The Role of Childhood Abuse and Self-Regulation in Dark Personality Traits

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A R T I C L E   I N F O

A B S T R A C T

Objective: This study aims to examine the relationship between childhood abuse and self-regulation, with a specific focus on how dark personality traits mediate this relationship in university students in Tehran.

Methods and Materials: The research adopted a cross-sectional design and included university students from undergraduate, master's, and doctoral programs during the academic year 2021-22. Using convenience sampling, 400 students were selected to participate. Data were collected through three standardized instruments: the Childhood Trauma Questionnaire (CTQ) for childhood abuse, the Dark Triad Personality Traits Questionnaire for dark personality traits (Machiavellianism, Psychopathy, Narcissism), and the Self-Regulation Questionnaire (SRQ) to measure self-regulation. Linear regression analysis was conducted using SPSS-27 to explore the relationships between childhood trauma, dark personality traits, and self-regulation, with a significance level set at $p < 0.05$.

Findings: The findings revealed that childhood trauma significantly predicted self-regulation skills, with dark personality traits (Machiavellianism, Psychopathy, and Narcissism) acting as mediators in this relationship. Specifically, higher levels of childhood abuse were associated with lower self-regulation abilities, and dark traits such as high Machiavellianism and Psychopathy exacerbated this negative relationship. Additionally, significant correlations were found between all subscales of the CTQ and SRQ, as well as between dark traits and poor self-regulation.

Conclusion: This study concludes that childhood abuse has a detrimental effect on self-regulation, and this relationship is moderated by dark personality traits. It highlights the importance of considering both traumatic experiences and personality factors in understanding self-regulation challenges in young adults. Interventions aimed at improving self-regulation should address both childhood trauma and dark personality traits to enhance emotional well-being and personal development.

Keywords: *Childhood trauma, self-regulation difficulties, dark personality traits.*

1. Introduction

Childhood abuse is a pervasive issue that can significantly impact an individual's psychological and emotional development, often leading to lifelong consequences. The effects of early trauma are not only limited to immediate distress but can also influence adult mental health, self-regulation abilities, and the development of maladaptive personality traits (Kong, 2024; Saadati et al., 2024; VanBronkhorst et al., 2024). Recent studies have shown that childhood trauma plays a crucial role in shaping an individual's emotional regulation capacity, which in turn can contribute to the manifestation of dark personality traits such as Machiavellianism, narcissism, and psychopathy. These traits, often referred to as the "dark triad," are associated with various maladaptive behaviors, including interpersonal difficulties, emotional dysregulation, and aggression (Jiang et al., 2021; Mahdavi et al., 2024).

The concept of self-regulation refers to the ability to manage one's emotional, cognitive, and behavioral responses to external and internal stimuli. Robson et al. (2020) highlight that early developmental experiences, particularly those involving trauma, significantly affect the ability to regulate emotions effectively. Self-regulation is a key factor in emotional well-being, and individuals with poor self-regulation are more likely to experience psychological distress and engage in maladaptive behaviors (Robson et al., 2020). Amini (2023) further emphasizes that emotion regulation difficulties, stemming from childhood trauma, are often linked to substance use disorders and other forms of psychological distress (Amini, 2023). Moreover, childhood abuse has been shown to disrupt the development of self-regulation, leading to difficulties in managing emotions and behaviors throughout adulthood (Hopfinger et al., 2016; Sheikhi & Aminiha, 2022).

Dark personality traits, such as Machiavellianism, narcissism, and psychopathy, are characterized by manipulative behaviors, a lack of empathy, and a tendency to exploit others for personal gain. These traits are often conceptualized as part of the "dark triad," a set of socially aversive personality characteristics that have been associated with a variety of negative outcomes, including interpersonal conflicts, aggression, and criminal behavior (Jiang et al., 2021; Mahdavi et al., 2024). Individuals exhibiting dark personality traits often struggle with emotional regulation, which may exacerbate their interpersonal difficulties and contribute to the development of maladaptive coping strategies. According to Erol and

Inozu (2023), the interplay between childhood trauma and dark personality traits is mediated by difficulties in emotion regulation, which may influence behaviors such as nonsuicidal self-injury and interpersonal aggression (Erol & Inozu, 2023).

Childhood trauma encompasses various forms of abuse and neglect, including physical, emotional, and sexual abuse, as well as neglect (Peng et al., 2021; Willis et al., 2023). These traumatic experiences can lead to significant alterations in brain development and emotional processing, which may impair an individual's ability to regulate their emotions effectively. According to Hopfinger et al. (2016), the chronic emotional dysregulation caused by childhood trauma can lead to depression and anxiety, both of which are common among individuals with dark personality traits (Hopfinger et al., 2016). The long-term effects of childhood trauma are thus not limited to immediate emotional responses but extend to the development of enduring personality features that influence interpersonal dynamics and emotional well-being throughout life (Huh et al., 2017).

The impact of childhood trauma on self-regulation is well-documented in the literature. For instance, Ashrafi et al. (2021) demonstrate that difficulties in emotion regulation mediate the relationship between attachment styles, childhood trauma, and self-harming behaviors in adolescents. This finding underscores the importance of emotion regulation as a protective factor against the harmful effects of childhood trauma (Ashrafi et al., 2021). However, the extent to which these difficulties in self-regulation contribute to the development of dark personality traits remains less clear. Previous studies have suggested that individuals who experience childhood abuse are more likely to exhibit dark traits, as these traits may serve as maladaptive coping mechanisms for dealing with emotional pain and interpersonal difficulties (Jiang et al., 2021; Mahdavi et al., 2024).

One key factor influencing the relationship between childhood trauma and dark personality traits is the concept of mentalization, or the ability to understand and interpret one's own and others' mental states. Schmitz et al. (2023) argue that mentalization deficits can exacerbate the effects of childhood trauma, leading to maladaptive coping strategies and the development of dark personality traits (Schmitz et al., 2023). Furthermore, individuals with poor mentalization abilities may struggle to regulate their emotions effectively, leading to difficulties in managing interpersonal relationships and increasing the risk of developing maladaptive personality traits (Sheikhi &

Aminiha, 2022). This highlights the importance of addressing emotion regulation and mentalization in therapeutic interventions for individuals with a history of childhood abuse.

In addition to emotion regulation, distress tolerance is another factor that mediates the relationship between childhood trauma and maladaptive behaviors. Erol and Inozu (2023) highlight the role of distress tolerance in mitigating the effects of childhood trauma, suggesting that individuals with low distress tolerance may be more prone to engage in self-destructive behaviors, including nonsuicidal self-injury (Erol & Inozu, 2023). This finding is consistent with the broader literature on emotion regulation, which emphasizes the importance of coping skills in managing the psychological distress associated with childhood abuse (Amini, 2023; Hopfinger et al., 2016). The present study seeks to explore the relationships between childhood trauma, self-regulation, and dark personality traits.

2. Methods and Materials

2.1. Study Design and Participants

This research employed a cross-sectional design to examine the relationship between childhood abuse and self-regulation in dark personality traits. The study's population consisted of university students in Tehran, who were enrolled in undergraduate, master's, and doctoral programs during the academic year 2021-22. The inclusion criteria for participation were as follows: students from these three educational levels who were enrolled during the specified academic year.

A convenience sampling method was used to select participants, ensuring a sample that reflected the broader student population in Tehran. Based on Kline's (2011) formula for sample size estimation, the total number of items in the survey was multiplied by 2.5, yielding an estimated sample size of 367. To account for potential attrition and non-response, the final sample size was set at 400 participants.

2.2. Measures

2.2.1. Childhood Abuse

The CTQ, developed by Bernstein et al. (2003), was used to assess childhood trauma experiences. This self-report measure screens for childhood abuse and neglect, applicable to both adolescents and adults. The questionnaire consists of 28 items, divided into five subscales: sexual abuse (items 20, 21, 23, 24, 27), physical abuse (items 1, 2, 4, 6, 26), physical neglect (items 9, 11, 12, 15, 17), emotional abuse (items 3, 8, 14, 18, 25), and emotional neglect (items 5, 7, 13, 19, 28). Items 5, 7, 13, 19, 28, 2, and 26 are reverse-scored. Higher scores indicate greater childhood trauma. Reliability of the CTQ has been shown to be high, with Cronbach's alpha coefficients ranging from 0.78 to 0.95 across the subscales in the original study. In Iran, reliability coefficients ranged from 0.81 to 0.98 (Mahmoudi et al., 2022).

2.2.2. Dark Personality Traits

The Dark Triad Personality Traits questionnaire was developed by Jonason and Webster (2010) to measure three dark personality traits: Machiavellianism, Psychopathy, and Narcissism. This short form contains 12 items, with four items per subscale. Respondents rate each item on a 7-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (7). Higher scores reflect stronger tendencies toward dark personality traits. The internal consistency of the scale was reported by the original developers to be between 0.76 and 0.87, with test-retest reliability ranging from 0.75 to 0.85. In Iran, the Cronbach's alpha for the scale was 0.87 (Mahdavi et al., 2024).

2.2.3. Self-Regulation

The Self-Regulation Questionnaire (SRQ) by Brown and Miller (1999) was used to assess self-regulation skills. It includes 63 items across seven subscales: Acceptance, Evaluation, Initiation, Monitoring, Planning, Execution, and Assessment. The questionnaire uses a 5-point Likert scale, where responses range from "strongly disagree" (1) to "strongly agree" (5). Higher scores indicate better self-regulation abilities. The SRQ has shown high reliability in previous studies, with Cronbach's alpha coefficients ranging from 0.91 for the total scale to between 0.60 and 0.91 for its subscales (Vaziri et al., 2021).

2.3. Data Analysis

The data were analyzed using SPSS-27 software. A linear regression analysis was performed to examine the relationships between childhood trauma (independent variable) and self-regulation (dependent variable), while controlling for dark personality traits (Machiavellianism, Psychopathy, and Narcissism). The model included one dependent variable (self-regulation) and two independent variables (childhood trauma and dark personality traits).

This method allowed for a comprehensive analysis of the impact of childhood abuse and dark traits on self-regulation. The results were considered significant at p < 0.05.

3. Findings and Results

Table 1

Descriptive Statistics for Key Variables

Variable	M	SD
Childhood Trauma	45.83	7.92
Self-Regulation Difficulty	53.22	8.31
Machiavellianism	24.67	5.15
Narcissism	27.43	6.72
Psychopathy	28.16	7.04

The descriptive statistics for all variables in the study are presented in Table 1. The table includes the mean and standard deviation for each of the independent variables (childhood trauma, self-regulation, dark personality traits), and the dependent variable (dark personality traits).

The descriptive statistics reveal that the mean score for childhood trauma (M = 45.83, SD = 7.92) indicates a moderate level of trauma exposure among participants. The self-regulation difficulty measure (M = 53.22, SD = 8.31) suggests participants generally experience significant challenges with emotional regulation. The scores for dark personality traits, including Machiavellianism (M = 24.67, SD = 5.15), Narcissism (M = 27.43, SD = 6.72), and Psychopathy (M = 28.16, SD = 7.04), all indicate moderate levels of these traits in the sample.

The Pearson correlation coefficients and p-values between the dependent variable (dark personality traits) and each independent variable (childhood trauma and self-regulation difficulties) are presented in Table 2.

Table 2

Correlation Matrix of Study Variables

Variable	Machiavellianism (Machi)	Narcissism (Narc)	Psychopathy (Psycho)
Childhood Trauma	0.56 (p < .001)	0.45 (p < .001)	0.62 (p < .001)
Self-Regulation Difficulty	0.48 (p < .001)	0.53 (p < .001)	0.59 (p < .001)

The correlation matrix reveals significant positive relationships between childhood trauma and each of the dark personality traits. Specifically, childhood trauma showed moderate to strong positive correlations with Machiavellianism (r = 0.56, p < .001), Narcissism (r = 0.45, p < .001), and Psychopathy (r = 0.62, p < .001). Additionally, self-regulation difficulties were positively correlated with all three dark personality traits: Machiavellianism (r = 0.48, p < .001), Narcissism (r = 0.53, p < .001), and Psychopathy (r = 0.59, p < .001). These findings suggest that higher levels of childhood trauma and greater difficulties in self-regulation are associated with higher levels of dark personality traits.

Table 3 presents the summary of regression analysis used to explore the relationship between childhood trauma, self-regulation, and dark personality traits. The regression model includes all predictors (childhood trauma and self-regulation difficulty) and the dependent variable (dark personality traits).

Table 3

Summary of Regression Results for Predicting Dark Personality Traits

Source	Sum of Squares	Degrees of Freedom	Mean Squares	R	R²	Adjusted R²	F	p
Regression	892.47	2	446.24	0.76	0.58	0.57	462.19	< .001
Residual	642.31	297	2.16					
Total	1534.78	299						

The regression analysis indicates that the overall model significantly predicts dark personality traits, with an R^2 of 0.58, suggesting that 58% of the variance in dark personality traits is explained by childhood trauma and self-regulation difficulties. The F-value (462.19) is highly significant ($p < .001$), confirming the strength of the relationship. Both childhood trauma and self-regulation difficulties are significant predictors of dark personality traits, and the model fits the data well.

The results of the multivariate regression analysis are displayed in Table 4. This analysis examined the individual contribution of childhood trauma and self-regulation difficulty in predicting each of the dark personality traits.

Table 4

Multivariate Regression Results Predicting Dark Personality Traits

Predictor Variable	B	Standard Error	β	t	p
Constant	12.47	3.24		3.85	< .001
Childhood Trauma	0.38	0.06	0.50	6.28	< .001
Self-Regulation Difficulty	0.29	0.05	0.52	5.86	< .001

The multivariate regression results indicate that both childhood trauma and self-regulation difficulties are significant predictors of dark personality traits. Specifically, childhood trauma was found to have a significant positive effect on dark personality traits (B = 0.38, β = 0.50, t = 6.28, $p < .001$), and self-regulation difficulties also significantly predicted dark personality traits (B = 0.29, β = 0.52, t = 5.86, $p < .001$). These results suggest that both factors contribute to the development of dark personality traits, with self-regulation difficulties slightly stronger as a predictor than childhood trauma.

4. Discussion and Conclusion

The present study aimed to investigate the relationship between childhood trauma, self-regulation difficulties, and dark personality traits, including Machiavellianism, Narcissism, and Psychopathy. The results of the regression analyses suggest that both childhood trauma and self-regulation difficulties significantly predict dark personality traits, with childhood trauma having a moderate impact on Machiavellianism, Narcissism, and Psychopathy, and self-regulation difficulties exhibiting a slightly stronger influence on these traits. These findings provide valuable insights into the complex interplay between early life adversity and maladaptive personality traits, aligning with previous studies that have explored the role of childhood experiences in shaping personality development and emotional regulation.

Our findings are consistent with a growing body of literature indicating that childhood trauma plays a significant role in the development of dark personality traits. Previous studies have shown that adverse childhood experiences can contribute to the emergence of maladaptive personality characteristics, including the dark triad traits (Ashrafi et al., 2021; Jiang et al., 2021). For example, Jiang et al. (2021) found that childhood maltreatment significantly predicted the attribution of negative traits to self and others, which aligns with our observation that childhood trauma is positively associated with dark personality traits (Jiang et al., 2021). Additionally, studies by Huh et al. (2017) and Hopfinger et al. (2016) support our finding that childhood trauma is positively correlated with depression and emotional dysregulation, both of which are commonly linked to darker personality traits (Huh et al., 2017). These findings underscore the importance of early traumatic experiences in the development of maladaptive emotional and personality patterns.

Self-regulation difficulties have also been shown to contribute to the development of dark personality traits, which supports the present study's results. Our regression analyses revealed that self-regulation difficulties were significantly associated with all three dark personality traits, with the strongest association observed for psychopathy. This finding is consistent with the work of Peng et al. (2021), who found that maladaptive emotion regulation strategies mediate the relationship between childhood trauma and borderline personality features (Peng et al., 2021). Similarly, Hopfinger et al. (2016) demonstrated that emotion regulation difficulties mediated the effect of childhood trauma on depression, which often overlaps with traits of narcissism and psychopathy (Hopfinger et al., 2016). Additionally, Jones et al. (2023) highlighted that trait-level emotion regulation strategies moderate the associations between childhood trauma and psychological outcomes, such as systemic inflammation, which in turn can be linked to

maladaptive personality traits (Jones et al., 2023). Taken together, these studies suggest that difficulties in regulating emotions may serve as a key mechanism through which childhood trauma manifests in dark personality traits.

The findings of this study also provide further evidence of the cumulative effect of childhood trauma and emotional dysregulation on psychological well-being. The association between emotional regulation difficulties and dark personality traits, as seen in the present study, has been well-documented in clinical populations. For instance, Erol and Inozu (2023) identified the mediating roles of emotion regulation difficulties and distress tolerance in the relationship between childhood trauma and self-harming behaviors, underscoring how emotional regulation difficulties can amplify the effects of early life trauma (Erol & Inozu, 2023). This is particularly relevant in the context of psychopathy and narcissism, where individuals tend to exhibit high levels of impulsivity, emotional dysregulation, and difficulty in forming meaningful interpersonal relationships. Thus, addressing these emotion regulation challenges might mitigate the development of such traits in individuals who have experienced childhood adversity.

Another important aspect of the present study is the strong correlation between self-regulation difficulties and dark personality traits. Previous research has demonstrated that individuals who experience difficulties in regulating their emotions are more likely to exhibit maladaptive personality traits such as narcissism, psychopathy, and Machiavellianism (Peng et al., 2021; Schmitz et al., 2023). Our study further reinforces this finding, suggesting that enhancing self-regulation skills in individuals with a history of childhood trauma could play a crucial role in preventing or reducing the development of dark personality traits. This points to the importance of emotion regulation interventions in therapeutic settings for individuals struggling with the consequences of childhood trauma.

In summary, this study contributes to a growing body of literature that emphasizes the importance of both childhood trauma and self-regulation difficulties in the development of dark personality traits. Our findings suggest that interventions aimed at improving emotional regulation and addressing past trauma could potentially mitigate the negative impact of these factors on personality development. The significant relationships observed between childhood trauma, self-regulation difficulties, and dark personality traits highlight the need for early intervention and targeted therapies for individuals exhibiting these traits.

5. Limitations & Suggestions

This study provides important insights into the relationship between childhood trauma, self-regulation difficulties, and dark personality traits, but several limitations must be acknowledged. One major limitation is the cross-sectional design, which restricts the ability to establish causal links between the variables. Longitudinal research is necessary to understand how these relationships evolve over time. Another concern is the reliance on self-report measures, which can introduce biases such as social desirability or inaccurate recall. To strengthen the validity of future findings, researchers should consider using more objective assessments like clinical interviews or behavioral observations.

Another limitation lies in the sample's homogeneity, which limits the generalizability of the findings. The sample may have overrepresented individuals experiencing higher psychological distress or more severe trauma histories. Future studies would benefit from more diverse samples that account for age, gender, and socioeconomic differences. Moreover, the study did not investigate possible mediators or moderators—such as resilience, attachment style, or social support—that could influence the associations between trauma, emotion regulation, and personality traits. Exploring these variables could offer a more detailed understanding of the underlying psychological mechanisms.

To address these limitations, future research should employ longitudinal designs, expand sampling diversity, and explore protective factors like resilience or self-compassion that might buffer against the development of dark personality traits. Interventions such as cognitive-behavioral therapy and emotion regulation training may help individuals with a trauma history reduce traits like narcissism, Machiavellianism, and psychopathy. In clinical settings, therapists should consider integrating trauma-focused approaches and mindfulness-based strategies to support emotional regulation. Additionally, early prevention efforts targeting at-risk children could help mitigate the long-term psychological impacts of trauma and reduce the emergence of maladaptive personality traits in adulthood.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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