“Are darker individuals in control?”: A path model of the Dark Triad, Emotional Regulation and Locus of Control

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Abstract

Among the socially aversive personality traits, the Dark Triad (i.e., Machiavellianism, narcissism, and psychopathy) is one of the most prominent. It is known that there is an association between these traits and emotional regulation and control strategies. However, further empirical support is needed to understand how these traits simultaneously influence each other. Thus, this study aimed to investigate the relationship between the Dark Triad, emotion dysregulation strategies, and locus of control using a predictive model. The participants consisted of 305 individuals aged 18 to 59 years ($M = 32.5; SD = 12.05$) who responded to the Dirty Dozen (DD), the Emotional Dysregulation Scale (EDEA), the Locus of Control Scale (ELOCUS), and the Baptist Depression Scale (EBADEP). Our results suggest positive associations of Machiavellianism, psychopathy, and narcissism with maladaptive emotional dysregulation strategies, and these strategies predicted external locus of control.
Therefore, individuals with darker traits tend to employ dysfunctional emotion regulation strategies and consequently attribute external events as the cause of such outcomes.

**Keywords:** Dark Traits; Dirty Dozen; Internal-External Control; Emotional Regulation

**Introduction**

The so-called Dark Triad comprises three personality traits classified as socially undesirable: Machiavellianism, subclinical narcissism, and subclinical psychopathy (Paulhus & Williams, 2002). Machiavellianism originates from the original works of the philosopher Machiavelli and encompasses manipulative and cynical individuals. Narcissism reflects grandiosity, a sense of entitlement, dominance, and superiority. Psychopathy refers to high impulsivity, sensation-seeking, and low empathy behaviors (Paulhus & Williams, 2002). Higher levels of these traits are present in various contexts in the general population and are usually associated with dysfunctional outcomes (Koehn et al., 2019). One characteristic shared by all three components of the Dark Triad is limited empathy (Jonason et al., 2013), which tends to be associated with a greater number of adverse outcomes for individuals, particularly in terms of emotion dysregulation. Zeigler-Hill and Vonk (2015) noted a complex relationship, as specific facets of these traits showed both positive and negative correlations with emotion regulation strategies, generally indicating positive associations between such traits and dysregulation strategies.

A recent study examined levels of emotional dysregulation and their associations with Dark Triad traits in two groups: offenders and non-offenders (Rogier et al., 2021). The criminals were men who committed violent crimes and were imprisoned in central and northern Italy, and the non-offenders were men from the general Italian population. The results showed no correlations between narcissism and emotional dysregulation in either group. Machiavellianism and dysregulation positively correlated in both emotional samples with weak
magnitudes, and psychopathy was positively associated with emotional dysregulation only in the offender group.

Emotional dysregulation is a characteristic of individuals with dark personality traits and is also associated with various negative consequences, including a higher prevalence of psychopathologies. The interplay between emotional dysregulation and adverse experiences is responsible for 50% of the variance in depressive traits (Abravanel & Sinha, 2015). Non-adaptive strategies associated with emotional dysregulation, such as rumination, avoidance, and difficulties with reappraisal, are linked to depression (Aldao et al., 2010). Emotion dysregulation also predicts depressive symptomatology and serves as a mediator between attachment type and generalized anxiety disorder (Marganska et al., 2013).

Gómez-Leal et al. (2019) emphasized the importance of investigating the potential consequences of Dark Triad traits for individuals. These authors, along with others (Papageorgiou et al., 2019; Shih et al., 2019), highlighted that one of these consequences may be an increased presence of depression indicators. Specifically, all three dark traits could predict an increase in depressive symptoms, with Machiavellianism predicting an increase in interpersonal indicators of depression, narcissism predicting an increase in cognitive and emotional dimensions, and psychopathy predicting an increase in cognitive dimensions.

Thus, the present research aims to expand on this relationship by investigating how the Dark Triad of personality and emotion dysregulation strategies predict different types of locus of control, using a structural equation model to understand the predictive validity of this relationship. Locus of control has been extensively studied (Rotter, 1966; 1990) in terms of external (i.e., perceiving consequences as luck, chance, fate, or other forces) and internal dimensions (i.e., perceiving consequences as resulting from one's behavior). During the COVID-19 pandemic, a study found that individuals who believed they had more internal control over their health also exhibited greater regulation of their emotions (Mehta &
Narayanan, 2021). The way coping strategies, such as emotional regulation, are utilized may also be associated with the most adaptive locus of control for different situations (Groth et al., 2019). The literature has extensively explored the relationship between personality traits and the use of coping strategies (i.e., adaptive vs. maladaptive; Mojsa-Kaja et al., 2021), and certain dark traits, such as Machiavellianism, have been associated with locus of control (Aldousari & Ickes, 2021).

Based on the constructs presented thus far, there seems to be a consensus that emotional dysregulation precedes locus of control (Mehta & Narayanan, 2021) and depression (Abravanel & Sinha, 2015; Marganska et al., 2013; Aldao et al., 2010). Regarding locus of control and depression symptoms, a higher belief in external locus of control is associated with a greater likelihood of increased indicators of depression (Benassi et al., 1988; Cheng et al., 2013; Hovenkamp-Hermelink et al., 2019; Kurtović et al., 2018). As for the Dark Triad and locus of control, Bonfá-Araujo et al. (2020) noted that Machiavellianism was negatively explained by externality and powerful others, as individuals with Machiavellian traits tend to manipulate people in positions of power to gain advantages over others. Narcissism and psychopathy significantly explained the internality dimension, with narcissism having a negative association and psychopathy having a positive association. In a second study by Bonfá-Araujo et al. (2021a), individuals with higher scores in the Dark Triad also exhibited an increased tendency for external control locus.

Considering the state-of-the-art, emotional dysregulation is a characteristic of individuals with dark personality traits and is also linked to the development of various psychopathologies, such as depression. By examining the relationships between the Dark Triad, emotion dysregulation, and locus of control, this research can contribute to identifying potential risk factors and pathways for the development of psychopathology or an increase in darker traits in individuals when faced with challenging situations. Additionally, coping
strategies play a crucial role in individuals' ability to manage stress and adapt to such circumstances. Investigating how coping strategies, particularly those associated with emotion regulation and the Dark Triad traits, can provide insights into maladaptive coping patterns and their consequences, offering a deeper understanding of how individuals with darker traits display emotional control and perceive the outcomes of different situations.

In the existing research literature, there are studies, as previously mentioned, that have measured these constructs. However, no research proposing a structural equation model to examine the predictive capacity of dark personality traits on locus of control was found, to the best of our knowledge. Hence, this study aims to investigate the predictive capacity of the Dark Triad on emotion regulation and locus of control, specifically analyzing the association between the darker variables and the process of emotion dysregulation and depression, as well as examining the association between emotion dysregulation strategies, depression, and locus of control variables.

**Method**

**Participants**

Participants were 305 Brazilians aged from 18 to 59 years, with a majority of women (73.77%). The mean age was 32.5 years ($SD = 12.05$), 95.1% were from the southeastern region of Brazil, 30.5% of the sample had up to 13 years of schooling, and the others had more than 13 years of schooling. Regarding marital status, the majority were married (48.9%) or single (43%). Concerning clinical data, 31.9% of the participants reported having been diagnosed with depression by a health professional at some point in their lives, among which 11.8% are current. Other mental disorders were also reported by the participants (14.7%), most of which related to anxiety (17.4%). Finally, 6.6% of the sample reported having suicidal ideation at the time of data collection. Such higher rates of mental disorders have been shown before despite Brazil’s ongoing efforts to tackle these numbers (Araújo & Torrenté, 2023).
**Instruments**

**Dark Triad Dirty Dozen** *(DTDD; Jonason & Webster, 2010)*. The scale has 12 items that measure the components of the Dark Triad, with four statements for each trait: narcissism, psychopathy, and Machiavellianism. The statements have five response options, ranging from 1 “strongly disagree” to 5 “strongly agree.” Gouveia et al. (2016) adapted the scale for the Brazilian context, and their study provided acceptable validity evidence and reliability for the measure. Some examples of items are “I tend to manipulate others to get my way” and “I tend to want others to pay attention to me”.

**Emotional Dysregulation Scale – Adults** *(EDEA)*. The scale used to measure emotional dysregulation, improved by Baptista et al. (2022) from the Emotional Self-Regulation Scale *(EARE-AD)*, was developed by Noronha et al. (2019). The EDEA contains 15 items that evaluate an individual’s response to sad situations. These items are measured using a Likert-type scale, on which 0 represents “none of the time/never” and 3 “always”. The 15 items are subdivided into four factors: adequate emotional strategies, aggressiveness externalization, pessimism, and paralysis. Some examples of items are “I mistreat other people” and “I cannot think straight”.

**Control Locus Scale** *(ELOCUS; Couto et al., 2022)*. The ELOCUS measures how well people perceive their lives to be controlled or how well they control their lives. It contains 29 statements, answered on a Likert scale. The statements are divided into internal and external items. The scale obtained satisfactory evidence regarding the content of the items. Some examples of items are “I think my destiny is already predetermined” and “It is through my ability that I can complete my tasks”.

**Baptist Depression Scale (Adult Version) - EBADEP - A - Short**. The scale aims to measure indicators of depression. The EBADEP-A-Short has 15 pairs of (opposite) statements and is answered based on a Likert scale. The instrument has psychometric studies regarding
diagnostic accuracy (Baptista & Carvalho, 2018) and regarding the exploration of latent traits and control for extreme response bias (Valentini et al., 2021). Some examples of items are “I’ve been feeling like crying” and “I no longer have the desire to do things I used to like”.

**Procedures and Data Analysis**

After receiving approval from the Ethics Committee (40347820.6.0000.5514), the instruments were implemented on the Google Forms platform. The participants completed the survey online without receiving any monetary compensation. The survey was distributed digitally, and the snowball technique was employed as a methodological approach to reach a wider audience.

Regarding the analysis procedure, Pearson's correlation was initially calculated to examine the relationships between the dimensions of all the instruments. Subsequently, a path analysis model was constructed using the AMOS software (Arbucke, 2014). In this model, locus of control was predicted by the Dark Triad and mediated by emotional dysregulation and depressive symptomatology. The model was evaluated using the Maximum Likelihood Robust (MLR) estimator, and the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA) were utilized as indicators of model fit. Acceptable values for the CFI and TLI should exceed .90, while the RMSEA should be below .08 (Brown, 2015).

**Results**

Correlations are presented in Table 1, indicating mostly small associations, as expected. The darker traits exhibited correlations with external locus of control and aggressive emotional strategies. Notably, four moderate-sized correlations were observed: the pessimism factor (emotional dysregulation) with external locus and depressive symptomatology, as well as the paralysis factor (also emotional dysregulation) with external locus and depressive symptomatology.
Table 1.
Correlation of the Dark Triad, Emotional Dysregulation, Locus of Control and Depression.

<table>
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<tbody>
<tr>
<td>1. Machiavellianism</td>
<td>ω = .72</td>
<td></td>
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<td></td>
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<td></td>
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<td>2. Psychopathy</td>
<td>.47**</td>
<td>ω = .60</td>
<td></td>
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<td>3. Narcissism</td>
<td>.53**</td>
<td>.32**</td>
<td>ω = .86</td>
<td></td>
<td></td>
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<tr>
<td>4. Adequate Emotional Strategies</td>
<td>.04</td>
<td>-.01</td>
<td>.01</td>
<td>ω = .74</td>
<td></td>
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<td>5. Aggressiveness Externalization</td>
<td>.21**</td>
<td>.21**</td>
<td>.27**</td>
<td>-.04</td>
<td>ω = .47</td>
<td></td>
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<td>6. Pessimism</td>
<td>.25**</td>
<td>.09</td>
<td>.27**</td>
<td>-.28**</td>
<td>.37**</td>
<td>ω = .83</td>
<td></td>
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<tr>
<td>7. Paralysis</td>
<td>.19**</td>
<td>.10</td>
<td>.26**</td>
<td>-.22**</td>
<td>.39**</td>
<td>.73**</td>
<td>ω = .84</td>
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<td>8. Internal Locus</td>
<td>-.10</td>
<td>-.01</td>
<td>-.09</td>
<td>.34**</td>
<td>-.14*</td>
<td>-.33**</td>
<td>-.28**</td>
<td>ω = .94</td>
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<td>9. External Locus</td>
<td>.32**</td>
<td>.24**</td>
<td>.31**</td>
<td>-.09</td>
<td>.37**</td>
<td>.46**</td>
<td>.47**</td>
<td>-.32**</td>
<td>ω = .83</td>
<td></td>
</tr>
<tr>
<td>10. Depression</td>
<td>.15**</td>
<td>.12*</td>
<td>.18**</td>
<td>-.37**</td>
<td>.28**</td>
<td>.61**</td>
<td>.69**</td>
<td>-.38**</td>
<td>.36**</td>
<td>ω = .91</td>
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</table>
A path analysis was conducted and is illustrated in Figure 1. All paths depicted in the figure were statistically significant, with beta values ranging from small to medium (β = .13 to β = .26). Figure 1 demonstrates that all personality traits, particularly narcissism, predicted nearly all factors of emotional dysregulation, except for adequate emotional strategies, along with depressive symptomatology. Machiavellianism predicted the pessimism factor of emotional dysregulation, while psychopathy predicted the externalizing aggressiveness of the same construct, with all predictions being positive. Additionally, the factors of emotional dysregulation and depression symptoms predicted the two dimensions of locus of control. Pessimism and depression predicted the internal locus negatively, whereas adequate strategies showed a positive association. The external locus was positively predicted by externalizing aggressiveness, pessimism, and paralysis, i.e., all factors of emotional dysregulation.
Figure 1. Path Analysis Model.

Notes. Model results $\chi^2 (33) = 628.939$, CFI = 1.00, TLI = 1.00, RMSEA = 0.00.
Discussion

This study aimed to investigate the predictive capacity of the Dark Triad personality traits over emotional dysregulation and locus of control, considering emotional dysregulation strategies and depression as mediators. A structural equation model was carried out to understand the investigated relations. As pre-established, the three characteristics comprising the Dark Triad were related to aversive outcomes such as dysregulation strategies (i.e., aggressiveness, pessimism, and paralysis) and depressive symptomatology. Furthermore, significant correlations were found only for the external control locus, indicating that darker individuals tend to understand events as controlled by external events (Bonfá-Araujo et al., 2021a; Guo et al., 2021). Our study has two main results.

The first result presents the positive association between the darker variables and the emotion regulation process. Concerning narcissism, it positively predicted paralysis, aggression, and pessimism, although it seems controversial (Di Pierro et al., 2017; Zeigler-Hill & Vonk, 2015), in which grandiose narcissism is usually associated negatively with emotional dysregulation. This result can be explained by the duality in the facets that make up grandiose narcissism (i.e., the first related to aspects of leadership and self-promotion and the second associated with aversive features such as exploitation and a sense of worthiness, the latter being primarily measured in the Dirty Dozen instrument; Cheshure et al., 2020). Therefore, individuals with high narcissism scores may use aggressive strategies or even feel paralyzed and pessimistic when facing events. Regarding the positive association of depressive symptomatology, new investigations are still needed since previous results have been inconsistent and are possibly associated with the tools used to measure it (Bonfá-Araujo et al., 2021b; Gómez-Leal et al., 2019).

For Machiavellianism, the only predictive relationship found was with the dysregulation strategy of pessimism. Individuals with high levels of Machiavellianism tend to
perceive relationships only in a utilitarian way, seeing other people as a means to an end. Machiavellians are also characterized by high emotional instability if they do not get what they want, also they tend to experience events in a more aversive and pessimistic manner (Szijjarto & Bereczkei, 2015; Zeigler-Hill & Vonk, 2015). Nevertheless, further evidence is needed to understand how the influence of emotional instability occurs. Finally, psychopathy positively predicted externalizing aggression. This result is congruent with the literature, given that men and women with high levels of psychopathy tend to behave aggressively (Long et al., 2014; Maxwell et al., 2017). Such results signal that psychopathic people have low emotional self-regulation skills and make use of more aggressive strategies. Such behaviors occur due to the impulsivity associated with this trait.

The second main result concerns the association between emotion dysregulation strategies and depression on the locus of control variables. The found associations suggest that poorly fitting strategies, such as aggression or paralysis, are associated with the external locus, i.e., the perception that others are responsible for such events, particularly for individuals with high scores on dark personality traits (Galvin et al., 2018). Furthermore, depressive symptomatology and pessimism were negatively associated with the internal control locus, again reinforcing previous findings. Individuals with higher levels of internal loci tend to have higher perceived self-control and are also more capable of emotionally self-regulating (Hovenkamp-Hermelink et al., 2019).

Regardless of the results found, this study has some limitations. The first concerns the use of self-report instruments with low measurement of nuances or facets, especially for the Dark Triad, since different facets may present different relationships regarding the emotion regulation process. However, as previously indicated, the Dirty Dozen has adequate psychometric properties and presents itself as a stable instrument in different regions of the world, with W.E.I.R.D. and non-W.E.I.R.D. individuals (Rogoza et al., 2020). The second
corresponds to the higher number of women participants, given that men tend to have higher mean scores in dark personality traits (Furnham et al., 2013). Thus, the replication process of this study is likely to find even more extreme results if the sample is mainly composed of men. Finally, it should be noted that, despite using the Dark Triad to predict the other variables, there is a possibility of depressive symptoms also contributing to the presence of aversive behaviors. Thus, future studies should consider testing which variables may be influencing each other.

Despite these limitations, the study showed how the dark personality could make use of dysfunctional emotion regulation strategies by behaving aggressively or ignoring problems, thus culminating in aversive consequences, and possibly blaming external circumstances. It is suggested that further studies should investigate how individuals with dark personality traits can use emotional regulation strategies to harm others, in addition to investigating the relationship between the Dark Triad and the internal locus of control, as only relationships with the external locus of control have been found (Bonfá-Araujo et al., 2021a; Rapp-Ricciardi et al., 2018).
References


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