



Self-esteem and narcissism: An item response theory analysis of curvilinearity[☆]

Michael L. Crowe^{*}, Chelsea E. Sleep, Nathan T. Carter, W. Keith Campbell, Joshua D. Miller^{*}

Department of Psychology, University of Georgia, 125 Baldwin Street, Athens, GA 30602, USA

ARTICLE INFO

Keywords:

Grandiose narcissism
Narcissistic Personality Inventory
Self-esteem
Psychopathology
Antagonism
GGUM
Ideal point

ABSTRACT

An association between grandiose narcissism and self-esteem has been well established. While the two constructs are both associated with an agentic, approach-oriented style, their levels of agreeableness/antagonism and overall adaptivity diverge. Three samples (N = 1920; N = 855, N = 591) were utilized to test the hypothesis that self-esteem may show a curvilinear relationship with narcissism such that relations between self-esteem and narcissism are stronger at particularly high levels of self-esteem. Item Response Theory scoring methods were utilized to maximize power and minimize error. No curvilinear effects consistent with the hypothesis were found. These results are consistent with arguments for substantive differences between self-esteem and narcissism.

1. Introduction

Grandiose narcissism is characterized by immodesty, self-enhancement, exploitativeness, and entitlement. While it is associated with numerous interpersonal impairments including aggressive or confrontational behavior, and unstable relationships (Miller, Lynam, Hyatt, & Campbell, 2017), it also has some positive inter- and intrapersonal effects including emotional stability, subjective well-being, assertiveness, and achievement motivation (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004).

Grandiose narcissism's association with self-esteem is a plausible mechanism through which these positive outcomes arise. A substantial relation between grandiose narcissism and self-esteem is logical and intuitive as both constructs are defined by positive self-evaluations. A modest to moderate association between the two constructs is consistently found in the literature (e.g., Hyatt, Sleep, Sedikides, Campbell, & Miller, 2017), and narcissism's relation with self-esteem has been identified as a mediating mechanism through which positive intrapersonal associations emerge (e.g., Sedikides et al., 2004). In terms of inter- and intra-personal functioning, self-esteem seems to have near universally beneficial correlates. It's consistently associated with happiness, emotional stability, and resilience to stress and adversity (Baumeister, Campbell, Krueger, & Vohs, 2003; Hyatt et al., 2017). There remains a question, though, as to whether it is possible for self-esteem to become too much of a good thing, eventually yielding negative interpersonal outcomes at high levels. The conceptualization of

narcissism as being largely defined by extreme self-esteem would imply such an etiology, in which narcissistic traits emerge from excessive self-esteem. In such a model, average levels of self-esteem may be emotionally adaptive and largely unrelated to the adverse interpersonal effects of narcissism, but higher levels would become increasingly associated with narcissistic traits and their associated negative outcomes.

The present analysis tests the possibility that while some self-esteem is healthy, extreme levels may be predictive of narcissism. Previous literature reviews have hypothesized that self-esteem may show this pattern of being beneficial at average levels, but aversive to others at the extremes (Baumeister et al., 2003). Such a “too much of a good thing” phenomenon would not be unique. In their review, Grant and Schwartz (2011) point out that many constructs related to self-esteem including happiness, optimism, and self-efficacy have shown non-monotonic relationships with positive outcomes. Personality traits have also received attention as likely candidates for such non-linear effects. Carter, Guan, Maples, Williamson, and Miller (2016) showed that while conscientiousness is positively associated with well-being (e.g., job satisfaction, positive affect, self-esteem) at normal levels, the association turns negative as conscientiousness progresses toward obsessive-compulsive tendencies. Clearly, there is a potential for beneficial psychological traits to become problematic at high levels, and, given the centrality of self-enhancement to narcissism, it seems reasonable to suspect that self-esteem could be another example of these phenomena.

If self-esteem is more strongly related to narcissistic traits at high levels, it would be identifiable through a curvilinear relation such that

[☆] The authors declare no potential conflict of interest with respect to the research, authorship, and/or publication of this article.

^{*} Corresponding authors at: Department of Psychology, University of Georgia, Athens, GA 30602, USA.

E-mail addresses: crowem@uga.edu (M.L. Crowe), jdmiller@uga.edu (J.D. Miller).

low to average levels of self-esteem would have minimal association with narcissism but be increasingly predictive of the trait as self-esteem progresses toward the extremes. Previous research on such “too much of a good thing” effects has shown that in some cases standard sum-scoring approaches can be inadequate for reliable identification of curvilinear effects (Carter, Dalal, Guan, LoPilato, & Withrow, 2017). Relative to sum-scoring, Item Response Theory (IRT) scoring approaches can more reliably detect true curvilinear effects where they exist and reduce false-flags (i.e., type 1 errors) where they do not. IRT-based scoring approaches are utilized for the present analyses.

It should be noted here that these analyses are exploratory in nature, and these data were not collected with these analyses in mind. However, no previous research has evaluated the relation between narcissism and self-esteem in this way, and while a curvilinear relation between the two variables seems reasonable, the two variables' relatively unique nomological nets would suggest that these are unique constructs with separate etiological pathways (Hyatt et al., 2017).

2. Method

2.1. Participants

Data were collected across 11 different samples, which have all been previously published. The 11 samples were pooled into three different samples based on the response format of the narcissism and self-esteem scales. A full description of the individual sub-samples is available in Appendix A.

2.1.1. Sample 1

Sample 1 consisted of 1920 individuals. Within this sample, 977 (52%) were students recruited from a large undergraduate institution ($M_{\text{age}} = 19.16$, 59% female, 85.6% Caucasian), whereas the rest were adults recruited through Amazon's Mechanical Turk (MTurk; $M_{\text{age}} = 34.4$, 62% female, 84% Caucasian).

2.1.2. Sample 2

Sample 2 consisted of 855 individuals. Within this sample, 583 (68%) were adults recruited through MTurk ($M_{\text{age}} = 30.46$, 53% female, 64.5% Caucasian). The rest were undergraduate students ($M_{\text{age}} = 19.4$, 67% female, 77% Caucasian).

2.1.3. Sample 3

Sample 3 consisted of 591 individuals. All participants in this sample were adults recruited through MTurk ($M_{\text{age}} = 36.95$, 62% female, 79% Caucasian).

2.2. Measures

2.2.1. Narcissistic Personality Inventory (NPI)

The NPI (Raskin & Terry, 1988) is a 40-item self-report inventory of narcissistic grandiosity. Along with a Total narcissism score (Sample 1 $\alpha = 0.86$, Sample 2 $\alpha = 0.84$, Sample 3 $\alpha = 0.94$), the NPI can be organized into three subscales: Leadership/Authority (L/A; Sample 1 $\alpha = 0.80$, Sample 2 $\alpha = 0.78$, Sample 3 $\alpha = 0.90$), Grandiose Exhibitionism (G/E; Sample 1 $\alpha = 0.79$, Sample 2 $\alpha = 0.77$, Sample 3 $\alpha = 0.82$), and Entitlement/Exploitativeness (E/E; Sample 1 $\alpha = 0.52$, Sample 2 $\alpha = 0.52$, Sample 3 $\alpha = 0.68$). The NPI was administered using a forced-choice response format to Samples 1 and 2. Sample 3 was administered a version of the NPI that uses a Likert-type response scale (Miller et al., 2017).

2.2.2. Rosenberg Self-esteem Scale (RSE)

The RSE (Rosenberg, 1965) is a 10-item measure of global self-esteem. Sample 1 ($\alpha = 0.90$) was administered the RSE with a 1 (*disagree strongly*) to 4 (*agree strongly*) Likert scale. Samples 2 ($\alpha = 0.89$) and 3 ($\alpha = 0.92$) responded to the 10 RSE items using a 1 (*disagree strongly*) to

5 (*agree strongly*) Likert scale.

2.3. Data analysis

2.3.1. Item response theory analyses

Item Response Theory (IRT) was utilized for scoring both the RSE and NPI in all samples due to its advantages in identifying curvilinear relationships (Carter et al., 2017, 2016). IRT generally conceptualizes item responses as a product of three factors: the level of the measured personality trait (θ) possessed by the respondent, the extremity of the item (also referred to as item location or difficulty), and item discrimination, which is conceptually equivalent to a factor loading.

IRT's ability to increase power in tests for curvilinearity is largely contingent on appropriate model selection (Carter et al., 2017). An IRT model is appropriate to the extent that it accurately reflects the item response process. Sum-scores, factor scores, and most IRT models assume a *dominance* response process. However, an ideal point response process assumption may be more appropriate for many personality scales. Both dominance and ideal-point IRT models were utilized, and relative fit was compared to identify the most appropriate scoring method. The generalized partial credit model (GPCM; Muraki, 1992) was utilized to evaluate whether responses fit a dominance response process. The R package 'mirt' was used (Chalmers, 2012). The generalized graded unfolding model (GGUM; Roberts, Donoghue, & Laughlin, 2000) was utilized for modeling an ideal point response process. The GGUM was estimated using the GGUM2004 software program (Roberts, Fang, Cui, & Wang, 2006). Both the 'mirt' package and GGUM2004 program utilize marginal maximum likelihood (MML) estimation to determine item parameters and Expected a Posteriori (EAP) scoring to determine persons' trait levels.

GGUM and GPCM models were run for all variables (e.g., RSE, NPI L/A, NPI G/E, NPI E/E) in all samples. Relative model-data fit for the GPCM and GGUM models were evaluated using Akaike Information Criterion (AIC; Akaike, 1973). The GGUM was indicated as better-fitting for all variables in Samples 1 and 2. In Sample 3, the GGUM showed superior fit for the measurement of NPI E/E and NPI G/E, but the GPCM was indicated for RSE and NPI L/A. All 12 selected IRT models (10 GGUM, two GPCM), were evaluated for absolute model-data fit to confirm the data met assumptions of unidimensionality and were appropriate for the selected model. Absolute model-data fit was evaluated using the MODFIT program (Stark, 2007), which compares the actual responses in the data to the responses predicted by the IRT model via the χ^2 statistic divided by the degrees of freedom for the test. Ratios (χ^2/df) greater than three are indicative of model-data misfit. All models showed acceptable model-data fit, which suggests all scales met the relevant model assumptions (e.g., unidimensionality). The identified models were then used to generate latent trait (θ) scores for each of the variables of interest.

2.3.2. Curvilinearity analyses

To examine curvilinearity, all latent trait scores were standardized, and the polynomial term was calculated from the standardized value (Cohen, Cohen, West, & Aiken, 2002). In the first step of all analyses the standardized self-esteem score was entered as a predictor of grandiose narcissism (e.g., NPI L/A). In the second step, the quadratic self-esteem term was entered as an additional predictor and the change in fit was evaluated to assess the incremental contribution of the quadratic term using AIC, BIC, and R^2 .

2.3.3. Power analyses

Monte Carlo simulations were conducted to identify the magnitude of curvilinearity the three samples could reliably detect. Self-esteem levels were simulated for each of the three datasets from a normal distribution. The simulated self-esteem scores were then used to generate narcissism scores with a known curvilinear relationship to the simulated self-esteem scores. The regression equation utilized for

Download English Version:

<https://daneshyari.com/en/article/7248783>

Download Persian Version:

<https://daneshyari.com/article/7248783>

[Daneshyari.com](https://daneshyari.com)