

## Dark Parenting: Parents Who Score as High in the Dark Triad Demonstrate Sub-Optimal Parenting Styles

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### ABSTRACT

The Dark Triad of personality, including the traits of Machiavellianism, psychopathy, and narcissism, have been shown to strongly predict a broad array of social and behavioral outcomes—particularly in the domain of mating. From an evolutionary perspective, the parenting domain of life is just as critical as is the mating domain: Parenting behaviors bear directly on long-term reproductive success. In spite of this fact, little past research has examined the relationship between the Dark Triad and parenting behaviors. We administered a measure of the Dark Triad along with three different parenting style measures to 251 parents (211 women, 39 men; mean age = 39.15,  $SD = 9.63$ ). Participants also completed a measure of the Big Five personality scale and adult attachment styles. Analyses revealed that each facet of the Dark Triad was predictive of at least one of the non-authoritative parenting styles (including neglectful/uninvolved). Implications regarding the social psychology of parenting are discussed.

### KEYWORDS

Parenting, Parenting Styles, Dark Triad, Personality Psychology, Evolutionary Psychology

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The Dark Triad of personality (Paulhus & Williams, 2002), including the continuous trait dimensions of Machiavellianism (the tendency to manipulate others for one's own gain), psychopathy (the tendency to care little for the feelings of others), and narcissism (the tendency to overly focus on oneself), has shown to be a powerful predictor of various forms of behavioral outcomes, including such wide-ranging phenomena as emotional responding to social slights (see Geher & Wedberg, 2019), a tendency to be promiscuous in sexual relationships (see Schmitt et al., 2017), a

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proclivity to have a backup romantic partner waiting in the wings (Wedberg, 2016), and more.

Much of the past research on the correlates of the Dark Triad has focused on the domain of human mating (e.g., Jonason et al., 2013). From an evolutionary perspective, such a focus makes good sense as mating behaviors bear directly on the capacity to facilitate reproduction, which is ultimately Darwin's bottom line (see Geher, 2014). Research on the connection between the dark triad and mating has essentially found that these dark traits effectively lead to successful outcomes in short-term mating contexts (Jonason, Li, Webster, & Schmitt, 2008; Schmitt et al., 2017).

From an evolutionary perspective, the life domain of parenting is similarly critical when it comes to long-term reproductive success (see Geher, 2011). In fact, several past researchers in the evolutionary behavioral sciences have made this case regarding such broad-reaching areas of parenting such as fatherhood (see Geary, 2007), the role of parenting on social and sexual development (see Belsky, 2010), child development, broadly construed, from an evolutionary perspective (see Bjorklund & Pelligrini, 2002), and the nature of parental mourning at the loss of a child (Volk & Atkinson, 2008), among other topics. While it is certainly possible to reproduce without effective parenting, given the high costs associated with development in an altricial species like ours, effective parenting is critical to facilitating long-term reproductive success.

This said, to this point, the powerful framework of the Dark Triad of personality has barely been examined vis-à-vis the life domain of parenting. The current research was designed to address this gap in the literature.

### Strategic Pluralism, Personality, and the Dark Triad

An evolutionary framework for understanding human personality and social psychology often takes an approach that is steeped in the concept of *strategic pluralism* (Gangestad & Simpson, 2000). The basic idea of strategic pluralism is that humans, like many creatures, modify their behavioral strategies based on information that is taken in from the environment. For instance, if prevailing conditions during one's early childhood were very hard to predict, it might be evolutionarily optimal to rely much on oneself and little on others, developing an approach to social living that focuses on one's own needs and desires (Jonason et al., 2017). On the other hand, based on the idea of life history strategy (Figueredo, Brumbach, Jones, Sefcek, Vasquez, & Jacobs, 2008), someone who was raised under highly stable and secure environmental conditions may have a different optimal approach to living; such an individual has learned that others can be trusted and that life is safe. An upbringing as such would match what evolutionary psychologists refer to as a "slow" life history strategy, trusting others and taking steps that assume a relatively long lifespan.

A strategic pluralism perspective, in fact, has been applied to many different concepts in the evolutionary psychological sciences including basic personality traits (see Nettle & Clegg, 2008), romantic attachment during adulthood (see Schmitt et al., 2004), and basic mating strategies (Gangestad & Simpson, 2000), among many other areas of personality and behavioral functioning. Approaches to how we people deal

with others may be understood through strategic pluralism, with some people taking a relatively other-oriented approach while others might take a more dark approach.

When it comes to how people treat others in social contexts, the Dark Triad has emerged as something of a ubiquitous evolved strategy—a strategy marked by exploiting others for one’s own gain. Partly, this strategy seems to follow from an upbringing that is relatively unstable and that facilitates a sort of self-reliance (see Jonason et al., 2017). And partly, the elements of the Dark Triad may simply be heritable (see Figueredo et al., 2008). In any case, we may understand the Dark Triad as a particular social strategy that seems to function to advance one’s own immediate goals at a cost to others.

Relevant to the current research, we can envision such an approach as leading to tumultuous parenting outcomes. Specifically, a narcissistic parent might not spend enough time and attention to his or her children in comparison to all of the time and energy that he or she expends on oneself. A Machiavellian parent, whose social behaviors are consistently manipulative, might manipulate his or her children, leading to such emotional outcomes as betrayal and a lack of trust. Finally, a psychopathic approach to parenting, rooted in a lack of emotional responding for others, might lead to a truly harsh form of parenting that is fully devoid of empathy and concern for one’s child.

This said, there may be adaptive benefits to each of these dark traits in terms of parental outcomes. For instance, in an unstable environment, a child with a psychopathic parent may learn to rely largely on him or herself, which may pay adaptive dividends later in life (again, assuming a hard and unpredictable environment). Basically, based on the idea of strategic pluralism, these dark traits may lead to evolutionarily adaptive outcomes under specific kinds of environmental conditions.

The opposite of a Dark Triad approach to social life is up for some debate. It seems that scoring low on the three elements of the Dark Triad is not the exactly the same as scoring high on the recently developed “light triad” (Kantianism [seeing others as ends in and of themselves], belief in humanity, and a genuine adoption of humanism; see Kaufman et al., 2019). Such an approach to others might lead to a relatively empathic approach to parenting, which may well lead to increased feelings of esteem, trust, and confidence.

Generally, people show a preference for individuals who demonstrate genuine markers of kindness and generosity (see Geher & Kaufman, 2013). We like our romantic partners, friends, and elected leaders to be honest and to generally take steps to advance the welfare of ourselves and of others in our communities. For this reason, people who show strong “dark” personality tendencies might have a tough time in social groups. When it comes to social living, then, we can think of two broad evolved strategies: (a) a dark approach that focuses on what is best for oneself and (b) a light approach that focuses on what is best for the community. When it comes to how people behave in social contexts, a plurality of strategies has emerged.

### Attachment Style and Parenting

The ways that people are socially attached to various intimate others in their lives are often referred to as *attachment styles* (see Hazan & Shaver, 1987; Ainsworth

& Bell, 1970). Used to describe both attachment between children and parents as well as attachments found within intimate dyads, the construct of individual differences in attachment styles is a core psychological model that connects dispositions with important social and relational processes, including parenting.

While various models of attachment style exist, an often-used model was developed by Collins and Read (1990) which includes the dimensions of avoidant, overly dependent, and anxious. Generally, this continuous model of attachment style suggests that people vary from one another along these three trait dimensions. Research into the relationship between attachment style and the Dark Triad has generally found that scoring high on the facets of the Dark Triad tends to correspond to scoring high on relatively insecure facets of attachment style (see Demircioğlu, & Göncü Köse, 2018). Based on the nature of this model of attachment style, we would expect that parents who score as relatively insecurely attached would score as relatively high on markers of the Dark Triad and as potentially unlikely to demonstrate an authoritative parenting style. The current study included Collins and Read's (1990) measure of attachment style to see if attachment style could help elucidate the relationship among markers of the Dark Triad and parenting styles.

### Parenting Styles

Another life domain that shows substantial variability pertains to parenting styles. Some parents are strict while others are overly permissive. Some parents are harsh while others are proverbial cream puffs. In the 1960's, classic research by Diana Baumrind (1966, 1967) empirically documented three distinct parenting styles, including the following: (1) *Authoritative*, marked by a tendency to empower and consult with one's child, while concurrently setting firm limits, (2) *Authoritarian*, marked by a tendency to exert one's power over a child, often in a harsh manner, and (3) *Permissive*, marked by a tendency to allow children to run the show, generally getting whatever they demand.

This tripartite model of parenting has shown to be very powerful, and measures of parenting from this perspective (e.g., the *Parenting Styles and Dimensions Questionnaire* [PSDQ; Robinson, Mandelco, Olsen, & Hart, 2001]) have demonstrated strong reliability and predictive validity. For instance, parenting style has been shown to correlate with such basic personality attributes as the Big Five personality trait dimensions (extraversion, emotional stability, open-mindedness, agreeableness, and conscientiousness; Oliver, Guerin, & Coffman, 2009) along with measures of attachment styles in romantic relationships (Prinz, Stams, Deković, Reijntjes, & Belsky, 2009). Given the centrality of this construct in the current research, we employed three different measures of parenting styles (see Method section for details). Also, note that relatively recent models of parenting style have added a *neglectful/uninvolved* category, which speaks to the tendency to not expend much time and/or energy on one's children (e.g., Shyny, 2017).

### A Gap in the Evolutionary Literature

Understanding the importance of the connection between the Dark Triad and parenting styles, Jonason, Lyons, and Bethell (2014) conducted a study that was designed to explore the relationship between one's recollections of his or her parents during his or her own childhood vis a vis one's current scores on a measure of the Dark Triad. Generally, these researchers found that people who recall their parents as relatively harsh were more likely to score as high on the different facets of the Dark Triad. We think that this study is a good start to addressing the basic questions that we raise in this paper. However, by relying on recollections of one's own parent's behaviors, this study by Jonason et al. (2014) is inherently limited.

One recent study examined the relationship between psychopathic tendencies and parenting styles among a sample of actual parents (Cox, Kopkin, Rankin, Tomeny, & Coffey, 2018). While the overall pattern of results was a bit complex, these researchers generally found that some facets of psychopathy were related to various sub-facets of parenting style (e.g., rebellious non-conformity tended to be negatively related to authoritarian parenting). The findings from this study were extremely nuanced and somewhat difficult to put into a coherent framework. Further, the study by Cox et al. (2018) only explored one facet of the Dark Triad.

There is a major gap in the empirical literature on this topic. No past research examining the relationship between all three facets of the Dark Triad and one's actual approach to parenting (in a sample of actual parents) has been published to date. The current study was largely designed to fill this gap.

### The Current Study

The current study was primarily designed to explore the relationship between the Dark Triad and parenting styles in a sample of actual parents. Further, we include measures of the Big Five personality traits and adult attachment to examine the possible empirical overlap that these variables may have with our primary predictor and outcome variables. Another goal of this research was to develop a "behavioroid," decision-based measure of parenting styles that may improve ecological validity compared with self-report measures (see content related to the development of the Parental Analytical Style Scale (PASS) in Method and Results sections).

This study includes two specific predictions and two open-ended questions. The predictions are as follows:

1. The three facets of the Dark Triad will be negatively correlated with indices of authoritative parenting.
2. The three facets of the Dark Triad will be positively correlated with indices of authoritarian, permissive, and uninvolved parenting.

The open-ended questions are as follows:

1. Some of the Big Five personality traits, such as agreeableness, may share variance with parenting style variables and the Dark Triad.
2. Some of the adult attachment style measures, such as security in relationships, may share variance with parenting style variables and the Dark Triad.

### METHOD

The primary purpose of this study was to examine the relationship between the Dark Triad of personality traits and parental styles. Further, we examined the possible connections with the Big Five personality traits and adult attachment style with these broad classes of variables.

#### Participants

A total of 251 parents (211 women, 39 men; mean age = 39.15,  $SD = 9.63$ ), aged 18 years of age or older, took an online survey created via Qualtrics. These participants were recruited through online postings to various Facebook and Reddit communities. The survey was also dispersed to parents by local school officials (in line with our approved Human Research Ethics Board proposal).

The sample consisted of 86.90% white (non-Latino) participants and was primarily liberal in terms of political orientation (60.20%). Of these participants, 48.60% lived in the Northeast of the U.S., 16.30% lived in the South region, 11.20% lived in the Midwest, 9.60% lived in the South, and 14.30% of the sample was not from the U.S. The sample was diverse in terms of socioeconomic status, as measured by estimated annual household income ( $M = \$83,621.31$ ,  $SD = \$123,531.91$ ), and religion (15.90% Catholic/Christian, 19.50% Christian/Non-Catholic, 4.40% Jewish, .4% Muslim, 22.70% Atheist, 25.10% Agnostic, and 12.00% other). On average, participants reported having 1.87 children ( $SD = .96$ , max = 6), including biological, adopted and/or stepchildren. Importantly, this research was approved by the SUNY New Paltz Human Research Ethics Board.

#### Measures and Procedure

The first measure presented to participants was the *Adult Attachment Scale* (Collins & Read, 1990). This 21-item scale measured the extent to which individuals experience closeness (e.g., *I find it relatively easy to get close to others*), feels that they can depend on others (e.g., *I find it difficult to trust others completely*), and are fearful of being unloved (e.g., *I often worry that my partner does not really love me*), with 7 items for each style. Participants were asked to rate their feelings on a 1-to-5 Likert scale, ranging from *not at all characteristic* (1) to *very characteristic* (5).

The *Dirty Dozen* scale (Jonason & Webster, 2010) was the second scale given to participants. This 12-item scale measured the Dark Triad: Machiavellianism (e.g., *I tend to manipulate others to get my way*), narcissism (e.g., *I tend to seek prestige or status*), and psychopathy (e.g., *I tend to be cynical*). Participants were asked to report the extent to which they agree with each statement on a 1-to-7 Likert scale.

The *Ten Item Personality Scale* personality scale was the third measure given to participants (Gosling et al., 2003). It was intended to measure the Big Five personality traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism). Participants were asked to either agree or disagree with the statements such as *I see myself as extraverted/enthusiastic* on a 1 (*Disagree strongly*) to 7 (*Agree strongly*) Likert scale.

The first measure of parenting style that was presented to participants was the *Parental Analytical Style Scale* (PASS). This scale, created for this study, utilized a 100-point budget allocation process, in which participants allocated *points* to indicate the degree to which they would likely engage in each of four possible parental responses (in light of specific scenarios that we presented to participants). Each question included four responses which were designed to tap the authoritative, uninvolved, permissive, and authoritarian parenting styles.

The specific instructions given to participants were as follows: *Imagine that you are the parent of a five-year old child. You are only allowed 100 points to attribute to all 4 scenarios. Please indicate how likely you would be to respond in each of the following ways.*

For instance, one question included the following scenario: *The child did not have any dinner, but is now asking for cookies.* This scenario was followed by four responses (presented via random order for each participant). For this particular scenario, the four possible responses were as follows:

*I explain the importance of good nutrition and tell him no.* (authoritative)

*I tell him that he has got to be kidding! No way!* (authoritarian)

*One cookie never hurt anyone!* (permissive)

*I really don't think it matters what my kid eats.* (uninvolved).

Participants needed to allocate the full 100 points across these four options in a way that they believed represented their parenting decision-making style. See Appendix A for the full scale, including implementation and scoring instructions.

For validation purposes, the *Parenting Style Four Factor Questionnaire* (PSFFQ) was then included in the survey (Shyny, 2017). Note that this measure was originally developed in India and contained some language issues. Thus, we modified the grammar as needed for the 32-items. The PSFFQ is the only known measure of *all four* parenting styles to date that has previously demonstrated evidence of reliability and validity (Cronbach's Alpha = .92). Participants were asked to self-report on a 5-point Likert scale how often they identified with various statements such as, *I never like to tell my children where I am going or why I am late* (uninvolved).

The well-known *Parenting Styles and Dimensions Questionnaire* (PSDQ) was lastly presented to participants, as this scale has demonstrated high reliability and validity in previous research (Robinson, Mandelco, Olsen, & Hart, 2001). This version consists of 32 items that assess parents' identification with Baumrind's global parenting dimensions (authoritative, authoritarian, and permissive). Participants were asked to self-report the degree to which each statement applies on a Likert scale from 1-to-5. An example of one of these items is, *I punish by taking privileges away from my child with little if any explanations.*

## RESULTS

The basic question in this research pertains to the relationship between the facets of the Dark Triad of personality (see Jonason & Webster, 2010) and indices of parenting styles. Other variables included as moderators or as inter-correlated predictor variables in our analyses were biological sex, the Big Five personality traits, and adult attachment style.

The basic analytical strategy included the following steps:

1. Computing descriptive statistics for all the variables in the study.
2. Validating the newly created Parental Analytical Style Scale (PASS).
3. Examining zero-order correlations among measures.
4. Examining sex differences in the nature of the correlations among the predictor and outcomes variables.
5. Regression analyses to predict scores on the three different parenting style measures.

### Descriptive Statistics

Basic descriptive statistics were computed for all the dispositional variables. In Table 1, we present the means, standard deviations, Ns, and Cronbach alphas for these variables.

**Table 1.** Descriptive Statistics for Parenting Style Four Factor Questionnaire (PSFFQ, Shyny, 2017), Parenting Styles and Dimensions Questionnaire (PSDQ, Robinson, Mandelco, Olsen, & Hart, 2001), Parental Analytical Style Scale (PASS), The Big Five personality traits (Ten Item Personality Inventory, Gosling et al., 2003), the Dark Triad personality traits (Dirty Dozen, Jonason & Webster, 2010), and the Adult Attachment Scale (Collins & Read, 1990)

|                 | Mean  | Standard Deviation | N   | Cronbach Alpha |
|-----------------|-------|--------------------|-----|----------------|
| <hr/>           |       |                    |     |                |
| PSFFQ Subscales |       |                    |     |                |
| Authoritarian   | 16.87 | 3.76               | 222 | .72            |
| Authoritative   | 31.42 | 3.08               | 215 | .47            |
| Permissive      | 21.35 | 3.38               | 220 | .46            |
| Uninvolved      | 13.41 | 3.02               | 222 | .64            |

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|                          |        |        |     |     |
|--------------------------|--------|--------|-----|-----|
| PSDQ<br>Subscales        |        |        |     |     |
| Authoritarian            | 17.01  | 4.10   | 219 | .82 |
| Authoritative            | 63.23  | 6.60   | 214 | .87 |
| Permissive               | 9.18   | 2.46   | 220 | .69 |
| PASS<br>Subscales        |        |        |     |     |
| Authoritative            | 660.63 | 151.15 | 251 | .66 |
| Authoritarian            | 94.46  | 94.20  | 251 | .66 |
| Permissive               | 191.25 | 104.38 | 251 | .56 |
| Uninvolved               | 191.25 | 52.56  | 251 | .51 |
| TIPI<br>Subscales        |        |        |     |     |
| Extraversion             | 7.71   | 3.58   | 251 | .84 |
| Agreeableness            | 10.80  | 2.33   | 251 | .39 |
| Conscientious            | 10.81  | 2.64   | 251 | .61 |
| Emotional<br>Stability   | 8.93   | 2.89   | 251 | .68 |
| Openness                 | 10.61  | 2.20   | 250 | .35 |
| Dirty Dozen<br>Subscales |        |        |     |     |
| Machiavellianism         | 9.38   | 4.08   | 251 | .74 |

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|                  |       |       |     |     |
|------------------|-------|-------|-----|-----|
| Psychopathy      | 8.41  | 3.67  | 250 | .57 |
| Narcissism       | 11.52 | 4.58  | 250 | .77 |
| Total Score      | 29.38 | 10.47 | 249 | .83 |
| AAS<br>Subscales |       |       |     |     |
| Secure           | 18.71 | 5.25  | 248 | .86 |
| Anxious          | 12.85 | 4.62  | 250 | .71 |
| Non-Avoidant     | 22.33 | 4.49  | 251 | .73 |

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### Validating the Parental Analytical Style Scale (PASS)

As mentioned prior, the PASS was developed to provide a new option for measuring Baumrind's classic parenting styles. Existing measures such as the PSDQ utilize a strictly self-report method measuring the tendency toward the various parental styles. While such self-report measures clearly have a place in research, we wanted to advance the psychometrics in this area by developing a "behavioroid" measure of parenting styles, examining the degree to which people would engage in various decisions connected with the different parenting styles of authoritative, authoritarian, permissive, and uninvolved parenting.

As a first step toward demonstrating the validity of this measure, some evidence of reliability needs to be provided. Toward this end, we conducted four Cronbach alpha analyses to test for internal reliability. The alphas for these four subscales were as follows: authoritative (.66), authoritarian (.66), permissive (.56), and uninvolved (.51) parenting.

To address convergent validity, we computed zero-order correlations between these four subscales of the PASS and the corresponding subscales of the PSDQ and the PSFFQ (note that the PSDQ does not have a neglectful subscale). Each of these correlations was positive and significant, suggesting that the PASS subscales have strong convergent validity (See Table 2).

**Table 2.** Correlations between Parenting Analytical Style Scale (PASS) Subscales and the Corresponding Subscales of the PSDQ and the PSFFQ (Ns in parentheses)

| PASS Subscale | <i>r</i> with PSDQ Subscale | <i>r</i> with PSFFQ Subscale |
|---------------|-----------------------------|------------------------------|
| Authoritative | .23* (214)                  | .21* (215)                   |
| Authoritarian | .34* (219)                  | .43* (222)                   |
| Permissive    | .26* (220)                  | .30* (220)                   |
| Uninvolved    | n/a                         | .26* (222)                   |

\**p* < .01

### Zero-Order Correlation Among Measures

As a starting point for our analyses, we conducted zero-order correlations among the predictor variables, including the facets and total scores for the Dark Triad measure (Jonason & Webster, 2010), potentially inter-correlated dispositional variables (the Big Five [Gosling et al., 2003]) and the three facets of adult attachment (Collins & Read, 1990), and the outcome measures (including all sub-scales of the three parental style measures included in this research). The tables presented below summarize these correlations. Note that due to the large number of tests being conducted, all significance tests use an alpha of .01.

### Zero-Order Correlation Among Measures

**Table 3.** Correlations between Parenting Analytical Style Scale (PASS) Subscales, Subscales of the PSDQ, and the PSFFQ Subscales

|                  | 1     | 2     | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------------------|-------|-------|---|---|---|---|---|---|---|----|----|
| PASS Subscales   |       |       |   |   |   |   |   |   |   |    |    |
| 1. Authoritarian | 1     |       |   |   |   |   |   |   |   |    |    |
| 2. Authoritative | -.51* | 1     |   |   |   |   |   |   |   |    |    |
| 3. Permissive    | -.1   | -.68* | 1 |   |   |   |   |   |   |    |    |

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|------------------|-------|-------|------|-------|-------|-------|------|-------|-------|------|---|
| 4. Uninvolved    | .14   | -.36* | .07  | 1     |       |       |      |       |       |      |   |
| PSDQ Subscales   |       |       |      |       |       |       |      |       |       |      |   |
| 5. Authoritarian | .34*  | -.19* | -.08 | .04   | 1     |       |      |       |       |      |   |
| 6. Authoritative | -.37* | .23*  | .09  | -.12  | -.28* | 1     |      |       |       |      |   |
| 7. Permissive    | .20*  | -.36* | .26* | .15*  | .39*  | -.11  | 1    |       |       |      |   |
| PSFFQ Subscales  |       |       |      |       |       |       |      |       |       |      |   |
| 8. Authoritarian | .43*  | -.16* | -.13 | -.02  | .63*  | -.29* | .31* | 1     |       |      |   |
| 9. Authoritative | -.26* | .21** | .05  | -.15* | -.22* | .51*  | -.10 | -.16* | 1     |      |   |
| 10. Permissive   | .6    | -.27* | .30* | .4    | .15*  | .14*  | .47* | .21*  | .19*  | 1    |   |
| 11. Uninvolved   | .18*  | -.24* | .04  | .26*  | .34*  | -.24* | .30* | .23*  | -.30* | .27* | 1 |

\* $p < .01$ ,  $N$ s range 204-251

**Table 4.** Correlations between Parenting Analytical Style Scale (PASS) Subscales, Corresponding Subscales of the PSDQ, PSFFQ, and the Dirty Dozen

|                | Machiavellianism | Psychopathy | Narcissism | DT Total |
|----------------|------------------|-------------|------------|----------|
| PASS Subscales |                  |             |            |          |
| Authoritarian  | .11              | .13         | .12        | .14      |
| Authoritative  | -.11             | -.19*       | -.02       | -.12     |
| Permissive     | .02              | .06         | -.08       | -.00     |
| Uninvolved     | .09              | .03         | .03        | .05      |
| PSDQ Subscales |                  |             |            |          |
| Authoritarian  | .06              | .08         | .06        | .07      |
| Authoritative  | -.14             | -.22*       | -.17*      | -.21**   |

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|                 |       |       |       |       |
|-----------------|-------|-------|-------|-------|
| Permissive      | .16*  | .15*  | .08   | .15*  |
| PSFFQ Subscales |       |       |       |       |
| Authoritarian   | .11   | .22*  | .10   | .16*  |
| Authoritative   | -.11  | -.17  | -.09  | -.14  |
| Permissive      | .09   | .06   | -.01  | .05   |
| Uninvolved      | .22** | .24** | .25** | .28** |

\* $p < .01$ ,  $N$ s range from 214-251

**Table 5.** Correlations between Parenting Analytical Style Scale (PASS) Subscales, Corresponding Subscales of the PSDQ, PSFFQ, and the Ten Item Personality Inventory ( $r$  with  $N$ s in parentheses)

|                 | Extraversion | Agreeableness | Conscientiousness | Emotional Stability | Openness |
|-----------------|--------------|---------------|-------------------|---------------------|----------|
| PASS Subscales  |              |               |                   |                     |          |
| Authoritarian   | .05          | -.07          | -.04              | -.08                | -.08     |
| Authoritative   | -.11         | .13           | -.01              | .04                 | -.03     |
| Permissive      | .09          | -.03          | .06               | .05                 | .08      |
| Uninvolved      | -.04         | -.08          | -.09              | -.05                | -.03     |
| PSDQ Subscales  |              |               |                   |                     |          |
| Authoritarian   | -.05         | -.06          | .00               | -.12                | -.15     |
| Authoritative   | .08          | .19**         | .01               | -.01                | .16      |
| Permissive      | .03          | -.07          | -.04              | -.16                | -.01     |
| PSFFQ Subscales |              |               |                   |                     |          |
| Authoritarian   | -.03         | -.15          | .09               | -.07                | -.16*    |

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|               |      |       |        |       |      |
|---------------|------|-------|--------|-------|------|
| Authoritative | .13  | .19** | .08    | .02   | .12  |
| Permissive    | .07  | .07   | -.03   | -.08  | .12  |
| Uninvolved    | -.07 | -.11  | -.29** | -.17* | -.02 |

\* $p < .01$ ,  $N$ s range from 214-251

**Table 6.** Correlations between Parenting Analytical Style Scale (PASS) Subscales, Corresponding Subscales of the PSDQ, PSFFQ, and the Adult Attachment Scale

|                        | Secure | Anxious | Non-Avoidant |
|------------------------|--------|---------|--------------|
| <b>PASS Subscales</b>  |        |         |              |
| Authoritarian          | -.09   | .00     | -.06         |
| Authoritative          | .13    | -.03    | .02          |
| Permissive             | -.08   | .05     | .08          |
| Uninvolved             | .06    | -.07    | -.11         |
| <b>PSDQ Subscales</b>  |        |         |              |
| Authoritarian          | -.14   | .13     | -.12         |
| Authoritative          | -.03   | .06     | .16          |
| Permissive             | .00    | .01     | -.02         |
| <b>PSFFQ Subscales</b> |        |         |              |
| Authoritarian          | -.14   | .12     | -.09         |
| Authoritative          | -.06   | .06     | .16          |
| Permissive             | -.07   | .08     | -.02         |
| Uninvolved             | -.05   | .15     | -.16*        |

\* $p < .01$ ,  $N$ s range from 212-251

**Table 7.** Correlations between the Dirty Dozen, the Ten Item Personality Inventory, and the Adult Attachment Scale

|                                       | 1     | 2     | 3     | 4     | 5     | 6     | 7    | 8    | 9    | 10   | 11  | 12 |
|---------------------------------------|-------|-------|-------|-------|-------|-------|------|------|------|------|-----|----|
| Dirty Dozen Subscales<br>(Dark Triad) |       |       |       |       |       |       |      |      |      |      |     |    |
| 1. Machiavellianism                   | 1     |       |       |       |       |       |      |      |      |      |     |    |
| 2. Psychopathy                        | .59*  | 1     |       |       |       |       |      |      |      |      |     |    |
| 3. Narcissism                         | .60*  | .56*  | 1     |       |       |       |      |      |      |      |     |    |
| 4. Dirty Dozen Total                  | .86*  | .82*  | .87*  | 1     |       |       |      |      |      |      |     |    |
| AAS Subscales<br>(Adult Attachment)   |       |       |       |       |       |       |      |      |      |      |     |    |
| 5. Secure                             | -.08  | -.11  | .08   | -.04  | 1     |       |      |      |      |      |     |    |
| 6. Anxious                            | .08   | .04   | .17*  | .12   | -.39* | 1     |      |      |      |      |     |    |
| 7. Non-Avoidant                       | -.16* | -.20* | .02   | -.13* | .57*  | -.16* | 1    |      |      |      |     |    |
| TIPI<br>(Big Five)<br>Subscales       |       |       |       |       |       |       |      |      |      |      |     |    |
| 8. Extraversion                       | .08   | .03   | .28*  | .16   | .22*  | -.11  | .41* | 1    |      |      |     |    |
| 9. Agreeableness                      | -.36* | -.47* | -.25* | -.41* | .29*  | -.12  | .36* | .04  | 1    |      |     |    |
| 10. Conscientiousness                 | -.22* | -.10  | -.14  | -.18* | -.02  | -.16* | .07  | .05  | -.00 | 1    |     |    |
| 11. Emotional Stability               | -.14  | -.00  | -.08  | -.08  | .27*  | -.32* | .12  | .10  | .20* | .21* | 1   |    |
| 12. Openness                          | -.06  | -.11  | -.60  | -.09  | -.03  | -.04  | .16* | .25* | .19* | .04  | .07 | 1  |

\* $p < .05$ , \*\* $p < .01$ ,  $N$ s range from 247-251

Several of the patterns found in these zero-order correlations are noteworthy. In particular, 17 of the correlations between Dark Triad variables and parental style variables (out of 48 possible) were significant (and all of these were in the predicted directions). For example, authoritative parenting style (Table 4) was found to be negatively correlated with psychopathy ( $r(251) = -.19, p < .01$ ).

Table 5 presents zero-order correlations between the Big Five measure (TIPI) and the various parental style dimensions. Some interesting findings emerged. Specifically, for all three parenting scales, authoritative style significantly and positively correlated with agreeableness. Uninvolved parents scored lower in terms of emotional stability ( $r(222) = -.17, p = .01$ ) and conscientiousness ( $r(222) = -.29, p \sim .00$ ). Permissive parents also scored lower in terms of emotional stability,  $r(220) = -.16, p = .02$ ). Overall, authoritative parents seem to be relatively open-minded and

agreeable, while such traits as emotional instability correspond to the other parenting styles.

We decided to explore these relationships further to determine if these relationships may have played out differently across the sexes. These analyses were post hoc in nature, but we found them interesting enough to report here. Several patterns of interest emerged on this point. Specifically, we found that fathers who scored high on the Dark Triad are generally less authoritative ( $r(33) = -.44, p = .01$ ). Within the PASS, fathers who scored high on narcissism were not found to follow the permissive parenting style ( $r(39) = -.34, p = .03$ ). According to the PSFFQ uninvolvement mothers scored high in the Dark Triad across the board ( $r(188) = .27, p = .00$ ). As shown by the PSFFQ further, mothers who practice the authoritarian approach scored high on psychopathy ( $r(189) = .24, p = .00$ ). These particular findings suggest that the Dark Triad plays out in parenting differently across the sexes.

### Regressions Designed to Predict Parenting Style

Eleven standard multiple regression analyses were conducted to examine if the various dispositional factors (i.e., Dark Triad, the Big 5, adult attachment style) significantly predicted parenting style measured by the three scales. In addition to the Dark Triad subscores, only the predictors that significantly related to each parenting style, as found in the bivariate correlations, were included in the models. Six of the eleven models were significant overall. Four of these included unique significant predictor variables.

Tables 8-13 summarize these regression analyses. The overall models significantly predicted authoritative parenting, as measured by all three scales, authoritarian parenting (measured by the PSFFQ), permissive parenting (measured by the PSDQ), and uninvolvement parenting (measured by the PSFFQ). Regarding the Dark Triad subscores as the main predictor variables, psychopathy significantly predicted lower degrees of authoritarian parenting ( $p = .02$ ) and higher degrees of authoritative parenting ( $p = .02$ ), measured by the PSFFQ and PASS respectively. Emotional stability uniquely predicted lower degrees of permissive parenting in the case of the PSDQ ( $p = .04$ ). Last, as would be predicted by the nature of the four parenting dimensions, conscientiousness significantly predicted lower degrees of uninvolvement parenting ( $p = .00$ ) and openness significantly predicted lower degrees of authoritarian parenting ( $p = .03$ ), as indicated by the PSFFQ.

**Table 8.** Multiple Regression Table Predicting Authoritative Parenting (PSDQ)

|                                 | b    | B    | $s^2$ |
|---------------------------------|------|------|-------|
| <i>Predictor Variables</i>      |      |      |       |
| Machiavellianism                | .09  | .05  | .00   |
| Psychopathy                     | -.23 | -.13 | .01   |
| Narcissism                      | -.15 | -.11 | .01   |
| Agreeableness                   | .13  | .05  | .00   |
| Openness                        | .33  | .11  | .01   |
| Non-Avoidant Attachment         | .16  | .11  | .01   |
| $R^2 = .08; F(6, 206) = 3.17^*$ |      |      |       |

\* $p < .05$

**Table 9.** Multiple Regression Table Predicting Permissive Parenting (PSDQ)

|                                 | b    | B    | $s^2$ |
|---------------------------------|------|------|-------|
| <i>Predictor Variables</i>      |      |      |       |
| Machiavellianism                | .06  | .10  | .01   |
| Psychopathy                     | .08  | .12  | .01   |
| Narcissism                      | -.03 | -.06 | .00   |
| Emotional Stability*            | -.12 | -.14 | .02   |
| $R^2 = .05; F(4, 214) = 2.86^*$ |      |      |       |

\* $p < .05$

**Table 10.** Multiple Regression Table Predicting Authoritative Parenting (PSFFQ)

|                                 | b    | B    | $sr^2$ |
|---------------------------------|------|------|--------|
| <i>Predictor Variables</i>      |      |      |        |
| Machiavellianism                | .01  | .01  | .00    |
| Psychopathy                     | -.74 | -.09 | .00    |
| Narcissism                      | -.02 | -.03 | .00    |
| Agreeableness                   | .13  | .10  | .01    |
| Non-Avoidant Attachment         | .07  | .11  | .01    |
| $R^2 = .05; F(5, 208) = 2.26^*$ |      |      |        |

\* $p = .05$

**Table 11.** Multiple Regression Table Predicting Authoritarian Parenting (PSFFQ)

|                                 | b    | B    | $sr^2$ |
|---------------------------------|------|------|--------|
| <i>Predictor Variables</i>      |      |      |        |
| Machiavellianism                | -.06 | -.06 | .00    |
| Psychopathy*                    | .23  | .22  | .02    |
| Narcissism                      | .01  | .01  | .00    |
| Agreeableness                   | .02  | .01  | .00    |
| Secure Attachment               | -.09 | -.13 | .01    |
| Openness*                       | -.25 | -.15 | .02    |
| $R^2 = .09; F(6, 212) = 3.41^*$ |      |      |        |

\* $p < .05$

**Table 12.** Multiple Regression Table Predicting Uninvolved Parenting (PSFFQ)

| Predictor Variables     | b    | B    | $s^2$ |
|-------------------------|------|------|-------|
| Machiavellianism        | -.03 | -.04 | .00   |
| Psychopathy             | .12  | .14  | .01   |
| Narcissism              | .12  | .03  | .01   |
| Conscientiousness*      | -.27 | -.23 | .05   |
| Emotional Stability     | -.78 | -.08 | .01   |
| Non-Avoidant Attachment | -.75 | -.11 | .02   |
| Anxious Attachment      | .03  | .05  | .00   |

$R^2 = .16$ ;  $F(7, 212) = 5.91^*$

\* $p < .05$

**Table 13.** Multiple Regression Table Predicting Authoritative Parenting (PASS)

| Predictor Variables | b     | B    | $s^2$ |
|---------------------|-------|------|-------|
| Machiavellianism    | -1.31 | -.04 | .00   |
| Psychopathy*        | -8.87 | -.21 | .02   |
| Narcissism          | 3.85  | .12  | .01   |
| Secure Attachment   | 2.68  | .09  | .01   |
| Agreeableness       | 1.42  | .02  | .00   |

$R^2 = .06$ ;  $F(5, 241) = 2.95^*$

\* $p < .05$

## DISCUSSION

The current study was designed to fill an important gap in the literatures related to both the Dark Triad of personality (Paulhus & Williams, 2002) and parental styles (Baumrind, 1967). From an evolutionary perspective, parenting is one of the most significant life domains as it directly bears on long-term reproductive success (see Geher, 2014; Geher & Wedberg, 2020). Further, in recent years, the Dark Triad of personality has emerged as a ubiquitous predictor of various classes of social behaviors. Aside from a few partial examples found in the literature (e.g., Jonason,

Lyons, & Bethel, 2014; Cox et al., 2018), the research presented here stands as essentially the first work that was primarily designed to bridge the gap between parenting styles and the Dark Triad.

### Developing the Parental Analytical Style Scale (PASS)

A significant methodological contribution of this work pertained to the development and validation of a new measure of parenting styles that takes modern technologies associated with survey software Qualtrics into account. The Parental Analytical Style Scale (PASS) is different from a standard Likert-scale measure of parenting styles. This measure provides participants with parenting-relevant scenarios and asks them to allocate different *points* to different ways that they believe they would respond. Using a budget-allocation measure (see Li, 2008), participants were given limited points that they could allocate to the different responses, thus making them actually forced to differentially express value for some responses more than others. This measure led to sub-facets corresponding to authoritarian, authoritative, permissive, and uninvolved dimensions of parenting style. Analyses of internal reliability suggested that these subscales demonstrated moderate-to-good internal reliability. Further, a convergent validity analysis found that the subscales from the PASS were consistently positively related to the corresponding subscales of the two previously validated measures (the PSDQ and the PSFFQ). The PASS is fully available in the Appendix of this paper.

### Predicting Parenting from the Dark Triad

Consistent with the basic predictions of this research, the Dark Triad was generally related to the various indices of parenting styles in ways that were predicted. Authoritative parenting was generally negatively related to Dark Triad tendencies while authoritarian and uninvolved parenting were generally positively correlated with Dark Triad tendencies. Interestingly, several of these relationships held up when controlling for scores on the measures of the Big Five and Adult Attachment Style, suggesting that these relationships are generally robust.

### Limitations and Future Directions

While this research provides advances compared with prior research on the relationship between parenting and the Dark Triad, several limitations exist as well. Generally, our participants were relatively well-educated, wealthy, and from North America. Such a homogenous sample suggests that the implications of our results may well be limited. On this general topic, it is noteworthy that the number of males in the sample was very low and this fact did not allow us to really address either (a) sex differences in the nature of the relationships being studied here or (b) male-specific patterns related to parental behavior.

Further, while the PASS does provide an attempt to advance methodologically beyond the problems associated with self-reported measures, in the end, this study does rely primarily on classic self-reported measures. A liability of this fact pertains to concerns regarding the degree to which self-reported data in such an important

domain of life as parenting are fully ecologically valid. Future research could improve on this point by examining the variables studied here using more in vivo, behavioral measures.

The PASS, we hope, does provide a model for how to use modern technological advances such as the budget-allocation measuring system and Qualtrics survey software to measure standard psychological variables, such as parenting styles, using a more ecologically valid approach (based on how people make decisions in budget-limited contexts). While we believe that the psychometrics associated with the PASS were generally sufficient, some of the internal reliability coefficients and convergent-validation correlations were relatively low, speaking to an empirical limitation of this work.

It is also noteworthy that the Dirty Dozen measure of the Dark Triad (Jonason & Webster, 2010) has fallen out of favor in recent years due to some demonstrated psychometric liabilities (such as intercorrelations among the facets that tend to be above acceptable numbers). Future research on this topic might benefit from using the Short Dark Triad (SD3; Jones & Paulhus, 2014), which has demonstrated itself to be stronger than the Dirty Dozen in terms of various psychometric attributes.

Our sample consisted of 14.30% of parents reporting they were not from the United States, and because of a low number of participants originating from differing countries, we were unable to include analyses of effects of culture on parenting styles. Parenting styles and practices vary around the world, and research exploring the relationship between the Dark Triad and parenting should investigate these cultural differences in parenting. A cross-cultural study examining the relationship between perceived parenting style and child's anxiety looking at four dimensions of parenting: *over protection*, *emotional warmth*, *parental rejection*, and *anxious rearing*, found that Chinese and Malay children perceive their parents to be less emotionally warm than Indian, Arab, and Caucasian children and fear more rejection from their parents (Mousavi, Low, & Hashim, 2016). The Chinese and Malay children also had the highest total anxiety score, a finding the researchers attribute to the children's perceived negative parenting traits (i.e., less emotional warmth and fear of rejection). Moreover, the Arab children in the study found their parents to be most controlling and over protective than the other participants. This study not only details how parenting may differ culture to culture, but it also depicts the negative outcomes negative parenting traits has on the child. Future research should look further into cultural differences in parenting in relation to the Dark Triad to further investigate the consequences of differing parenting practices.

Another notable limitation to our study is that we did not access parenting styles relevant to the participants' genetic relatedness to their children (i.e., an individual may choose to parent a different way with their biological offspring compared to a step or adopted child). There has been a substantial amount of literature detailing the differential treatment of children according to their genetic relatedness to their parent. For example, a study by Burch and Gallup (2000) found that in a sample of men participating in a domestic violence program, a child's paternal resemblance is positively correlated with the quality of the relationship the father has with their child, and this finding was also inversely proportional to the severity of the injuries sustained by their spouses. Related, males are more likely to invest in hypothetical children that look more like them (e.g., spend more time and money with

the child; Platek, Burch, Panyavin, Wasserman, & Gallup, 2002). However, the study found female participants seem unaffected by their resemblance to the children suggesting there may be sex differences on how individuals parent children varying in biological relatedness to themselves.

An even darker phenomenon, coined the *Cinderella effect* by evolutionary psychologists, further supports the maltreatment of non-biological offspring. The gross mistreatment suffered by children at the hands of a stepparent has been well documented around the world, and the evidence suggests that children are disproportionately at risk for abuse by a stepparent than a biological parent (See Geher, 2014). Psychologists Martin Daly and Margo Wilson, who dedicated decades of research to document the abuse and exploitation in step relationships, suggest that children suffer fatal beatings by a stepparent 100 times more than beatings by biological parents (Daly & Wilson, 2008).

These chilling findings suggest an unfortunate reality—the relationship between the perception of genetic relatedness to one's offspring influences the way an individual parent said offspring, and even so much so that the physical wellbeing of the child may be threatened. Because of this risk, it is imperative that research further investigating the relationship between parenting styles and the dark triad takes into account the differential treatment of non-biological offspring versus biological offspring, with hopes of shedding more light on dark parenting and its consequences.

### Bottom Line

To this point, a great deal of research has shown that the Dark Triad of personality is strongly related to a broad suite of human behaviors, particularly in the domain of human mating. The current research extends work on the Dark Triad into the parenting domain. From an evolutionary perspective, parenting is every bit as relevant to Darwin's bottom line (of reproductive success) as is mating. Generally, we found reliable relationships between our measure of the Dark Triad and our measures of parenting styles. Parents who score high in the Dark Triad tend to score low on measures of authoritative parenting while, concurrently, scoring high on measures of authoritarian and uninvolved parenting. These findings have clear implications for the nature of parenting as well as for the nature of choosing long-term mates that may lead to families.

## REFERENCES

- Ainsworth, M. D. S., & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behaviour of one-year-olds in a strange situation. *Child Development, 41*, 49-67.
- Barkley, R. A. (2005). *Taking charge of ADHD: The complete, authoritative guide for parents* (revised ed.). New York: Guilford Press.
- Baumrind, D. (1966). Effects of authoritative parental control on child behavior. *Child Development, 37*, 887.

- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs*, 75, 43-88.
- Belsky, J. (2010). Childhood experience and the development of reproductive strategies. *Psicothema*, 22, 28-34.
- Bjorklund, D. F., & Pellegrini, A. D. (2002). *The origins of human nature: Evolutionary developmental psychology*. Washington, D.C.: American Psychological Association.
- Burch, R. L., & Gallup, G. G., Jr. (2000). Perceptions of paternal resemblance predict family violence. *Human Behavior and Evolution*, 21, 429-435.
- Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, 58, 644-663.
- Cox, J., Kopkin, M. R., Rankin, J. A., Tomeny, T. S., & Coffey, C. A. (2018). The Relationship between Parental Psychopathic Traits and Parenting Style. *Journal of Child and Family Studies*, 27, 2305-2314.
- Daly, M., & Wilson, M. (2008). Is the “Cinderella effect” controversial? A case study of evolution-minded research and critiques thereof. Pp. 381-398 in CB Crawford & D Krebs, eds., *Foundations of evolutionary psychology*. Mahwah NJ: Erlbaum.
- Demircioğlu, Z. I., & Göncü Köse, A. (2018). Effects of attachment styles, dark triad, rejection sensitivity, and relationship satisfaction on social media addiction: A mediated model. *Current Psychology*, 37, 1-15.
- Figueredo, A. J., Brumbach, B. H., Jones, D. N., Sefcek, J. A., Vasquez, G., & Jacobs, W. J. (2008). Ecological constraints on mating tactics. In G. Geher & G. Miller (Eds.), *Mating intelligence: Sex, relationships, and the mind's reproductive system* (pp. 337–365). Mahwah, NJ: Lawrence Erlbaum.
- Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences*, 23, 573–644.
- Geary, D. C. (2007). *Evolution of fatherhood*. In C. Salmon & T. Shackelford (Eds.), *Family relationships: An evolutionary perspective* (pp. 115-144). New York: Oxford University Press.
- Geher, G. (2011). Evolutionarily informed parenting: A ripe area for scholarship in evolutionary studies. *EvoS Journal: The Journal of the Evolutionary Studies Consortium*, 3, 26-36.
- Geher, G. (2014). *Evolutionary psychology 101*. New York: Springer.
- Geher, G., & Wedberg, N. (2020). *Positive evolutionary psychology: Darwin's guide to living a richer life*. New York: Oxford University Press.
- Geher, G., & Kaufman, S. B. (2013). *Mating intelligence unleashed*. New York: Oxford University Press.
- Geher, G., & Wedberg, N. A. (2019). *Positive evolutionary psychology: Darwin's guide to living a richer life*. New York: Oxford University Press.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A very brief measure of the Big Five personality domains. *Journal of Research in Personality*, 37, 504-528.
- Hoeve, M., Dubas, J., Eichelsheim, V., van der Laan, P., Smeenk, W., & Gerris, J. (2009). The relationship between parenting and delinquency: A meta-analysis. *Journal of Abnormal Child Psychology*, 37, 749–775.

- Hunt, J. C. (2013). Associations between different parenting styles and child behavior. A dissertation submitted as a requirement for a doctoral degree. *Philadelphia College of Osteopathic Medicine*.
- Jonason, P. K., Foster, J. D., Egorova, M. S., Parshikova, O., Csathó, Á., Oshio, A., & Gouveia, V. V. (2017). The Dark Triad traits from a life history perspective in six countries. *Frontiers in Psychology: Evolutionary Psychology*, 8, 1-6.
- Jonason, P. K., Kaufman, S. B., Webster, G. D., & Geher, G. (2013). What lies beneath the Dark Triad Dirty Dozen: Varied relations with the Big Five. *Individual Differences Research*, 11, 81-90.
- Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2008). The dark triad: Facilitating a short-term mating strategy in men. *European Journal of Personality*, 23, 5-18.
- Jonason, P. K., Lyons, M., & Bethell, E. (2014). The making of Darth Vader: Parent-child care and the Dark Triad. *Personality and Individual Differences*, 67, 30-34.
- Jonason, P. K., & Webster, G. D. (2010). The Dirty Dozen: A concise measure of the Dark Triad. *Psychological Assessment*, 22, 420-432.
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3): A brief measure of dark personality traits. *Assessment*, 21, 28-41.
- Kaufman, S. B., Yaden, D. B., Hyde, E., & Tsukayama, E. (2019). The Light vs. Dark triad of personality: Contrasting two very different profiles of human nature. *Frontiers in Psychology*, 10, 1-26.
- Li, N. P. (2007). Intelligent priorities: Adaptive long-and short-term mate preferences. In G. Geher, & G. Miller (Eds.), *Mating intelligence: Sex, relationships, and the mind's reproductive system* (pp.105-119). Mahwah, NJ: Erlbaum.
- Mousavi, S. E., Low, W. Y., & Hashim, A. H. (2016). Perceived parenting styles and cultural influences in adolescent's anxiety: A cross-cultural comparison. *Journal of Child and Family Studies*, 25, 2102-2110.
- Nettle, D., & Clegg, H. (2008). Personality, mating strategies and mating intelligence. In G. Geher & G. Miller (Eds.), *Mating intelligence: Sex, relationships, and the mind's reproductive system* (pp. 121-135). Mahwah, NJ: Lawrence Erlbaum.
- Oliver, P. H., Guerin, D. W., & Coffman, J. K. (2009, July 01). Big five parental personality traits, parenting behaviors, and adolescent behavior problems: A mediation model.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of Personality. *Journal of Research in Personality*, 36, 556-563.
- Platek, S. M., Burch, R. L., Panyavin, I., Wasserman, B., & Gallup, G. G., Jr. (2002). Children's faces: Resemblance affects males but not females. *Evolution and Human Behavior* 23, 159-166.
- Prinzie, P., Stams, G. J., Deković, M., Reijntjes, A. H., & Belsky, J. (2009). The relations between parents' Big Five personality factors and parenting: A meta-analytic review. *Journal of Personality and Social Psychology*, 97, 351-362.
- Robinson, C. C., Mandleco, B., Olsen, S. F., & Hart, C. H. (2001). The Parenting Styles and Dimensions Questionnaire (PSDQ). In B. F. Perlmutter, J. Touliatos, & G. W. Holden (Eds.), *Handbook of family measurement techniques: Vol. 3. Instruments & index* (pp. 319 - 321). Thousand Oaks: Sage.

- Rothrauff, T. C., Cooney, T. M., & An, J. S. (2009). Remembered parenting styles and adjustment in middle and late adulthood. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 64, 137-46.
- Schmitt, D. P., Alcalay, L., Allensworth, M., Allik, J., Ault, L., Austers, I., Bennett, K. L., Bianchi, G., Boholst, F. Borg-Cunen, M., Braeckman, J., Brainerd, Jr., E. G., Caral, L., Caron, G., Casullo, M. M., Cunningham, M., Daibo, I., De Backer, C., De Souza, E., ... & ZupanEiE, A. (2004). Patterns and universals of adult romantic attachment across 62 cultural regions: Are models of self and of other pancultural constructs? *Journal of Cross-Cultural Psychology*, 35, 367-402.
- Schmitt, D. P., Alcalay, L., Allik, J., Alves, I. C. B., Anderson, C. A., Angelini, A. L., Asendorf, J. B., Austers, I., Balaguer, I., Baptista, A., Bender, S. S., Bennett, K., Bianchi, G., Birashk, B., Bleske-Rechek, A., Boholst, F. A., Boothroyd, L., Borja, T., Bos, A. ... & Brainerd, E. (2017). 'Narcissism and the strategic pursuit of short-term mating: Universal links across 11 world regions of the international sexuality description project-2'. *Psychological Topics*, 26, 89-137.
- Shyny, T. Y. (2017). Construction and validation of PS-FFQ (Parenting Style Four Factor Questionnaire). *International Journal of Engineering Development and Research*, 5, 426-437.
- Thompson, A., Hollis, C., & Richards, D. (2003). Authoritarian parenting attitudes as a risk for conduct problems: Results from a British national cohort study. *European Child & Adolescent Psychiatry*, 12, 84 – 91.
- Volk, T., & Atkinson, J. (2008). Is child death the crucible of evolution? Special Issue: Proceedings of the 2nd Annual Meeting of the NorthEastern Evolutionary Psychology Society. *Journal of Social, Evolutionary and Cultural Psychology*, 2, 247-260.
- Wedberg, N. A. (2016). Partner Insurance: Women may have a backup partner as a mating strategy. Thesis submitted in partial completion of the MA degree in psychology, State University of New York at New Paltz.

APPENDIX

The Parental Analytical Style Scale (PASS)

Using a 100-point budget allocation process, participants allocated points to indicate how much they would likely engage in one of four parental decisions (for 10 hypothetical scenarios). The Parental Analytical Style Scale (PASS) was designed to measure the variety of parenting styles ranging from neglectful, uninvolved, permissive, and authoritarian. These items were given the following framing: *Imagine that you are the parent of a five-year old child. You are only allowed 100 points to allocate to the four items within each scenario. Please indicate how likely you would be to respond in each of the following ways.*

The scenarios used are included below. (Note: For each of these questions in the table, the four parenting styles were represented as follows: 1. *Authoritative* 2. *Authoritarian*, 3. *Permissive*, 4. *Uninvolved*.)

|  |   |
|--|---|
| <p>The child wants an ice-cream cone yet the parent is running late for errands.</p> | <ol style="list-style-type: none"> <li>1. I gently tell him “no” and we head to the car. (authoritative)</li> <li>2. I tell him “absolutely not” You are going to make us really late. (authoritarian)</li> <li>3. I just can’t turn down a good ice cream cone for my kid. (permissive)</li> <li>4. I probably wouldn’t even notice the request. (uninvolved)</li> </ol> |
| <p>The child wants to stay up an hour past their bedtime, on a school night.</p>     | <ol style="list-style-type: none"> <li>1. I explain to him that bedtime is really important so he will feel great tomorrow! So bedtime it is! (authoritative)</li> <li>2. I tell him no and that’s that. (authoritarian)</li> <li>3. What’s one more hour!?! (permissive)</li> <li>4. I’m exhausted too—I can’t even! (uninvolved)</li> </ol>                             |

## Dark Parenting

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| <p>The child wants to play on the computer, but they have yet to clean up their toys in the living room.</p>     | <ol style="list-style-type: none"> <li>1. I explain that after he cleans up his toys, he can go on the computer. (authoritative)</li> <li>2. I tell him that he is not allowed to use the computer for the rest of the day because he didn't clean up his mess. (authoritarian)</li> <li>3. I start the computer for him while I pick up his toys. (permissive)</li> <li>4. Those toys have been there for weeks, so it's no big deal (uninvolved)</li> </ol> |
| <p>The child did not have any dinner, but is now asking for cookies.</p>   | <ol style="list-style-type: none"> <li>1. I explain the importance of good nutrition and tell him no. (authoritative)</li> <li>2. I tell him that he has got to be kidding! No way! (authoritarian)</li> <li>3. One cookie never hurt anyone! (permissive)</li> <li>4. I really don't think it matters what my kid eats. (uninvolved)</li> </ol>  |
| <p>The child wants to have a friend sleep over, but we have to go on a trip at 6:00 in the morning tomorrow.</p> | <ol style="list-style-type: none"> <li>1. I explain that we all need to get up too early, but maybe another time. (authoritative)</li> <li>2. I ask why are you asking this question when you already know that the answer is no!?! (authoritarian)</li> <li>3. Oh, I'll let him have fun with his friend—we'll just have to get up super early. (permissive)</li> <li>4. As long as I don't have to supervise or do anything. (uninvolved)</li> </ol>        |
| <p>The child wants the parent to buy them a toy at the grocery store.</p>  | <ol style="list-style-type: none"> <li>1. We are here to buy groceries, but we can go toy shopping another time. (authoritative)</li> <li>2. I tell her absolutely not, money does not grow on trees! (authoritarian)</li> <li>3. Sure, a new toy will make her happy. (permissive)</li> <li>4. As long as it keeps her out of my hair. (uninvolved)</li> </ol>   |

## Dark Parenting

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| <p>The child refuses to wear a winter jacket even though it is freezing outside.</p>                             | <ol style="list-style-type: none"> <li>1. I explain that she needs the jacket to stay warm, so she has to wear it. (authoritative)</li> <li>2. I tell her that she is not leaving the house until she puts on her jacket. (authoritarian)</li> <li>3. Well, it's her choice—I can bring it to her later. (permissive)</li> <li>4. If she's cold, she's cold. (uninvolved)</li> </ol>                                 |
| <p>The child wants \$5 to play a game at the county fair. I have already spent over \$100 at the fair today.</p> | <ol style="list-style-type: none"> <li>1. I tell her that we've already spent a lot of money at the fair, but that we can play a game later at home. (authoritative)</li> <li>2. Do you have any idea how much money we already spent today?! Definitely not! (authoritarian)</li> <li>3. Sure, what's five bucks?! (permissive)</li> <li>4. Why would someone bring their kids to the fair? (uninvolved)</li> </ol> |
| <p>The child wants me to play a game with her at the same time that I am watching my favorite TV show.</p>       | <ol style="list-style-type: none"> <li>1. I tell her how important this show is to me, but that I will play with her later. (authoritative)</li> <li>2. I tell her that she ought to know better than to bother me during my TV time. (authoritarian)</li> <li>3. I tell her sure and turn off the TV. (permissive)</li> <li>4. If I ignore her enough, she'll get the hint. (uninvolved)</li> </ol>                 |
| <p>The child wants to paint in the carpeted living room.</p>   | <ol style="list-style-type: none"> <li>1. I explain to her how painting is messy and tell her she can paint outside. (authoritative)</li> <li>2. Absolutely not. I don't want her messing up my carpet. (authoritarian)</li> <li>3. Sure, I will just put some newspaper down on the floor. (permissive)</li> <li>4. I don't care what she does, as long as it doesn't involve me. (uninvolved)</li> </ol>           |

*Note:* The presentation of the order within each question was done at random. Also, by random, some items were worded in the masculine (he) and some were worded in the feminine (she). Use of pronouns may be modified by researchers, as appropriate.