

The “Well-Dressed Snake Personality”: An Insight into Narcissistic/Psychopathic Personalities

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Abstract: How many kinds of malevolent characters are out there? In line with Paulhus and Williams (2002) the answer is three, namely the *Dark Triad* of Machiavellianism, Narcissism, and Psychopathy. Dark traits (DT) are associated with emotional deficits, exploitation, immoral strategic thinking, and risky behaviors. All three traits have been largely investigated mainly during the last decades. The purpose of this paper is to provide an overview about the available literature regarding the characteristics of personality traits associated with the DT, by focusing on the main consequences of the DT from a psychopathological and psychiatric perspective. Studies found a strong association between DT traits and several types of negative psychosocial outcomes such as substance use, sexual promiscuity, aggression, and crime. Nevertheless, there is specific literature showing the advantages of scoring high DT traits, for example the assumption of positions of authority over other people, and the expression of low levels of social anxiety. Although the literature mainly focuses on the consequences that DT traits may have for society in general, there is a lack of studies investigating the personal repercussions, in the psychopathological and/or psychiatric dimensions in those individuals scoring high DT traits. Therefore, further research is needed to clarify how the different personality dark traits may interact with each other and modulate not only the individual's life choices but also how and whether DT traits may predispose or not to the onset of a specific psychiatric disorder.

Keywords: Dark triad, Dark tetrad, Machiavellianism, Narcissism, Psychopathy, Sadism.

1. INTRODUCTION

As stated by Kaufman *et al.* [1] “we all have, in us, both a light and a dark side”. Accordingly, during the last decades, many researchers focused on the so-called “dark traits” as features strictly associated with individual's ethically, morally, and socially aversive beliefs and behaviors [2]. One of the most frequently investigated personality constructs is represented by the famous “*Dark Triad*” characterized by the following three core personality features: *i.e.* Machiavellianism, Narcissism and Psychopathy [3]. These traits are associated with a selfish, aggressive and exploitative interpersonal strategy [4]. For many years, dark traits have been only considered as maladaptive personality traits by many psychologists, being associated with undesirable consequences in personal, social and professional life, such as uncertainty of interpersonal relationships, problems with the justice or punishments [5]. However, some studies also focused on the benefits and advantages of these personality traits, such as obtaining immediate rewards, pleasures and a more successful professional life [4-7].

Therefore, the main purpose of the present narrative review is: a) describing the “*Dark Triad*” and

its conceptual evolution, as well as the new concept of the so-called ‘*Dark Tetrad*’; b) investigating the main characteristics of personality traits associated with the Dark Triad and Tetrad; c) evaluating the main consequences of these personality traits from a psychopathological and psychiatric perspective.

2. METHODOLOGY

We carried out a narrative review by searching through PubMed/Medline using the following keyterms: “*Dark Triad*” [Title/Abstract] AND “*Dark Tetrad*” [Title/Abstract]. The search strategy initially found 298 relevant papers. Two authors screened all relevant papers according to the main abovementioned objectives of the present narrative review, taking into account a set of inclusion and exclusion criteria. All full-text English written papers (including cohort studies, RCTs, meta-analyses, systematic reviews) describing the dark triad and dark tetrad, investigating the main characteristics of personality and/or psychopathological features associated with the dark triad and/or dark tetrad were screened. Furthermore, all relevant references of each retrieved articles were screened for the review. Conference abstracts, case reports and/or case series, and editorials were excluded. All papers published between January 2009 and March 2022 were included.

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3. RESULTS

3.1. The Dark Triad of Personality and Its Evolution

The concept of the "Dark Triad of personality" (DT) was firstly introduced by Paulhus and Williams, for indicating three distinct but related sub-clinical personality traits: Machiavellianism, Narcissism and Psychopathy [3]. These personality traits share a set of core behaviors which include a callous-manipulation, aggression and violence, strong motives for self-enhancement, counterproductive and coercive behaviors in the workplace, a heartless "love style" characterized by high levels of infidelity, and the preference for "one-night stands" and "friends-with benefits" [3, 8-11].

However, despite the overlap between these traits, each trait appears to have its own peculiarities. For example, psychopathy is more related to higher levels of aggressiveness and impulsivity, dishonesty and a drive towards antisocial behavior [12, 13]. Machiavellianism is more associated with manipulation and insincerity [3, 14]. While narcissism is much more characterized by dominance, feeling of superiority and egocentric attitude [3]. Among these undesirable outcomes, researchers have also found emotional deficits such as anxiety or low empathy associated with the three DT traits [15-17] as well as difficulty in regulating mood and depressive symptoms [18].

However, most of the research on DT focused on the negative consequences that these traits may have for the society, in general, while little importance has been assigned to the negative emotional consequences that individuals with high DT may suffer [13, 18]. Recently, scholars have added to the original Paulhus and Williams' construct, the fourth trait of *everyday sadism*, so that the 'Dark Triad' personality becomes the 'Dark Tetrad' [19]. Everyday sadism mainly refers to individuals who have dispositional tendencies to develop fantasies about, watch or directly inflict psychological and/or physical pain and humiliation to others, whilst taking pleasure from their suffering [20-21].

Under particular circumstances, traits associated with the Dark Tetrad may be adaptive. In fact, psychopathic traits can facilitate guilt-free executive decision-making by practitioners such as lawyers, businessmen and politicians [22]. Machiavellians may be functional in complex social groups, by guiding the individual to serve as leaders, by involving as well as motivating others if they see a definite strategic profit to themselves [23]. Narcissism may help in resisting to

negative feedbacks and maintaining positive self-beliefs in the face of unexpectedly low performance [24]. While everyday sadism may reflect the satisfaction of achieving dominance and may represent an adaptation mechanism [25].

3.1.1. Machiavellianism

The term Machiavellianism derives from Niccolò Machiavelli, a 16th century Florentine writer, historian, and politician, who wrote "*The Prince*", a theoretical discussion on accumulating and exercising political power [8]. In his famous critical essay, Machiavelli remarked the importance of pragmatism, emotional distance, and manipulative influence tactics to achieve and maintain political power [23]. Almost 500 years later, Machiavelli's book became the base for academic research on the concept of Machiavellianism [26], a personality profile defined by four constants traits: the inclination to ignore ethical standards in service of self-oriented outcomes (*amoral manipulation*), a cynical outlook on the motivations and intentions of others (*distrust of others*), a necessity to dominate interpersonal situations and minimize the capacities of others (*desire for control*), and a strong aspiration to acquire extrinsic indicators of career success (*desire for status*) [27, 28].

Machiavellian policies are justified by their efficacy with the famous expression "*the end justifies the means*" [29]. Given these inclinations, it is generally accepted that Machiavellians will inevitably carry on their own selfish interests at the expense of others and the organizations in which they reside [27]. However, Machiavellianism should be always considered as a quantitative trait. In fact, everyone may be potentially capable of manipulative behaviors, but some are more inclined and able to do it compared to others [30].

3.1.2. Psychopathy

"Psychopath" is a term used by the layperson to relate to a large variety of people, from criminals to businessmen who privileges profits over ethics, but the fundamental principle is that psychopaths cause damage to everyone [31]. Psychopathy has been also defined as a "*pathological condition consisting of enduring deviant behavior in combination with emotional detachment*" [32]. In fact, research linked psychopathy to emotional deficits, such as a deficiency of impulse control [33], low empathy [34], and deficits in moral expressions [35]. It is important to underline that despite the constructs of psychopathy and antisocial personality disorder have often been used indifferently, they are not equivalent [32]. While the antisocial

disorder only comprises a part of psychopathy, the psychopathy is also characterized by alterations in the emotional and affective sphere [17]. People with psychopathic traits have deficits in the capacity to identify and understand the emotions of others [36], especially show impairments in recognizing sad and fearful facial expressions [37]. In addition, they have deficits in moral emotions such as indifference to situations that create feelings of shame and discomfort [38].

In order to reconcile different historical conceptions of psychopathy, the Triarchic Model was developed by Patrick and Drislane [39], which proposes that psychopathy should incorporate three distinct but intersecting symptomatic and phenotypic concepts (*i.e.*, disinhibition, boldness, and meanness) [39]. Disinhibition implicates impulsiveness, hostility, suspicion, and difficulties in regulating emotion. The boldness indicates the tendency toward confidence and social assertiveness, emotional resilience, and audaciousness [39]. Meanness implies a deficient empathy, lack of affective capacity, contempt toward others, predatory exploitation, and empowerment through cruelty or destructiveness.

Furthermore, psychopathy has been demonstrated to have a neurobiological basis, as documented by several neuroimaging studies [40-42]. In particular, psychopathy has been associated with structural and functional neural abnormalities [42-44]. Psychopathic individuals have a decreased amygdala activity during aversive conditioning, facial emotion recognition and moral judgment [45-47]. Amygdala volume reductions and surface distortions have also been observed in psychopathic individuals [48, 49]. A region closely interconnected with the amygdala, the ventromedial prefrontal cortex, also displays a reduced activity during moral judgment and a reduced volume [50, 51]. Moreover, psychopathic individuals also have a heightened sensitivity to rewards and sensation-seeking behaviors, which have been linked to an increased volume and activity in the striatum [52]. Increased volume and activity in the striatum may contribute to psychopathic individual's impulsive behavior [52].

3.1.3. Narcissism

The term Narcissism originates from the Greek mythological figure of *Narcissus*, a young male hunter who was so absorbed by his own beauty and greatness that he arrogantly unappreciated the attention and love of others [3]. In this original Greek form, narcissism

reflected a conception and presentation of oneself as superior and deserving of admiration and special treatments [3].

However, not all individuals with narcissism solely display a grandiose sense of self [53]. In fact, although systematic research on narcissism has been conducted for over 100 years, researchers only recently tried to distinguish between two different narcissism varieties: *i.e.*, the grandiose (namely 'overt') and the vulnerable (namely 'covert') narcissism [53, 54]. In both forms the individual strongly believes that he/she has a special "*uniqueness and superiority*", displays high levels of self-love, a strong sense of entitlement, and poses a greater emphasis on self-serving bias [55]. However, there are also considerable differences between grandiose and vulnerable narcissism that emphasize the dual nature of this personality trait [56]. The grandiose narcissism discloses a high self-esteem level and a low tolerance to criticism, an unrealistic sense of superiority, as well as admiration seeking, arrogance and a tendency to depreciate others' behaviors [53-54]. Contrarily, the individual with a vulnerable narcissism presents a low self-esteem, hypervigilance, social withdrawal and emotional hypersensitivity, as well as introversion and self-devaluation [54, 57]. The individual with vulnerable narcissism often is led towards a frustration of narcissistic needs due to the constant need for admiration, approval and success which may induce to the development of homicidal and/or suicidal ideation, parasuicidal conduct, and suicide attempts [58].

3.1.4. Everyday Sadism

Sadism indicates the tendency to "*inflict pain and humiliation on others to assert dominance and power, or for the purposes of pleasure and enjoyment*" [59]. Overall, research on sadism mainly focuses on sexual sadism [60]. Sexual sadism also occurs at subclinical levels, for instance in a preference for BDSM (bondage-discipline, domination-submission, and sadomasochism), a sexual inclination towards looking for pleasure from their own or another's pain [61].

However, not all sadism is merely sexual [19]. Non-sexual, subclinical sadism has been named '*everyday sadism*' which reflects the cruelty in everyday life, for example preferring watching violence on movies, gaining pleasure from viewing fight sports involving humans or animals, and so forth [62]. Individuals who exhibit "everyday sadism" behaviors gain a greater pleasure from killing bugs and are even disposed to work for the opportunity to hurt "innocent" people [62].

Moreover, everyday sadism is linked with augmented bullying behavior such as internet trolling [62, 63] and a predilection for playing violent video games [64, 65]. Furthermore, everyday sadists, compared to non-sadists, usually experience more pleasure while causing harm, and the grade of pleasure is positively correlated with increased severity of injury [22].

3.2. The Psychopathological and Psychiatric Correlates of the Dark Triad

A wide variety of behavioral and psychosocial alterations in individual, interpersonal, working and academic functioning has been described among subjects who display one or more traits belonging to the Dark Triad [8, 18, 66, 67]. In fact, it is necessary to evaluate not only the consequences that DT traits may have for society in general, such as exploitative behavior, antisocial behavior or higher levels of aggressiveness and impulsivity that these individuals may manifest, but also the personal consequences that may affect individuals with high DT scores [18]. For ease, here we discuss them according to six main domains: addictive behaviors, depressive symptoms, risky and antisocial behaviors, behavioral alterations in the workplace, intimate relationships, and behavioral alterations during the COVID-19 pandemic.

3.2.1. Dark Triad and Addiction

The Dark Triad of personality attracted enormous research interest in the past decades in the field of addictions. In particular, the addictive behaviors in the subjects who presented one or more traits belonging to the Triad, were studied in the light of alteration of affect regulation mechanism, which is more noticeable in narcissism, as well as inhibitory deficit, an assumed mechanism in psychopathy [68]. Among the three traits, narcissism and psychopathy are those which mainly exhibit an association with substance use [66]. Grandiose narcissism is related with substance use, notably alcohol, in nonclinical samples [66, 69] and it has been mostly represented in individuals with substance use disorder [70]. Similarly, vulnerable narcissism is also related to substance use in nonclinical samples [69]. Grandiose narcissism forecasts drinking addiction independently of impulsivity, which indicates that other mechanisms might be important [71]. This becomes more evident when grandiosity is associated with vulnerability, for which augmented feelings of shame explain the association with the conduct of abuse [69].

Beyond substance-related behaviors, grandiose narcissism is associated with a social media addiction

[71, 72], compulsive working [73], compulsive smartphone use [74], compulsive buying [75], and pathological gambling [76]. Grandiose narcissism is associated with an additive Facebook usage through the necessity to be admired by the other users [77]. The presumed mechanism mediating substance-related and non-substance related addictive behavior in narcissism are identified in self-regulatory functions, particularly in the stability of self-esteem, which is high but unstable in grandiose narcissism [78], and low in vulnerable narcissism [79].

The association between Machiavellianism and addictive behavior is still unclear [68]. Available studies are few and investigate much more the association between Machiavellianism and a problematic internet use rather than other substance use disorders [80, 81]. In one study, Machiavellianism is higher in cocaine users compared to cocaine-naïve controls [82].

While psychopathic traits are related with substance use and addiction in forensic populations [83, 84] and also in the general population [85]. The mechanism through which psychopathic traits determine substance use and addiction, is mainly related to the increased sensation seeking and a decreased inhibitory control associated with psychopathology [66, 83]. Unlike narcissism, there is limited evidence for substance use and addiction as secondary to the impaired affect regulation experienced by psychopathic individuals, by confirming clinical data which demonstrate an association between psychopathic traits and lower levels of stress and anxiety compared to narcissistic personalities [86, 87]. Psychopathic traits are also associated with non-substance related addictive behaviors such as problematic social media and internet use [81] as well as problematic gambling in the general population [88, 89].

3.2.2. Dark Triad and Depressive Symptoms

Several studies examined the relationship between depression and all of three DT personality traits separately [90-92]. Regarding psychopathy, there is an open discussion related to its relationship with depression, as some authors consider both constructs to be reciprocally exclusive [93]. This is due to the fact that psychopathy is reputedly an activating disorder and, in contrast, depression is included among the inhibiting disorders [18]. Research analyzing the relationship between depressive symptoms and psychopathy found extremely variable and heterogeneous findings. While some studies found a negative relationship between depression and psychopathy (Stalenheim and Von Knorring, 1996),

others reported a positive relationship [18, 90, 94]. Regarding Machiavellianism, there are some contrasting even though more consistent findings demonstrating a positive relationship between machiavellianism and depression [15,18]. Al Aïn *et al* [15] found a positive association between the total score on the Machiavellianism IV scale (MACH IV) and the total score at the Beck Depression Inventory II (BDI-II) [15]. The Machiavellian concept is primarily characterized by the emotional indifference that is usually observed in people who suffer from depression [95]. Moreover, Machiavellianism is associated with anhedonia or the incapacity to feel pleasure, a symptom that is frequently found in depressive disorders [96]. Individuals with high levels of narcissism and a good social support, are considered to be protective towards the development of a mood disorder [18, 97]. Coherently, several research studies demonstrated no apparent relationship between narcissism and depression [16, 18]. However, suicidal ideation and risk is not rare in individuals with narcissism traits, even though the wish to kill oneself can also emerge without the presence of a clinically relevant depressed state [98, 99]. Within this context, suicidal ideation and feelings usually may grow out as a consequence of the desperate need to regulate own's self-esteem and protect a pathological self-image of perfection [99]. Furthermore, an acute narcissistic injury can produce an intense shame to the individual to drive him/her towards the suicide as the only considered option to escape from these negative feelings [99].

3.2.3. Dark Triad, Risky Behaviors, Antisocial and Criminal Behaviors

The main psychopathological core symptoms of the dark personalities lead to an increase in risk-taking activities and behaviors [29, 100]. The Dark Triad is positively associated with risk involvement and negatively associated with risk perception [101]. Studies found a strong association between DT traits and the tendency to take financial hazard [102], disposition toward risky driving [103], health-risk activities, such as substance use and sexual promiscuity [68, 104], deviant behaviors, such as aggression [105, 106], bullying, cyberbullying [107, 108], and crime [109]. Studies demonstrated that psychopathy and narcissism represent the most harmful dark factors in relation to risky activities [29, 100], contrarily to Machiavellianism [29]. Narcissistic traits are significantly present in a large sample of violent offenders and seems to be positively associated with any criminal behaviors [110, 111]. Grandiose narcissism is related with both forms of aggression,

reactive and proactive; while vulnerable narcissism is only associated with reactive aggression [112, 113]. Moreover, individuals with higher levels of grandiose narcissism may have disproportionate self-confidence in their aptitudes and may take riskier behaviors [114], probably due to their overly active reward-oriented system [115]. In addition, individuals with higher levels of grandiose narcissism may focus more on positive outcomes and seem to not estimate situations in a realistic way [116]. However, there is also contrasting evidence suggesting that individuals with high narcissistic vulnerability are more likely to exhibit aggressive behavior than individuals with high levels of grandiosity [58, 117]. In fact, it seems that the fragmented sense of the self and the desperate need for external estimation may predispose individuals with higher levels of vulnerable narcissism to suffer shame about their needs and an uncontrolled anger towards those who usually experience some fragility, by promoting aggressive behavior [117].

Psychopathic individuals are more likely than Machiavellians and narcissists to have faced the justice system [101]. It should be noted that most studies on psychopathy essentially involved criminals and this may partly justify the fact that most people who express psychopathic traits are known as bullies, sexual offenders, or killers [8]. However, the aggressive behavior manifested by psychopathic individuals is not merely unidimensional. In fact, some violent acts may be clearly premeditated or proactive or cold-blooded, whereas others may appear to lack premeditation or even not have a clear motivation (reactive aggression or hot-blooded) [118]. Most empirical evidence suggested that psychopathy usually is moderately-to-strongly associated with both reactive and proactive aggression [119, 120] although few studies reported a stronger association between psychopathy and proactive, rather than reactive, aggression [121]. According to Garofalo *et al* [120], emotion dysregulation may also play a significant, not yet exclusive, role in explaining the association between psychopathy and aggression.

3.2.4. Dark Triad and Workplace Behaviors

There is an increasing interest in the role of DT at workplaces, mainly due to the associated costs for individuals and organizations, resulting from negative/harmful behaviors and attitudes of subjects expressing one or more DT traits [7, 122]. Conversely, individuals with DT traits may also possess great capabilities and efficiency in negotiational activities, lower levels of stress and anxiety which may predispose them to be more resistant and resilient at

work, and a greater predilection for jobs with a greater responsibility [123]. Wille *et al.* [124] analyzed the association between DT traits and the level of career success, by demonstrating how narcissistic traits were more positively related with a hierarchical position and a financial realization, compared to those individuals without DT traits. Hirschi and Jaanssch [125] indicated that narcissists earn higher salaries and are more pleased with their professional careers. This might also be clarified by the high self-worth of narcissists, which is related to high self-esteem and high self-efficacy opinions, that are positively associated with objective and subjective career success [126].

Individuals with high Machiavellianism levels have the willingness and the ability to manipulate and exploit others, and this can lead them to assume positions of high responsibility and authority over other people [127]. Although it was shown that Machiavellianism is associated with a diminished work organization, and team commitment [128], along with a tendency to be considered as abusive by subordinates [129]. As a consequence of characteristics such as impulsivity, emotional superficiality, and lack of remorse, psychopaths have diminished levels of social responsibility and can adversely affect productivity [130]. Psychopathy is positively related to severe forms of counterproductive work behavior and is the strongest negative predictor of job performance among the Dark Triad traits [122]. However, it was recognized that traits associated with psychopathy could probably be favorable in the workplace for multiple reasons [32]. Firstly, some characteristics of psychopathy, such as charm and self-confidence, may be advantageous in the social context of work [131]. Secondly, leaders who are fearless and audacious can be useful both for their subjects and the organization [132]. Thirdly, there are specific jobs which may benefit from some traits associated with psychopathy, such as fearlessness and low reactivity to stress, such as in the military or police workplace [133]. From these above described considerations mainly derives the concept of "successful psychopaths" or "Snakes in suits" [134].

3.2.5. Dark Triad and Intimate Relationships

The Dark Triad has consistently been found to be related to interpersonal dysfunction within intimate relationships [135-137]. Such dysfunctional patterns towards partners have involved: controlling and vindictive behaviours, stalking behaviours and interpersonal violence, a callous/cold-hearted, self-seeking and dominant attitude, and the tendency to create short-term relationships [135, 138]. All the DT

traits are associated with callousness and manipulative behaviours, so individuals high on the DT are often seen as toxic and antagonistic in intimate relationships [137]. Jonason and Kavanagh [139] found that individuals who scored high on DT traits had *ludus* and *pragma* love styles. A *ludus* love style describes a game-playing mating strategy, where the individuals seek to play "the game of love" with multiple partners [139]. A *pragma* love style describes a cerebral mating strategy, where the individuals "think with their head rather than their heart" [139]. Moreover, the DT was positively associated with a preference for short-term relationships, "one-night stands", "friends with benefits", "booty-calls", and negatively correlated for serious romantic relationships [11, 137]. In line with this, DT is associated with dating several individuals at the same time and higher levels of infidelity [11, 137]. According to McHoskey [140] a romantic relationship is an "ideal environment" for the realization of Machiavellian manners because Machiavellian individuals seek out new sexual experiences through intimidation and humiliation with destructive relational strategies and low levels of intimacy and commitment [138, 140]. Psychopathic traits such as low level of empathy and deficiency of impulse control, disrupt the formation of romantic relationships and limit their duration [137]. Furthermore, among all the three elements of the DT, psychopathy is the one that appears to be most associated with Intimate Partner Violence (IPV) that can be expressed as psychological, physical or sexual abuse towards intimates [141]. Narcissist create good first impressions as they are self-confident about their attractiveness [136, 137]. Indeed, problems do not usually occur at the beginning of the relationship. Narcissist may try to evoke jealousy or other unpleasant feelings in their partners, to try to punish and control them, often creating a relationship based on uncertainty [137].

3.2.6. The Roles of Dark Triad Traits during the COVID-19 Pandemic

Recently, researchers have begun identifying personality traits that may be more susceptible to current Covid-19 conspiracy beliefs [142], and how these beliefs are linked with a low adherence to medical guidelines [67], including negative relations between Covid-19 conspiracy beliefs and reluctance to Covid-19 vaccine [67]. Hughes and Machan [143], investigated the association between DT traits and conspiracy beliefs and their mediating role in disseminating conspiracy theories [143]. Machiavellianism and primary psychopathy emerged as stronger positive predictors of general and Covid-19 conspiracy beliefs, whereas narcissism positively

predicted Covid specific conspiracy beliefs only [143]. Nowak *et al* [144] conducted a study on a Polish community sample (N=755), by measuring DT Traits and health beliefs about the COVID-19 virus, by demonstrating that participants with DT traits were those less likely to be engaged in preventive behaviours.

DISCUSSION

DT traits are associated with several types of negative psychosocial outcomes and these results are not surprising because the dark traits themselves are partly included in those characteristics typical of individuals who manifest some type of malevolent and/or antisocial behavior. Overall, studies found a strong association between DT traits and the tendency to take financial hazard [102], disposition toward risky driving [103], health-risk activities, such as substance use and sexual promiscuity [68, 104], aggression [105, 106], bullying, cyberbullying [107, 108], and crime [109]. Nevertheless, there is specific literature showing the advantages of scoring high DT traits. In fact, since the three DT traits are associated by an emotionally cold interpersonal behavior, most studies more specifically focus on interpersonal topics, such as workplace behavior [123, 127]. Individuals with high Machiavellianism or Narcissistic levels generally assume positions of high responsibility and authority over other people, also due to their capabilities and efficiency in negotiational activities, lower levels of stress and anxiety [123, 127]. Psychopathy is positively related to severe forms of counterproductive work behavior, due to characteristics such as impulsivity or emotional superficiality [122, 130]. However, it was recognized that traits such as charm and self-confidence, fearlessness and low reactivity to stress could probably be favorable in the workplace [32]. Conversely, few studies are available specifically investigating the personal consequences that may affect individuals with high DT scores, being most of these which focus on the increased risk of depressive episodes or suicidal behaviors [18, 99].

Despite the abovementioned findings, our comprehensive review clearly underlines the lack of methodologically and homogeneous studies in this field, both regarding the consequences of DT traits in the society/workplace/academic environment and so forth, and in the psychopathological and/or psychiatric dimensions in those individuals scoring high DT traits. Therefore, several limitations should be taken into account in retrieving data here retrieved. Firstly, most of the studies explore the DT traits by using self-

reported questionnaires which do not ensure to adequately identify those negative traits and/or behaviours which are usually under-reported by individuals, particularly those who are more prone to simulate to others [145]. However, even though semi-structured interviews are also available rather than self-report measures, it is not always easy to find collaborative individuals. Moreover, some of these assessment tools do not necessarily assess all three DT traits. Therefore, it would be helpful to carry out studies which have more specific evaluation scales or which collect data in a mixed manner (*i.e.*, a screening tool by using self-report scales and a confirmatory tool by using a semi-structured interview). Secondly, most studies have mainly cross-sectional design, hence, do not allow to monitor whether these DT traits may change over the time, due to an investigation, a protective factor, and so forth. It would be helpful to carry out longitudinal studies exploring also all potential risky and protective factors, evaluating whether there is a change over the time of DT traits in that individual and whether experimental interventions could improve them, also in terms of psychosocial outcomes. Thirdly, many of the studies available are based on small sample sizes, mainly coming from forensic settings. Moreover, most studies mainly are addressed to identify antisocial and psychopathy traits, rather than all three components of DT. Finally, really few studies specifically address a clinical sample of psychiatric patients, by identifying (if any) DT traits are concomitant to the psychiatric illness or whether DT traits may predispose to the onset of a specific psychiatric disorder or may be protective by some psychiatric onset. Therefore, further studies should also investigate DT traits also in the clinical samples.

Overall, further research directions should better evaluate how subjects, who have one or more personality traits belonging to the Dark Triad, are influenced by these personality traits in the management of daily life, socio-personal-working functioning as well as in a more predisposition in the development of psychiatric disorders.

CONCLUSIONS

The malevolent side of human essence holds a special attraction to many people. Scholars, physicians, and also lay people have shown great curiosity in understanding what drives individuals to be involved in criminal, antisocial and apparently immoral behaviors. Stable personality inclinations towards socially and ethically aversive behaviors are usually under the umbrella terms “dark” personality traits [3]. The “Dark

Triad" construct represents one of the most investigated within this field [3]. The DT personalities share some common features, such as competitiveness, manipulateness, socioemotional deficits, interpersonal difficulties, and an increased risk for aggression and delinquency.

Overall, Narcissism, Machiavellianism, and psychopathy represent the malevolent side of human nature and thus are intrinsically maladaptive. However, DT traits may also confer some benefits to the individual. For example, narcissism is positively related to higher salary, Machiavellianism is positively related to leadership position or career satisfaction, and psychopathy is positively related to fearless behavior. Nevertheless, the maladaptive characteristics predominate over the adaptive ones. This is also due to the fact that personality traits are dimensional in nature and this dimensionality implies a continuum between nonclinical expressions of narcissism, Machiavellianism, and psychopathy. Most of the research included clinical or forensic samples and this may have limited the identification of a possible "bright side" of the Dark Triad construct. Although we have emphasized the distinctiveness of Dark Triad traits, it is important to underline that some individuals possess more than one of the DT traits. Further research is needed to identify how the different traits interact with each other and modulate the behavior as well as the life choices of the individuals who present them.

REFERENCES

- [1] Kaufman, S. B., Yaden, D. B., Hyde, E., & Tsukayama, E. The Light vs. Dark Triad of Personality: Contrasting Two Very Different Profiles of Human Nature. *Frontiers in psychology* 2019; 10: 467. <https://doi.org/10.3389/fpsyg.2019.00467>
- [2] Moshagen, M., Hilbig, B. E., & Zettler, I. The dark core of personality. *Psychological Review* 2018; 125(5): 656-688. <https://doi.org/10.1037/rev0000111>
- [3] Paulhus, D. L., & Williams, K. M. The Dark Triad of Personality: Narcissism, Machiavellianism, and Psychopathy. *Journal of Research in Personality* 2002; 36: 556-563. [https://doi.org/10.1016/S0092-6566\(02\)00505-6](https://doi.org/10.1016/S0092-6566(02)00505-6)
- [4] Ozer, D.J. and Benet-Martinez, V. "Personality and the prediction of consequential outcomes". *Annual Review of Psychology*, 2006; 57, 401-421. <https://doi.org/10.1146/annurev.psych.57.102904.190127>
- [5] Pilch, I. As cold as a fish? Relationships between the Dark Triad personality traits and affective experience during the day: A day reconstruction study. *PLoS One* 2020; 15(2): e0229625. <https://doi.org/10.1371/journal.pone.0229625>
- [6] Jonason PK, Li NP, Buss DM. The costs and benefits of the Dark Triad: Implications for mate poaching and mate retention tactics. *Pers Individ Dif* 2010; 48: 373-378. <https://doi.org/10.1016/j.paid.2009.11.003>
- [7] Jonason PK, Webster GD, Schmitt DP, Li NP, Crysel L. The antihero in popular culture: Life history theory and the dark triad personality traits. *Rev Gen Psychol* 2012; 16: 192-199. <https://doi.org/10.1037/a0027914>
- [8] Furnham A, Richards SC, Paulhus DL. The Dark Triad of personality: a 10 year review. *Soc Pers Psychol Compass* 2013; 7(3): 199-216. <https://doi.org/10.1111/spc3.12018>
- [9] Jonason PL, Wee S, Norman P, Jackson C. Occupational niches and the Dark Triad traits. *Pers Individ Differ* 2014; 69: 119-123. <https://doi.org/10.1016/j.paid.2014.05.024>
- [10] Spurr D, Keller AC, Hirschi A. Do Bad Guys Get Ahead or Fall Behind? Relationships of the Dark Triad of Personality With Objective and Subjective Career Success. *Soc Psychol Pers Sci* 2015; 7(2): 113-121. <https://doi.org/10.1177/1948550615609735>
- [11] Koladich SJ, Atkinson BE. The dark triad and relationship preferences: A replication and extension. *Pers Individ Differ* 2016; 94: 253-255. <https://doi.org/10.1016/j.paid.2016.01.023>
- [12] Hare RD, Neumann CS. Structural models of psychopathy. *Curr Psychiatry Rep* 2005; 7: 57-64. <https://doi.org/10.1007/s11920-005-0026-3>
- [13] Kennealy PJ, Skeem JL, Walters GD, Camp J. Do core interpersonal and affective traits of PCL-R psychopathy interact with antisocial behavior and disinhibition to predict violence? *Psychol Assess* 2010; 22(3): 569-580. <https://doi.org/10.1037/a0019618>
- [14] Brewer G, Abell L. Machiavellianism, Relationship Satisfaction, and Romantic Relationship Quality. *Eur J Psychol* 2017; 13(3): 491-502. <https://doi.org/10.5964/ejop.v13i3.1217>
- [15] Al Ain S, Carré A, Fantini-Hauwel C, Baudouin JY, Besche-Richard C. What is the emotional core of the multidimensional Machiavellian personality trait? *Front Psychol* 2013; 4: 454. <https://doi.org/10.3389/fpsyg.2013.00454>
- [16] Jonason PK, Kroll CH. A multidimensional view of the relationship between empathy and the Dark Triad. *J Individ Diff* 2015; 36(3): 150-156. <https://doi.org/10.1027/1614-0001/a000166>
- [17] Megías A, Gómez-Leal R, Gutiérrez-Cobo M.J, Cabello R, Fernández-Berrocal P. The relationship between trait psychopathy and emotional intelligence: A meta-analytic review. *Neurosci Biobehav Rev* 2017; 84: 198-203. <https://doi.org/10.1016/j.neubiorev.2017.12.003>
- [18] Gómez-Leal R, Megías-Robles A, Gutiérrez-Cobo MJ, Cabello R, Fernández-Abascal EG, Fernández-Berrocal P. Relationship between the Dark Triad and depressive symptoms. *PeerJ* 2019; 7: e8120. <https://doi.org/10.7717/peerj.8120>
- [19] Meere M, Egan V. Everyday sadism, the Dark Triad, personality, and disgust sensitivity. *Pers Individ Differ* 2017; 112: 157-161. <https://doi.org/10.1016/j.paid.2017.02.056>
- [20] Kowalski CM, Di Pierro R, Plouffe RA, Rogoza R, Saklofske DH. Enthusiastic Acts of Evil: The Assessment of Sadistic Personality in Polish and Italian Populations. *J Pers Assess* 2019; 102(6): 770-780. <https://doi.org/10.1080/00223891.2019.1673760>
- [21] Lui LF, Sassenrath C, Pfafftheicher S. When is your pain my gain? The use of perspective taking by everyday sadists. *Pers Individ Differ* 2020; 167: 110213. <https://doi.org/10.1016/j.paid.2020.110213>
- [22] Lasko EN, Chester DS. What makes a "successful" psychopath? Longitudinal trajectories of offenders' antisocial behavior and impulse control as a function of psychopathy. *Pers Disor: Theory Res Treat* 2021; 12(3): 207-215. <https://doi.org/10.1037/per0000421>
- [23] Castille CM, Buckner JE, Thoroughgood CN. Prosocial Citizens Without a Moral Compass? Examining the

- Relationship Between Machiavellianism and Unethical Pro-Organizational Behavior. *J Bus Ethics* 2016; 149: 919-930.
<https://doi.org/10.1007/s10551-016-3079-9>
- [24] Twenge JM, Campbell WK. "Isn't It Fun to Get the Respect That We're Going to Deserve?" Narcissism, Social Rejection, and Aggression. *Pers Soci Psychol Bul* 2003; 29(2): 261-272.
<https://doi.org/10.1177/0146167202239051>
- [25] Neil V. Cruelty's rewards: The gratifications of perpetrators and spectators. *Behav Brain Sci* 2006; 29(3): 211-224.
<https://doi.org/10.1017/S0140525X06009058>
- [26] Christie R, Geis FL. *Studies in Machiavellianism*. New York: Academic Press. 1970.
<https://doi.org/10.1016/B978-0-12-174450-2.50006-3>
- [27] Dahling JJ, Whitaker BG, Levy PE. The development and validation of a new Machiavellianism scale. *J Manage* 2009; 35(2): 219-257.
<https://doi.org/10.1177/0149206308318618>
- [28] Wu J, Lebreton JM. Reconsidering the dispositional basis of counterproductive work behavior: The role of aberrant personality. *Pers Psychol* 2001; 64(3): 593-626.
<https://doi.org/10.1111/j.1744-6570.2011.01220.x>
- [29] Crysel LC, Crosier BS, Webster GD. The Dark Triad and risk behavior. *Pers Individ Differ* 2013; 54: 35-40.
<https://doi.org/10.1016/j.paid.2012.07.029>
- [30] Wilson DS, Near D, Miller RR. Machiavellianism: a synthesis of the evolutionary and psychological literatures. *Psychol Bull* 1996; 119(2): 285-99.
<https://doi.org/10.1037/0033-2909.119.2.285>
- [31] Polaschek DLL. (Mis)understanding Psychopathy: Consequences for Policy and Practice with Offenders. *Psychiatr Psychol Law* 2015; 22: 500-519.
<https://doi.org/10.1080/13218719.2014.960033>
- [32] Sutton A, Roche M, Stapleton M, Roemer A. Can Psychopathy Be Adaptive at Work? Development and Application of a Work Focused Self-and Other-Report Measure of the Triarchic Psychopathy Model. *Int J Environ Res Public Health* 2020; 17(11): 3938.
<https://doi.org/10.3390/ijerph17113938>
- [33] Kiehl KA. A cognitive neuroscience perspective on psychopathy: evidence for paralimbic system dysfunction. *Psychiatry Res* 2006; 142: 107-128.
<https://doi.org/10.1016/j.psychres.2005.09.013>
- [34] Montagne B, Van Honk J, Kessels RPC, Frigerio E, Burt M, Van Zandvoort MJE, Perrett DI, De Haan EHF. Reduced efficiency in recognising fear in subjects scoring high on psychopathic personality characteristics. *Pers Individ Differ* 2005; 38: 5-11.
<https://doi.org/10.1016/j.paid.2004.02.008>
- [35] Blair RJR. Responding to the emotions of others: dissociating forms of empathy through the study of typical and psychiatric populations. *Conscious Cognit* 2005; 14: 698-718.
<https://doi.org/10.1016/j.concog.2005.06.004>
- [36] Visser BA, Bay D, Cook GL, Myburgh J. Psychopathic and antisocial, but not emotionally intelligent. *Pers Individ Differ* 2010; 48: 644-648.
<https://doi.org/10.1016/j.paid.2010.01.003>
- [37] Bird G, Viding E. The self to other model of empathy: providing a new frame-work for understanding empathy impairments in psychopathy, autism, and alexithymia. *Neurosci Biobehav Rev* 2014; 47: 520-532.
<https://doi.org/10.1016/j.neubiorev.2014.09.021>
- [38] Morrison D, Gilbert P. Social rank, shame and anger in primary and secondary psychopaths. *J Forens Psychiatry Psychol* 2001; 12: 330-356.
<https://doi.org/10.1080/09585180110056867>
- [39] Patrick CJ, Drislane LE. Triarchic Model of Psychopathy: Origins, Operationalizations, and Observed Linkages with Personality and General Psychopathology. *J Pers* 2015; 83(6): 627-43.
<https://doi.org/10.1111/jopy.12119>
- [40] Santana EJ. The Brain of the Psychopath: A Systematic Review of Structural Neuroimaging Studies. *Psychol Neurosci* 2016; 9(4): 420-43.
<https://doi.org/10.1037/pne0000069>
- [41] Griffiths SY, Jalava JV. A comprehensive neuroimaging review of PCL-R defined psychopathy. *Aggress Violent Behav* 2017; 36: 60-75.
<https://doi.org/10.1016/j.avb.2017.07.002>
- [42] Pujol J, Harrison BJ, Contreras-Rodriguez O, Cardoner N. The contribution of brain imaging to the understanding of psychopathy. *Psychol Med* 2019; 49(1): 20-31.
<https://doi.org/10.1017/S0033291718002507>
- [43] Deming P, Koenigs M. Functional neural correlates of psychopathy: a meta-analysis of MRI data. *Transl Psychiatry* 2020; 10: 133.
<https://doi.org/10.1038/s41398-020-0816-8>
- [44] Johanson M, Vaurio O, Tiihonen J, Lähteenhuo M. A Systematic Literature Review of Neuroimaging of Psychopathic Traits. *Front Psychiatry* 2020; 6: 10-27.
<https://doi.org/10.3389/fpsy.2019.01027>
- [45] Gordon HL, Baird AA, End A. Functional differences among those high and low on a trait measure of psychopathy. *Biol Psychiatry* 2004; 56: 516-521.
<https://doi.org/10.1016/j.biopsych.2004.06.030>
- [46] Birbaumer N, Veit R, Lotze M, et al. Deficient Fear Conditioning in Psychopathy: A Functional Magnetic Resonance Imaging Study. *Arch Gen Psychiatry* 2005; 62(7): 799-805.
<https://doi.org/10.1001/archpsyc.62.7.799>
- [47] Dolan MC, Fullam RS. Psychopathy and functional magnetic resonance imaging blood oxygenation level-dependent responses to emotional faces in violent patients with schizophrenia. *Biol Psychiatry* 2009; 66: 570-577.
<https://doi.org/10.1016/j.biopsych.2009.03.019>
- [48] Yang Y, Raine A, Colletti P, Toga AW, Narr KL. Morphological alterations in the prefrontal cortex and the amygdala in unsuccessful psychopaths. *J Abnorm Psychol* 2010; 119: 546-554.
<https://doi.org/10.1037/a0019611>
- [49] Boccardi M, Frisoni GB, Hare RD, Cavado E, Najt P, Pievani M, Rasser PE, Laakso MP, Aronen HJ, Tiihonen ER, Vaurio O, Thompson PM, Tiihonen J. Cortex and amygdala morphology in psychopathy. *Psychiatry Res* 2011; 193(2): 85-92.
<https://doi.org/10.1016/j.psychres.2010.12.013>
- [50] Harenski CL, Harenski KA, Shane MS, Kiehl KA. Aberrant neural processing of moral violations in criminal psychopaths. *J Abnorm Psychol* 2010; 119: 863-874.
<https://doi.org/10.1037/a0020979>
- [51] Ermer E, Cope LM, Nyalakanti PK, Calhoun VD, Kiehl KA. Aberrant paralimbic gray matter in criminal psychopathy. *J Abnorm Psychol* 2012; 121: 649-658.
<https://doi.org/10.1037/a0026371>
- [52] Wallace JF, Malterer MB, Newman JP. Mapping Gray's BIS and BAS constructs onto Factor 1 and Factor 2 of Hare's Psychopathy Checklist. Revised *Pers Individ Dif* 2009; 47: 812-816.
<https://doi.org/10.1016/j.paid.2009.06.019>
- [53] Cain NM, Pincus AL, Ansell EB. Narcissism at the crossroads: Phenotypic description of pathological narcissism across clinical theory, social/ personality psychology, and psychiatric diagnosis. *Clin Psychol Rev* 2008; 28: 638-56.
<https://doi.org/10.1016/j.cpr.2007.09.006>
- [54] Bogaerts S, Garofalo C, De Caluwé E. Grandiose and vulnerable narcissism, identity integration and self-control related to criminal behavior. *BMC Psychol* 2021; 9: 191.
<https://doi.org/10.1186/s40359-021-00697-1>

- [55] Rohmann E, Brailovskaia J, Bierhoff HW. The framework of self-esteem: Narcissistic subtypes, positive/negative agency, and self-evaluation. *Curr Psychol* 2019; 40: 1-8. <https://doi.org/10.1007/s12144-019-00431-6>
- [56] Rohmann E, Neumann E, Herner MJ, Bierhoff HW. Grandiose and vulnerable narcissism. *Euro Psychol* 2012; 17: 279-90. <https://doi.org/10.1027/1016-9040/a000100>
- [57] Miller JD, Hoffman BJ, Campbell WK, Pilkonis PA. An examination of the factor structure of Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, narcissistic personality disorder criteria: one or two factors? *Compr Psychiatry* 2008; 49: 141-5. <https://doi.org/10.1016/j.comppsy.2007.08.012>
- [58] Pincus AL, Lukowitsky MR. Pathological narcissism and narcissistic personality disorder. *Ann Rev Clin Psychol* 2010; 6: 421-446. <https://doi.org/10.1146/annurev.clinpsy.121208.131215>
- [59] O'Meara A, Davies J, Hammond S. The psychometric properties and utility of the short sadistic impulse scale (SSIS). *Psychol Assess* 2011; 23: 523-521. <https://doi.org/10.1037/a0022400>
- [60] Eher R, Schilling F, Hansmann B, Pumberger T, Nitschke J, Habermeyer E, Mokros A. Sadism and violent reoffending in sexual offenders. *Sex Abuse* 2015; 28: 46-72. <https://doi.org/10.1177/1079063214566715>
- [61] Hébert A, Weaver A. An examination of personality characteristics associated with BDSM orientations. *Can J Hum Sex* 2014; 23(2): 106-115.
- [62] Buckels EE, Jones D, Paulhus DL. Behavioral confirmation of everyday sadism. *Psychol Sci* 2013; 24: 2201-2209. <https://doi.org/10.1177/0956797613490749>
- [63] Buckels EE, Trapnell PD, Andjelovic T, Paulhus DL. Internet trolling and everyday sadism: Parallel effects on pain perception and moral judgment. *J Pers* 2019; 87(2): 328-40. <https://doi.org/10.1111/jopy.12393>
- [64] Greitemeyer T. Everyday sadism predicts violent video game preferences. *Pers Individ Differ* 2015; 75: 19-23. <https://doi.org/10.1016/j.paid.2014.10.049>
- [65] Greitemeyer T, Weiß N, Heuberger T. Are everyday sadists specifically attracted to violent video games and do they emotionally benefit from playing those games? *Aggress Behav* 2019; 45(2): 206-13. <https://doi.org/10.1002/ab.21810>
- [66] Stenason L, Vernon PA. The Dark Triad, reinforcement sensitivity and substance use. *Pers Individ Dif* 2016; 94: 59-63. <https://doi.org/10.1016/j.paid.2016.01.010>
- [67] Bertin P, Nera K, Delouée S. Conspiracy beliefs, rejection of vaccination, and support for hydroxychloroquine: A conceptual replication-extension in the COVID-19 pandemic context. *Front Psychol* 2020; 11: 565128. <https://doi.org/10.3389/fpsyg.2020.565128>
- [68] Jauk E, Dieterich R. Addiction and the Dark Triad of personality. *Front Psychiatry* 2019; 10: 662. <https://doi.org/10.3389/fpsyg.2019.00662>
- [69] Bilevicius E, Neufeld DC, Single A, Foot M, Ellery M, Keough MT. Vulnerable narcissism and addiction: the mediating role of shame. *Addict Behav* 2019; 92: 115-21. <https://doi.org/10.1016/j.addbeh.2018.12.035>
- [70] Carter RR, Johnson SM, Exline JJ, Post SG, Pagano ME. Addiction and "generation me": narcissistic and prosocial behaviors of adolescents with substance dependency disorder in comparison to normative adolescents. *Alcohol Treat Q* 2012; 30(2): 163-78. <https://doi.org/10.1080/07347324.2012.663286>
- [71] Lyvers M, Narayanan SS, Thorberg FA. Disordered social media use and risky drinking in young adults: differential associations with addiction-linked traits. *Aust J Psychol* 2019; 71: 223-31. <https://doi.org/10.1111/ajpy.12236>
- [72] Andreassen CS, Pallesen S, Griffiths MD. The relationship between addictive use of social media, narcissism, and self-esteem: findings from a large national survey. *Addict Behav* 2017; 64: 287-93. <https://doi.org/10.1016/j.addbeh.2016.03.006>
- [73] Clark MA, Lelchook AM, Taylor ML. Beyond the Big Five: how narcissism, perfectionism, and dispositional affect relate to workaholism. *Pers Individ Dif* 2010; 48(7): 786-91. <https://doi.org/10.1016/j.paid.2010.01.013>
- [74] Ksinan AJ, Mališ J, Vazsonyi AT. Swiping away the moments that make up a dull day: narcissism, boredom, and compulsive smartphone use. *Curr Psychol* 2019; 40(6): 2917-26. <https://doi.org/10.1007/s12144-019-00228-7>
- [75] Rose P. The happy and unhappy faces of narcissism. *Pers Individ Dif* 2002; 33(3): 379-91. [https://doi.org/10.1016/S0191-8869\(01\)00162-3](https://doi.org/10.1016/S0191-8869(01)00162-3)
- [76] Lakey CE, Rose P, Campbell WK, Goodie AS. Probing the link between narcissism and gambling: the mediating role of judgment and decision-making biases. *J Behav Decis Mak* 2008; 21(2): 113-37. <https://doi.org/10.1002/bdm.582>
- [77] Casale S, Fioravanti G. Why narcissists are at risk for developing Facebook addiction: The need to be admired and the need to belong. *Addict Behav* 2018; 76: 312-318. <https://doi.org/10.1016/j.addbeh.2017.08.038>
- [78] Geukes K, Nestler S, Hutteman R, Dufner M, Küfner ACP, Egloff B, et al. Puffed-up but shaky selves: state self-esteem level and variability in narcissists. *Pers Soc Psychol Bull* 2017; 112(5): 769-86. <https://doi.org/10.1037/pspp0000093>
- [79] Brookes J. The effect of overt and covert narcissism on self-esteem and self-efficacy beyond self-esteem. *Pers Individ Dif* 2015; 85: 172-5. <https://doi.org/10.1016/j.paid.2015.05.013>
- [80] Kircaburun K, Griffiths MD. The dark side of internet: preliminary evidence for the associations of dark personality traits with specific online activities and problematic internet use. *J Behav Addict* 2018; 7(4): 993-1003. <https://doi.org/10.1556/2006.7.2018.109>
- [81] Sindermann C, Sariyska R, Lachmann B, Brand M, Montag C. Associations between the dark triad of personality and unspecified/specific forms of Internet-use disorder. *J Behav Addict* 2018; 7(4): 985-92. <https://doi.org/10.1556/2006.7.2018.114>
- [82] Quednow BB, Hulka LM, Preller KH, Baumgartner MR, Eisenegger C, Vonmoos M. Stable self-serving personality traits in recreational and dependent cocaine users. *PLoS One* 2017; 12(3): e0172853. <https://doi.org/10.1371/journal.pone.0172853>
- [83] Walsh Z, Allen LC, Kosson DS. Beyond social deviance: substance use disorders and the dimensions of psychopathy. *J Pers Disord* 2007; 21(3): 273-88. <https://doi.org/10.1521/pedi.2007.21.3.273>
- [84] Hopley AAB, Brunelle C. Personality mediators of psychopathy and substance dependence in male offenders. *Addict Behav* 2012; 37(8): 947-55. <https://doi.org/10.1016/j.addbeh.2012.03.031>
- [85] Sellbom M, Donnelly KM, Rock RC, Phillips TR, Ben-Porath YS. Examining gender as moderating the association between psychopathy and substance abuse. *Psychol Crime Law* 2017; 23(4): 376-90. <https://doi.org/10.1080/1068316X.2016.1258466>
- [86] Miller JD, Lynam DR, Widiger TA, Leukefeld C. Personality disorders as extreme variants of common personality dimensions: can the five factor model adequately represent psychopathy? *J Pers* 2001; 69(2): 253-76. <https://doi.org/10.1111/1467-6494.00144>
- [87] Miller JD, Lynam DR. Psychopathy and personality: advances and debates: psychopathy and personality. *J Pers*

- 2015; 83(6): 585-92.
<https://doi.org/10.1111/jopy.12145>
- [88] Trombly DRC, Zeigler-Hill V. The Dark Triad and disordered gambling. *Curr Psychol* 2017; 36(4): 740-6.
<https://doi.org/10.1007/s12144-016-9461-z>
- [89] Onyedire NG, Johnbosco CC, Tochukwu CO, Desmond UO, Chiagoziem IA, Chuka MI. Associations of Dark Triad traits and problem gambling: moderating role of age among university students. *Curr Psychol* 2019; 40(5): 2083-94.
<https://doi.org/10.1007/s12144-018-0093-3>
- [90] Stinson JD, Becker JV, Tromp S. A preliminary study on findings of psychopathy and affective disorders in adult sex offenders. *Int J Law Psychiatry* 2005; 28(6): 637-49.
<https://doi.org/10.1016/j.iilp.2004.10.001>
- [91] Jones DN, Paulhus DL. Duplicity among the dark triad: Three faces of deceit. *J Pers Soc Psychol* 2017; 113(2): 329-42.
<https://doi.org/10.1037/pspp0000139>
- [92] Al Ain S, Carré A, Fantini-Hauwel C, Baudouin JY, Besche-Richard C. What is the emotional core of the multidimensional Machiavellian personality trait? *Front Psychol* 2013; 22: 4-454.
<https://doi.org/10.3389/fpsyg.2013.00454>
- [93] Lovelace L, Gannon L. Psychopathy and depression: mutually exclusive constructs? *J Behav Ther Exp Psychiatry* 1999; 30(3): 169-76.
[https://doi.org/10.1016/S0005-7916\(99\)00022-1](https://doi.org/10.1016/S0005-7916(99)00022-1)
- [94] Tokarev A, Phillips AR, Hughes DJ, Irwing P. Leader dark traits, workplace bullying, and employee depression: exploring mediation and the role of the dark core. *Journal Abnorm Psychol* 2017; 126(7): 911-920.
<https://doi.org/10.1037/abn0000299>
- [95] Demenescu LR, Kortekaas R, Den Boer JA, Aleman A. Impaired attribution of emotion to facial expressions in anxiety and major depression. *PLoS One* 2010; 5(12): e15058.
<https://doi.org/10.1371/journal.pone.0015058>
- [96] Treadway MT, Zald DH. Reconsidering anhedonia in depression: lessons from translational neuroscience. *Neurosci Biobehav Rev* 2011; 35(3): 537-555.
<https://doi.org/10.1016/j.neubiorev.2010.06.006>
- [97] Jonason PK, Schmitt DP. What have you done for me lately? Friendship-selection in the shadow of the Dark Triad traits. *Evol Psychol* 2012; 10(3): 400-421.
<https://doi.org/10.1177/147470491201000303>
- [98] Links PS. Pathological narcissism and the risk of suicide. In: Ogronczuk JS, Eds. *Understanding and treating pathological narcissism*. Washington DC: American Psychological Association 2013; pp. 167-81.
<https://doi.org/10.1037/14041-010>
- [99] Gabbard GO. Narcissism and suicide risk. *Ann Gen Psychiatry* 2022; 21(1): 3.
<https://doi.org/10.1186/s12991-022-00380-8>
- [100] Malesza M, Ostaszewski P. The utility of the Dark Triad model in the prediction of the self-reported and behavioral risk-taking behaviors among adolescents. *Pers Indiv Differ* 2016; 90: 7-11.
<https://doi.org/10.1016/j.paid.2015.10.026>
- [101] Maneiro L, Navas MP, Van Geel M, Cutrín O, Vedder P. Dark Triad Traits and Risky Behaviours: Identifying Risk Profiles from a Person-Centred Approach. *Int J Environ Res Public Health* 2020; 17(17): 6194.
<https://doi.org/10.3390/ijerph17176194>
- [102] Sekścińska K., Rudzińska-Wojciechowska J. Individual differences in Dark Triad Traits and risky financial choices. *Pers Indiv Differ* 2020; 152: 109598.
<https://doi.org/10.1016/j.paid.2019.109598>
- [103] Endriulaitienė A, Šeibokaitė L, Žardeckaitė-Matulaitienė K, Markšaitytė R, Slavinskienė J. Attitudes towards risky driving and Dark Triad personality traits in a group of learner drivers. *Transp Res F Traffic* 2018; 56: 362-370.
<https://doi.org/10.1016/j.trf.2018.05.017>
- [104] Garcia D. How "dirty" is the Dark Triad? Dark character profiles, swearing, and sociosexuality. *PeerJ* 2020; 8: e9620.
<https://doi.org/10.7717/peerj.9620>
- [105] Jones DN, Neria AL. The Dark Triad and dispositional aggression. *Pers Indiv Differ* 2015; 86: 360-364.
<https://doi.org/10.1016/j.paid.2015.06.021>
- [106] Barlett CP. Exploring the correlations between emerging adulthood, Dark Triad traits, and aggressive behavior. *Pers Indiv Differ* 2016; 101: 293-298.
<https://doi.org/10.1016/j.paid.2016.05.061>
- [107] Baughman HM, Dearing S, Giammarco E, Vernon PA. Relationships between bullying behaviours and the Dark Triad: A study with adults. *Pers Indiv Differ* 2012; 52: 571-575.
<https://doi.org/10.1016/j.paid.2011.11.020>
- [108] Van Geel M, Goemans A, Toprak F, Vedder P. Which personality traits are related to traditional bullying and cyberbullying? A study with the Big Five, Dark Triad and sadism. *Pers Indiv Differ* 2017; 106: 231-235.
<https://doi.org/10.1016/j.paid.2016.10.063>
- [109] Azizli N, Atkinson BE, Baughman HM, Chin K, Vernon PA, Harris E, Veselka L. Lies and crimes: Dark Triad, misconduct, and high-stakes deception. *Pers Indiv Differ* 2016; 89: 34-39.
<https://doi.org/10.1016/j.paid.2015.09.034>
- [110] Maples JL, Miller JD, Wilson LF, Seibert LA, Few LR, Zeichner A. Narcissistic personality disorder and self-esteem: an examination of differential relations with self-report and laboratory-based aggression. *J Res Pers* 2010; 44: 559-63.
<https://doi.org/10.1016/j.jrp.2010.05.012>
- [111] Lambe S, Hamilton-Giachritsis C, Garner E, Walker J. The role of Narcissism in aggression and violence: a systematic review. *Trauma Violence Abuse* 2018; 19: 209-30.
<https://doi.org/10.1177/1524838016650190>
- [112] Fossati A, Borroni S, Eisenberg N, Maffei C. Relations of proactive and reactive dimensions of aggression to overt and covert narcissism in nonclinical adolescents. *Aggress Behav* 2010; 36: 21-7.
<https://doi.org/10.1002/ab.20332>
- [113] Kjærviik SL, Bushman BJ. The link between narcissism and aggression: a meta-analytic review. *Psychol Bull* 2021; 147: 477503.
<https://doi.org/10.1037/bul0000323>
- [114] Campbell WK, Goodie AS, Foster JD. Narcissism, confidence, and risk attitude. *J Behav Decis Mak* 2004; 17: 297-311.
<https://doi.org/10.1002/bdm.475>
- [115] Foster JD, Trimm RF. On being eager and uninhibited: narcissism and approach-avoidance motivation. *Personal Soc Psychol Bull* 2008; 34: 1004-17.
<https://doi.org/10.1177/0146167208316688>
- [116] Luhtanen RK, Crocker J. Alcohol use in college students: effects of level of self-esteem, narcissism, and contingencies of self-worth. *Psychol Addict Behav* 2005; 19: 99-103.
<https://doi.org/10.1037/0893-164X.19.1.99>
- [117] Krizan Z, Johar O. Narcissistic rage revisited. *J Pers Soc Psychol* 2015; 108: 784-801.
<https://doi.org/10.1037/pspp0000013>
- [118] Porter S, Porter S. Psychopathy and violent crime. In: Hervé H, Yuille JC, Eds. *The Psychopath: Theory, Research, and Practice*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers 2007; 287-300.
- [119] Blais J, Solodukhin E, Forth AE. A meta-analysis exploring the relationship between psychopathy and instrumental versus reactive violence. *Crim Justice Behavior* 2014; 41(7): 797-821.
<https://doi.org/10.1177/0093854813519629>
- [120] Garofalo C, Neumann CS, Velotti P. Psychopathy and Aggression: The Role of Emotion Dysregulation. *Journal Interpers Violence* 2021; 36: 23-24.
<https://doi.org/10.1177/0886260519900946>

- [121] Long K, Felton JW, Lilienfeld SO, Lejuez CW. The role of emotion regulation in the relations between psychopathy factors and impulsive and premeditated aggression. *Pers Disor: Theory Res Treat* 2014; 5(4): 390-396. <https://doi.org/10.1037/per0000085>
- [122] Spain SM, Harms P, LeBreton JM. The dark side of personality at work. *J Organ Behav* 2014; 35: 41-60. <https://doi.org/10.1002/job.1894>
- [123] Judge TA, LePine JA. The bright and dark sides of personality: Implications for personnel selection in individual and team contexts. In J. Langan-Fox, C. Cooper, & R. Klimoski, Eds. *Research companion to the dysfunctional workplace: Management challenges and symptoms*. Cheltenham, Cheltenham, England: Edward Elgar press 2007; pp. 332-355.
- [124] Wille B, De Fruyt, De Clercq B. Expanding and reconceptualizing aberrant personality at work: Validity of five factor model aberrant personality tendencies to predict career outcomes. *Personnel Psychology* 2013; 66: 173-223. <https://doi.org/10.1111/peps.12016>
- [125] Hirschi A, Ja'nsch VK. Narcissism and career success: Occupational self-efficacy and career engagement as mediators. *Pers Indiv Differ* 2015; 77: 205-208. <https://doi.org/10.1016/j.paid.2015.01.002>
- [126] Sedikides C, Rudich EA, Gregg AP, Kumashiro M, Rusbult C. Are normal narcissists psychologically healthy? Self-esteem matters. *J Pers Soc Psychol* 2004; 87: 400-416. <https://doi.org/10.1037/0022-3514.87.3.400>
- [127] Dahling JJ, Whitaker BG, Levy PE. The development and validation of a new Machiavellianism scale. *J Manage* 2008; 35: 219: 257. <https://doi.org/10.1177/0149206308318618>
- [128] Zettler I, Friedrich N, Hilbig BE. Dissecting work commitment: the role of Machiavellianism. *Career Dev Int* 2011; 16: 20-35. <https://doi.org/10.1108/13620431111107793>
- [129] Kiazad K, Restubog SLD, Zagenczyk TJ, Kiewitz C, Tang RL. In pursuit of power: The role of authoritarian leadership in the relationship between supervisors' Machiavellianism and subordinates' perceptions of abusive supervisory behavior. *J Res Per* 2010; 44: 512-519. <https://doi.org/10.1016/j.jrp.2010.06.004>
- [130] Boddy CR, Ladyshevsky RK, Galvin P. The influence of corporate psychopaths on corporate social responsibility and organizational commitment to employees. *J Bus Ethics* 2010; 97: 1-19. <https://doi.org/10.1007/s10551-010-0492-3>
- [131] Boddy CR. Organisational psychopaths: A ten year update. *Manag Decis* 2015; 53: 2407-2432. <https://doi.org/10.1108/MD-04-2015-0114>
- [132] Smith SF, Lilienfeld SO. Psychopathy in the workplace: The knowns and unknowns. *Aggress. Violent Behav* 2013; 18: 204-218. <https://doi.org/10.1016/j.avb.2012.11.007>
- [133] Falkenbach DM, Glackin E, McKinley S. Twigs on the same branch? Identifying personality profiles in police officers using psychopathic personality traits. *J Res Pers* 2018; 76: 102-112. <https://doi.org/10.1016/j.jrp.2018.08.002>
- [134] Babiak P, Hare R. *Snakes in suits*, Regan Books, Ltd. 2006.
- [135] Day NJS, Townsend ML, Grenyer BFS. Living with pathological narcissism: core conflictual relational themes within intimate relationships. *BMC Psychiatry* 2022; 22: 30. <https://doi.org/10.1186/s12888-021-03660-x>
- [136] Day NJS, Townsend ML, Grenyer BFS. Pathological narcissism: An analysis of interpersonal dysfunction within intimate relationships. *Personal Ment Health* 2021; 1-13. <https://doi.org/10.1002/pmh.1532>
- [137] Čopková R, Lörincová E. The Dark Triad, Love Components, and Attachment Styles in Romantic Relationship Experiencing During Young Adulthood. *Interpersona* 2021; 15(2): 212-232. <https://doi.org/10.5964/ijpr.4687>
- [138] Ináncsi T, Láng A, Bereczkei T. A darker shade of love: Machiavellianism and positive assortative mating based on romantic ideals. *Europe's Journal of Psychology* 2016; 12(1): 137-152. <https://doi.org/10.5964/ejop.v12i1.1007>
- [139] Jonason PK, Kavanagh P. The dark side of love: Love styles and the Dark Triad. *Pers Indiv Differ* 2010; 49(6): 606-610. <https://doi.org/10.1016/j.paid.2010.05.030>
- [140] McHoskey, J. (2001). Machiavellianism and sexuality: On the moderating role of biological sex. *Personality and Individual Differences*, 31(5): 779-789. [https://doi.org/10.1016/S0191-8869\(00\)00180-X](https://doi.org/10.1016/S0191-8869(00)00180-X)
- [141] Carton, H., & Egan, V. (2017). The dark triad and intimate partner violence. *Personality and Individual Differences*, 105. <https://doi.org/10.1016/j.paid.2016.09.040>
- [142] Imhoff, R., & Lamberty, P. (2020). A bioweapon or a hoax? The link between distinct conspiracy beliefs about the coronavirus disease (COVID-19) outbreak and pandemic behavior. *Social Psychological and Personality Science*, 11(8), 1110-1118. <https://doi.org/10.1177/1948550620934692>
- [143] Hughes, S., & Machan, L. (2021). It's a conspiracy: Covid-19 conspiracies link to psychopathy, Machiavellianism and collective narcissism. *Personality and individual differences*, 171, 110559. <https://doi.org/10.1016/j.paid.2020.110559>
- [144] Nowak, B., Brzóska, P., Piotrowski, J., Sedikides, C., Żemojtel-Piotrowska, M., & Jonason, P. K. (2020). Adaptive and maladaptive behavior during the COVID-19 pandemic: The roles of Dark Triad traits, collective narcissism, and health beliefs. *Personality and individual differences*, 167, 110232. <https://doi.org/10.1016/j.paid.2020.110232>
- [145] Visser, B. A., & Campbell, S. (2018). Measuring the dark side of personality. In V. Zeigler-Hill & T. K. Shackelford (Eds.), *The SAGE handbook of personality and individual differences: The science of personality and individual differences* (pp. 573-591). Sage Reference. <https://doi.org/10.4135/9781526451163.n27>

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