

Original Article

Early Maladaptive Schemas, Emotion Regulation, and Forgiveness Across the Narcissism Spectrum: A Dimensional Comparative Study

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Abstract

Objective: This cross-sectional study compared early maladaptive schemas, emotion regulation, and forgiveness across healthy, narcissistic traits, and narcissistic personality disorder (NPD) groups.

Method: Convenience sampling yielded 492 adults: healthy individuals (n=205), individuals with narcissistic traits (n=196), and NPD (n=91). NPD classification required meeting the Structured Clinical Interview for DSM-5 Screening Personality Questionnaire (SCID-5-SPQ) threshold and telephone-based diagnostic confirmation. The traits group scored ≥ 8 on the Narcissistic Personality Inventory-16 (NPI-16) but did not meet the SCID-5-SPQ threshold; healthy participants scored below both thresholds. Participants completed Persian versions of the Young Schema Questionnaire-Short Form 3, Emotion Regulation Questionnaire, Interpersonal Emotion Regulation Questionnaire, and Heartland Forgiveness Scale. Multivariate analysis of covariance controlled for age, education, and marital status.

Results: Both narcissistic groups scored higher than healthy participants on emotional deprivation, $F(2, 486) = 6.65, P = 0.001, \eta^2_p = 0.027$; defectiveness/shame, $F(2, 486) = 7.00, P = 0.001, \eta^2_p = 0.028$; and entitlement/grandiosity, $F(2, 486) = 28.52, P < 0.001, \eta^2_p = 0.105$. NPD participants reported higher perspective-taking than both groups, $F(2, 486) = 10.57, P < 0.001, \eta^2_p = 0.042$, and higher soothing than healthy participants, $F(2, 486) = 6.87, P = 0.001, \eta^2_p = 0.027$. Healthy participants reported higher self-forgiveness than NPD participants, $F(2, 486) = 5.14, P = 0.006, \eta^2_p = 0.021$, and higher forgiveness of others than both narcissistic groups, $F(2, 486) = 13.33, P < 0.001, \eta^2_p = 0.052$. Situational forgiveness differed, $F(2, 486) = 11.07, P < 0.001, \eta^2_p = 0.044$, with healthy > traits > NPD. No differences emerged in enhancing positive affect, social modeling, suppression, or cognitive reappraisal.

Conclusion: schema vulnerabilities and forgiveness difficulties may be associated with narcissistic traits and NPD, while perspective-taking and situational forgiveness may differentiate NPD from trait-level narcissism. Findings are associative, not causal.

Key words: *Comparative Study; Emotion Regulation; Forgiveness; Narcissism; Narcissistic Personality Disorder*

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Personality disorders involve stable emotional, cognitive, and interpersonal patterns that usually begin in early adulthood, reduce adaptive functioning, and create difficulties in personal and social life (1, 2). Among these disorders, narcissistic personality disorder (NPD) has received considerable attention because of its impact on interpersonal functioning and psychosocial adjustment. NPD is characterized by grandiosity, a need for admiration, and reduced empathy across different contexts (3, 4). Contemporary dimensional and multidimensional models conceptualize narcissism as ranging from normative traits to clinically significant pathology (5, 6). Recent Iranian evidence has also supported a three-factor structure involving extraversion, neuroticism, and antagonism (7). This perspective suggests that examining narcissistic traits and NPD in relation to cognitive, emotional, and interpersonal processes may be useful.

One influential framework for understanding narcissistic functioning is the early maladaptive schemas model. Early maladaptive schemas are enduring cognitive-affective patterns that influence self-perception, expectations of others, and interpersonal behavior, and may develop when core emotional needs are not adequately met (8). Schema therapy models identify entitlement/grandiosity, emotional deprivation, and defectiveness/shame as particularly relevant to narcissism (8). Entitlement/grandiosity involves beliefs of superiority and special rights, emotional deprivation involves expectations that emotional needs will not be met, and defectiveness/shame involves beliefs of being flawed, unlovable, or vulnerable to rejection (9). Empirical studies have also linked narcissism with broader schema domains, including impaired autonomy, unrelenting standards, and disconnection (10-12). Within the Iranian context, related research has examined the association between early maladaptive schemas and narcissism among university students (11). However, relatively few studies have directly compared these schema patterns across healthy individuals, individuals with narcissistic traits, and individuals with NPD.

Emotion regulation is another important process in narcissistic functioning. Emotion regulation refers to strategies used to monitor, modify, and manage emotional responses, and it can occur at both intrapersonal and interpersonal levels (13). Intrapersonal emotion regulation includes strategies such as cognitive reappraisal and expressive suppression, whereas interpersonal emotion regulation involves using others to enhance positive affect, gain perspective, model coping, or seek soothing (14, 15). This distinction is relevant because narcissistic functioning is closely tied to self-esteem regulation, validation seeking, sensitivity to criticism, and interpersonal feedback. Previous studies suggest that narcissism and maladaptive emotion-related beliefs are associated with difficulties in understanding, accepting, and regulating emotions, although findings

may vary by narcissism dimension and emotion-regulation strategy (16-20). Nevertheless, direct comparisons of intrapersonal and interpersonal emotion regulation across healthy individuals, individuals with narcissistic traits, and individuals with NPD remain limited.

Forgiveness is also relevant to narcissistic functioning because it involves cognitive-emotional responses to perceived harm, offense, or adverse circumstances. Forgiveness may include forgiveness of oneself, forgiveness of others, and situational forgiveness, and generally involves reductions in resentment, revenge, avoidance, and negative affect (21-23). This construct is theoretically important in narcissism because narcissistic individuals may be highly sensitive to criticism, rejection, humiliation, and threats to self-worth (24). Such sensitivity may intensify anger, rumination, resentment, and retaliatory responses after perceived interpersonal injury (25). Therefore, forgiveness may represent an important interpersonal and emotion-related outcome in the study of narcissistic traits and NPD.

Contemporary approaches to personality pathology emphasize a dimensional understanding of disorders, focusing on a continuum from maladaptive traits to clinically significant personality disorder (3). Within this framework, early maladaptive schemas, emotion regulation, and forgiveness may be examined together because they reflect complementary aspects of narcissistic functioning: cognitive-affective vulnerability, regulation of emotional responses, and responses to perceived interpersonal injury. Previous studies have examined these constructs in relation to narcissism, but mostly as separate domains. Therefore, it remains unclear whether these variables show broad differences between healthy individuals and individuals with narcissistic traits or NPD, or whether some of them distinguish trait-level narcissism from clinically diagnosed NPD.

To our knowledge, few studies have examined early maladaptive schemas, intrapersonal and interpersonal emotion regulation, and forgiveness simultaneously across healthy individuals, individuals with narcissistic traits, and individuals with clinically diagnosed NPD. The present study aimed to compare early maladaptive schemas, intrapersonal and interpersonal emotion regulation, and forgiveness among healthy individuals, individuals with narcissistic traits, and individuals with NPD. Based on schema therapy models and empirical findings linking narcissism with early maladaptive schemas, particularly entitlement/grandiosity, emotional deprivation, and defectiveness/shame, we expected both narcissistic groups to report higher levels of these schemas than healthy individuals (8, 10, 11). Based on literature emphasizing intrapersonal and interpersonal emotion regulation, and on evidence linking narcissism with emotion-regulation difficulties, we expected group differences, if present, to be more evident in interpersonal emotion regulation than in intrapersonal

strategies such as suppression and cognitive reappraisal (14, 16, 18, 26, 27). Finally, based on studies conceptualizing forgiveness as an emotion-related response to perceived harm and linking lower forgiveness with narcissism-related sensitivity to interpersonal injury, we expected healthy individuals to report higher forgiveness than the narcissistic groups (22, 28-30). Because direct evidence comparing individuals with narcissistic traits and individuals with NPD across these variables is limited, differences between these two narcissistic groups were treated as exploratory.

Materials and Methods

Study Design and Participants

This descriptive, analytical cross-sectional study compared three independent groups across multiple psychological constructs: healthy participants, individuals with narcissistic traits, and individuals with NPD. The study was conducted using convenience sampling and online questionnaires. The final sample consisted of 492 participants, including 205 healthy participants, 196 participants with narcissistic traits, and 91 participants with NPD.

Inclusion criteria were an age between 18 and 50 years, at least an eighth-grade education, willingness to participate, and willingness to provide informed consent. Exclusion criteria were incomplete questionnaire responses, withdrawal of consent, duplicate submissions, and unwillingness to complete the diagnostic interview when it was required for final group assignment.

Procedure and Recruitment

Participants were recruited by distributing the online survey link across social media platforms, university student groups, and general online groups. All participants entered the study through the same online link, and three groups were subsequently identified from this initial sample using the group-classification procedure described below. The NPD group was not recruited separately from clinical or treatment settings.

Before completing the questionnaires, participants read an introductory page about the study aims, voluntary participation, confidentiality, data protection, and the right to withdraw, and then provided informed consent. All participants completed the Narcissistic Personality Inventory-16 (NPI-16), the Structured Clinical Interview for DSM-5 Screening Personality Questionnaire (SCID-5-SPQ), and the main study questionnaires. Participants who were willing to be contacted for possible follow-up assessments provided contact information at the end of the questionnaire. After screening the responses, those who met the initial SCID-5-SPQ threshold for NPD were contacted and invited to a telephone-based diagnostic interview.

To improve data quality, incomplete questionnaires were excluded. We screened for duplicate submissions using identical demographic information and available contact

details. When duplicates were identified, only the complete response was retained.

Group Classification

Group classification was performed using a hierarchical procedure to ensure that the three groups were mutually exclusive. Using the SCID-5-SPQ, participants endorsing five or more of the nine DSM-5 NPD criteria were identified as meeting the threshold for further diagnostic evaluation. Telephone-based diagnostic interviews were then conducted individually by a trained clinical psychologist who was familiar with the Structured Clinical Interview for DSM-5 Personality Disorders (SCID-5-PD).

During the interview, DSM-5 criteria for NPD were systematically assessed, and assignment to the NPD group required diagnostic confirmation through the structured interview rather than self-report scores alone. Participants with confirmed NPD were assigned exclusively to the NPD group regardless of their NPI-16 score.

Participants were assigned to the narcissistic traits group if they scored 8 or higher on the NPI-16 but did not meet the SCID-5-SPQ threshold for NPD. Participants were assigned to the healthy group if they scored below 8 on the NPI-16 and did not meet the SCID-5-SPQ threshold for NPD. Thus, the healthy, narcissistic traits, and NPD groups were mutually exclusive.

Sample Size

Sample size was calculated using G*Power version 3.1 for a multivariate analysis of variance (MANOVA) with global effects, assuming three independent groups and twelve dependent variables. A conservative multivariate effect size of $f^2(V) = 0.04$, a significance level of $\alpha = 0.01$, and a statistical power of 0.80 were specified, yielding a minimum required sample size of 390 participants (31). This conservative effect size was selected because recent systematic reviews have shown that associations among narcissism, early maladaptive schemas, emotion regulation, and related psychological constructs are generally small to moderate and heterogeneous across studies (16, 32). Accordingly, we avoided assuming a larger effect size, which could have underestimated the required sample size and increased the risk of an underpowered analysis. To improve the precision and robustness of the estimates and compensate for potential exclusions during eligibility screening, group classification, and data-quality checks, the final sample consisted of 492 participants.

Measures

Young Schema Questionnaire – Short Form 3

The YSQ-S3 is a 90-item self-report measure developed to assess 18 early maladaptive schemas across five schema domains (33). Items are rated on a six-point Likert scale, from 1 (“Completely untrue of me”) to 6 (“Describes me perfectly”), with higher scores indicating greater schema severity. The validated Persian version was used in this study (34). Previous Iranian studies have reported satisfactory psychometric properties,

including a Cronbach's alpha of 0.86 (8, 35). In the present study, Cronbach's alpha values were 0.83 for Emotional Deprivation, 0.85 for Defectiveness/Shame, 0.64 for Entitlement/Grandiosity, and 0.97 for the overall scale.

Heartland Forgiveness Scale

The HFS is an 18-item measure of dispositional forgiveness rated on a 7-point Likert scale and assesses self-forgiveness, forgiveness of others, and situational forgiveness (36). Total scores range from 18 to 126, with higher scores indicating greater forgiveness. The original scale showed good reliability ($\alpha = 0.80$), and Iranian validation studies reported acceptable reliability and satisfactory content and face validity (36, 37).

Interpersonal Emotion Regulation Questionnaire

The IERQ is a 20-item self-report measure assessing enhancement of positive affect, perspective taking, soothing, and social modeling (14). Items are rated on a five-point Likert scale from 1 ("Not true for me at all") to 5 ("Extremely true for me"). The original version showed good internal consistency, with Cronbach's alphas ranging from 0.89 to 0.94; the Persian version also showed good reliability, with Cronbach's alpha of 0.90 for the total scale (38).

Emotion Regulation Questionnaire

The ERQ includes two subscales: reappraisal (6 items) and suppression (4 items), rated on a 7-point Likert scale from "strongly disagree" to "strongly agree" (39). The original study reported internal consistency coefficients of 0.83 for reappraisal and 0.73 for suppression. The Persian version demonstrated Cronbach's alpha coefficients of 0.76 and 0.72 for cognitive reappraisal and suppression, respectively (40).

Narcissistic Personality Inventory – 16

The NPI-16 is a 16-item forced-choice self-report measure of narcissistic traits in nonclinical populations and is the short form of the NPI-40 (41). Scores range from 0 to 16, with higher scores indicating greater narcissistic traits; a score of 8 was used as the cutoff. In Iran, the NPI-16 correlated with the Narcissistic Personality scale of the Millon Clinical Multiaxial Inventory-II (MCMI-II) ($r = 0.77$), and the test-retest reliability, split-half reliability, and Cronbach's alpha were 0.84, 0.74, and 0.79, respectively (42).

The Structured Clinical Interview for DSM-5 Personality Disorders screening questionnaire

The SCID-5-SPQ, a self-report screening questionnaire associated with the SCID-5-PD, was used for preliminary screening of DSM-5 personality disorder criteria. Final assignment to the NPD group required diagnostic confirmation through the SCID-5-PD interview. The Persian version has shown face validity, convergent validity (assessed via correlation with the SCID-5-PD), and good internal consistency (Cronbach's alpha = 0.93) (43).

Structured Clinical Interview for DSM-5 Personality Disorders

The SCID-5-PD, introduced in 2016, is used to assess DSM-5 personality disorders across clusters A, B, and C, as well as Personality Disorder—Trait Specified, within both categorical and dimensional frameworks. It covers ten disorders, including narcissistic, borderline, antisocial, and avoidant presentations. The Persian version has demonstrated acceptable validity and reliability in an Iranian clinical sample.

Data Analysis

Data analysis was conducted using SPSS version 26. Preliminary demographic analyses were performed, and age, education level, and marital status, which significantly differed across groups, were entered as covariates in the main analysis. To address the primary research question, multivariate analysis of covariance (MANCOVA) was used to compare the three groups across the study variables while controlling for demographic covariates and accounting for intercorrelations among dependent variables. Before the main analysis, assumptions of multivariate analysis were examined, including normality, homogeneity of variance-covariance matrices (Box's M test), homogeneity of variances (Levene's test), linearity, and absence of severe multicollinearity. Given the sensitivity of Box's M test to violations of multivariate normality, Pillai's Trace was used as the primary multivariate statistic because of its greater robustness.

When the overall multivariate effect was significant, follow-up analyses of covariance (ANCOVAs) were performed for each dependent variable while controlling for covariates. Bonferroni-adjusted pairwise comparisons based on estimated marginal means were conducted to identify specific group differences and control the familywise Type I error rate. Effect sizes were reported using partial eta squared (η_p^2). Statistical significance was set at $P < 0.05$.

Ethical Consideration

The study was approved by the Ethics Committee of Zanjan University of Medical Sciences (Ethics code: IR.ZUMS.REC.1404.122). Participants provided electronic informed consent after reading information about the study purpose, voluntary participation, confidentiality, right to withdraw, and data storage. Responses were stored securely and accessed only by the research team.

Results

Demographic Information

The final sample included 492 participants: 205 in the healthy group, 196 in the narcissistic traits group, and 91 in the NPD group. The mean age was 26.52 years ($SD = 8.75$), and most participants were female (71%) and single. Demographic comparisons showed significant group differences in age, $F = 9.39$, $P < 0.001$, education level, $\chi^2 = 16.69$, $P = 0.033$, and marital status, $\chi^2 = 10.11$, $P = 0.006$, but not gender, $\chi^2 = 4.22$, $P = 0.121$.

Detailed demographic information is presented in Table

1.

Table 1. Demographic Characteristics Across Healthy, Narcissistic Traits, and Narcissistic Personality Disorder Groups

Variable	Healthy (n = 205)	Traits (n = 196)	NPD (n = 91)	Test	Statistic	P
Age (Mean $\pm$ SD)	28.46 $\pm$ 9.36	25.44 $\pm$ 8.53	24.45 $\pm$ 6.78	One-way ANOVA	$F(2, 489) = 9.39$	< 0.001
Gender (Female), n (%)	123 (60.0%)	114 (58.2%)	50 (54.9%)	Chi-square	$\chi^2(2) = 4.22$	0.121
Education level, n (%)				Chi-square	$\chi^2(8) = 16.69$	0.033
Less than high school diploma	36 (17.6%)	58 (29.6%)	23 (25.3%)			
High school diploma	8 (3.9%)	10 (5.1%)	2 (2.2%)			
Bachelor's degree	87 (42.4%)	81 (41.3%)	46 (50.5%)			
Master's degree	63 (30.7%)	39 (19.9%)	15 (16.5%)			
Doctoral degree (PhD)	11 (5.4%)	8 (4.1%)	5 (5.5%)			
Marital status, n (%)				Chi-square	$\chi^2(2) = 10.11$	0.006
Single	142 (69.3%)	161 (82.1%)	73 (80.2%)			
Married	63 (30.7%)	35 (17.9%)	18 (19.8%)			

Note. Values are presented as mean $\pm$ SD for continuous variables and n (%) for categorical variables. Percentages are calculated within each group. Group differences were examined using one-way ANOVA for age and chi-square tests for categorical variables. NPD = narcissistic personality disorder; Traits = individuals with narcissistic traits; SD = standard deviation.

The descriptive statistics (means and standard deviations) for all study variables across the three groups are presented in Table 2. Given the observed group differences in several demographic variables, age, education level, and marital status were subsequently

included as covariates in the multivariate analyses to control for their potential confounding effects. The results of the MANCOVA, including group comparisons and effect sizes, are presented in Table 3.

Table 2. Descriptive Statistics for Early Maladaptive Schemas, Emotion Regulation, and Forgiveness Across Healthy, Narcissistic Traits, and Narcissistic Personality Disorder Groups

Variable	Group	Mean	SD	Skewness	Kurtosis
Emotional Deprivation	Healthy	11.13	5.58	0.07	0.95
	TNP	13.23	6.94	-0.36	0.75
	NPD	13.48	6.08	-0.05	0.64
Defectiveness/Shame	Healthy	8.45	4.42	0.81	1.83
	TNP	10.13	5.58	1.61	1.40
	NPD	10.97	5.26	-0.15	0.82
Entitlement/Grandiosity	Healthy	13.00	4.35	-0.29	0.32
	TNP	16.37	4.99	-0.32	0.09
	NPD	17.03	5.11	0.30	-0.30
Enhancing Positive Affect	Healthy	17.52	4.41	0.75	-0.03
	TNP	17.81	4.58	0.30	-0.36
	NPD	17.92	4.64	-0.30	-0.35
Perspective Taking	Healthy	11.81	4.10	-0.11	0.58
	TNP	12.40	3.99	0.05	0.50
	NPD	14.04	4.46	-0.58	0.16
Soothing	Healthy	11.25	4.10	0.13	0.69
	TNP	11.95	4.41	0.56	0.47
	NPD	13.21	4.77	0.63	0.22
Social Modeling	Healthy	14.13	3.96	-0.13	0.49

Variable	Group	Mean	SD	Skewness	Kurtosis
Self-Forgiveness	TNP	14.00	3.82	-0.02	0.35
	NPD	14.72	4.33	-0.28	0.06
	Healthy	27.41	5.75	0.32	0.03
Forgiveness of Others	TNP	26.28	5.40	0.78	0.02
	NPD	25.01	4.71	-0.23	-0.20
	Healthy	26.42	6.83	-0.21	-0.03
Situational Forgiveness	TNP	23.64	6.80	0.80	-0.21
	NPD	22.18	6.44	0.59	-0.29
	Healthy	28.28	6.14	0.59	-0.29
Suppression	TNP	26.60	5.87	0.50	-0.25
	NPD	24.47	5.00	0.49	-0.00
	Healthy	17.37	4.56	-0.66	-0.17
Cognitive Reappraisal	TNP	17.52	4.92	-0.46	-0.13
	NPD	17.94	4.56	-0.33	-0.27
	Healthy	29.16	6.05	-0.92	-0.61
	TNP	28.55	6.51	-0.44	-0.47
	NPD	28.76	6.90	-0.27	-0.34

Note. Values are presented as unadjusted means and standard deviations. Skewness and kurtosis values are reported as descriptive indicators of distributional normality. Healthy = healthy group (n = 205); TNP = individuals with narcissistic traits (n = 196); NPD = narcissistic personality disorder group (n = 91); SD = standard deviation

Table 3. Multivariate Analysis of Covariance and Bonferroni Pairwise Comparisons for Early Maladaptive Schemas, Emotion Regulation, and Forgiveness Across Healthy, Narcissistic Traits, and Narcissistic Personality Disorder Groups

Variable	F (2,486)	P	Partial η^2	Significant Pairwise Comparisons (Bonferroni)
Emotional Deprivation	6.65	0.001	0.027	H < TNP (MD = 1.98, P = 0.006); H < NPD (MD = 2.37, P = 0.009)
Defectiveness/Shame	7.00	0.001	0.028	H < TNP (MD = 1.35, P = 0.026); H < NPD (MD = 2.24, P = 0.002)
Entitlement/Grandiosity	28.52	< 0.001	0.105	H < TNP (MD = 3.06, P < 0.001); H < NPD (MD = 3.79, P < 0.001)
Enhancing Positive Affect	0.55	0.579	0.002	No significant differences
Perspective Taking	10.57	< 0.001	0.042	NPD > H (MD = 2.42, P < 0.001); NPD > TNP (MD = 1.73, P = 0.003)
Soothing	6.87	0.001	0.027	NPD > H (MD = 2.06, P = 0.001)
Social Modeling	1.14	0.321	0.005	No significant differences
Self-Forgiveness	5.14	0.006	0.021	H > NPD (MD = 2.18, P = 0.005)
Forgiveness of Others	13.33	< 0.001	0.052	H > TNP (MD = 2.70, P < 0.001); H > NPD (MD = 3.99, P < 0.001)
Situational Forgiveness	11.07	< 0.001	0.044	H > TNP (MD = 1.47, P = 0.041); H > NPD (MD = 3.46, P < 0.001); TNP > NPD (MD = 1.99, P = 0.022)
Suppression	0.50	0.609	0.002	No significant differences
Cognitive Reappraisal	0.37	0.689	0.002	No significant differences

Note. F statistics are reported with degrees of freedom of 2 and 486. All Bonferroni-adjusted pairwise comparisons were based on the same model error term and therefore used the same error degrees of freedom (df = 486). MD = mean difference; H = healthy group; TNP = traits group; NPD = narcissistic personality disorder.

Before performing the MANCOVA, its assumptions were examined. Box's M test for equality of covariance matrices was significant (Box's M = 220.86, P = 0.002); however, given the adequate sample size and the test's sensitivity to multivariate nonnormality, Pillai's Trace was used as the primary robust multivariate statistic.

Because age, education level, and marital status differed significantly across groups, they were entered as covariates. The adjusted multivariate group effect on the combined dependent variables remained significant, indicating overall group differences. Levene's test supported homogeneity of variances for most dependent

variables; minor violations in a few variables were not considered problematic given the robustness of the analysis and the relatively large sample size. Detailed group-comparison statistics are presented in Table 3.

Results of the MANCOVA, presented in Table 3, revealed significant group differences across several study variables after controlling for age, education level, and marital status. Comparative analyses of maladaptive schemas demonstrated significant group differences in Emotional Deprivation [$F(2, 486) = 6.65, P = 0.001, \eta^2_p = 0.027$], Defectiveness/Shame [$F(2, 486) = 7.00, P = 0.001, \eta^2_p = 0.028$], and Entitlement/Grandiosity [$F(2, 486) = 28.52, P < 0.001, \eta^2_p = 0.105$]. Bonferroni-adjusted comparisons indicated that the healthy group scored significantly lower than both the narcissistic traits and NPD groups on all three schemas, whereas the latter two groups did not significantly differ from one another. Regarding interpersonal emotion regulation, no significant group differences were observed for Enhancing Positive Affect [$F(2, 486) = 0.55, P = 0.579, \eta^2_p = 0.002$] or Social Modeling [$F(2, 486) = 1.14, P = 0.321, \eta^2_p = 0.005$]. Significant differences emerged for Perspective Taking [$F(2, 486) = 10.57, P < 0.001, \eta^2_p = 0.042$], with the NPD group scoring significantly higher than both the healthy and narcissistic traits groups. Similarly, significant differences were found for Soothing [$F(2, 486) = 6.87, P = 0.001, \eta^2_p = 0.027$], with the NPD group scoring significantly higher than the healthy group.

For forgiveness-related variables, significant group differences were identified for Self-Forgiveness [$F(2, 486) = 5.14, P = 0.006, \eta^2_p = 0.021$], Forgiveness of Others [$F(2, 486) = 13.33, P < 0.001, \eta^2_p = 0.052$], and Situational Forgiveness [$F(2, 486) = 11.07, P < 0.001, \eta^2_p = 0.044$]. Specifically, the healthy group reported significantly higher self-forgiveness than the NPD group. For forgiveness of others, the healthy group scored significantly higher than both the narcissistic traits and NPD groups, whereas no difference was observed between the latter two groups. In situational forgiveness, the healthy group scored significantly higher than both the other groups, and the narcissistic traits group also scored significantly higher than the NPD group.

Finally, no significant group differences were found for Suppression [$F(2, 486) = 0.50, P = 0.609, \eta^2_p = 0.002$] or Cognitive Reappraisal [$F(2, 486) = 0.37, P = 0.689, \eta^2_p = 0.002$], suggesting that these cognitive emotion regulation strategies were relatively similar across the three groups.

Discussion

This study examined early maladaptive schemas, intrapersonal and interpersonal emotion regulation, and forgiveness across healthy individuals, individuals with narcissistic traits, and individuals with NPD. These domains were integrated because narcissistic functioning may involve interrelated processes in which self-relevant

schemas shape appraisals of interpersonal events, emotion regulation reflects attempts to manage the affect resulting from these appraisals, and forgiveness indicates whether perceived injuries are resolved or maintained as resentment. In the present cross-sectional design, this integration was used as an interpretive framework rather than as evidence for a tested causal pathway. Thus, the three constructs were treated as linked levels of a cognitive-emotional-interpersonal process rather than as separate correlates (12, 16, 22). Findings were interpreted after controlling for age, education level, and marital status. This indicates that the observed group differences remained significant after adjustment for these demographic variables, although residual confounding cannot be fully excluded.

The first set of findings concerned early maladaptive schemas. After controlling for age, education level, and marital status, both narcissistic groups scored higher than the healthy group on emotional deprivation, defectiveness/shame, and entitlement/grandiosity, with the largest effect observed for entitlement/grandiosity. This pattern suggests shared schema-related vulnerabilities in both narcissistic groups. This is consistent with schema therapy models and prior evidence linking narcissism to early maladaptive schemas, particularly entitlement and defectiveness-related themes (8, 10, 12). However, the absence of significant differences between the traits and NPD groups should be interpreted cautiously; it may reflect shared vulnerabilities across the narcissism spectrum, but it may also indicate limited measure sensitivity or reduced statistical power due to the smaller NPD group (6, 44).

The second set of findings concerned interpersonal emotion regulation. After controlling for covariates, no group differences emerged in enhancing positive affect or social modeling, suggesting that group differences were not evident across all IERQ components. In contrast, the NPD group reported higher perspective taking than both other groups and greater soothing than the healthy group, whereas the narcissistic traits group did not differ significantly from either group in soothing. Importantly, higher IERQ perspective taking should not be interpreted as greater empathic capacity, but rather as greater self-reported use of others' viewpoints for emotion regulation. A common feature of perspective taking and soothing is reliance on others to down-regulate negative affect: perspective taking involves using others to reappraise distressing situations, whereas soothing involves seeking comfort, empathy, or reassurance. Thus, reliance on selected interpersonal emotion-regulation strategies may become more clinically pronounced in NPD, particularly when negative self-relevant emotions require external reframing or reassurance. This interpretation is consistent with interpersonal emotion regulation models and clinical accounts of NPD emphasizing the interplay

between self-esteem regulation, negative affect, and external feedback (15, 16, 24).

The third key finding concerned intrapersonal emotion regulation. No significant group differences emerged in suppression or cognitive reappraisal among healthy individuals, individuals with narcissistic traits, and individuals with NPD after controlling for covariates, suggesting that these intrapersonal emotion regulation strategies did not differentiate the three groups in this sample. This finding is broadly consistent with evidence that total or grandiose narcissism is not consistently associated with suppression or reappraisal, although vulnerable narcissism has been more reliably linked to greater suppression (16, 18, 45, 46). Thus, the non-significant intrapersonal emotion regulation findings may partly reflect the stronger entitlement/grandiosity pattern in the present sample and the lack of separate assessment of vulnerable narcissism. Moreover, suppression and reappraisal were assessed as self-reported frequencies; their emotional and interpersonal consequences may still differ depending on context, motivational goals, and regulatory flexibility. In the present findings, group differences were more evident in interpersonal regulation, particularly in the NPD group's greater use of perspective taking and soothing.

The fourth and final set of findings concerned forgiveness. Significant group differences emerged in all three dimensions of forgiveness, although the pattern of pairwise differences varied across dimensions. For self-forgiveness, the healthy group scored significantly higher than the NPD group, whereas the narcissistic traits group did not differ significantly from either group. For forgiveness of others, the healthy group scored higher than both narcissistic groups, with no significant difference between the narcissistic traits and NPD groups. For situational forgiveness, a graded pattern emerged, with the healthy group scoring higher than both narcissistic groups and the narcissistic traits group scoring higher than the NPD group. This pattern is consistent with conceptualizations of forgiveness as a cognitive-emotional process that requires regulation of negative affect, reduction of rumination, and reinterpretation of harmful or uncontrollable events (21-23). From this perspective, forgiveness is expected to be more developed among psychologically healthy individuals.

The lower forgiveness of others in both narcissistic groups may reflect shared narcissism-related vulnerabilities, including entitlement, shame sensitivity, anger, and heightened sensitivity to self-worth threats, which can interfere with emotional reconciliation after perceived injury (47-49).

In contrast, the additional deficit of the NPD group in situational forgiveness may indicate greater difficulty accepting circumstances that cannot be controlled, repaired, or attributed to a specific interpersonal offender. This interpretation is consistent with clinical accounts of NPD emphasizing fragile self-esteem

regulation, low tolerance of frustration, and difficulties adapting to perceived failure or loss of control (47, 50).

Taken together, the findings suggest that schemas, emotion regulation, and forgiveness may offer complementary perspectives on narcissistic traits and NPD. Schema differences appeared across both narcissistic groups, whereas selected interpersonal regulation strategies and situational forgiveness showed more specific differences in the NPD group. Suppression and cognitive reappraisal did not differentiate the groups. This pattern indicates that considering schema-related vulnerabilities, interpersonal regulation, and forgiveness together may be useful for describing narcissism-related profiles, without implying causal relationships among these constructs.

Limitation

Several limitations should be noted. The cross-sectional design limits causal inference, and unequal group sizes may have affected the precision of comparisons. Although age, education level, and marital status were controlled, residual confounding cannot be excluded. The predominance of female participants, convenience sampling, online recruitment, and self-report measures may limit generalizability and introduce response bias. Telephone-based diagnostic interviews may have limited assessment of nonverbal cues. Inter-rater reliability was not calculated, and narcissism subtypes were not examined separately. Future studies should use longitudinal designs, more balanced samples, subtype-specific measures, and multi-assessor diagnostic procedures.

Conclusion

The findings of the present study suggest that narcissism can be conceptualized along a continuum ranging from healthy functioning to narcissistic personality disorder. Within this continuum, early maladaptive schemas and certain emotional vulnerabilities appear to function as shared core features. At the same time, the results indicate that the distinction between narcissistic traits and narcissistic personality disorder is more evident in patterns of interpersonal emotion regulation and their emotional and relational consequences, particularly in the domain of forgiveness, than in intrapersonal strategies. Specifically, a diminished capacity to accept and forgive uncontrollable situations may serve as a distinguishing marker of greater psychopathological severity in narcissism. These findings underscore the importance of simultaneously addressing cognitive, emotional, and interpersonal mechanisms in the understanding and treatment of narcissism.

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Conflict of Interest

The authors declare that they have no financial or nonfinancial conflicts of interest related to this work.

Author's Contributions

Reyhaneh Miralikhani: Conceptualization, Methodology, Data curation, Writing – original draft, Review and Editing. Gholamreza Ahmadi: Writing – original draft, Methodology, Formal analysis. Mohadese Shiyasi: Data curation, Writing – original draft. Zahra Safikhani: Writing – original draft. Seyede Elnaz Mousavi: Supervision, Conceptualization, review & editing. All authors read and approved the final manuscript.

References

1. Waugh MH, Hopwood CJ, Krueger RF, Morey LC, Pincus AL, Wright AGC. Psychological Assessment with the DSM-5 Alternative Model for Personality Disorders: Tradition and Innovation. *Prof Psychol Res Pr*. 2017;48(2):79-89.
2. Wilson S, Stroud CB, Durbin CE. Interpersonal dysfunction in personality disorders: A meta-analytic review. *Psychol Bull*. 2017;143(7):677-734.
3. Monaghan C, Bizumic B. Dimensional models of personality disorders: Challenges and opportunities. *Front Psychiatry*. 2023;14:1098452.
4. Weinberg I, Ronningstam E. Narcissistic Personality Disorder: Progress in Understanding and Treatment. *Focus (Am Psychiatr Publ)*. 2022;20(4):368-77.
5. 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(4):638-56.
6. Krizan Z, Herlache AD. The Narcissism Spectrum Model: A Synthetic View of Narcissistic Personality. *Pers Soc Psychol Rev*. 2018;22(1):3-31.
7. Bahrami B, Safarloo N. Psychometric Properties of the Persian Version of the Five-Factor Narcissism Inventory-Short Form (FFNI-SF). *Iran J Psychiatry*. 2023;18(2):173-82.
8. Young JE, Klosko JS, Weishaar ME. Schema therapy: A practitioner's guide: guilford press; 2006.
9. Bär A, Bär HE, Rijkeboer MM, Lobbestael J. Early Maladaptive Schemas and Schema Modes in clinical disorders: A systematic review. *Psychol Psychother*. 2023;96(3):716-47.
10. Young JE, Klosko JS, Weishaar ME. Schema therapy: A practitioner's guide: guilford press; 2006.
11. Jadidi M, Ramezani KZ. Prediction of narcissism based on narcissistic needs, maladaptive schemas and defense mechanisms in female and male students of Tehran universities. 2023.
12. Vida D, Láng A, Áfra E, Kemény V, Czibor A, Csapó G, et al. In the mind of Narcissus: The mediating role of emotional regulation in the emergence of distorted cognitions. *Scand J Psychol*. 2024;65(4):729-34.
13. Petrova K, Gross JJ. The Future of Emotion Regulation Research: Broadening Our Field of View. *Affect Sci*. 2023;4(4):609-16.
14. Hofmann SG, Carpenter JK, Curtiss J. Interpersonal Emotion Regulation Questionnaire (IERQ): Scale Development and Psychometric Characteristics. *Cognit Ther Res*. 2016;40(3):341-56.
15. Queiroga MR, da Silva DF, Ferreira SA, Weber VMR, Fernandes DZ, Cavazzotto TG, et al. Characterization of Reproductive and Morphological Variables in Female Elite Futsal Players. *Front Psychol*. 2021;12:625354.
16. Blay M, Cham MA, Duarte M, Ronningstam E. Association between Pathological Narcissism and Emotion Dysregulation: A Systematic Review. *Psychopathology*. 2024;57(4):297-317.
17. Cipriano A, Cantone D, Guerriera C, Rosato MS, Cotrufo P, Cella S. Narcissistic vulnerability and binge eating in adolescence: The mediating role of emotion dysregulation and dissociative experiences. *Journal of Affective Disorders Reports*. 2024;16:100737.
18. Loeffler LAK, Huebben AK, Radke S, Habel U, Derntl B. The Association Between Vulnerable/Grandiose Narcissism and Emotion Regulation. *Front Psychol*. 2020;11:519330.
19. Zhang H, Wang Z, You X, Lü W, Luo Y. Associations between narcissism and emotion regulation difficulties: Respiratory sinus arrhythmia reactivity as a moderator. *Biol Psychol*. 2015;110:1-11.
20. Ghapanchi A, Abasi I, Rimes KA, Bitarafan M, Zarabi H, Derakhshan FS, et al. Psychometric Evaluation of a Persian Version of Beliefs about Emotions Scale in Community and Clinical Samples. *Iran J Psychiatry*. 2024;19(1):89-98.
21. Kim JJ, Payne ES, Tracy EL. Indirect Effects of Forgiveness on Psychological Health Through Anger and Hope: A Parallel Mediation Analysis. *J Relig Health*. 2022;61(5):3729-46.
22. Hampton LE, Carruth NP, Lurquin JH, Miyake A. Personality correlates of dispositional forgiveness: a direct comparison of interpersonal and self-forgiveness using common transgression scenarios. *Front Psychol*. 2023;14:1218663.

23. Vismaya A, Gopi A, Romate J, Rajkumar E. Psychological interventions to promote self-forgiveness: a systematic review. *BMC Psychol*. 2024;12(1):258.
24. Reis S, Huxley E, Eng Yong Feng B, Grenyer BFS. Pathological Narcissism and Emotional Responses to Rejection: The Impact of Adult Attachment. *Front Psychol*. 2021;12:679168.
25. McCullough ME, Emmons RA, Kilpatrick SD, Mooney CN. Narcissists as "Victims": the role of narcissism in the perception of transgressions. *Pers Soc Psychol Bull*. 2003;29(7):885-93.
26. Zaki J, Williams WC. Interpersonal emotion regulation. *Emotion*. 2013;13(5):803-10.
27. Gross JJ. Emotion regulation: Current status and future prospects. *Psychol Inq*. 2015;26(1):1-26.
28. Fattfouta R, Zeigler-Hill V, Schröder-Abé M. I'm merciful, am I not? Facets of narcissism and forgiveness revisited. *J Res Pers*. 2017;70:166-73.
29. Nedeljković B, Dinić B, Tucaković L. The dark triad and forgiveness: The mediating role of anger rumination. *Pers Individ Dif*. 2023;215:112362.
30. Li J, Struthers CW, Rebrov DO, Shoikhedbrod A, Guilfoyle JR. The association between victims' vulnerable and grandiose narcissism and grudge holding. *J Soc Psychol*. 2025;165(1):21-36.
31. Faul F, Erdfelder E, Lang AG, Buchner A. G*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behav Res Methods*. 2007;39(2):175-91.
32. Pilkington PD, Karantzas GC, Faustino B, Pizarro-Campagna E. Early maladaptive schemas, emotion regulation difficulties and alexithymia: A systematic review and meta-analysis. *Clin Psychol Psychother*. 2024;31(1):e2914.
33. Young JE. Young schema questionnaire--Short form. *Cognit Ther Res*. 1998.
34. Yousefi N, Shirbagi N. Validating the young early maladaptive schema questionnaire (YEMSQ) among students. 2010.
35. Ghiasi M, Molavi M, Neshatdost H, Salavati M. The factor structure of Farsi version of Young Schema Questionnaire-S3 in two groups in Tehran. *Psychological Achievements*. 2011;18(1):93-118.
36. Thompson LY, Snyder CR, Hoffman L, Michael ST, Rasmussen HN, Billings LS, et al. Dispositional forgiveness of self, others, and situations. *J Pers*. 2005;73(2):313-59.
37. Ebrahimi M, Azkhosh M, Shoaai F, Froughan M, Dolatshahi B. Psychometric properties of Persian version of Heartland Forgiveness Scale in elderly. *Iranian Journal of Rehabilitation Research*. 2017;3(4):9-20.
38. Lotfi M, Shiasy Y, Amini M, Mansori K, Hamzezade S, Salehi A, et al. Investigating psychometric properties of Interpersonal Emotion Regulation Questionnaire (IERQ) in university students. *Journal of Mazandaran University of Medical Sciences*. 2020;30(185):74-85.
39. Gross JJ. *Handbook of emotion regulation*: Guilford publications; 2013.
40. Ames DR, Rose P, Anderson CP. The NPI-16 as a short measure of narcissism. *J Res Pers*. 2006;40(4):440-50.
41. Mohammadzadeh A. Iranian validation of the narcissistic personality inventory-16. *Journal of Fundamentals of Mental Health*. 2010;11(4):274-81.
42. Gharrae B, Masoumian S, Zamirinejad S, Yaghmaeezadeh H. Psychometric Properties of the Persian Version of the Self-report Personality Questionnaire for Personality Disorders of DSM-5 (SCID-5-SPQ) in Clinical Samples. *Iranian Journal of Psychiatry and Clinical Psychology*. 2022;27(4):508-19.
43. Pincus AL, Lukowitsky MR. Pathological narcissism and narcissistic personality disorder. *Annu Rev Clin Psychol*. 2010;6:421-46.
44. Walker SA, Olderbak S, Gorodezki J, Zhang M, Ho C, MacCann C. Primary and secondary psychopathy relate to lower cognitive reappraisal: A meta-analysis of the Dark Triad and emotion regulation processes. *Pers Individ Dif*. 2022;187:111394.
45. Reis S, Huxley E, Eng Yong Feng B, Grenyer BFS. Pathological Narcissism and Emotional Responses to Rejection: The Impact of Adult Attachment. *Front Psychol*. 2021;12:679168.
46. Williams WC, Morelli SA, Ong DC, Zaki J. Interpersonal emotion regulation: Implications for affiliation, perceived support, relationships, and well-being. *J Pers Soc Psychol*. 2018;115(2):224-54.
47. Miller JD, Lynam DR, Hyatt CS, Campbell WK. Controversies in Narcissism. *Annu Rev Clin Psychol*. 2017;13:291-315.
48. Exline JJ, Baumeister RF, Bushman BJ, Campbell WK, Finkel EJ. Too proud to let go: narcissistic entitlement as a barrier to forgiveness. *J Pers Soc Psychol*. 2004;87(6):894-912.
49. Ronningstam E. Narcissistic personality disorder: a clinical perspective. *J Psychiatr Pract*. 2011;17(2):89-99.