# The Dark Empath: Characterising dark traits in the presence of empathy

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## ABSTRACT

A novel psychological construct characterised by high empathy and dark traits: *the Dark Empath* (DE) is identified and described relative to personality, aggression, dark triad (DT) facets and wellbeing. Participants ($n = 991$) were assessed for narcissism, Machiavellianism, psychopathy, cognitive empathy and affective empathy. Sub-cohorts also completed measures of (i) personality (BIG5), indirect interpersonal aggression ($n = 301$); (ii) DT facets of vulnerable and grandiose narcissism, primary and secondary psychopathy and Machiavellianism ($n = 285$); and (iii) wellbeing (depression, anxiety, stress, anhedonia, self-compassion; $n = 240$). Latent profile analysis identified a four-class solution comprising the traditional DT ($n = 128$; high DT, low empathy), DE ($n = 175$; high DT, high empathy), Empaths ($n = 357$; low DT, high empathy) and Typicals ($n = 331$; low DT, average empathy). DT and DE were higher in aggression and DT facets, and lower in agreeableness than Typicals and Empaths. DE had higher extraversion and agreeableness, and lower aggression than DT. DE and DT did not differ in grandiose and vulnerable DT facets, but DT showed lower wellbeing. The DE is less aggressive and shows better wellbeing than DT, but partially maintains an antagonistic core, despite having high extraversion. The presence of empathy did not increase risk of vulnerability in the DE.

## 1. Introduction

Conceptualised as the Dark Triad (DT), Machiavellianism, psychopathy and narcissism cluster as three interconnected and potentially maladaptive personality constructs. Machiavellianism describes an exploitative, cynical and manipulative nature; psychopathy comprises affective-interpersonal (superficial charm, callous affect) and behavioural (erratic lifestyle, antisocial behaviour) deficits; and narcissism is characterised by an exaggerated sense of entitlement, superiority, and grandiose thinking (Hare & Neumann, 2008; Jones & Paulhus, 2014). A well-established literature associates these dark traits with empathy deficits; that is an impairment in the ability to take the perspective of others, understand their viewpoints, and share their emotions to attain interpersonal reciprocity (Ali, Amorim, & Chamorro-Premuzic, 2009; Hepper, Hart, & Sedikides, 2014; Heym et al., 2019; Jonason & Krause, 2013; Jones & Figueredo, 2013; Ritter et al., 2011; Szabó & Bereczkei, 2017; Wai & Tiliopoulos, 2012). Indeed, evidence suggests deficits in certain facets of empathy may be at the very heart of a dark constellation, binding psychopathy and Machiavellianism in particular (Heym, Firth, et al., 2019).

Despite the often-reported negative associations between DT and empathy (Jonason & Krause, 2013; Vachon & Lynam, 2016; Wai & Tiliopoulos, 2012), questions remain around (i) whether impaired empathy is indeed necessary and/or sufficient for the presence of dark traits (Mihailides, Galligan, & Bates, 2017), (ii) whether the dark shades may present with enhanced capacity to empathise, and if so, (iii) how this constellation may differ from the traditional DT and those without dark traits in its associations with other personality constructs and relevant mal/adaptive outcomes. Answering these questions will provide further understanding of the intimate relationship between dark traits and empathy, critical to the conceptualisation of these constructs, as well as their relationship to other personality traits, maladaptive behaviours (e.g., aggression) and psychological wellbeing (e.g., depression, anxiety). To this end, the current study seeks the dissociation between impaired empathy, and in particular, investigates the existence of darkness in the presence of empathy – a combination we refer to as the 'Dark Empath'.

Mihailides et al. (2017) suggest that state psychopathy (induced using the moral inversion paradigm) and empathy are not mutually exclusive, at least in the general/non-clinical population, and that conjoined psychopathy and empathy may have survival benefit (adaptive psychopathy hypothesis). Less is known about the conjoining of psychopathy and empathy on a trait level, an investigation of which might explain some inconsistencies in the literature. That is, although empathy and the dark traits are often inversely related, there are several reports of non-significant and even positive associations (Davis & Nichols, 2016; Nagler, Reiter, Furtner, & Rauthmann, 2014; Veselka, Schermer, & Vernon, 2012). Such findings have in part been explained

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by construct multidimensionality (Szabó & Bereczkei, 2017), including differential associations between dark traits and empathy subdivisions (i.e. cognitive and affective; Davis, 1983; Reniers, Corcoran, Drake, Shryane, & Völlm, 2011; Wai & Tiliopoulos, 2012). Cognitive empathy refers to the capacity to know and understand another's mental state (e.g., the ability to *perspective take;* seeing from another's viewpoint), whereas affective empathy is the capacity to resonate with another person (or situation) on an emotional level (i.e., vicarious *sharing of their feelings*; Davis, 1983; Jonason & Krause, 2013; Reniers et al., 2011).

Several studies suggest direct associations between both cognitive and affective, empathy deficits and the dark dyad - Machiavellianism and psychopathy (Heym, Firth, et al., 2019; Jonason & Krause, 2013; Vachon & Lynam, 2016; Wai & Tiliopoulos, 2012). On the other hand, cognitive empathy (particularly perspective taking) is more consistently found spared, or even enhanced, in narcissism (Hepper et al., 2014 ; Nagler et al., 2014; Szabó & Bereczkei, 2017; Veselka et al., 2012; Vachon & Lynam, 2016; Wai & Tiliopoulos, 2012). Positive relationships have also been reported, albeit less commonly, for Machiavellianism (Szabó & Bereczkei, 2017; Turner, Foster, & Webster, 2019), and psychopathy (Veselka et al., 2012). Such mixed findings might further support the notion that there are different subpopulations with elevated dark traits: with and without the capacity to empathise.

### 1.1. The Dark Empath and personality

Dissociating the Dark Empath from the traditional dark triad (with empathy deficits), one would expect some general trait differences in terms of the five-factor model (FFM) of personality. Firstly, meta-analyses (O'Boyle, Forsyth, Banks, Story, & White, 2015; see also Vize, Lynam, Collison, & Miller, 2018 for similar results) support strong links between low Agreeableness (A) and DT traits, particularly Machiavellianism. Accordingly, Antagonism is proposed as a "Dark Core" (Vize, Collison, Miller, & Lynam, 2019). Machiavellianism and psychopathy appear most similar in their FFM profile, with reliable negative associations with Conscientiousness (C), whilst Narcissism is related more to Extraversion and Openness (only weakly with C). Weaker associations are seen with Neuroticism (N; positive for Psychopathy and Machiavellianism, negative for Narcissism). However, large credibility intervals indicate N as a moderator – at least for psychopathy and Machiavellianism (O'Boyle et al., 2015). In other words, in some subpopulations, dark traits may present with exceedingly high levels of N, in others with very low N (Czibor et al., 2017; Miller et al., 2010). Indeed, primary and secondary psychopathy are distinguished by opposite relations to N and anxiety (e.g., Falkenbach, Reinhard, & Zappala, 2019; Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003). Whilst affective empathy is most strongly associated with A, it has also been linked to increased N, whereas cognitive empathy has been negatively associated with N (Melchers et al., 2016). Thus, whether the presence of empathy in conjunction with the dark triad is reflected in different FFM profiles (e.g., higher levels of A and N) needs to be determined.

### 1.2. The Dark Empath and aggression

The DT are implicated in several aggressive behaviours. Psychopathy is the strongest predictor of physical and premeditated aggression (Jones & Neria, 2015; Lämmle, Oedl, & Ziegler, 2014; Muris, Merckelbach, Otgaar, & Meijer, 2017; Paulhus, Curtis, & Jones, 2018) and bullying behaviours in adults (Baughman, Dearing, Giammarco, & Vernon, 2012). Narcissism may mediate aggression in response to ego-threat (Jones & Paulhus, 2010) and, along with Machiavellianism, promote indirect methods of intimidation (Baughman et al., 2012). Both psychopathy and Machiavellianism have been associated with increased relational aggression (damaging relationships and social status, such as peer group exclusion, rumour spreading, gossiping) in,

adults (Abell & Brewer, 2014; Heym, Firth, et al., 2019) and children (Kerig & Stellwagen, 2010).

Empathy has been traditionally viewed as a key trait in mitigating aggression (e.g., Heym, Firth, et al., 2019; Miller & Eisenberg, 1988). According to the Violence Inhibition Mechanism model (VIM; Blair, 1995), impairment in the recognition and affective empathic response to distress cues (e.g., fearful or sad facial expressions) are thought to underpin physical aggression in psychopathy (Blair, 2005; Blair et al., 2004). However, whether VIM is relevant outside the context of psychopathy and physical aggression is unclear. Moreover, cognitive (rather than affective) empathy deficits have been shown to partially mediate the relationship between indirect interpersonal aggression and dark traits – at least for psychopathy and Machiavellianism (Heym, Firth, et al., 2019). However, a recent meta-analysis (86 studies) revealed only a weak (mean effect size of $-0.11$, though still statistically significant) association between (multiple types of) empathy and aggression, which was generalised across age, race and sex (Vachon, Lynam, & Johnson, 2014). Thus, whether the presence of empathy in conjunction with the dark triad is reflected in reduced aggression in the Dark Empath needs to be determined.

### 1.3. The Dark Empath, vulnerable dark traits and wellbeing

Investigation of the Dark Empath may have implications for understanding increased risk for vulnerable dark traits (Miller et al., 2010), which include aspects of secondary psychopathy (impulsivity, emotional dysregulation), vulnerable/covert (in contrast to grandiose) narcissism and borderline personality traits. Vulnerable dark traits manifest significant positive relations to Neuroticism and several aspects of wellbeing (e.g., depression, anxiety, stress, self-compassion; Barry, Loflin, & Doucette, 2015; Miller et al., 2010; Miller, Gentile, Wilson, & Campbell, 2013), which in turn have been associated with increased affective empathy (Heym et al., 2019; Melchers et al., 2016). Nevertheless, empathy did not strongly differentiate grandiose from vulnerable narcissism, though they did load slightly more on the former (0.35) than the latter (0.29; Miller et al., 2013). Thus, it is not clear whether the capacity to empathise may put the Dark Empath at increased risk of vulnerability.

Recent models highlight the interplay between empathy and self-compassion in the development of mood disorders, including depression, whereby greater capacity for affective empathy might underpin greater risk of depression (Schreiter, Pijnenborg, & Aan Het Rot, 2013). However, the literature on the role of empathy in wellbeing is mixed with reports of some facets, particularly cognitive empathy, reducing risk. For example, harsher self-judgment and over-identification with one's own thoughts (as indicators of low self-compassion) were linked to affective empathy, whilst only self-judgment together with reduced cognitive empathy predicted increased cognitive depression (Heym, Heasman, et al., 2019). Moreover, impoverished affect may manifest as poor empathy and negative symptoms in depression, such as social anhedonia (Wang, Neumann, Shum, et al., 2013) and poor affiliative reward, which has been proposed to underpin CU traits (Waller & Wagner, 2019). In this case, the lack of empathy in conjunction with dark traits might be predicted to be associated with poorer wellbeing. Indeed, the traditional DT constructs Machiavellianism and psychopathy (but not narcissism) have shown significant positive associations with internalising in a recent meta-analysis (Vize et al., 2018) and large cohort ($n = 791$; Gómez-Leal et al., 2019) studies. In any case, whether the presence/absence of empathy in conjunction with the dark traits reflects a predisposition to vulnerable traits and wellbeing remains to be determined.

### 1.4. Summary and hypotheses

A series of studies are presented that investigate conjoined trait empathy and the dark triad. Latent profile analysis is applied to a large

*N. Heym, et al.*

**Table 1**
Descriptive statistics for the dark triad and empathy scores for each cohort.

| | Cohort | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Sample size | N = 125 (42 men) | N = 301 (39 men) | N = 285 (154 men) | N = 240 (133 men) |
| **Age** | **Mean (SD)** | **Mean (SD)** | **Mean (SD)** | **Mean (SD)** |
| Total | 21.50 (4.07) | 26.87 (11.66) | 29.80 (10.16) | 32.96 (9.07) |
| Men | 21.19 (1.45) | 28.38 (11.78) | 30.56 (8.63) | 33.38 (9.13) |
| Women | 21.65 (4.89) | 26.65 (11.65) | 28.98 (11.55) | 32.31 (8.95) |
| **DT** | **Mean (SD) [alpha]** | **Mean (SD) [alpha]** | **Mean (SD) [alpha]** | **Mean (SD) [alpha]** |
| Mach | 2.93 (0.57) [0.63] | 2.88 (0.66) [0.80] | 3.16 (0.76) [0.85] | 3.12 (0.69) [0.83] |
| Narc | 2.94 (0.56) [0.72] | 2.65 (0.61) [0.74] | 2.78 (0.67) [0.74] | 2.55 (0.63) [0.74] |
| Psych | 2.24 (0.63) [0.75] | 2.07 (0.60) [0.75] | 2.50 (0.80) [0.82] | 2.31 (0.66) [0.75] |
| **Empathy** | | | | |
| PT | 3.20 (0.42) [0.83] | 3.28 (0.53) [0.92] | 2.99 (0.55) [0.86] | 2.94 (0.66) [0.92] |
| OS | 3.11 (0.46) [0.82] | 3.06 (0.55) [0.87] | 2.96 (0.56) [0.84] | 2.92 (0.54) [0.84] |
| EC | 2.84 (0.59) [0.70] | 2.75 (0.74) [0.85] | 2.72 (0.68) [0.73] | 2.70 (0.66) [0.75] |
| ProxR | 3.10 (0.58) [0.73] | 3.01 (0.61) [0.74] | 2.86 (0.66) [0.71] | 2.83 (0.66) [0.74] |
| PerR | 2.81 (0.65) [0.68] | 2.93 (0.72) [0.74] | 2.59 (0.61) [0.55] | 2.66 (0.64) [0.62] |

*Note:* Mach = Machiavellianism; Narc = Narcissism; Psych = Psychopathy; PT = perspective taking; OS = online simulation, EC = emotional contagion, ProxR = proximal responsivity, PeriR = peripheral responsivity.

dataset to identify latent groups based on scores for empathy and the dark traits (study 1). Subsequent studies investigate differences across latent classes in (i) the big five personality traits and indirect relational aggression (study 2); (ii) sub-facets of dark traits (i.e. vulnerable vs grandiose narcissism, primary vs secondary psychopathy, Machiavellian tactics, morality and views; study 3); and (iii) related aspects of wellbeing (depression, anxiety, stress, anhedonia, self-judgment, over-identification; study 4).

## 2. Methods

Data were compiled across 4 cross-sectional online psychometrics studies. For all studies, ethical approvals were obtained from the University Ethics Committees.

### 2.1. Participants

Table 1 presents sample sizes, demographics and scores (mean, SD) for DT and empathy in participants from 4 cohorts. Participants from Cohort 1 were recruited via opportunity sampling of predominantly students (82%), who completed the survey through a research participation scheme and were awarded with research credits. In Cohort 2, participants were recruited from two UK University participant pools and via general online participation schemes and were unpaid for their time (see Heym, Firth, et al., 2019). Participants from Cohorts 3 and 4 were recruited through MTURK and were paid a small amount for their time ($0.50).

### 2.2. Measures

For all studies, online questionnaires were used to assess the Dark Traits and affective and cognitive empathy, as well as age and sex. In addition, participants in study 2 (cohort 2) completed a scale for the big five and an interpersonal aggression questionnaire. Participants in study 3 (cohort 3) completed scales on subfactors of the dark traits (e.g., vulnerable and grandiose narcissism, primary and secondary psychopathy, Machiavellianism subscales). Participants in study 4 (cohort 4) completed scales on wellbeing (e.g., anxiety, depression, stress, anhedonia, self-compassion). All scales are detailed below.

#### 2.2.1. The Dark Triad

Machiavellianism, narcissism, and psychopathy were measured using the 27-item Dark Triad of Personality Scale (SD3; Jones & Paulhus, 2014), scored on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Mean scores were calculated for the three subscales (9 items each) with higher scores indicating higher level of DT traits. The SD3 is a reliable measure (Cronbach α range = 0.77–0.80), and shows respective associations with standard measures of psychopathy, Machiavellianism, and narcissism (Muris et al., 2017).

#### 2.2.2. Empathy

Empathy was measured using the Questionnaire of Cognitive and Affective Empathy (QCAE; Reniers et al., 2011) comprising 31 items in total scored on a 4-point Likert scale (1 = strongly agree to 4 = strongly disagree). Cognitive empathy consists of two facets: (1) perspective taking (PT; 10 items) - understanding internal mental states of others; and (2) online simulation (OS; 9 items) - understanding another's perspective by imagining what they are feeling. Affective empathy splits into three facets: (1) emotional contagion (EC; 4 items) - automatic copying of another's emotions, (2) proximal responsivity (ProR; 4 items) - response to emotional cues of others, and (3) peripheral responsivity (PerR; 4 items) - response to emotional cues in immersive settings. The scales have shown acceptable reliabilities (α = 0.65–85; Reniers et al., 2011). Mean scores were calculated.

### 2.3. Study 2: Additional questionnaires for personality and aggression

#### 2.3.1. Five Factor Model of personality

Personality was measured using The International Personality Item Pool representation of the Big-Five factor markers (IPIP Big-Five; Goldberg, 1992; Goldberg et al., 2006) which is a 50-item version consisting of 10-items for each of the Big-Five personality factors: Extraversion (E, α = 0.87), Agreeableness (A, α = 0.82), Conscientiousness (C, α = 0.79), Emotional Stability (ES, α = 0.72; reversed for Neuroticism), and Intellect (I, α = 0.84). Responses are recorded using a 5-point Likert-scale (1 = strongly disagree to 5 = strongly agree) and mean scores were calculated.

#### 2.3.2. Indirect relational aggression

Indirect relational aggression was measured using the Indirect Aggression Scale – Aggressor version (IAS-A; Forrest, Eatough, &

Shevlin, 2005). The 25-item IAS-A consists of three subscales: Social Exclusion (SE; 10 items); Malicious Humour (MH; 9 items) and Guilt Induction (GI; 6 items). Participants indicate to what extent they had behaved aggressively during the last twelve months on a 5-point Likert scale (1 = never to 5 = regularly). Total scores were obtained for each subscale. The scales have shown good reliabilities (α = 0.81–0.84).

### 2.4. Study 3: Additional questionnaires for vulnerable dark traits

#### 2.4.1. Vulnerable narcissism

The Five-Factor Narcissism Inventory (FFNI; Glover, Miller, Lynam, Crego, & Widiger, 2012) is a 148-item self-report inventory of 15 subscales related to vulnerable and grandiose narcissism. Reponses are recorded using a 5-point Likert-scale (1 = strongly disagree to 5 = strongly agree) and totals are calculated. Vulnerable narcissism is measured by combining scores from the following sub-scales; Reactive Anger (10 items), Shame (10 items), Need for Admiration (10 items), and Distrust (9 items). The scales have shown acceptable reliabilities (α = 0.62–0.89 for subscales, and 0.90 for the total scale; Glover et al., 2012).

#### 2.4.2. Grandiose narcissism (NPI)

The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979) is a 40-item self-report, forced-choice measure of grandiose narcissism. The scale has shown high internal consistencies (alphas ranging from 0.82–0.86; Raskin & Terry, 1988). We used 3 sub-scales: Leadership (11 items, α = 0.78), Grandiose Exhibitionism (10 items, α = 0.72), Entitlement/Exploitativeness (4 items, α = 0.46/MIC $r$ = 0.18) as derived by Ackerman et al. (2011). Totals were calculated.

#### 2.4.3. Psychopathy (LSRP)

The Levenson Self-report Psychopathy Scale (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995) is a 26-item measure consisting of two subscales: Factor 1 (α = 0.82) measuring the callous and uncaring attitudes of primary psychopathy (16 items) and Factor 2 (α = 0.63) measuring the impulsive and antisocial behaviours of secondary psychopathy (10 items). Responses are recorded using a Likert-style format (1 = strongly disagree to 4 = strongly agree) and totals scores were calculated.

#### 2.4.4. Machiavellianism

The Machiavellian scale (Mach-IV; Christie & Geis, 1970) is a 20-item self-report scale, which assesses attitudes towards human nature (9 items), lack of morality (2 items), and manipulative tactics (9 items). The items were measured using a 6-point Likert-style format (1 = strongly disagree to 6 = strongly agree) and mean scores were calculated. Good reliabilities (α = 0.70–0.76) have been reported (Christie & Geis, 1970).

### 2.5. Study 4: Additional questionnaires for wellbeing

#### 2.5.1. Depression, Anxiety and Stress

The Depression Anxiety Stress Scale (DASS; Lovibond & Lovibond, 1995) has 42 items designed to measure depression, anxiety, and stress. The scale is divided into three sub-scales: Depression (14 items, α = 0.91), Anxiety (14 items, α = 0.81) and Stress (14 items, α = 0.89). Participants are asked to use a 4-point severity/frequency scale (0 = never to 3 = almost always) to rate the extent that they have experienced each state over the past week. Scores for each subscale are calculated by summing the scores of the relevant items indicating greater internalising (Lovibond & Lovibond, 1995).

#### 2.5.2. Anhedonia

The Motivation and Pleasure Scale (Llerena et al., 2013) was used to assess anhedonia across several domains. The current study used all original 18 items from the scale which showed good internal consistency (α = 0.87). Five-point scales (0 = no pleasure to 4 = extreme

pleasure) were used to assess Social Pleasure (3 items), Recreational or Work Pleasure (3 items), Feelings and motivations about close, caring relationships (6 items), motivation and effort to engage in activities (6 items). Scores were reverse coded and averaged so that higher scores reflect greater anhedonia.

#### 2.5.3. Self-judgment and over-identification

Subscales of the self-compassion scale (Neff, 2003) were used to measure self-judgment (5 items, α = 0.77) and over-identification (4 items, α = 0.81). Items are rated using a 5-point Likert scale (1 = almost never to 5 = almost always). Scores were reverse coded and averaged, such that higher scores reflect greater self-compassion (more positive self-judgment; less over-identification, respectively). The scales have shown good internal and test-retest ($r$s = 0.88) reliability and discriminant validity (Neff, 2003).

### 2.6. Analytical strategy

#### 2.6.1. Latent profile analysis

The analyses are grouped in four studies. Study 1 used latent profile analysis (LPA) - a statistical tool to identify unobserved groups, called classes or profiles - on eight variables: the three dark triad variables and the five empathy variables. The latent profiles represent groups of people that answer similarly on the eight variables. LPA is a person-centred analysis (see Williams & Kibowski, 2016) and the resultant groups are then used in further analyses to elucidate their associations with relevant outcomes. In order to decide on the best fitting number of groups in the data, fit indices for seven models (one class through to a six class solution) were run. Fit indices were three information criteria (IC): Akaike (AIC), Bayesian (BIC) and sample-size adjusted BIC (ssaBIC); the Lo-Mendell-Rubin's adjusted likelihood ratio test (LRT), and entropy. For the ICs an elbow point, the smallest value indicates the best fitting solution. Once the LRT becomes non-significant, it indicates the previous class solution, based on parsimony. For entropy, no cut-off value exists. It is a standardised measure varying between zero and one, with a higher value indicating more reliability in sorting participants into classes. For all fit indices, Nylund, Asparouhov, and Muthén (2007) suggest the BIC as the most robust. As there is a continuing debate as to the performance of fit indices, it is recommended to report all fit indices, and base the decision of the best fitting solution on previous theory, practical concerns (e.g., small class sizes) and fit indices (Nylund et al., 2007). In studies 2 to 4, relevant outcome variables were considered in order to gain a clearer insight about the classes identified in study one, with class membership as dummy-coded predictor variables, and age and sex as covariates. Class membership was identified by assigning participants to their most likely class, which creates a multi-categorical variable in which each group from the analysis is a category (unordered). All analyses were performed in Mplus version 8 (Muthén & Muthén, 1998–2017) with maximum likelihood (ML) estimation.

#### 2.6.2. Chi square and analysis of variance (ANOVA)

Once latent classes had been identified, Chi Square and univariate ANOVA were used to test for differences in sex and age (respectively). Multivariate ANOVA (MANOVA) was used to investigate differences across Latent Classes in outcome variables. Separate analysis were performed for Personality (Big5), Aggression (SE, MH, GI), Vulnerable Narcissism (Reactive Anger, Shame, Need for admiration, distrust), Grandiose Narcissism (Leadership, Grandiosity, Entitlement/exploitation), Psychopathy (Primary, Secondary), Machiavellianism (Tactics, Morals, Views), DASS scores (Depression, Anxiety, Stress), Anhedonia (Social, Recreation and Work, Close Relationships, Activities) and Self-Compassion (Self-Judgment, Over-Involvement). Post-hoc tests are presented with both least squares and Bonferonni correction. Where relevant, significant outcomes were confirmed after co-varying for sex and age.

**Table 2**
Fit parameters for latent profiles 1–6.

| Model | AIC | BIC | ssaBIC | Entropy | LMR | Adjusted LRT | H0 LLV | 2*LLD | DNP | P | SBD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15,498.60 | 15,576.98 | 15,526.16 | N/A | | | | | | | |
| 2 | 14,514.89 | 14,637.35 | 14,557.95 | 0.73 | 9856.84 | $p < .001$ | | | | | |
| 3 | 14,229.199 | 14,395.756 | 14,287.770 | 0.734 | 298.872 | $p = .011$ | −7232.443 | 303.686 | 9 | <.001 | 5 |
| 4 | 13,936.365 | 14,147.010 | 14,010.440 | 0.733 | 305.907 | $p = .011$ | −7080.600 | 310.834 | 9 | <.001 | 5 |
| 5 | 13,800.265 | 14,054.998 | 13,889.844 | 0.773 | 151.658 | $p = .039$ | −6925.182 | 154.100 | 9 | <.001 | 5 |
| 6 | 13,695.972 | 13,994.793 | 13,801.055 | 0.761 | 120.355 | $p = .0682$ | −6848.132 | 122.293 | 9 | <.001 | 5 |

### 2.6.3. Sample size considerations

Power calculations are not performed for studies with LPA due to a-priori unknown number of classes, and consequently unequal cell sizes of the different classes. However, it can be assumed that the analysis was sufficiently powered (likely overpowered, rather than under-powered) if significant effects are found (Lenth, 2001). Despite the standard criticisms around this (Lenth, 2001), retrospective power calculations can be performed using G* power for any non-significant effects simply to inform future power and sample size considerations for a prospective study collecting data.

## 3. Results

### 3.1. Study 1: Latent profile analyses (LPA)

Table 2 shows fit parameters for latent Profiles 1–6, estimated from the entire sample ($N = 991$). Of the entire sample, $n = 20$ had missing data for sex and/or age and were not included in subsequent analyses. A further $n = 20$ had missing data from other psychometric scales, and were not included in MANOVA analyses. Whilst LMR supports the 5-class solution, the smallest group – characterised by low empathy (all subscales), narcissism and psychopathy, but average Machiavellianism – represented only 1.8% of the sample. Sample size for that class would not have been large enough for analyses in subsequent studies, thus, a 4-class solution was considered optimal.

Fig. 1 shows the class profiles for the 4-class solutions. Class 1 (traditional DT) represented 13% ($n = 128$) of participants char-acterised by high DT traits and low empathy; class 2 (Typical) re-presented 34.4% ($n = 331$) of the sample characterised by lower DT traits and average empathy; class 3 (Dark Empath; DE) represented 19.3% ($n = 175$) of the sample characterised by higher DT traits and higher empathy, and class 4 (Empath) represented 33.3% ($n = 357$) of the sample characterised by lower DT traits and higher empathy.
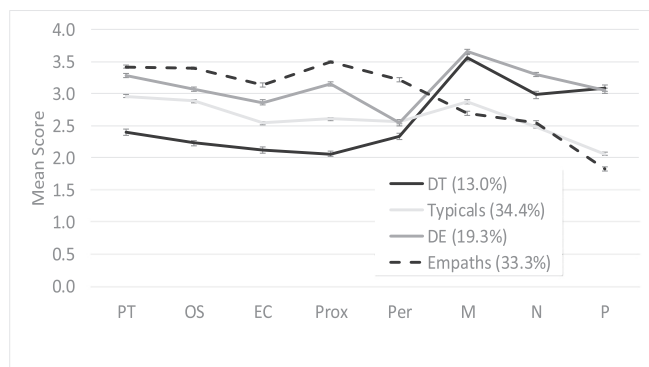


**Fig. 1.** Mean values for empathy and dark triad (DT) as a function of latent class.
DT = Traditional Dark Triad, DE = Dark Empath.
PT = Perspective taking, OS = Online simulation, EC = Emotion Contagion, Prox = Proximal Responsivity, Per = Peripheral Responsivity, M = Machiavellianism, N = Narcissism, P = Psychopathy.

### 3.2. Age and sex as a function of class

Table 3 shows sample size, sex and age for each class in the 4-class solution, in the full sample ($N = 971$[1], $n = 380$ men) and as a function of cohort. Chi Square analyses for each latent class show significantly higher proportion of men in DT (Chi Sqr = 19.52, $p < .001$) and DE (Chi Sqr = 4.21, $p = .04$) groups; and a significantly lower proportion of men in Typical (Chi Sqr = 24.18, $p < .001$) and Empath (Chi Sqr = 139.60, $p < .001$) groups. Univariate ANOVA showed a bor-derline effect of Latent Class on age [$F_{3,967} = 2.52$, MS = 482.57, $p = .057$, partial $\eta^2 = 0.01$]. Post hoc tests suggested lower age in DE compared to Typicals (LSD $p = .009$, Bonferroni $p = .057$).

### 3.3. Study 2. FFM & aggression (cohort 2; n = 301)

Table 4 presents the descriptive statistics and Cronbach's alphas across total samples, as well as the latent class means for all outcome variables.

There were univariate effects of latent class for all Big5 measures (N: $F_{3,297} = 5.35$, MS = 332.51, $p = .001$, partial $\eta^2 = 0.05$; E: $F_{3,297} = 2.96$, MS = 181.59, $p = .03$, partial $\eta^2 = 0.03$; A: $F_{3,297} = 28.70$, MS = 902.45, $p < .001$, partial $\eta^2 = 0.23$; I: $F_{3,297} = 4.31$, MS = 168.51, $p = .005$, partial $\eta^2 = 0.04$), but C ($p = .07$, partial $\eta^2 = 0.02$).[2] For Agreeableness, significant effects were seen for all comparisons ($ps < .05$), with DT scoring lowest, fol-lowed by DE, then Typicals, and Empaths scoring highest. For extra-version, DE scored significantly higher than Typicals (all $ps < .05$) and Empaths (LSD $p = .02$[3]), and marginally higher than DT ($p = .055$[3]). For Neuroticism, DE scored higher than Typicals (LSD $p < .05$[3]) and Empaths higher than DT (LSD $p < .05$[3]) and Typicals ($ps < .01$). For Intellect, the Empaths scored significantly higher than DT and Typicals (LSD $ps < .01$; Bonferroni $ps < .05$).

There were univariate effects of latent class for all three aggression measures (SE: $F_{3,297} = 20.01$, MS = 0.32, $p < .001$, partial $\eta^2 = 0.17$; MH: $F_{3,297} = 29.30$, MS = 0.47, $p < .001$, partial $\eta^2 = 0.22$; GI: $F_{3,297} = 24.12$, MS = 0.56, $p < .001$, partial $\eta^2 = 0.20$)[1]. DT scored significantly higher than all other groups on all measures (all compar-isons $ps < .001$ for LSD and Bonferroni). Furthermore, for Malicious Humour and Guilt Induction, DE scored higher than Empaths (all $ps < .01$) and Typicals ($ps < .05$; apart from n.s. Bonferroni for MH). In addition, Typicals scored higher than Empaths ($p = .036$[3]) in Malicious Humour (see Fig. 2).

### 3.4. Study 3: Vulnerable dark traits (cohort 3; n = 285)

There were univariate effects of latent class for (i) all three Grandiose Narcissism variables (Leadership: $F_{3,281} = 38.98$, MS = 229.58, $p < .001$, partial $\eta^2 = 0.29$; Grandiose: $F_{3,281} = 31.56$, MS = 156.78, $p < .001$, partial $\eta^2 = 0.25$; Exploitative:

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[1] After exclusion of missing data from age, sex, SD3 and/or QCAE
[2] Same significant univariate effects were seen in the MANCOVA covarying age and sex.
[3] But the Bonferroni comparison was non-significant.

**Table 3**
Sample size, sex and age as a function of class membership.

| Class | Total N = 971 | Cohort 1 n = 125 | Cohort 2 n = 301 | Cohort 3 n = 285[a] | Cohort 4 n = 240 |
|---|---|---|---|---|---|
| **Sample size** | | | | | |
| 1. DT | 13% (*n* = 123) | 5% (*n* = 6) | 5% (n = 17) | 20% (*n* = 59) | 16% (n = 38) |
| 2. Empaths | 36% (*n* = 350) | 44% (*n* = 55) | 45% (*n* = 136) | 23% (*n* = 64) | 27% (n = 64) |
| 3. DE | 18% (*n* = 173) | 23% (n = 29) | 10% (n = 31) | 27% (*n* = 76) | 13% (n = 31) |
| 4. Typicals | 34% (*n* = 325) | 28% (n = 35) | 39% (*n* = 117) | 29% (*n* = 86) | 44% (*n* = 107) |
| **Sex male: female ratio [within sex %]** | | | | | |
| 1. DT | 86:37 [23%: 6%] | 6:0 [14%: 0%] | 4:13 [10%: 5%] | 46:12 [32%: 9%] | 27:11 [20%: 10%] |
| 2. Empaths | 56:269 [15%: 45%] | 7:48 [17%: 58%] | 11: 125 [28%: 48%] | 12:52 [8%: 36%] | 25:39 [19%: 36%] |
| 3. DE | 100:73 [27%: 12%] | 18:11 [43%: 13%] | 5:26 [13%: 10%] | 53:23 [37%: 17%] | 19:12 [14%: 11%] |
| 4. Typicals | 129:221 [35%: 37%] | 11:24 [26%: 29%] | 19:98 [49%: 37%] | 34:50 [23%: 38%] | 62:45 [47%: 42%] |
| **Age mean (sd)** | | | | | |
| 1. DT | 28.55 (8.52) | 22.17 (1.60) | 25.53 (11.48) | 27.86 (6.10) | 31.92 (9.65) |
| 2. Empaths | 27.51 (10.30) | 21.93 (5.64) | 27.03 (11.48) | 28.78 (10.32) | 31.66 (8.08) |
| 3. DE | 26.80 (7.75) | 21.14 (2.00) | 24.45 (10.68) | 28.09 (5.87) | 31.19 (8.46) |
| 4. Typicals | 30.52 (12.01) | 21.00 (2.35) | 27.52 (12.18) | 32.48 (13.28) | 34.69 (9.41) |

[a] Includes 2 non-binary/gender-fluid participants in Typical and one prefer not to say in DT.

**Table 4**
Means, SDs and Cronbach's alphas for total samples as well as means for each latent class for all outcome measures across studies 2–4.

| Variable | Total mean (SD) | α | Means latent classes | | | |
|---|---|---|---|---|---|---|
| | | | DT | DE | Typicals | Empaths |
| **Study 2: FFM & IA (N = 301)** | | | | | | |
| **Big Five Personality** | | | | | | |
| Intellect | 3.74 (0.64) | 0.81 | 3.41 (0.68) | 3.75 (0.65) | 3.64 (0.61) | 3.87 (0.62) |
| Conscientiousness | 3.30 (0.72) | 0.86 | 3.11 (0.89) | 3.16 (0.76) | 3.23 (0.66) | 3.42 (0.72) |
| Extraversion | 3.10 (0.79) | 0.89 | 3.01 (0.86) | 3.47 (0.75) | 3.00 (0.69) | 3.11 (0.85) |
| Agreeableness | 3.65 (0.63) | 0.84 | 2.80 (0.67) | 3.24 (0.56) | 3.61 (0.48) | 3.90 (0.61) |
| Neuroticism | 3.00 (0.81) | 0.88 | 2.69 (0.69) | 3.13 (0.77) | 2.81 (0.71) | 3.17 (0.86) |
| **Aggression** | | | | | | |
| Social exclusion | 15.13 (6.01) | 0.89 | 26.35 (12.33) | 16.00 (5.60) | 14.38 (4.13) | 14.18 (4.81) |
| Malicious humour | 13.12 (5.42) | 0.89 | 23.94 (9.83) | 14.45 (4.54) | 12.79 (4.52) | 11.76 (3.81) |
| Guilt induction | 9.06 (4.48) | 0.90 | 17.47 (7.09) | 10.32 (4.54) | 8.39 (3.68) | 8.29 (3.49) |
| **Study 3: DT sub-facets (N = 285)** | | | | | | |
| **NPI grandiose narcissism** | | | | | | |
| Leadership | 4.57 (2.87) | 0.76 | 5.81 (2.18) | 6.47 (2.57) | 3.30 (2.57) | 2.88 (2.65) |
| Grandiosity | 3.43 (2.56) | 0.74 | 4.24 (2.05) | 5.14 (2.25) | 2.31 (2.31) | 2.17 (2.24) |
| Exploitative | 1.31 (1.31) | 0.66 | 2.36 (1.14) | 1.95 (1.19) | 0.65 (0.98) | 0.48 (0.93) |
| **FFNI vulnerable narcissism** | | | | | | |
| Anger | 27.97 (6.77) | 0.74 | 31.93 (5.41) | 32.30 (5.89) | 25.17 (5.48) | 22.92 (4.89) |
| Shame | 31.24 (6.37) | 0.71 | 31.56 (5.87) | 32.28 (6.41) | 29.13 (6.57) | 32.55 (5.93) |
| Need | 28.61 (7.43) | 0.80 | 31.37 (6.67) | 31.64 (7.73) | 25.15 (7.13) | 27.11 (5.74) |
| Distrust | 26.81 (6.80) | 0.80 | 30.12 (4.91) | 30.29 (5.85) | 24.32 (6.38) | 22.97 (6.48) |
| **LSRP psychopathy** | | | | | | |
| Primary | 40.93 (12.03) | 0.90 | 49.81 (6.58) | 49.80 (7.45) | 34.74 (8.93) | 30.50 (10.38) |
| Secondary | 27.29 (7.22) | 0.80 | 32.25 (4.45) | 31.43 (5.89) | 23.78 (6.14) | 22.52 (6.11) |
| **MACH IV** | | | | | | |
| Tactics | 2.88 (0.49) | 0.51 | 3.13 (0.36) | 3.13 (0.32) | 2.69 (0.49) | 2.61 (0.51) |
| Morality | 2.83 (1.07) | 0.63 | 3.35 (0.86) | 3.56 (0.91) | 2.41 (0.90) | 2.01 (0.80) |
| Views | 2.79 (0.49) | 0.45 | 2.97 (0.40) | 2.92 (0.45) | 2.71 (0.48) | 2.57 (0.51) |
| **Study 4: Wellbeing (N = 240)** | | | | | | |
| **DASS** | | | | | | |
| Depression | 7.39 (5.60) | 0.93 | 9.00 (5.39) | 7.90 (6.24) | 6.04 (4.86) | 8.45 (6.14) |
| Anxiety | 4.88 (4.44) | 0.85 | 7.13 (5.81) | 4.55 (3.74) | 3.71 (3.56) | 5.67 (4.57) |
| Stress | 7.47 (4.89) | 0.86 | 9.37 (4.76) | 8.16 (4.99) | 6.10 (4.20) | 8.28 (5.43) |
| **Motivation and pleasure** | | | | | | |
| Social | 2.74 (0.92) | 0.81 | 3.24 (0.96) | 2.66 (0.98) | 2.68 (0.81) | 2.60 (0.95) |
| Rec/work | 2.78 (1.03) | 0.83 | 2.97 (0.95) | 2.89 (1.25) | 2.81 (0.98) | 2.56 (1.05) |
| Relationships | 2.66 (0.84) | 0.69 | 3.29 (0.66) | 2.90 (0.91) | 2.52 (0.82) | 2.41 (0.75) |
| Activities | 3.08 (0.92) | 0.85 | 3.21 (0.69) | 3.00 (0.95) | 3.09 (0.91) | 3.02 (1.05) |
| **Self-compassion** | | | | | | |
| Self-judgment | 2.42 (0.83) | 0.80 | 2.41 (0.78) | 2.13 (0.86) | 2.60 (0.81) | 2.27 (0.81) |
| Over-identification | 2.57 (0.95) | 0.82 | 2.57 (0.86) | 2.45 (0.89) | 2.75 (0.95) | 2.34 (1.00) |
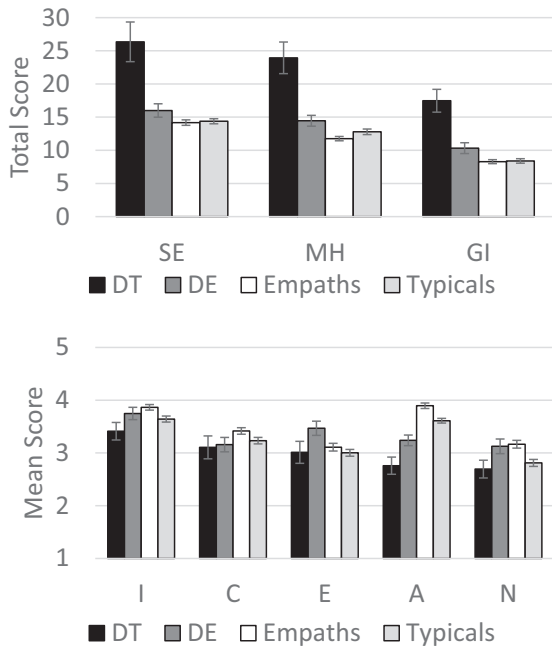
**Fig. 2.** Scores from study 2 for aggression (top panel) and Five Factor Model (bottom panel) as a function of latent class. Error bars denote standard error.
DT = Traditional Dark Triad, DE = Dark Empath.
SE = Social Exclusion, MH = Malicious Humour, GI = Guilt Induction.
I = Intellect, C = Conscientiousness, E = Extraversion, A = Agreeableness, N = Neuroticism.

$F_{3,281} = 52.14$, MS = 58.79, $p < .001$), partial $\eta^2 = 0.36)^2$; (ii) all four Vulnerable Narcissism variables (RAnger: $F_{3,281} = 52.17$, MS = 1551.98, $p < .001$, partial $\eta^2 = 0.36$; Shame: $F_{3,281} = 4.96$, MS = 193.53, $p = .002$, partial $\eta^2 = 0.05$; Need for Admiration: $F_{3,281} = 16.26$, MS = 774.43, $p < .001$, partial $\eta^2 = 0.15$; Distrust: $F_{3,281} = 28.26$, MS = 1013.72, $p < .001$, partial $\eta^2 = 0.23)^2$; (iii) primary and secondary psychopathy (primary: $F_{3,281} = 96.72$, MS = 6964.03, $p < .001$, partial $\eta^2 = 0.51$; secondary: $F_{3,281} = 51.91$, MS = 1759.36, $p < .001$, partial $\eta^2 = 0.36)^2$; and (iv) all three Machiavellianism variables (Tactics: $F_{3,281} = 28.99$, MS = 435.08, $p < .001$, partial $\eta^2 = 0.24$; Morality: $F_{3,281} = 47.44$, MS = 145.17, $p < .001$, partial $\eta^2 = 0.34$; Views: $F_{3,281} = 10.65$, MS = 187.99, $p < .001$, partial $\eta^2 = 0.10)^2$.

No differences were seen between DE and DT on any of the vulnerable narcissism, leadership, psychopathy or Machiavellianism measures. However, DE scored higher than DT in Grandiosity ($p = .02^3$) and the opposite pattern was seen for Exploitative ($p = .03^3$). DE and DT scored significantly higher than Typicals and Empaths on (i) all three grandiose narcissism scales (all $ps < .001$); (ii) Need for Admiration (all $ps < .01$), Reactive Anger and Distrust (all $ps < .001$); (iii) the two psychopathy measures (all $ps < .001$); and (iv) MACH Views (all $ps < .05$), Tactics and Morality (all $ps < .001$). In addition, Typicals scored significantly lower than the Dark Triad (LSD $p = .022^3$), Dark Empath and Empath groups (all $ps < .01$) on Shame; and higher than the Empaths on Morality ($ps < .05^3$) and primary ($ps < .05$), but not secondary psychopathy (see Figs. 3 and 4).

### 3.5. Study 4: Wellbeing (cohort 2; n = 240)

There were univariate main effects of latent class for (i) all three DAS measures (Depression: $F_{3,236} = 4.14$, MS = 124.92, $p = .007$, partial $\eta^2 = 0.05$; Anxiety: $F_{3,236} = 6.94$, MS = 127.53, $p < .001$, partial $\eta^2 = 0.08$; Stress: $F_{3,236} = 5.83$, MS = 131.30, $p = .001$, partial $\eta^2 = 0.07)^2$; (ii) lack of Social Pleasure (SP) and Close Relationships (CR), but not for Recreation/Work Pleasure (RWP) or motivation for
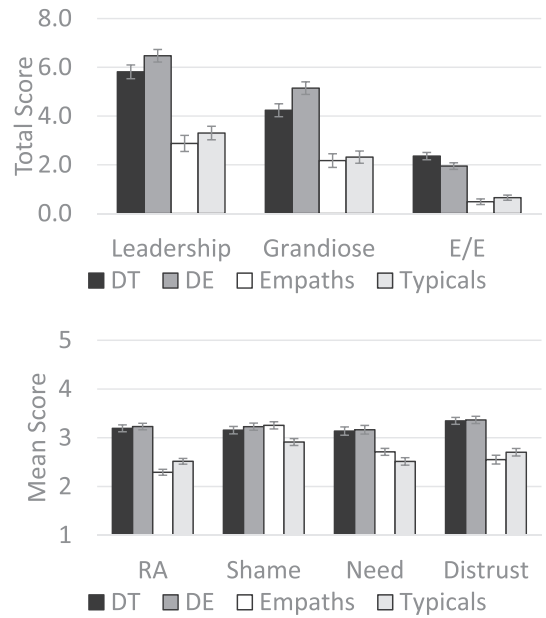


**Fig. 3.** Mean scores from study 3 for grandiose (top panel) and vulnerable (bottom panel) narcissism as a function of latent class. Error bars denote standard error.
DT = Traditional Dark Triad, DE = Dark Empath.
E/E = entitlement/exploitation, RA = Reactive Anger, Need = Need for admiration.
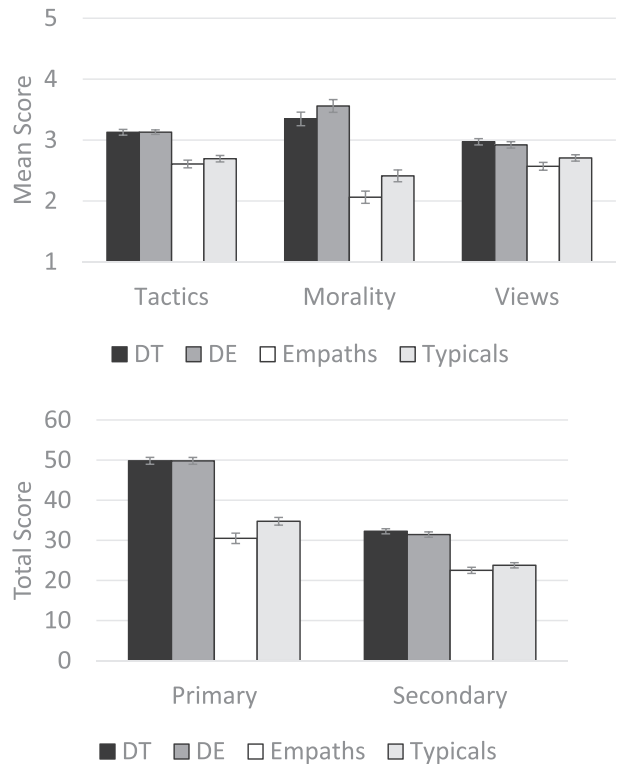


**Fig. 4.** Mean scores from study 3 for Machiavellianism (top panel) and psychopathy (bottom panel) as a function of latent class. Error bars denote standard error.
DT = Traditional Dark Triad, DE = Dark Empath.

Activities (ACT) (SP: $F_{3,236} = 4.67$, MS = 3.76, $p = .003$, partial $\eta^2 = 0.06$; CR: $F_{3,236} = 12.28$, MS = 7.68, $p < .001$, partial $\eta^2 = 0.14$; WP: $F_{3,236} = 1.60$, MS 1.70, $p = .19$, $\eta^2 = 0.02$; ACT: $F_{3,236} = 0.40$,

$MS = 0.34$, $p = .76$, partial $\eta^2 = 0.01$)[2]; and (iii) the two self-compassion scales, Self-Judgment (SJ) and Over-identification (OI) (SJ: F $F_{3,236} = 3.82$, $MS = 2.52$, $p = .011$, partial $\eta^2 = 0.05$; OI: $F_{3,236} = 2.72$, $MS = 2.42$, $p = .045$, partial $\eta^2 = 0.03$).[4]

DT scored significantly higher in anxiety ($p < .05$[3]), lack of social pleasure (all $ps < .05$) and poor close relationships ($p < .05$[3]) than the DE, otherwise all comparisons between DT and DE were non-significant. Compared to Typicals, DT also scored significantly higher in anxiety, stress and depression (all $ps < .05$), whereas DE scored higher in stress ($p < .05$[3]) and lower in SJ ($ps < .05$). Both DT and DE scored higher than Typicals (all $ps < .05$, apart from n.s. Bonferroni for DE) and Empaths (all $ps < .05$) on poor close relationships; however only the DT scored higher than all in lack of social pleasure (all $ps < .05$). In addition, Typicals scored significantly lower than Empaths in depression ($ps < .05$) and stress ($ps < .05$), and significantly higher than them in OI ($ps < .05$) and SJ (LSD $p = .01$[3]).

Because of the nonsignificant findings for RWP and ACT, power was calculated retrospectively. For a medium effect ($F^2V = 0.0625$) a sample of 144 (36 equal groups) would be required (smallest cell size in study 4 is DE with 31 participants). However, for a small effect (0.01) a sample of 868 (276 equal groups) is needed. Future studies would need to examine small effects (RWP, ACT) in larger samples (see Fig. 5).

## 4. Discussion

The current study is the first to identify and characterise the *Dark Empath*, a novel psychological construct that describes a subpopulation who demonstrate a cluster of dark personality traits (psychopathy, narcissism and Machiavellianism) combined with elevated levels of empathy. This contrasts the traditional conceptualisation of the *Dark Triad* (DT) with reduced levels of empathy – a group also identified in the latent class analysis; alongside *Empaths* (high in empathy, low in dark traits) and *Typicals* (average in empathy, low in dark traits). Of the entire cohort in the current study, Typicals and Empaths represented the largest two subgroups (34.4% and 33.3%; respectively). The *Dark Empath* and traditional DT represented the smaller two subgroups (19.3% and 13%; respectively). Both Dark Empath and DT had greater representation of men than women. Regarding age, whilst Dark Empath tended to be younger than other groups, particularly Typicals, this effect did not survive Bonferonni correction for multiple comparisons; and thus, should be treated with caution.

Key findings from studies have important implications for understanding several ongoing debates regarding the dark triad and empathy. These include i) the role of personality traits in the dark core; ii) the role of empathy in mitigating dark-trait-related aggression; iii) the role of empathy in the vulnerable dark triad; and iv) whether empathy promotes wellbeing in the presence of the dark traits.

### 4.1. The Dark Empath and personality

With regards to the Big Five personality model, some general personality differences were identified between the groups. Firstly, the Dark Empath was characterised by higher extraversion, particularly compared to Empaths and Typicals. Whilst the presence of empathy in both, the Dark Empath and Empaths, were associated with higher Neuroticism than in Typicals (and DT for Empaths only), the Dark Empaths and traditional DT groups did not differ on Neuroticism. Thus, Neuroticism did not clearly differentiate subpopulations of the dark traits with or without elevated levels of empathy. However, the findings might still explain increasing levels of Neuroticism in the DT in some studies, in that those cohorts may have comprised a greater proportion

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[4] Same significant univariate effect was seen in the MANCOVA for Self-judgment covarying age and sex.

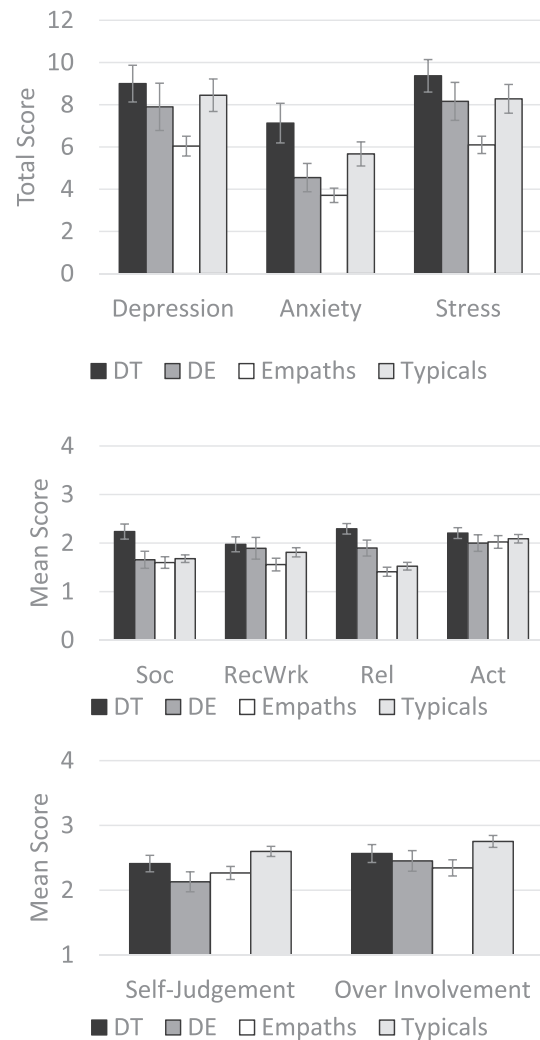For Over-identification the effect was now non-significant.



**Fig. 5.** Mean scores from study 4 for depression, anxiety and stress (top panel), motivation and pleasure (middle panel) and self-compassion (bottom panel) as a function of latent class. Error bars denote standard error.
DT = Traditional Dark Triad, DE = Dark Empath.
Soc = Social Pleasure, RecWrk = Recreation and Work, Rel = Motivation and Pleasure from Close Relationships, Act = Motivation and Pleasure from Activities and Hobbies.

of Dark Empaths (*c.f.,* O'Boyle et al., 2015). The presence of empathy in DE was reflected in higher Agreeableness than DT, nevertheless, both dark groups remained lower in Agreeableness than Typicals and Empaths (this effect was greater in DT than Dark Empath). Thus, the presence of empathy may partially protect against a dark disagreeable core (Kowalski, Vernon, & Schermer, 2019; Paulhus & Williams, 2002; Vize et al., 2019). Nevertheless, despite the Dark Empath thriving in the company of others (high Extraversion), they may remain selfish, untrusting and/or contentious. Further work is needed to differentiate the Dark Empath from the traditional DT on a facet level of the big five personality domains, with the view to yielding more nuanced distinctions.

### 4.2. Relational aggression

In addition to being more agreeable, Dark Empaths were also showing lower levels of indirect interpersonal aggression - guilt induction, malicious humour and social exclusion - than the traditional DT. This is in line with a role of empathy in reducing engagement in aggressive behaviour, including relational aggression (Heym, Firth,

et al., 2019). Nonetheless, similar to DT, Dark Empaths were more likely to engage in indirect aggression (specifically guilt induction and malicious humour) compared to Typicals and Empaths. Thus, the presence of empathy does not fully mitigate relational aggression in people with dark traits – there remains a certain level of antagonism. Some authors have proposed distinct, additive pathways of impaired empathy and psychopathy in facilitating decisions to cause harm in others (e.g., as assessed by utilitarian decisions in moral dilemma paradigms; Takamatsu & Takai, 2019). Similarly, both direct and indirect (via empathy) associations have been reported between a dark dyad (Machiavellianism, psychopathy) and relational aggression (Heym, Firth, et al., 2019). Thus, whilst elevated empathy levels may suppress some of the antagonistic tendencies in those with dark traits, the shared disagreeableness and increased relational aggression between the traditional DT and Dark Empath (as compared to Typicals and Empaths) remains in line with the proposition of antagonism as a core trait of the DT (Kowalski et al., 2019; Paulhus & Williams, 2002; Vize et al., 2019).

The finding that Typicals and Empaths show similarly low levels of interpersonal aggression (apart from Malicious Humour where Typicals scored slightly higher) may suggest that empathy is less related to aggression (at least some types) outside the context of the dark traits. Such a novel and controversial proposal warrants further investigation, as it would have substantial theoretical and clinical implications regarding our understanding of the relationship between empathy and aggression. How these associations vary as a function of different types of aggression (e.g., direct vs indirect) in different populations would need to form part of such an investigation.

Indeed, current findings may also partially explain the relatively weak association between empathy and aggression found in Vachon, Lynam & Johnson's (2014) meta-analysis across student, community and (non-violent and violent) criminal samples. They had argued that a broader conceptualisation of empathy into a more maladaptive range including callous-unemotional and dissonant (i.e., enjoyment in others pain) emotional aspects may strengthen the link between empathic deficits and aggressive behaviour. For example, their newly developed empathy dissonance scale showed much stronger associations with aggression and externalising psychopathology (Vachon & Lynam, 2016). In turn, this would also suggest that the association between empathy and aggression may be more prominent specifically in maladaptive subpopulations with a combination of callous-unemotional and dissonance related traits, as seen in DT in the current study.

Furthermore, other authors have proposed a "Dark" side to Emotional Intelligence (EI, of which empathy is a key component), which confers an advantage for emotional manipulation, deceit and other antisocial behaviours. Although there may conceivably be overlap between the Dark Empath and Dark EI, conceptual differences exist. The dark side of EI relates to the ability (as opposed to propensity) to engage in antagonistic behaviours through effective emotion monitoring and management (Davis & Nichols, 2016). The protective role of empathy against the propensity for interpersonal aggression in the context of the Dark Empath is likely to differ from those aspects of EI that confer ability. Moreover, when empathy is controlled for, social intelligence (another key component of EI) has been linked to increased aggression, particularly indirect aggression (Björkqvist, Österman, & Kaukiainen, 2000). Thus, future studies should include other aspects of EI in order to differentiate propensity and ability for relational aggression.

### 4.3. The Dark Empath, vulnerable dark traits and wellbeing

With regard to the alignment of Dark Empath to vulnerable (as opposed to grandiose/primary) dark traits, no difference was seen between DE and DT on vulnerable narcissism or secondary psychopathy. Moreover, DT had higher depression, anxiety, stress and social anhedonia than all other groups. Thus, the presence of empathy in the DT does not simply determine the Vulnerable DT or greater vulnerability to

internalising. Likewise, both dark groups scored similarly on primary psychopathy and the subscales of Machiavellianism. The only differentiation currently found between DT and Dark Empath in dark traits was on the subscales of grandiose narcissism, whereby DT scored higher in entitlement/exploitativeness and DE higher in grandiosity/exhibitionism (although these effects did not survive Bonferroni correction). These findings are arguably in line with the DT being higher in disagreeableness and interpersonal aggression facilitating the drive to get what one deserves (entitlement) and taking advantage of others for their own gain (exploitativeness). On the other hand, constant attention seeking for admiration and showing off in front of others (exhibitionism) may explain greater Extraversion in the Dark Empath. Nevertheless, future work would need to disentangle any interrelationships. In any case, taken together, the current findings suggest differentiation of the Dark Empath and the vulnerable Dark Triad.

Whilst compared to Typicals, Dark Empaths (along with Empaths) had higher stress and reduced positive self-judgment (i.e. Dark Empaths are bad and they know it), DT in general performed less well in terms of depression, anxiety, stress and social anhedonia. Similarly, Gómez-Leal et al. (2019) found callous affect and entitlement – higher in DT - to be two of the primary predictors for depression in a student sample. Empathy - including protective (e.g., cognitive empathy) and vulnerability (e.g., empathic distress) facets, may have a complex relationship with wellbeing (Heym, Firth, et al., 2019; Wang et al., 2013), which in itself is a heterogeneous construct (Li et al., 2018). In the context of schizotypy, social anhedonia has been associated with poorer cognitive and affective empathy, whilst cognitive empathy alone mediated the relationship between anhedonia and social functioning (Wang et al., 2013). Lower social anhedonia in the Dark Empath, compared to DT, is in line with higher Extraversion and Agreeableness. Greater social anhedonia in DT would also predict greater tendency for avoidant type attachment (Blanchard & Lyons, 2016), which might be further investigated in future work. On the other hand, poor self-judgment seems to be associated with empathy irrespective of the presence of dark traits. It is possible that current findings for the DT – and previous reports of associations between poor wellbeing and dark traits (Vize et al., 2018) - reflect shared neural mechanisms for regulating one's own emotions and responding to emotions in others. For example, similar brain networks involving the right frontal and medial temporal regions are implicated in mood disorders, empathy and psychopathy (Li et al., 2018; Sumich, Sarkar, Hermens, Kelesidi, et al., 2012; Toller, Adhimoolam, Rankin, Huppertz, et al., 2015; Yang & Raine, 2009). Future studies should investigate similarities and differences in neural mechanisms implicated in the traditional DT, Dark Empaths and Empaths.

Although we controlled for shared variance with sex, investigation of interactions with sex was beyond the scope of the current paper. However, this should be the focus of future work, particularly considering studies that show moderation of the relationship between dark traits and empathy by sex. For example, Jonason, Lyons, Bethell, and Ross (2013) have shown that the link between DT and reduced empathy is primarily through narcissism in women, but through psychopathy in men. Also, high trait EI is linked to reduced Machiavellian tactics in men, but promotes them in women, perhaps because of a greater reliance on interpersonal aggression (Davis & Nichols, 2016; also see Czibor et al., 2017). Given that woman tend to score higher in empathy, but lower in dark traits than men, the role of sex in determining the conjoined presence of empathy with the dark traits should be investigated.

## 5. Summary and conclusion

This is the first study to identify and characterise the Dark Empath, a novel psychological construct with elevated levels of psychopathy, narcissism and Machiavellianism in the presence of empathy. The Dark Empath differs from the traditional Dark Triad with respect to general

personality profile (higher E, lower A), lower levels of interpersonal aggression and better wellbeing (e.g., lower anxiety and anhedonia), suggesting a more adaptive level in psychosocial functioning. However, the presence of empathy in the Dark Empath did not increase risk of vulnerability (in terms of vulnerable DT or wellbeing) compared to the DT. Nevertheless, the Dark Empath remained more antagonistic (lower A, higher aggression), neurotic, stressed and self-critical than Typicals, reflecting some maladaptive psychological outcomes. Shared characteristics between the Dark Empath and Empaths (e.g., stress, harsh self-judgment), may reflect empathic epiphenomena, irrespective of the presence of dark traits.

## Credit authorship contribution statement

**Nadja Heym:** Conceptualization, Data curation, Formal Analysis, Investigation, Methodology, Project administration, Writing - original draft, Writing - review & editing. **Fraenze Kibowski:** Conceptualization, Formal analysis, Writing - original draft, Writing - review & editing. **Claire A.J. Bloxsom:** Data curation. **Alyson Blanchard:** Data curation, Formal Analysis, Writing - original draft. **Alexandra Harper:** Data curation, Writing - original draft. **Louise Wallace:** Writing - original draft. **Jennifer Firth:** Writing - original draft, Writing - review & editing, Data curation. **Alexander Sumich:** Conceptualization, Project administration, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing - original draft, Writing - review & editing.

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