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The impact of narcissistic personality pattern test (NPPT) scores on neuroticism: a quantitative analysis

Abstract

The Narcissistic Personality Pattern Test (NPPT) has emerged as a useful tool in identifying narcissistic traits within individuals, particularly in non-clinical populations. Neuroticism, a core dimension of the Big Five model of personality, is characterized by emotional instability, heightened anxiety, and sensitivity to stress. Existing psychological literature suggests an interrelationship between narcissism and neuroticism, particularly within vulnerable narcissism, where heightened self-consciousness and defensiveness amplify neurotic tendencies. This study examines the impact of NPPT scores on neuroticism by analyzing responses from a sample of young adults who completed the NPPT self-report scale. The methodology included scoring participants' NPPT responses across dimensions of narcissistic behavior, followed by statistical analysis to explore correlations with neuroticism-related responses. Results indicated that higher narcissistic tendencies were significantly associated with elevated neurotic traits such as irritability, indecisiveness, and emotional reactivity. Conversely, individuals with lower narcissistic scores demonstrated greater emotional stability and resilience, suggesting an inverse relationship between low narcissistic traits and neuroticism. These findings underscore the psychological implications of narcissistic patterns in shaping emotional regulation, stress response, and personality development. The study contributes to the broader field of personality psychology by validating the NPPT as a predictive instrument for understanding individual differences in neuroticism. It also highlights the potential clinical utility of NPPT in early detection of maladaptive personality traits, thereby informing preventive interventions in counselling and psychotherapy.

Keywords: narcissistic personality pattern test (NPPT), neuroticism, emotional regulation, personality traits, psychological assessment

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Nuzhath Begum,[1] Amita Puri[2]

[1]Department of Psychology, Bharatiya engineering science and technology innovation university (BESTIU), India

[2]Consultant Clinical Psychologist, Citizen Hospital and De-Addiction Centre, India

Correspondence: Amita Puri, Consultant Clinical Psychologist, Citizen Hospital and De-Addiction Centre, India, Tel 9315311334

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Introduction

Personality psychology has long emphasized the interplay between enduring traits and pathological patterns in shaping individual differences. Within this domain, narcissism and neuroticism represent two central constructs that, while distinct in their manifestations, often intersect in complex and clinically meaningful ways.

Neuroticism, one of the (IPDE) International Personality Disorder Exam, is defined as a predisposition toward emotional instability, anxiety, irritability, self-consciousness, and pervasive negative affectivity.[1] Individuals high in neuroticism are more likely to experience intense emotional reactions, difficulties with stress management, and maladaptive coping mechanisms.

Narcissism, on the other hand, is a multifaceted construct encompassing self-focus, entitlement, grandiosity, and interpersonal strategies for regulating self-esteem. Contemporary models distinguish between grandiose narcissism, characterized by dominance, self-assurance, and extraversion, and vulnerable narcissism, which is marked by hypersensitivity, withdrawal, insecurity, and fragile self-worth.[2]

A growing body of research highlights the differential associations of these two narcissism subtypes with neuroticism. Vulnerable narcissism has been shown to strongly correlate with neuroticism, reflecting its central features of emotional reactivity, hypersensitivity to criticism, and self-doubt.[3] Vulnerable narcissists tend to experience chronic anxiety, mood instability, and fear of rejection, making them particularly prone to maladaptive outcomes such as depression or borderline-like symptomatology.

Conversely, grandiose narcissism is often negatively associated with neuroticism, as grandiose individuals typically exhibit high self-confidence, low levels of anxiety, and resilience in the face of stress.[4] Yet, despite this apparent emotional stability, grandiose narcissism may conceal underlying fragility that emerges under conditions of failure or threat to self-esteem. Thus, while the two forms diverge in their overt relationship with neuroticism, both share the common thread of fragile self-regulation, often relying on maladaptive interpersonal strategies to maintain a coherent sense of self.

In terms of assessment, various psychometric and diagnostic tools have been employed to capture narcissistic traits and their relationship with broader personality dimensions. The International Personality Disorder Examination (IPDE) has been widely used in clinical contexts to diagnose Narcissistic Personality Disorder (NPD), and findings from IPDE studies consistently reveal that individuals with NPD score high on measures of neuroticism.[5] These results underscore the clinical significance of neurotic tendencies as a core vulnerability underlying pathological narcissism.

However, more recent advances in measurement have emphasized the importance of dimensional tools capable of capturing narcissism beyond categorical diagnostic frameworks. The Narcissistic Personality Pattern Test (NPPT) represents one such instrument, developed to assess narcissistic traits across both clinical and non-clinical populations. Unlike categorical measures such as the IPDE,

which situate narcissism within rigid diagnostic criteria, the NPPT allows for a more nuanced and dimensional analysis of narcissistic tendencies.

This is especially valuable in personality research, as it enables the mapping of narcissistic traits onto broader personality structures such as the Five-Factor Model, thereby facilitating deeper insights into how narcissism interacts with traits like neuroticism, agreeableness, or conscientiousness.

Despite its promise, research on the NPPT remains limited. Few empirical studies have systematically examined how NPPT scores predict neurotic tendencies, particularly in diverse cultural contexts. Existing literature has been dominated by Western samples, leaving open questions regarding the cross-cultural generalizability of narcissism–neuroticism associations. Moreover, most studies have relied on established instruments such as the Narcissistic Personality Inventory (NPI) or the Pathological Narcissism Inventory (PNI), which, while valuable, are not specifically designed to capture the multidimensionality reflected in the NPPT. As a result, important gaps remain in understanding how narcissistic personality patterns, as operationalized through the NPPT, uniquely contribute to neuroticism and its associated emotional and behavioral outcomes.

Addressing these gaps is not merely of theoretical interest but carries practical implications for clinical assessment and intervention. By integrating NPPT scores into personality assessment frameworks, clinicians may be better equipped to identify individuals at elevated risk for neurotic symptomatology, particularly those whose narcissistic vulnerabilities predispose them to emotional instability.

Furthermore, examining these dynamics in non-Western contexts will allow for the development of culturally sensitive assessment tools and therapeutic strategies that acknowledge cultural variations in self-concept, interpersonal norms, and expressions of narcissism.

In summary, the intersection of narcissism and neuroticism continues to be a critical area of inquiry within personality psychology. While grandiose and vulnerable narcissism exhibit divergent associations with neuroticism, both forms reflect underlying self-esteem fragility that contributes to maladaptive emotional regulation.

The NPPT, by providing a dimensional and comprehensive assessment of narcissistic traits, holds promise as a tool for advancing this research agenda. Expanding empirical inquiry into NPPT-based predictions of neuroticism, particularly across culturally diverse populations, represents a key step toward refining personality assessment, improving diagnostic accuracy, and enhancing the effectiveness of clinical interventions.

Review of literature

The association between narcissism and neuroticism has been documented across diagnostic and dimensional frameworks. Using the IPDE, Loranger et al.[5] demonstrated that individuals diagnosed with narcissistic personality disorder frequently present with high levels of neuroticism, particularly in the domains of anxiety, anger, and emotional instability. This aligns with meta-analytic findings by Samuel and Widiger,[6] who observed that narcissistic traits often co-occur with neurotic vulnerability in both clinical and community samples.

Miller et al.[3] highlighted the bifurcation of narcissism into grandiose and vulnerable dimensions, reporting that vulnerable narcissism strongly correlates with neuroticism, whereas grandiose narcissism tends to be negatively or weakly associated with neurotic traits. This dual pathway underscores the complexity of narcissism as it manifests in personality functioning.

Further evidence from Pincus and Lukowitsky[7] emphasized that narcissistic personality is not homogenous but instead involves a dynamic interplay of self-enhancement and self-vulnerability, both of which shape emotional regulation. Within this context, neuroticism often emerges as a key marker of vulnerability, predicting susceptibility to stress, interpersonal sensitivity, and maladaptive coping mechanisms.

While IPDE-based research provides valuable diagnostic insights, the NPPT represents an innovative approach by operationalizing narcissistic traits across broader personality domains. Preliminary findings indicate that NPPT scores may serve as reliable predictors of emotional instability and maladaptive affective regulation.[8] However, empirical validation linking NPPT to neuroticism remains limited.

The gap lies in the lack of integration between diagnostic frameworks (e.g., IPDE) and pattern-based assessments (e.g., NPPT). Bridging this gap would not only enrich personality theory but also enhance applied clinical practice by offering multidimensional profiles of narcissism and neuroticism. Such integration is especially significant in cross-cultural contexts, where expressions of narcissism and neuroticism may differ due to sociocultural influences.[9]

Methodology

Sample- The dataset contains 203 respondents (after cleaning); demographic characteristics are:

N = 203 (valid NPPT & neurotic items),

Age: mean = 25.90 years (SD = 7.80, range 13–67; n with valid age = 198),

Gender: Female = 107, Male = 95, Other = 1.

(These numbers reflect the survey file you uploaded: Form Responses 1.)

Measures & Composite Construction

NPPT composite (predictor). The uploaded questionnaire contains many items. To derive a workable NPPT-score within this dataset I selected items that clearly capture narcissistic features (items present in the file and conceptually aligned with narcissistic feelings/behaviors):

60. I often fantasize about being admired and respected.

61. I believe I am special and unique.

63. I need to be the center of attention.

54. I get upset when people don't notice me.

69. I expect others to do special favour for me.

71. I think I am entitled to more than others.

77. I feel upset when others achieve more than I do.

78. I think I am better than most people.

These items were a mix of 0–3 Likert items and binary items. I standardized each item to a 0–1 scale (treating higher values as greater narcissistic expression); then the NPPT composite (NPPT_comp) was computed as the mean of these standardized item scores (i.e.,

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proportion of narcissistic endorsement across the selected items). This approach preserves item variance while making mixed response formats comparable.

Neuroticism composite (outcome) - Neuroticism-related indicators were constructed from items that represent anxiety, panic, nervous energy, fearfulness and irritability (present in the dataset):

7. I usually feel tense or nervous.

87. I felt that I was using a lot of nervous energy.

88. I was worried about situations in which I might panic and make a fool of myself.

94. I felt I was close to panic.

99. I felt scared without any good reason.

130. I get palpitation of heart.

133. I get panic or fainting attacks.

137. I feel scared if someone speaks loud.

138. I feel scared if someone speaks loud. (Duplicate item present)

142. I get easily irritated.

151. I am afraid that I may or have become victim of some incurable disease.

157. Nothing irritates me. (Reverse keyed)

These items were likewise standardized to 0–1 (and reverse-coded where appropriate), and the NeuroCom score was computed as the mean across available neuroticism items.

Rationale & transparency: Because the uploaded file contains multiple scales and mixed response formats, standardized averaging was used to form interpretable composite indices. This method is transparent and commonly used when combining items from mixed formats in exploratory secondary-data analysis. Where possible you should later confirm scale keys with the instrument manual (if you have a formal NPPT scoring key) and perform reliability analyses / factor analysis for scale validation I report internal-descriptive statistics below.

Statistical analyses

All analyses are computed on cases with sufficient data for the composites:

a. Descriptive statistics for NPPT

b. Pearson correlation between NPPT

c. Multiple linear regression predicting Neuro_comp from NPPT_ comp, controlling for age and gender (gender coded Female=0, Male=1, other=2).

d. Mean comparisons (independent-samples t-test) using a median split on NPPT_comp (High vs Low NPPT) to illustrate group differences on Neuro_comp.

Assumptions checks: normality and homoscedasticity should be inspected when preparing the final thesis (I report effect sizes and robust p-values below).

Analyses were performed in Python/stats models (I can export tables/figures on request).

Results

Descriptive statistics

Sample size: N = 203

NPPT composite: M = 0.392 (**SD =** 0.199), **median =** 0.375, **range** 0.00–1.00.

Neuroticism composite (Neuro_comp): **M** = 0.446 (SD = 0.221), **median** = 0.444, **range** 0.00–0.972 (Table 1.0).

Model	R	R^2	Adjusted R^2	Std. Error of Estimate
1	0.423	0.179	0.17	0.202

Correlation

Pearson r (NPPT_comp, Neuro_comp) = 0.363, p < .000001 (two-tailed).

Interpretation: a moderate, positive association – higher NPPT scores are associated with higher neuroticism composite scores (Table 1.1).

Source	SS	df	MS	F	p
Regression	1.717	3	0.572	14.1	< .001
Residual	7.875	194	0.041		
Total	9.592	197			

Regression

Multiple linear regression predicting Neuro_comp from NPPT_ comp, age, and gender produced the following key results:

Model fit: R^2 = 0.179 (Adjusted R^2 ≈ 0.17), indicating the model explains ≈17.9% of variance in Neuro_comp (Table 1.2).

Predictor	B	SE B	t	p	95% CI [LL, UL]
Constant	0.433	0.071	6.11	< .001	[0.293, 0.572]
NPPT Composite	0.405	0.071	5.67	< .001	[0.264, 0.546]
Age	–0.006	0.002	–3.16	0.002	[–0.009, –0.002]
Gender (Male vs Female)	0.019	0.028	0.67	0.5	[–0.035, 0.073]

Interpretation

The multiple regression model significantly predicted neuroticism scores, F(3, 194) = 14.10, p < .001, with an R^2 of .179, indicating that approximately 17.9% of the variance in neuroticism was explained by NPPT scores, age, and gender. As shown in Table 1.2, NPPT composite scores were a significant positive predictor of neuroticism (B = 0.405, t = 5.67, p < .001), suggesting that individuals scoring higher on NPPT also tended to report higher levels of neuroticism. Age emerged as a significant negative predictor (B = –0.006, t = –3.16, p = .002), indicating that younger participants had higher neuroticism levels than older participants. Gender, however, was not a significant predictor (p = .500), suggesting no meaningful differences in neuroticism between males and females after controlling for NPPT and age.

Overall, these findings support the hypothesis that NPPT scores are meaningfully associated with neuroticism, even when accounting for demographic variables.

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Coefficients (unstandardized):

Intercept (const) = 0.4325, p < .0001.

NPPT_comp b = 0.4051, SE = 0.0714, t = 5.672, p < .000001. 95% CI [0.264, 0.546].

Age b = –0.00584, SE = 0.00185, t = –3.163, p = .0018. 95% CI [–0.00948, –0.00220].

Gender (Male vs Female) b = 0.01900, p = .50 (not significant) (Table 1.3).

Predictor	B	SE B	t	p	95% CI [LL, UL]
Constant (Intercept)	0.433	0.071	6.11	< .001	[0.293, 0.572]
NPPT Composite	0.405	0.071	5.67	< .001	[0.264, 0.546]
Age	–0.006	0.002	–3.16	0.002	[–0.009, –0.002]
Gender (Male vs Female)	0.019	0.028	0.67	0.5	[–0.035, 0.073]

Interpretation: NPPT_comp significantly and positively predicts neuroticism composite: for each 0.10 increase in NPPT_comp (i.e., 10% increase on the standardized NPPT scale), Neuro_comp increases by ~0.0405 (on the 0–1 scale), holding age and gender constant. Age showed a small but significant negative association with Neuro_comp (younger participants had slightly higher neuroticism scores). Gender was not a significant predictor in this sample.

Group comparison

Using a median split on NPPT_comp (High NPPT: NPPT_comp ≥ median; Low NPPT: NPPT_comp < median):

High NPPT (n = 103): Neuro_comp mean = 0.492.

Low NPPT (n = 100): Neuro_comp mean = 0.399.

Independent t-test (Welch): t (≈) = 3.041, p = .00267 (Table 1.4).

Group	n	M	t	df	p
High NPPT	103	0.492			
Low NPPT	100	0.399	3.04	≈ df*	0.003

Interpretation: The high-NPPT group shows significantly higher mean neuroticism composite than the low-NPPT group (medium effect).

Discussion

Summary of findings. In this sample of N = 203 respondents, NPPT-derived narcissistic pattern scores (NPPT_comp) were moderately and positively associated with neuroticism indicators (r = .363, p < .000001). NPPT_comp remained a significant predictor of neuroticism even when controlling for age and gender (b = .405, p < .000001), and the effect size (R^2 = .179) indicates that NPPT_comp accounts for a meaningful portion of variance in neuroticism scores. Group comparisons confirm that participants with higher NPPT scores show significantly greater neuroticism-related symptoms.

Interpretation relative to the literature. These results align with existing literature emphasizing that features of narcissism that reflect vulnerability, sensitivity to others' evaluations, entitlement-frustration, and need for admiration correlate positively with negative affectivity and neuroticism.[3,6,7] Because the items selected for the NPPT_comp included vulnerability-tinged items (e.g., "I get upset when people don't notice me," "I need to be the center of attention," "I feel upset when others achieve more than I do"), it is consistent that the composite shows a moderate positive link to neuroticism.

The non-significant effect of gender in the regression suggests the NPPT–neuroticism link is not substantially moderated by gender in this sample; however, age was negatively associated with neuroticism, which is consistent with some developmental findings that neurotic expressions decline modestly across adulthood. Clinical implications. If NPPT reliably indexes narcissistic vulnerability and entitlement-related distress, the measure may be useful for clinicians to anticipate elevated negative affect, stress-sensitivity, and emotion-regulation difficulties. Interventions that focus on emotion regulation, stress-coping, and addressing maladaptive entitlement cognitions might reduce both narcissistic interpersonal problems and neurotic symptomatology.

Limitations of the study

Scale construction- The NPPT_comp and Neuro_comp were constructed from items in the uploaded form using a pragmatic standardization approach (0–1 scaling) to combine mixed response formats. Ideally, future work should:

a. Use the formal NPPT scoring key if available

b. Confirm internal reliability (α) and factor structure via exploratory/confirmatory factor analysis

c. Test measurement invariance across gender/age groups.

Item selection. I selected items that obviously reflect narcissistic and neurotic themes, but this selection might omit other NPPT items or misclassify some items. If you have the original NPPT item-key or scale manual, we can recomputed with exact validated scoring.

Cross-sectional design- The data are cross-sectional, so causality cannot be inferred. Although NPPT_comp predicts neuroticism in regression, directionality cannot be established neuroticism could also contribute to narcissistic vulnerability.

Sampling & generalizability- The sample is relatively young (mean ~26 years) and derived from a survey; representativeness for wider populations is unknown.

Recommendations

a. Compute internal consistency (Cronbach's α) for the NPPT item set and for the neuroticism item set.

b. Conduct exploratory factor analysis (EFA) on the NPPT candidate items to confirm dimensionality (grandiose vs vulnerable).

c. Run mediation analyses if you have other variables (e.g., self-esteem, interpersonal functioning) to examine mechanisms linking narcissistic patterns and neuroticism.

d. If longitudinal or repeated-measures data are available later, test directionality (cross-lag models).

Conclusion

The present analysis examined the relationship between narcissistic traits, as assessed by the Narcissistic Personality Pattern Test (NPPT), and neuroticism indicators in a sample of 203 individuals. Findings revealed a robust positive association between NPPT-derived narcissism scores and neuroticism, with regression analyses demonstrating that narcissism (NPPT_comp) significantly predicted

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neuroticism (Neuro_comp) even after controlling for demographic variables such as age and gender ($b = 0.405$, $p < .000001$; model $R^2 = .179$). This indicates that nearly 18% of the variance in neuroticism was accounted for by narcissistic patterns, highlighting the substantial psychological overlap between these constructs.

The strength of this association underscores the role of narcissistic vulnerability in shaping emotional instability. While narcissism has often been characterized by outward grandiosity, dominance, and self-enhancement, the current findings suggest that when narcissistic traits reflect hypersensitivity, insecurity, and heightened reactivity to evaluation, they map closely onto core features of neuroticism.

These features include anxiety, panic-like experiences, irritability, mood swings, and chronic negative affect. In other words, individuals with elevated NPPT scores particularly on items tapping evaluative sensitivity are more prone to the affective instability and distress that define neuroticism.

The findings align with existing literature that distinguishes between grandiose and vulnerable narcissism. [7,9] Vulnerable narcissism, in particular, has been shown to strongly correlate with neurotic traits such as emotional volatility and fear of rejection.

The present results reinforce this conceptualization by empirically demonstrating that NPPT-assessed narcissistic traits, particularly those reflecting vulnerability, predict neurotic symptoms above and beyond demographic covariates. This provides evidence that narcissistic self-concepts, when fragile, may amplify susceptibility to stress and undermine emotional regulation capacities.

The clinical implications of these findings are noteworthy. First, the NPPT or the specific items selected for this analysis may serve as a useful screening tool to identify individuals at risk of neurotic symptomatology. In applied settings, elevated NPPT scores could help clinician's flag individuals who may be prone to anxiety disorders, mood dysregulation, or maladaptive interpersonal functioning.

Second, the findings suggest that interventions targeting narcissistic vulnerability, such as schema therapy, emotion-focused therapy, or psychodynamic approaches, may indirectly reduce neurotic symptoms by addressing underlying self-esteem fragility and hypersensitivity to evaluation. At the same time, caution is warranted in interpreting these results. While the NPPT shows promise as a predictive index, the instrument itself remains under-validated relative to established narcissism measures such as the Pathological Narcissism Inventory (PNI). Replication across diverse samples and cultural contexts is necessary to ensure generalizability. Moreover, the cross-sectional design of the present analysis precludes causal inference; it remains unclear whether narcissistic traits exacerbate neuroticism, whether neurotic tendencies foster narcissistic vulnerabilities, or whether both share underlying etiological mechanisms, such as insecure attachment patterns or emotion-regulation deficits.

In conclusion, the present analysis contributes to the growing body of evidence linking narcissistic traits particularly vulnerable features with neuroticism. The significant predictive power of NPPT scores suggests that narcissism, when characterized by sensitivity to evaluation and fragility, may serve as a key risk marker for emotional instability and maladaptive psychological outcomes.

Future research should prioritize longitudinal designs, multi-method assessment, and broader validation efforts to solidify the role of NPPT as a reliable tool for identifying individuals at elevated risk for neurotic symptomatology.

Acknowledgment

None.

Conflicts of interest

The authors declare that there are no conflicts of interest.

References

1. Costa PT, McCrae RR. Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI): Professional Manual. Odessa, FL: Psychological Assessment Resources; 1992.
2. Miller JD, Lynam DR, Hyatt CS, et al. Controversies in narcissism. *Annu Rev Clin Psychol*. 2017;13:291–315.
3. Miller JD, Dir A, Gentile B, et al. Searching for a vulnerable dark triad: comparing factor 2 psychopathy, vulnerable narcissism, and borderline personality disorder. *J Pers*. 2011;78(5):1529–1564.
4. Paulhus DL, Williams KM. The dark triad of personality: narcissism, Machiavellianism, and psychopathy. *J Res Pers*. 2002;36(6):556–563.
5. Loranger AW, Sartorius N, Andreoli A, et al. The International Personality Disorder Examination: the World Health Organization/Alcohol, Drug Abuse, and Mental Health Administration international pilot study of personality disorders. *Arch Gen Psychiatry*. 1994;51(3):215–224.
6. Samuel DB, Widiger TA. A meta-analytic review of narcissism and the Five-Factor Model of personality. *Clin Psychol Rev*. 2008;28(7):1326–1342.
7. Pincus AL, Lukowitsky MR. Pathological narcissism and narcissistic personality disorder. *Annu Rev Clin Psychol*. 2010;6:421–446.
8. Kernberg OF. What is personality? *J Pers Disord*. 2016;30(2):145–156.
9. 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):638–656.