (Simpson & Gangestad, 1991) is a 7-item self-report measure of individual differences in human mating strategies. Higher scores reflect a more unrestricted sociosexual orientation (individuals are more likely to engage in sexual relations in the absence of love and commitment) and lower scores reflect a more restricted orientation (individuals are less likely to engage in sexual relations in the absence of love and commitment). The SOI has demonstrated both discriminant and convergent validity (Simpson & Gangestad, 1991). Cronbach’s α in the current study was .82.
2.2.4. Satisfaction with life scale (SWLS)

The SWLS (Diener, Emmons, Larsen, & Griffin, 1985) is a widely used measure of life satisfaction. Participants rate five statements on their self-perceived global life satisfaction. Diener et al. (1985) have demonstrated discriminant and convergent validity for the SWLS, as well as high internal consistency. In the current study, Cronbach’s α for the SWLS was .88, indicating high internal consistency.

2.2.5. Triangular love scale (TLS)

The TLS (Sternberg, 1998) is a 45-item questionnaire that measures the degree of intimacy, passion and commitment an individual experiences toward a relationship partner. In the current study, the 19 items of those retained in the principal component analyses by Lemieux and Hale (1999), on the basis of significant factor loadings, were used. This 19-item shortened version has previously been employed by Overbeeke, Ha, Scholte, de Kemp, and Engels (2007). In the current study, Cronbach’s α was .91 for both intimacy and passion and .74 for the commitment subscale.

3. Results

3.1. Correlations

All composite variables were transformed into z-scores before analysis. Intercorrelations among age, gender, Machiavellianism, primary psychopathy, secondary psychopathy, life satisfaction, socioeconomic orientation and the three love dimensions (intimacy, passion and commitment) are shown in Table 1.

3.2. Structural equation modelling (SEM)

Next, a structural model for integrating demographic and individual difference predictors of the relationship components and life satisfaction was tested via SEM. SEM was carried out using AMOS 5.0 (Arbuckle, 2003) in order to (1) account for the overlap among different predictors; (2) account for the overlap among different criteria; (3) assess the validity of a hierarchical model in which the same factors are both predictors and criteria; (4) remove the variance attributable to generic latent factors.

To assess the fit of the model, the following indices were used: \( \chi^2 \) (Bollen, 1989), which tests whether an unconstrained model fits the covariance/correlation matrix as well as the given model (although non-significant \( \chi^2 \) values indicate good fit, well-fitting models often have significant \( \chi^2 \) values); the parsimony goodness-of-fit indicator (PGFI; Mulaik et al., 1989), which measures power and is optimal around .50; the CFI (Bentler, 1990), which compares the hypothesised model with a model based on zero-correlations among all variables (values around .90 indicate very good fit); for the root-mean-square error of approximation (RMSEA; Browne & Cudeck, 1993), values <.08 indicate good fit; Akaiker’s information criterion (AIC; Akaiker, 1973) provides an estimate of the extent to which the parameter estimates from the original sample will cross-validate in future samples and; Hoelter’s critical N (CN; Hoelter, 1983) provides the maximum sample size for which a model with same sample size and df would be acceptable at the .01 level.

The hypothesised model included gender and age as exogenous variables, three sets of mediators, namely the dark side traits, socioeconomic orientation, and relationship components, and life satisfaction as an endogenous factor. Given the overlap among the relationship components on one hand and dark side traits on the other (as per Table 1), two latent factors were modelled in order to remove the common variance among these factors and examine effects by and onto the distilled “pure” factors of intimacy, commitment, passion, Machiavellianism, primary and secondary psychopathy. In line with predictions, paths were allowed from gender to the dark side factor and sociosexual orientation, which was also hypothesised to be effected by the dark side factor and which was also expected to effect the relationship components and life satisfaction. Finally, the relationship components were expected to effect life satisfaction. The hypothesised model did not fit the data well: \( \chi^2(df = 33, N = 291) = 193.2, p < .01 \) CFI = .80, GFI = .88, AGFI = .81, PGFI = .53, RMSEA = .13 (.11–.15). In line with modification indices, nine theoretically relevant paths were added, namely: from secondary psychopathy to life satisfaction and intimacy, from primary psychopathy and Machiavellianism to the overall latent factor of relationship styles, from Machiavellianism to sociosexual orientation, from sociosexual orientation to commitment and from age to commitment, intimacy and the latent dark side trait. When these paths were added, the hypothesised effects by the latent dark side factor were no longer significant and were therefore dropped. The modified model (Fig. 1) explained the data well: \( \chi^2(df = 27, N = 291) = 64.4, p < .01 \) CFI = .96, GFI = .97, AGFI = .93, PGFI = .50, RMSEA = .06 (.04–.08). The model explained 25% of the variance in life satisfaction, and 20% and 16% of the variance in the latent dark side and relationship factors, respectively.

4. Discussion

The present study examined the associations between non-clinical psychopathy (primary and secondary), Machiavellianism, gender, life satisfaction, socioeconomic orientation and the relationship components of intimacy, passion and commitment, using SEM.

The correlational results indicated that, as predicted, females were significantly associated with lower levels of primary psychopathy, Machiavellianism and a less promiscuous sociosexual orientation. The hypothesised model included gender and age as exogenous variables, three sets of mediators, namely the dark side traits, socioeconomic orientation, and relationship components, and life satisfaction as an endogenous factor. Given the overlap among the relationship components on one hand and dark side traits on the other (as per Table 1), two latent factors were modelled in order to remove the common variance among these factors and examine effects by and onto the distilled “pure” factors of intimacy, commitment, passion, Machiavellianism, primary and secondary psychopathy. In line with predictions, paths were allowed from gender to the dark side factor and sociosexual orientation, which was also hypothesised to be effected by the dark side factor and which was also expected to effect the relationship components and life satisfaction. Finally, the relationship components were expected to effect life satisfaction. The hypothesised model did not fit the data well: \( \chi^2(df = 33, N = 291) = 193.2, p < .01 \) CFI = .80, GFI = .88, AGFI = .81, PGFI = .53, RMSEA = .13 (.11–.15). In line with modification indices, nine theoretically relevant paths were added, namely: from secondary psychopathy to life satisfaction and intimacy, from primary psychopathy and Machiavellianism to the overall latent factor of relationship styles, from Machiavellianism to sociosexual orientation, from sociosexual orientation to commitment and from age to commitment, intimacy and the latent dark side trait. When these paths were added, the hypothesised effects by the latent dark side factor were no longer significant and were therefore dropped. The modified model (Fig. 1) explained the data well: \( \chi^2(df = 27, N = 291) = 64.4, p < .01 \) CFI = .96, GFI = .97, AGFI = .93, PGFI = .50, RMSEA = .06 (.04–.08). The model explained 25% of the variance in life satisfaction, and 20% and 16% of the variance in the latent dark side and relationship factors, respectively.

<table>
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<td>Intercorrelations: bivariate Pearson correlation coefficients.</td>
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<tr>
<td>1. Gender</td>
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\( n = 297. \) Gender: F, 0; M, 1.

\( \text{**} p < .01 \) level.
orientation. However, gender was not significantly associated with secondary psychopathy as suggested by previous research (e.g., Levenson et al., 1995), although a study using the Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) demonstrated that Factor 2 (secondary psychopathy) scores were not significantly different across gender in an undergraduate sample (Lilienfeld & Hess, 2001). Machiavellianism was highly correlated with primary psychopathy and moderately with secondary psychopathy. Various researchers have noted the conceptual similarity between Machiavellianism and psychopathy (e.g., McHoskey et al., 1998; Mealey, 1995), but research indicates that although overlapping, they are distinct constructs (Paulhus & Williams, 2002; Vernon, Villani, Vickers, & Harris, 2008; Williams & Paulhus, 2004).

In line with previous research (e.g., Egan & Angus, 2004; McHoskey, 2001) and our expectations, Machiavellianism and primary psychopathy were both positively associated with promiscuity and along with secondary psychopathy, negatively associated with commitment. Machiavellianism was negatively associated with life satisfaction and intimacy, which is not surprising when considering that this trait is associated with negative emotions (e.g., McHoskey et al., 1998) and a lack of interpersonal affect in interpersonal relationships (Christie & Geis, 1970).

Contrary to our expectations, primary psychopathy was not significantly associated with life satisfaction, although the correlation was in the negative direction. Like Machiavellianism, secondary psychopathy is associated with negative affect (Blackburn et al., 2008) and a hostile interpersonal style (Blackburn, 1998) and was also negatively associated with life satisfaction and intimacy.

With regards to the SEM, as predicted, the relationship components positively predicted life satisfaction. Research has demonstrated that these relationship components are related to greater life satisfaction (e.g., Arrindell & Luteijn, 2000). In line with the initial hypotheses, gender (female) negatively predicted the dark side traits and sociosexual orientation; this is consistent with previous research into these traits and sexuality, which demonstrate that psychopathy and Machiavellianism are manifested differently in men and women (McHoskey, 2001; Wilson, Near, & Miller, 1996).

As hypothesised, Machiavellianism positively predicted sociosexual orientation but negatively predicted the relationship components. Similarly to secondary psychopathy, Machiavellianism is linked to the experience of negative affect such as increased anxiety (McHoskey et al., 1998) and is typified by low agreeableness, low conscientiousness, low extraversion and high neuroticism (Jakobwitz & Egan, 2006). These features are likely to adversely affect the Machiavellian individual’s intimate relationships.

Unexpectedly, primary psychopathy positively predicted the relationship components. That primary psychopathy was associated with greater intimacy, passion and commitment is counterintuitive. However, individuals with psychopathic traits are expert manipulators; perhaps individuals higher in primary psychopathy desire and therefore have and report greater passion, commitment and intimacy in a relationship so that they can manipulate their partner better; the closer you are to somebody, the better understanding you have of their weaknesses. Hare (1999) states that individuals with psychopathic traits ‘recognise and turn to their own advantage the hang-ups and self-doubts that most people have’ (p. 148). We note, however, that this finding taken in isolation should be treated with caution, although it could be investigated further.

In contrast to primary psychopathy, secondary psychopathy negatively predicted intimacy and negatively predicted life satisfaction. Research has demonstrated that neuroticism is strongly related to negative affect (e.g., Gomez, Cooper, & Gomez, 2000; Robinson, Ode, Moller, & Gotez, 2007) and primary psychopathy is associated with higher psychoticism (hostility, low empathy, egocentric) and lower neuroticism than secondary psychopathy (Blackburn, 2009; Eysenck, 1977). Savard et al. (2006) found that when distinguishing primary psychopathy from secondary psychopathy, secondary psychopathy was more reliably associated with couple dissatisfaction, probably as a result of the anti-social and impulsive behaviour exhibited in secondary psychopathy. Although both primary and secondary psychopathy are associated with antagonistic interpersonal styles (such as coercive behaviour), individuals with primary psychopathic traits are relatively free of anxiety whereas individuals with secondary psychopathic traits are more
withdrawn, submissive and anxious (Blackburn, 1993). This negative affectivity is likely to be the cause of lower self-reported life satisfaction among our high secondary psychopathy scorers. A limitation of the current study was that it did not investigate aversive personality traits in couples; it would have been interesting to compare the relationship components between both intimate partners and to determine what the impact of being in a relationship with a high scorer on the aversive traits is. Further research could examine relationship components and life satisfaction in couples using a longitudinal design as satisfaction with life is not a static phenomenon. This study contributes to the ‘dark’ personality literature by examining, for the first time, the psychopathy subtypes and Machiavellianism in relation to life satisfaction and intimate relationships.

References


