

DEVELOPING A COMPREHENSIVE NARCISSISM STRUCTURE

by

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(Under the Direction of Joshua D. Miller)

ABSTRACT

Objective: A criterion problem in the measurement of narcissism has prevented the development of a comprehensive structural model. Understanding narcissism's underlying factor structure is necessary for precise measurement and investigation of its specific psychological and behavioral processes. The study aims to develop a comprehensive structural model of narcissism. *Method:* Participants recruited from Amazon's Mechanical Turk (N = 591) completed 303 narcissism items encompassing 46 narcissism scales and subscales. Criterion variables measuring the Five Factor Model, self-esteem, aggression, and externalizing behavior were also collected. *Results:* Factor analyses reveal the factor structure of narcissism at a range of specificities. No more than five meaningful factors (i.e., Grandiosity, Neuroticism, Antagonism, Distrustful Self-reliance, Attention-seeking) were identified. Narcissism scales that effectively capture each factor are identified. Factors diverged in their associations with criterion variables. *Discussion:* A three-factor model (i.e., Agentic Extraversion, Neuroticism, Antagonism) seems to be the most parsimonious conceptualization. Larger factor solutions are discussed, but future research will be necessary to determine their value.

INDEX WORDS: Bass-ackwards, factor analysis, narcissism, trifurcated model

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CHAPTER 1

DEVELOPING A COMPREHENSIVE NARCISSISM STRUCTURE

Narcissism is a personality structure. That is, the term “narcissism” refers to a collection of personality traits. However, despite a century of scientific inquiry, a consensual definition of the construct (i.e., exactly which traits are present within the structure) is still being debated (Krizan & Herlache, 2017; Miller, Lynam, Hyatt, & Campbell, 2017; Miller, Lynam, Siedor, Crowe, & Campbell, 2018; Wright & Edershile, 2018). This lack of a clear operational definition for the domain has impaired progress with conflicting accounts of narcissism’s empirical profile, some indicating an association with self-confident exhibitionism and others indicating shyness and social withdrawal (see Wink, 1991 for discussion). In order for scientific inquiry to be cumulative, narcissism must have commonly accepted conceptual boundaries and measures. Progress has been made on this front. In the past 20 years there has been broad recognition of the need to distinguish between grandiose and vulnerable narcissistic expressions (Cain, Pincus, & Ansell, 2008; Dickinson & Pincus, 2003; Miller & Campbell, 2008; Wink, 1991). This recognition shifted the field’s understanding of narcissism’s structure, and when narcissism measures were reorganized to reflect that structure (i.e., understood as measures of grandiose or vulnerable narcissism) the conflicting empirical accounts began to be resolved (Miller, Hoffman, et al., 2011; Pincus et al., 2009). However, a fundamental criterion problem still remains. If grandiose and vulnerable narcissism are to be conceptualized as a common personality problem, if they are both narcissism, they must share a common structural model. An underlying factor structure that unites both grandiose and vulnerable narcissistic expressions should be present.

Narcissism has been described as a “paradox” because grandiose and vulnerable narcissism seem incongruent in many ways (Morf & Rhodewalt, 2001). Grandiose narcissism is characterized, in part, by high self-esteem, sociability, assertiveness, and exhibitionism while vulnerable narcissism typically indicates low self-esteem, social withdrawal, and negative emotionality (Miller & Campbell, 2008; Miller, Hoffman, et al., 2011; Wink, 1991). However, analyses have consistently shown that grandiose and vulnerable narcissistic expressions share interpersonally antagonistic traits such as entitlement, egotism, and non-compliance (Miller & Campbell, 2008; Miller, Lynam, et al., 2017; Wink, 1991). A unifying structural model of narcissism would be capable of accounting for both the convergence and divergence of grandiose and vulnerable narcissism by incorporating both shared and unique traits. Such a model would resolve boundary and criterion problems by identifying the “core” of narcissism (i.e., those traits shared by all expressions) as well as the traits specific to individual expressions. As with the grandiose and vulnerable distinction, a unifying structural model would also allow for organization and understanding of narcissism measures, not only benefitting future analyses, but also clarifying previous studies. In light of these potential benefits, attempts at developing a comprehensive structural model have already been made.

Structural Integration of Grandiose and Vulnerable Narcissism

Many narcissism measures in active use include underlying structural models (Back et al., 2013; Foster, McCain, Hibberts, Brunell, & Johnson, 2015; Glover, Miller, Lynam, Crego, & Widiger, 2012; Pincus et al., 2009). In each case, the models diverge due to the unique theories and processes used for their development. Only two structural models for the narcissism domain have been empirically derived, the trifurcated model (Miller, Lynam, et al., 2017; Miller, Lynam, McCain, et al., 2016), and the narcissistic spectrum model (Krizan & Herlache, 2017). Both were

identified through factor analyses of narcissism scales, and both models argue for a three-factor conceptualization of narcissism's structure: Agentic Extraversion/Exhibitionism; Antagonism/Entitlement; Vulnerability/Neuroticism. The models accommodate both grandiose and vulnerable narcissism through recognition of a common antagonistic core (e.g., entitlement, arrogance, manipulativeness). The traits that are present in only grandiose (e.g., exhibitionism, authoritativeness) or vulnerable (e.g., shame, need for admiration) narcissism are then conceptualized as peripheral components specific to particular phenotypes.

While both the trifurcated model and narcissistic spectrum model are effective in their ability to resolve many previously identified measurement conflicts (Wright & Edershile, 2018), the models have limitations that must be acknowledged. In both cases, sub-scale scores rather than individual items were submitted to factor analytic techniques. While analysis of homogenous item parcels can simplify factor solutions, the approach can become problematic even when parcels are relatively homogeneous (Marsh, Lüdtke, Nagengast, Morin, & Von Davier, 2013). It is possible that in previous analyses relevant traits, buried within item parcels, failed to emerge from the final structural models. Both approaches were also constrained by a limited number of measures. In all factor analyses the validity of the factor solution is contingent on items that effectively cover the entirety of the target domain. This is particularly relevant when considering a construct with poorly defined boundaries like narcissism. Miller and colleagues (2016) were reliant on the FFNI, while the FFNI and PNI made up 21 of the 26 subscales in Krizan and Herlache's (2017) analyses. Neither the trifurcated model nor the narcissistic spectrum model included items from the NARQ or any of the DSM-based narcissism measures (e.g., PDQ-4; PID-5). Incomplete coverage may have biased or constrained the resulting solutions. Lastly, both models describe the narcissism domain out to only three-factors

(Krizan & Herlache, 2017; Miller, Lynam, McCain, et al., 2016). Evidence from general personality research has indicated that Extraversion (Watson, Stasik, Ellickson-Larew, & Stanton, 2015) and Agreeableness (Crowe, Lynam, & Miller, 2017) are multifaceted and all major personality inventories have included Neuroticism subscales (Costa & MacCrae, 1992; Lee & Ashton, 2004; Soto & John, 2017). It stands to reason that pathological variants of these domains may also include facets that are yet to be empirically identified.

The goal of the present analysis is to develop a comprehensive structural model of narcissism, and the trifurcated model and narcissistic spectrum model are strong foundations from which to proceed. The present analyses will address previous limitations by maximizing both item coverage and model flexibility. Item content from all major measures and conceptualizations of the narcissism domain will be included. Maximizing domain coverage will ensure that no trait relevant to the narcissism domain gets excluded from the model and that the resulting factor solutions are not unduly biased by the content and implied conceptualization of any one scale. An item-level factor analytic approach will maximize the flexibility of the resulting solutions and allow for identification of homogeneous narcissism factors, which will be well suited for investigating the specific psychological processes of divergent narcissistic expressions (Smith, McCarthy, & Zapolski, 2009).

Conceptualization and Measurement of Narcissism

Narcissism has a long history of scientific interest within clinical psychology, psychiatry, and social/personality psychology. While a rich literature on the subject has developed from each of these domains, each also applied its own unique conceptualization to the construct (Cain et al., 2008). Current narcissism measures vary in terms of measurement bandwidth (i.e., narrow vs. broad), factor structure (i.e., single factor vs. multifaceted), construct definition, and target

population (general population vs. clinical). The result is a criterion problem in which unique but overlapping conceptualizations of narcissism have interfered with the synthesis of disparate research traditions (Pincus & Lukowitsky, 2010). Each conceptualization must be incorporated in order to develop a consensual structural model.

Grandiose narcissism measures. Most of these measures characterize narcissism as a normal personality trait which contains both adaptive and maladaptive components. This has led some to describe these measures as indicative of “normal” or “healthy” narcissism (Horton, Bleau, & Drwecki, 2006; Pincus & Lukowitsky, 2010; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004). While they do correlate with some adaptive outcomes (Sedikides et al., 2004), they all have strong positive associations with problematic interpersonal styles including manipulative and aggressive behavior (Back et al., 2013; Crowe, Carter, Campbell, & Miller, 2016; Krizan & Johar, 2015; Miller, Widiger, & Campbell, 2010; Rhodewalt & Morf, 1995; Twenge & Campbell, 2003). Measures of narcissistic grandiosity include the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), Grandiose Narcissism Scale (GNS; Foster et al., 2015), Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013), Narcissistic Grandiosity Scale (NGS; Crowe et al., 2016; Rosenthal, Hooley, & Steshenko, 2007), and the narcissism scale from the Short Dark Triad (SD3 Narcissism; Jones & Paulhus, 2014)

Vulnerable narcissism measures. While the grandiose narcissism measures emphasize a grandiose sense of self as the prototypical dysfunction, the clinically oriented domains support a more introverted and neurotic variant of the construct that includes a need for validation from others, interpersonal hypersensitivity, depressed affect, and social withdrawal (Pincus &

Lukowitsky, 2010). The Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 1997) is the most utilized measure of this more vulnerable narcissistic expression.

Narcissistic Personality Disorder Measures. Empirical analyses indicate that many NPD-based measures yield a hybrid construct emphasizing interpersonal antagonism and a blend of both grandiose and vulnerable components (Miller & Campbell, 2008). The Personality Diagnostic Questionnaire-4 (PDQ-4; Hyler, 1994) and Structured Clinical Interview for the DSM-IV Personality Disorders Questionnaire (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997) are both measures of NPD representative of this hybrid conceptualization. The Personality Inventory for the DSM-5 NPD scale (PID-5 NPD; Krueger, Derringer, Markon, Watson, & Skodol, 2012) emphasizes grandiosity more than the other NPD measures and captures NPD using two facets from the PID-5 Antagonism domain: grandiosity (e.g., entitlement, egotism, sense of superiority), attention seeking (e.g., admiration seeking).

Multidimensional measures. Multidimensional measures were developed to capture both grandiose and vulnerable expressions of narcissism. As such, they represent a more inclusive conceptualization of the domain relative to the previously identified measures. The most popular of the multidimensional measures are the Pathological Narcissism Inventory (PNI; Pincus et al., 2009) and Five Factor Narcissism Inventory (FFNI; Glover et al., 2012).

The “Bass-Ackward” Approach to Understanding the Narcissism Domain

Goldberg (2006) described a methodology capable of constructing a “hierarchical” model of personality structure. Goldberg’s (2006) “Bass-ackward” approach uses a series of factor analyses to describe the factor space of a construct in a step-wise fashion from a single factor, representing what is most common to the data, to as many factors as can be interpreted. In each progressive factor solution, the factor scores are saved so that the relations of factors from

adjacent levels of analyses can be compared. This method allows researchers to develop a map of factor emergence from most-broad to most-precise. By incorporating all items from each of the identified measures we can be confident that all traits relevant to the narcissism domain, as it is currently conceptualized within the literature, are represented. Rather than developing a new measure or basing the factor analysis on a few isolated conceptualizations of the construct, this atheoretical approach defines narcissism as simply *that which is being measured by narcissism scales*. The result is a hierarchical model of narcissism that is by definition consensual, in the sense that it is democratically composed of items from all narcissism measures in active use.

The flexibility of the potential factor solutions is maximized by using narcissism items rather than parcels. Furthermore, by utilizing a comprehensive pool of over 200 items, the likely number of predictors for each factor is increased along with factor stability (Marsh et al., 2013; Schmitt, Sass, Chappelle, & Thompson, 2018). The first factor is expected to be indicative of what is most common to the narcissism scales, a grandiose sense of self-importance. At the two-factor level, grandiose and vulnerable narcissism constructs consistent with that found in the literature is expected to emerge. The three-factor solution is expected to replicate the three-factor models identified by both Miller and colleagues (2016) and Krizan and Herlache (2017). Any hypotheses on factors emerging following a three-factor solution would be speculative. Factor solutions at the fourth level of analysis and beyond should be interpreted as exploratory.

The identified factor solutions are correlated with several external criterion variables (i.e., Five Factor Model, externalizing behavior, aggression, self-esteem) associated with the narcissism domain. The number of narcissism items collected for this analysis necessarily limited the number of outcome variables that could reasonably be collected. These criterion variables were selected due to their coverage (e.g., Five Factor Model), known association with

narcissistic phenotypes (e.g., self-esteem), and relationship with antagonistic personality pathology (e.g., aggression, externalizing behavior). Narcissism is expected to have significant divergence at the three-factor level with the Agentic Extraversion/Exhibitionism factor showing positive associations with FFM Extraversion and self-esteem, the Neuroticism/Vulnerability factor showing a positive association with FFM Neuroticism and a negative association with self-esteem, and the Antagonism/Entitlement factor showing a negative association with FFM Agreeableness and a positive association with antisocial behaviors.

CHAPTER 2

METHOD

Participants and Procedure

The sample consisted of 707 adults recruited from Amazon's Mechanical Turk (MTurk) website who agreed to allow their data to be used for analyses. MTurk has been identified as a reliable source of data with more demographic diversity than most undergraduate populations (Chandler & Shapiro, 2016; Miller, Crowe, Weiss, Maples-Keller, & Lynam, 2017). Participants were required to be 18 years of age or older and to reside in the United States. They were paid \$2.00 for their participation. Participants were excluded for invalid responding (see *Validity Scales* in Measures; $n = 86$), for finishing the study in a time deemed invalid (i.e., averaging less than two seconds per item; $n = 26$), and for invariant response patterns on the IPIP-NEO-120 (i.e., selecting a single response option for at least 90 of the 120 responses; $n = 4$). The final sample consisted of 591 individuals (62% women; $M_{\text{age}} = 37.0$ years, $SD_{\text{age}} = 11.8$ years; 79% Caucasian).

Measures

Narcissism item pool.

Five Factor Narcissism Inventory Short Form (FFNI-SF). The FFNI-SF (Sherman et al., 2015) is a 60-item abbreviated form of the FFNI (Glover et al., 2012). The FFNI was designed to measure maladaptive expressions of Five Factor Model (FFM) facets related to narcissistic personality profiles. The FFNI and FFNI-SF measure 15 facets (i.e., reactive anger, shame, indifference, need for admiration, exhibitionism, authoritativeness, grandiose fantasies,

manipulativeness, exploitativeness, entitlement, lack of empathy, arrogance, acclaim-seeking, thrill seeking, distrust) identified through a process of expert opinion, review of the empirical literature, and meta-analytic investigation. Items to measure each facet were rationally developed and selected using a criterion keying approach. The 15 facet scales can be aggregated to form measures of grandiose ($\alpha = .94$) and vulnerable ($\alpha = .85$) narcissism as well as three empirically-derived higher-order factors (Miller, Lynam, McCain, et al., 2016): Agentic Extraversion ($\alpha = .90$), Antagonism ($\alpha = .92$), Neuroticism ($\alpha = .88$). Facet-level reliabilities ranged from .71 (arrogance) to .90 (manipulativeness).

Grandiose Narcissism Scale (GNS). The GNS (Foster et al., 2015) contains 33 items intended to measure the seven facet scales of grandiose narcissism originally proposed for the Narcissistic Personality Inventory (Raskin & Terry, 1988). The subscales include authority (i.e., preferring to be in charge), self-sufficiency (i.e., preferring to do things on one's own), superiority (i.e., belief that one is better than others), vanity (i.e., strong focus on physical appearance), exhibitionism (i.e., acting in ways that grab others' attention), entitlement (i.e., belief that one is deserving of special treatment), and exploitativeness (i.e., willingness to take advantage of others). Subscale alpha reliabilities ranged from .75 (self-sufficiency) to .93 (authority).

Hypersensitive Narcissism Scale (HSNS). The HSNS ($\alpha = .77$; Hendin & Cheek, 1997) is a 10-item measure of narcissistic vulnerability, hypersensitivity, and entitlement. The item pool was pulled from Murray's Narcissism Scale (Murray, 1938), and items were selected based on their association with an MMPI-based measure of "covert" narcissism.

Narcissistic Admiration and Rivalry Questionnaire (NARQ). The NARQ (Back et al., 2013) is an 18-item measure that was developed to assess a theoretical process model of

narcissism labeled the Narcissistic Admiration and Rivalry Concept (NARC). The NARC model proposes two distinct, but related narcissistic social processes intended to maintain a grandiose self: Admiration (i.e., assertive self-enhancement; $\alpha = .84$) and Rivalry (i.e., antagonistic self-protection; $\alpha = .80$). Items were rationally generated to measure six facets representative of the hypothesized affective-motivational (i.e., striving for uniqueness, $\alpha = .62$; striving for supremacy, $\alpha = .82$), cognitive (i.e., grandiose fantasies, $\alpha = .75$; devaluation of others, $\alpha = .64$), and behavioral (i.e., charmingness, $\alpha = .66$; aggressiveness, $\alpha = .60$) components of the two domains.

Narcissistic Grandiosity Scale (NGS). The NGS (Rosenthal et al., 2007) is a 16-item adjective-based measure of narcissistic grandiosity intended to measure a grandiose sense of self-importance without overly confounding the construct with normative self-esteem. The specific item selection process is unclear as a manuscript detailing its development was never published. However, a recent examination concluded that the NGS is a unidimensional measure of narcissistic grandiosity with strong convergent and discriminant validity (Crowe et al., 2016).

Narcissistic Personality Inventory (NPI). The NPI (Raskin & Terry, 1988) is a 40-item forced-choice measure of narcissistic grandiosity. The items were rationally developed based on the Narcissistic Personality Disorder criteria presented in the third edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (1980). The 40-item Likert version (see Miller, Gentile, et al., 2017) was collected for this study. Initial analyses conducted by Raskin & Terry (1988) identified seven facets, but an alternative three-factor solution developed by Ackerman et al. (2011) is likely more appropriate and currently sees more use: Leadership/Authority (NPI LA; $\alpha = .90$), Grandiose Exhibitionism (NPI GE; $\alpha = .82$),

Entitlement/Exploitativeness (NPI EE; $\alpha = .68$). Ackerman and colleague's (2011) three-factor model uses only a subset of the NPI's 40 items.

Personality Diagnostic Questionnaire-4 Narcissistic Personality Disorder Scale (PDQ-4+). The PDQ-4+ (Hyler, 1994) is a 99-item self-report measure of DSM-IV personality disorders. The nine NPD items ($\alpha = .78$) in the scale were developed to assess each of the nine NPD symptom criteria in the DSM-IV.

Psychological Entitlement Scale (PES). The PES ($\alpha = .78$; Campbell, Bonacci, Shelton, Exline, & Bushman, 2004) is a nine-item inventory developed to measure psychological entitlement, conceptualized as a "stable and pervasive sense that one deserves more and is entitled to more than others" (p. 31). The item pool was developed rationally, and items were selected based on their item-total correlations to maximize reliability.

Personality Inventory for the DSM-5 (PID-5) – NPD Scale. The PID-5 (Krueger et al., 2012) is a 220-item measure designed to assess the 25 personality traits included in Section III of the DSM-5. Workgroup members developed the list of maladaptive traits rationally and generated specific items intended to measure their content. According to the Section III personality disorder criteria, the PID-5 Attention Seeking ($\alpha = .91$) and Grandiosity ($\alpha = .85$) scales are averaged to create a DSM-5 NPD trait score ($\alpha = .91$).

Pathological Narcissism Inventory (PNI). The PNI (Pincus et al., 2009) is a 52-item measure designed to measure "pathologically narcissistic" (p. 366) traits related to vulnerable and grandiose narcissism. After reviewing the literature on the conceptualization of narcissism across fields of interest (Cain et al., 2008), seven facet-level traits were identified and a pool of items were developed. Individual items were selected based on component loadings in exploratory principal components analysis. The final seven facets were labeled: contingent self-

esteem ($\alpha = .92$), exploitative ($\alpha = .81$), self-sacrificing self-enhancement ($\alpha = .75$), hiding the self ($\alpha = .77$), grandiose fantasy ($\alpha = .90$), devaluing (.81), and entitlement rage ($\alpha = .85$).

Subscales of the PNI can be combined to assess vulnerable narcissism (i.e., Contingent Self-esteem, Hiding the Self, Devaluing, and Entitlement Rage; $\alpha = .94$) and grandiose narcissism (i.e., Self-sacrificing Self-enhancement, Grandiose Fantasies, and Exploitativeness; $\alpha = .88$).

Short Dark Triad (SD3) – Narcissism Scale. The SD3 (Jones & Paulhus, 2014) is a 27-item measure of the “Dark Triad” (i.e., Machiavellianism, narcissism, psychopathy). The initial pool of items was developed following a literature review with the intent of measuring subclinical components of each domain. Items were selected through a series of principal component and factor analyses in which items that failed to load on the intended factor and which had excessive cross-loadings were removed. Only the nine narcissism items from the scale were collected ($\alpha = .79$).

Structured Clinical Interview for the DSM-IV Personality Disorders Personality Questionnaire – NPD Scale (SCID-II NPD). The SCID-II (First et al., 1997) is a 119-item self-report questionnaire derived from the DSM-IV structured clinical interview. The 17-item NPD items ($\alpha = .87$) were included in these analyses.

Criterion measures.

International Personality Item Pool representation of the Revised NEO Personality Inventory – 120 item version (IPIP-NEO-120). The IPIP (Goldberg et al., 2006) is a collection of publicly available items and scales. The IPIP-NEO-120 (Maples, Guan, Carter, & Miller, 2014) is a 120-item measure of the five domains and 30 facets of the five-factor model of personality.

Crime and Analogous Behavior scale (CAB). The CAB (Miller & Lynam, 2003) assesses substance use, antisocial behavior, and intimate partner violence. The *substance use* variable was calculated by counting the number of five different substances participants endorsed trying. The *antisocial behavior* variable was calculated by counting the number of nine different behaviors endorsed. The *intimate partner violence* variable was calculated by counting the number of six different acts of violence toward a romantic partner that the participant endorsed.

Patient-reported Outcomes Measurement Information System (PROMIS) Anxiety and Depression Short Form Scales. The PROMIS scales are self-report instrument developed to measure emotional and behavioral functioning. The PROMIS Anxiety (PROMIS-A) and PROMIS Depression (PROMIS-D) short form inventories are seven and eight items respectively. For these analyses the PROMIS-A and PROMIS-D short form scales were combined to make a single 15 item measure of emotional distress ($\alpha = .97$; Pilkonis et al., 2011)

Reactive and Proactive Aggression Questionnaire (RPA). The RPA (Raine et al., 2006) consists of 23 self-report items assessing two forms of aggression: Proactive Aggression ($\alpha = .82$) and Reactive Aggression ($\alpha = .82$). Items are scored in the following manner: 0 (never), 1 (sometimes), and 2 (often).

Rosenberg Self-esteem Scale (RSES). The RSES ($\alpha = .92$; Rosenberg, 1965) is a 10-item global measure of self-esteem in which the items are scored on a 1 (*Disagree strongly*) to 4 (*Agree strongly*) scale.

Validity Scales. Two validity scales from the Elemental Psychopathy Assessment (Lynam et al., 2011) were used – the *Infrequency Scale* (e.g., “I try to eat something almost every day”; reversed), and the *Too Good to Be True Scale* (e.g., “I have never in my life been angry at another person.”). Participants’ data were omitted if they received a score of four or

more on the Infrequency Scale or a score of three or more on the Too Good to Be True Scale. The 16 items from these two scales were embedded within the pool of narcissism items (see *Data Analysis*).

Data Analysis

Before data collection occurred, all narcissism items from each scale were intermixed into a single pool of 303 items (i.e., 287 narcissism items and 16 validity scale items). Items not originally presented in the form of a complete sentence were put into sentence form for the sake of consistency (e.g., the item “perfect” from the NGS was instead presented as “I am perfect”). A random number generator was used to randomize the pool of items. Participants rated their agreement with each item on the same 1 (*Strongly disagree*) to 5 (*Strongly agree*) scale.

After data collection was complete, seven pairs of identical items were identified in the item set. In each case the item presented to participants first was retained while the second item was pulled from the dataset. All remaining items were correlated with one another to identify excessively overlapping items. Two hundred and twenty-two item pairs were identified with correlations greater than .65 (see Crowe et al., 2017 for description of similar method). Individual items were removed from the overlapping set in a step-wise fashion intended to minimize bias and maximize the final number of retained items. Each item’s total number of inter-item correlations greater than .65 were counted, the individual item with the highest count was removed, each item’s total number of correlations were then recounted, and the process was repeated. In instances where more than one item had the same number of inter-item correlations greater than .65, a random number generator was used to select a single item to be pulled from the pool. In this way, 65 items were removed resulting in a final count of 215 items on which the

structural analysis was conducted. Scale descriptive statistics and their representation in the final item pool are presented in Table 1.

All factor solutions were identified using a Principal Axis factoring method.¹ A single unrotated factor was extracted, then rotated solutions of successively more factors were extracted until one of the factors was either too specific to be meaningful (e.g., a factor composed of the single item “I am a bit of a daredevil”) or was no longer interpretable. All rotated solutions were identified using a Promax rotation. At each step in the process the factor scores were saved so that factor solutions from different levels could be correlated and compared. The identified factors were correlated with existing narcissism scales, the Five Factor Model, and other relevant external criterion variables.

¹ The analysis was replicated using alternative estimation methods (i.e., maximum-likelihood, principal components) and the solutions were consistent. Factor scores from all methods maintained correlations greater than .98 through the six-factor solution.

Table 1

Narcissism Scales Descriptive Statistics

| Scale | Items | α | M (SD) |
|-----------------------------------|-----------|----------|-------------|
| FFNI-SF | | | |
| Acclaim-seeking | 4 (3) | 0.85 | 3.26 (1.05) |
| Arrogance | 4 (3) | 0.71 | 1.9 (0.76) |
| Authoritativeness | 4 (0) | 0.90 | 2.92 (1.1) |
| Distrust | 4 (4) | 0.76 | 2.99 (0.94) |
| Entitlement | 4 (1) | 0.85 | 1.83 (0.87) |
| Exhibitionism | 4 (3) | 0.80 | 2.74 (0.99) |
| Exploitativeness | 4 (3) | 0.86 | 1.82 (0.88) |
| Grandiose Fantasies | 4 (4) | 0.79 | 2.58 (1.06) |
| Indifference | 4 (3) | 0.83 | 2.73 (1.04) |
| Lack of Empathy | 4 (4) | 0.85 | 1.88 (0.86) |
| Manipulativeness | 4 (1) | 0.90 | 2.43 (1.08) |
| Need for Admiration | 4 (3) | 0.72 | 2.63 (0.98) |
| Reactive Anger | 4 (4) | 0.72 | 2.31 (0.92) |
| Shame | 4 (4) | 0.81 | 3.25 (1.04) |
| Thrill-seeking | 4 (2) | 0.87 | 1.88 (0.95) |
| GNS | | 0.92 | 2.69 (0.61) |
| Authority | 5 (0) | 0.93 | 2.91 (1.13) |
| Self-sufficiency | 5 (5) | 0.75 | 3.77 (0.76) |
| Superiority | 4 (3) | 0.82 | 2.48 (0.98) |
| Vanity | 5 (2) | 0.91 | 3.3 (1.03) |
| Exhibitionism | 5 (4) | 0.87 | 2.08 (0.91) |
| Entitlement | 4 (3) | 0.79 | 2.32 (0.87) |
| Exploitativeness | 5 (2) | 0.89 | 1.84 (0.89) |
| HSNS | 10 (10) | 0.77 | 2.7 (0.7) |
| NARQ | | 0.85 | 2.33 (0.6) |
| Admiration | 9 (7) | 0.84 | 2.68 (0.76) |
| Rivalry | 9 (7) | 0.80 | 1.98 (0.69) |
| NGS | 16 (13) | 0.93 | 2.22 (0.81) |
| NPI | | 0.94 | 2.65 (0.66) |
| Leadership/Authority | 11 (8) | 0.90 | 2.78 (0.91) |
| Grandiose Exhibitionism | 10 (7) | 0.82 | 2.24 (0.72) |
| Entitlement/Exploitativeness | 4 (1) | 0.68 | 2.44 (0.89) |
| Other Items | 15 (12) | 0.81 | 2.87 (0.61) |
| PDQ-4+ | 9 (9) | 0.78 | 2.19 (0.68) |
| PES | 9 (8) | 0.88 | 2.39 (0.85) |
| PID-5 | | 0.91 | 2.12 (0.77) |
| Attention Seeking | 8 (4) | 0.91 | 2.18 (0.9) |
| Grandiosity | 6 (6) | 0.85 | 2.04 (0.82) |
| PNI | | | |
| Contingent Self-esteem | 12 (8) | 0.92 | 2.32 (0.89) |
| Devaluing | 7 (6) | 0.81 | 2.36 (0.81) |
| Entitlement rage | 8 (8) | 0.85 | 2.41 (0.83) |
| Exploitative | 5 (2) | 0.81 | 2.58 (0.92) |
| Grandiose Fantasy | 7 (4) | 0.90 | 2.95 (1.07) |
| Hiding the self | 7 (7) | 0.77 | 3.2 (0.83) |
| Self-sacrificing self-enhancement | 6 (6) | 0.75 | 3.2 (0.76) |
| SCID-II NPD | 17 (13) | 0.87 | 2.17 (0.65) |
| SD3 Narcissism | 9 (8) | 0.79 | 2.52 (0.75) |
| Total | 287 (215) | 0.99 | 2.5 (0.55) |

Note. The item numbers in parentheses indicate the number from each scale that was included in the final item pool. FFNI-SF = Five Factor Narcissism Inventory – Short Form; GNS = Grandiose Narcissism Scale; HSNS = Hypersensitive Narcissism Scale; NARQ = Narcissistic Admiration and Rivalry Questionnaire; NGS = Narcissistic Grandiosity Scale; NPI = Narcissistic Personality Inventory; PDQ-4+ = Personality Diagnostic Questionnaire-4 Narcissistic Personality Disorder Scale; PES = Psychological Entitlement Scale; PID-5 = Personality Inventory for the DSM-5; PNI = Pathological Narcissism Inventory; SCID-II NPD = Structured Clinical Interview for DSM-IV Personality Disorders Personality Questionnaire – NPD Scale; SD3 = Short Dark Triad

CHAPTER 3

RESULTS

The first unrotated factor accounted for 22% of the total variance. The first sixteen eigenvalues of the analysis are shown in Figure 1. Following the single-factor analysis a series of successively larger solutions were examined. While the intent of the analysis was to describe narcissism at many levels, several approaches were used to in an attempt to identify the optimal number of factors. Eigenvalues were examined within a parallel analysis (Horn, 1965) that suggested 12 factors. Velicer's (1976) minimum average partial (MAP) test indicated 21 factors, and examination of BIC values (Raftery, 1995) indicated seven unique factors.

In the nine-factor solution, no items had their highest loading on the ninth factor. The eight-factor solution was therefore the largest model given consideration. The content of the factor solutions was examined to evaluate both parsimony and interpretability of the factors. Inspection of the seven and eight factor solutions revealed that in each there was one factor composed of a single item: "I am a bit of a daredevil." Those solutions were excluded due to their inclusion of such a specific factor. In the six-factor solution a 10-item fantasy-related factor emerged. The seven strongest loading items for this factor included the word *fantasy* and the six strongest began with the phrase "I often fantasize about...". Such homogeneity in item content was interpreted as indicative of a bloated specific factor. A list of all items loading onto the sixth factor and their loadings is provided in the Appendix. The content of each of the factors through the five-factor solution was interpretable and item loadings were generally high. The five-factor solution was chosen as the base of the hierarchical analysis. The five-factor solution accounted

for 39% of the variance in narcissism scores. Inclusion of the sixth factor increased variance accounted for by 2%.

A Hierarchy of Narcissism Factors

The final hierarchy from one to five factors is depicted in Figure 2. Figure 3 provides an Alluvial Diagram depicting the proportion of the total item pool with its highest loading on each of the identified factors at each level of analysis. Example items for each of the factors is provided in Table 2. To better understand the content of the factors, scores from each solution were correlated with each of the full scales collected for the narcissism item pool (Table 3), as well as the Five Factor Model as represented by the IPIP-NEO-120 (Table 4). To evaluate the content and stability of factors across solutions, the correlations of all factor scores are reported in Table 5 (above diagonal) along with the relationship between each factor's FFM profile (below diagonal).²

The first identified factor (F1.1) was labeled Narcissism as it represents what is most common to all of the item content. It revealed substantial associations with nearly all broad narcissism scales. Full-scale correlations ranged from $r = .55$ (HSNS) to $r = .94$ (FFNI Total) while facet-level correlations varied between $r = .12$ (FFNI Shame) and $r = .85$ (PID-5 Grandiosity). When evaluated using the FFM traits, the narcissism factor was characterized by low agreeableness (e.g., Morality $r = -.62$; Modesty $r = -.62$) and a moderate association with extraversion (e.g., Excitement Seeking $r = .36$; Assertiveness $r = .35$).

The two-factor solution revealed two correlated factors ($r = .42$) consistent with grandiose and vulnerable narcissism. Both factors were heterogeneous in content. The highest loading items for the Grandiose Narcissism factor (F2.1) were primarily related to a grandiose

² For example, in the lower triangle of Table 5, F1.1 has a correlation of .77 with F3.1. This indicates that F1.1's FFM correlation profile (shown in Table 4) is similar to F3.1's FFM correlation profile ($r = .77$, $n = 35$).

sense of self (e.g., “I am superior”; “I have outstanding qualities few others possess”). This factor demonstrated correlations ranging from $r = .67$ (PNI Grandiose) to $r = .95$ (NPI total) with domain-level measures of grandiosity and from $r = .07$ (FFNI Vulnerable) to $r = .33$ (PNI Vulnerable) with domain-level measures of vulnerable narcissism. Grandiose Narcissism’s (F2.1) strongest facet-level associations were with NARQ Admiration ($r = .92$), NPI L/A ($r = .86$), and the PID-5 Grandiosity scale ($r = .86$). Factor 2.1 also revealed a FFM pattern of associations consistent with grandiose narcissism – low agreeableness (e.g., Modesty $r = -.73$; Morality $r = -.53$) and high extraversion (e.g., Assertiveness $r = .54$; Gregariousness $r = .41$; Excitement Seeking $r = .40$). The most representative items for the Vulnerable Narcissism factor (F2.2) were primarily drawn from the PNI and included reactive anger (e.g., “I typically get very angry when I’m unable to get what I want from others”), and a dependence on others for validation (“It’s hard to feel good about myself unless I know other people admire me”; “I very much need other people to take notice of more or compliment me”). Vulnerable Narcissism (F2.2) had its strongest domain-level associations with measures of vulnerable and pathological narcissism (PNI Vulnerable $r = .95$; PNI Total $r = .92$; HSNS $r = .85$) and its weakest with measures of grandiosity (NGS $r = .30$; SD3 Narcissism $r = .30$). Facet-level associations ranged from $r = -.19$ (FFNI Indifference) to $r = .88$ (PNI Entitlement Rage). From a personality trait perspective, Vulnerable Narcissism (F2.2) was characterized by strong positive associations with neuroticism (e.g., Anxiety $r = .52$; Depression $r = .52$; Anger $r = .49$) and a negative association with agreeableness (e.g., Morality $r = -.52$).

The third level of analysis revealed a factor solution consistent with Miller and colleagues (2016, 2017) trifurcated model. Content from both Grandiose (F2.1) and Vulnerable (F2.2) Narcissism merged to yield a new factor labeled Antagonism (F3.3). The three factors

had moderate to large intercorrelations: $r = .28$ (F3.1 and F3.2), $r = .50$ (F3.1 and F3.3). Antagonism (F3.3) included items related to a willingness to exploit others for personal gain (e.g. “It’s fine to take advantage of persons to get ahead), a sense of entitlement (e.g., “To be honest, I’m just more important than other people), and a lack of empathy (e.g., “I’m not big on feelings of sympathy”). Among the current measures of narcissism, Antagonism (F3.3) had its strongest association with FFNI Antagonism ($r = .92$) but was also highly related to SCID-II NPD ($r = .86$). Its facet-level associations ranged from $r = .02$ (FFNI Shame) to $r = .82$ (NARQ Rivalry) and its FFM profile included negative associations with all facets of agreeableness (e.g., Morality $r = -.63$; Cooperation $r = -.57$) as well as a negative association with Dutifulness ($r = -.53$), a facet of conscientiousness. The other two factors that emerged at this stage of analysis (F3.1 and F3.2) revealed patterns of association highly similar to their counterparts at the two-factor level. Factor 3.1 was labeled Agentic Extraversion and its associations with narcissism scales ranged from $r = -.18$ (FFNI Neuroticism) to $r = .97$ (NPI Total). Its FFM associations had a pattern consistent with that of Grandiose Narcissism (F2.2) as it was most closely associated with Modesty ($r = -.69$) and Assertiveness ($r = .60$). The Neuroticism factor (F3.2) had associations that ranged from $r = -.39$ (FFNI Indifference) to $r = .94$ (PNI Vulnerable). Within the FFM, facets of Neuroticism (e.g., Anxiety $r = .60$; Depression $r = .59$) were most strongly correlated of the Neuroticism (F3.2) factor.

When four factors were extracted the three previously identified factors remained intact and yielded virtually identical factors (Agentic Extraversion, F4.1; Neuroticism, F4.2; Antagonism, F4.3) and trait-based correlational profiles. Factor intercorrelations ranged from unrelated ($r = .01$; F4.2 and F4.4) to large ($r = .50$; F4.1 and F4.3). The fourth factor that emerged at this level was labeled Distrustful Self-reliance (F4.4) as it included items

emphasizing a desire for self-sufficiency (e.g., “I don’t like to depend on other people to do things”; “I hate asking for help”), and a hesitancy to trust others (e.g., “I’m slow to trust people”; “I often think others aren’t telling me the whole truth”). Distrustful Self-reliance was unique among the identified factors in that it manifested null to small associations with the other narcissism factors (F4.1 $r = .03$; F4.2 $r = .01$; F4.3 $r = .10$). Among the narcissism measures, this factor had associations that ranged from $r = -.33$ (PID-5 Attention Seeking) to $r = .72$ (GNS Self-sufficiency). However, F4.4 factor scores correlated at a level greater than $r = |.40|$ with only three scales (GNS Self-sufficiency; FFNI Distrust $r = .56$; PNI Hiding the Self $r = .55$), and its association with the first narcissism factor was minimal ($r = .10$). The Distrustful Self-reliance (F4.4) factor also had relatively weaker associations with facets of the FFM, with only the Trust facet showing a large association ($r = -.49$).

Extracting five factors from the narcissism item pool yielded two factors (Neuroticism F5.2; Antagonism F5.3) that were near perfect correlates with their counterparts at the four-factor level. The Distrustful Self-reliance (F5.4) factor also emerged in this solution in a form consistent with its previous counterpart ($r = .92$). Intercorrelations between the five factors ranged from $r = -.02$ (F5.4 and F5.5) to $r = .63$ (F5.1 and F5.5). Agentic Extraversion (F4.1) split to yield the new factor at this level. The two factors were labeled Grandiosity (F5.1) and Attention Seeking (F5.5). Grandiosity (F5.1) was best represented by items related to a grandiose sense of self (e.g., “I deserve to be seen as a great personality”) and entitlement (e.g., “great things should come to me”). Its association with other narcissism scales ranged from $r = -.15$ (FFNI Neuroticism) to $r = .91$ (NARQ Admiration). Grandiosity’s (F5.1) strongest FFM facet-level correlates were Modesty ($r = -.65$) and Assertiveness ($r = .45$). Attention-seeking (F5.5) was composed of items related to a desire for attention (e.g., “I love getting the attention of other

people”; “I can be a showoff”) and authority (e.g., “I like having authority over people”; “I have a natural talent for influencing people”). Its correlations with narcissism scales ranged from $r = -.11$ (FFNI Neuroticism) to $r = .86$ (NPI Total), and its strongest associations included FFNI Extraversion ($r = .83$), NPI L/A ($r = .82$), and PID-5 Attention-Seeking ($r = .81$). While the factors identified at the five-factor level are generally distinct (Median inter-factor $r = .22$), Grandiosity (F5.1) and Attention-seeking (F5.5) factor scores covaried strongly ($r = .63$) and they had highly related FFM correlation profiles ($r = .97$), suggesting that this level of branching may not be substantive enough to support the notion that they are meaningfully different factors.

Criterion Associations across Factor Solutions

In order to evaluate factor divergence, each factor score was correlated with relevant criterion variables: self-esteem, externalizing behavior, aggression, and emotional distress (see Table 6; FFM correlates were discussed previously). Narcissism (F1.1) had no meaningful association with self-esteem ($r = .01$) or emotional distress ($r = .06$). The first factor was associated with aggression (RPA Proactive Aggression $r = .35$; RPA Reactive Aggression $r = .26$) and antisocial behavior (CAB Antisocial Behavior $r = .14$). Meaningful divergence was observed within all factor solutions. Consistent with expectations, Grandiose (F2.1) and Vulnerable (F2.2) Narcissism diverged in their relationship with self-esteem and emotional distress with grandiosity associated with increased self-esteem ($r = .31$) and less distress ($r = -.20$) while vulnerability had maladaptive associations with the same measures (i.e., self-esteem $r = -.53$; distress $r = .50$). Vulnerable narcissism’s association with internalizing problems continued within the Neuroticism (F3.2, F4.2, F5.2) factor, which consistently revealed particularly maladaptive associations with self-esteem and emotional distress. Meaningful factor divergence was also observed for proactive and reactive aggression. Proactive aggression was

comparable across factors at the two-factor level: Grandiose (F2.1) $r = .28$, Vulnerable (F2.2) $r = .32$. However, when three or more factors were extracted, Antagonism (F3.3 $r = .43$; F4.3 $r = .44$; F5.3 $r = .45$) emerged as particularly predictive of such aggression. Distrustful Self-reliance (F4.4, F5.4) maintained a null association with proactive aggression, and all other factors revealed (F4.1, F4.2; F5.1, F5.2, F5.5) comparable modest associations ranging from $r = .16$ (F5.2) to $r = .21$ (F5.5). Unlike proactive aggression, which had a particular association with Antagonism, reactive aggression showed a consistently stronger association with Vulnerable Narcissism (F2.2 $r = .37$) and Neuroticism (F3.2 $r = .36$; F4.2 $r = .35$; F5.2 $r = .34$). Distrustful self-reliance (F4.4 $r = .17$; F5.4 $r = .24$) was also more relevant to reactive aggression as its association increased to a level comparable to that of Antagonism (F4.3 $r = .23$; F5.3 $r = .23$).

While some statistically significant inter-factor divergence was observed in associations with the CAB scales, the magnitude of all correlations was small. Distrustful Self-reliance (F5.4) was the only factor to show a significant correlation with substance use ($r = .13$), but its relationship did not differ meaningfully from nearly all other factors. The correlations with antisocial behavior at the five-factor level reveal Antagonism (F5.3; $r = .16$), Distrustful Self-reliance (F5.4; $r = .14$), and Attention-seeking (F5.5; $r = .16$) as significant correlates, but Attention-seeking (F5.5) and Grandiosity (F5.1) were the only factors with correlations meaningfully different in magnitude. That was the only criterion association in which F5.1 and F5.5 diverged. No factors diverged in their association with intimate partner violence.

Table 2.

Example Item Content

| Scale | Item | 1.1 | 2.1 | 2.2 | 3.1 | 3.2 | 3.3 | 4.1 | 4.2 | 4.3 | 4.4 | 5.1 | 5.2 | 5.3 | 5.4 | 5.5 |
|------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| NGS | I am prominent | <u>0.68</u> | <u>0.77*</u> | 0.24 | <u>0.75*</u> | 0.11 | 0.46 | <u>0.75*</u> | 0.10 | 0.46 | 0.15 | <u>0.75*</u> | 0.05 | 0.37 | 0.18 | 0.55 |
| NGS | I am powerful | 0.62 | <u>0.73*</u> | 0.18 | <u>0.72*</u> | 0.05 | 0.41 | <u>0.71*</u> | 0.04 | 0.41 | 0.05 | <u>0.69</u> | -0.01 | 0.34 | 0.11 | 0.57 |
| NARQ-A | I show others how special I am | <u>0.71*</u> | <u>0.70</u> | 0.42 | <u>0.70*</u> | 0.33 | 0.48 | <u>0.70*</u> | 0.32 | 0.49 | -0.01 | <u>0.70</u> | 0.28 | 0.41 | 0.02 | 0.54 |
| PID-5 G | I have outstanding qualities that few others possess | <u>0.69*</u> | <u>0.73*</u> | 0.34 | <u>0.70*</u> | 0.20 | 0.51 | <u>0.70*</u> | 0.18 | 0.51 | 0.25 | <u>0.75*</u> | 0.14 | 0.43 | 0.24 | 0.45 |
| NARQ-A | I manage to be the center of attention with my outstanding contributions | <u>0.65</u> | <u>0.70</u> | 0.31 | <u>0.70*</u> | 0.20 | 0.43 | <u>0.69*</u> | 0.20 | 0.46 | -0.19 | 0.61 | 0.15 | 0.39 | -0.08 | <u>0.68*</u> |
| PNI-CSE | I sometimes need important others in my life to reassure me of my self-worth | 0.42 | 0.21 | <u>0.64</u> | 0.24 | <u>0.68*</u> | 0.28 | 0.25 | <u>0.69*</u> | 0.30 | -0.11 | 0.26 | <u>0.68*</u> | 0.28 | -0.11 | 0.22 |
| PNI-CSE | When others don't notice me, I start to feel worthless | 0.34 | 0.10 | <u>0.64</u> | 0.13 | <u>0.68*</u> | 0.26 | 0.13 | <u>0.69*</u> | 0.28 | -0.07 | 0.16 | <u>0.69*</u> | 0.27 | -0.07 | 0.13 |
| PNI-CSE | It's hard to feel good about myself unless I know other people admire me | 0.47 | 0.24 | <u>0.68*</u> | 0.25 | <u>0.68*</u> | 0.37 | 0.26 | <u>0.68*</u> | 0.39 | -0.10 | 0.29 | <u>0.68*</u> | 0.37 | -0.11 | 0.21 |
| FFNI-Shame | I feel ashamed when people judge me | 0.11 | -0.15 | 0.53 | -0.08 | <u>0.67*</u> | 0.02 | -0.08 | <u>0.68*</u> | 0.03 | -0.05 | -0.06 | <u>0.69*</u> | 0.04 | -0.05 | -0.04 |
| PNI-CSE | When others don't respond to me the way that I would like them to, it is hard for me to still feel ok with myself | 0.36 | 0.12 | <u>0.64</u> | 0.13 | <u>0.66*</u> | 0.31 | 0.14 | <u>0.67</u> | 0.32 | -0.07 | 0.17 | <u>0.67*</u> | 0.32 | -0.08 | 0.12 |
| FFNI-Exp | It's fine to take advantage of persons to get ahead | 0.58 | 0.50 | 0.49 | 0.38 | 0.27 | <u>0.69*</u> | 0.37 | 0.26 | <u>0.70*</u> | -0.05 | 0.38 | 0.25 | <u>0.70*</u> | -0.03 | 0.33 |
| PID-5 A | To be honest, I'm just more important than other people | <u>0.67</u> | 0.64 | 0.45 | 0.55 | 0.25 | <u>0.68*</u> | 0.54 | 0.23 | <u>0.69*</u> | 0.05 | <u>0.61</u> | 0.21 | <u>0.64</u> | 0.00 | 0.33 |
| FFNI-Aro | I do not waste my time hanging out with people who are beneath me | 0.59 | 0.52 | 0.47 | 0.41 | 0.26 | <u>0.67*</u> | 0.40 | 0.24 | <u>0.67*</u> | 0.16 | 0.48 | 0.23 | <u>0.65</u> | 0.11 | 0.21 |
| NARQ-R | I enjoy it when another person is inferior to me | 0.58 | 0.46 | <u>0.57</u> | 0.35 | 0.39 | <u>0.67*</u> | 0.34 | 0.38 | <u>0.67*</u> | 0.03 | 0.41 | 0.37 | <u>0.66*</u> | -0.01 | 0.22 |
| SCID-NPD | I find that there are very few people that are worth my time and attention | 0.50 | 0.42 | 0.45 | 0.28 | 0.24 | <u>0.66*</u> | 0.27 | 0.21 | <u>0.65</u> | 0.32 | 0.39 | 0.21 | <u>0.64</u> | 0.24 | 0.05 |
| GNS-Suf | I don't like to depend on other people to do things | 0.14 | 0.12 | 0.13 | 0.11 | 0.10 | 0.12 | 0.12 | 0.08 | 0.08 | <u>0.60*</u> | 0.15 | 0.06 | 0.08 | <u>0.66*</u> | 0.00 |
| GNS-Suf | I get irritated when I have to depend on other people | 0.34 | 0.24 | 0.37 | 0.21 | 0.30 | 0.34 | 0.21 | 0.27 | 0.30 | <u>0.55*</u> | 0.24 | 0.26 | 0.30 | <u>0.61*</u> | 0.11 |
| PNI-HS | I hate asking for help | 0.14 | 0.05 | 0.24 | 0.04 | 0.23 | 0.15 | 0.04 | 0.21 | 0.11 | <u>0.53*</u> | 0.05 | 0.20 | 0.12 | <u>0.61*</u> | -0.01 |
| GNS-Suf | When something needs to be done, I do it on my own | 0.16 | 0.19 | 0.05 | 0.22 | 0.06 | 0.03 | 0.23 | 0.04 | 0.00 | <u>0.49*</u> | 0.23 | 0.01 | -0.03 | <u>0.57*</u> | 0.13 |
| NPI-Suf | I rarely depend on anyone else to get things done | 0.22 | 0.26 | 0.07 | 0.23 | 0.00 | 0.19 | 0.23 | -0.02 | 0.16 | <u>0.50*</u> | 0.26 | -0.04 | 0.14 | <u>0.54*</u> | 0.09 |
| GNS-Exh | I make myself the center of attention | 0.56 | 0.58 | 0.31 | 0.57 | 0.21 | 0.40 | 0.57 | 0.22 | 0.44 | -0.37 | 0.43 | 0.17 | 0.39 | -0.21 | <u>0.70*</u> |
| NPI-L/A | I like having authority over other people | 0.64 | 0.67 | 0.34 | 0.68 | 0.26 | 0.39 | 0.68 | 0.26 | 0.41 | -0.11 | 0.58 | 0.21 | 0.34 | 0.04 | <u>0.69*</u> |
| NPI-L/A | I have a natural talent for influencing people | 0.49 | 0.61 | 0.08 | 0.64 | 0.02 | 0.21 | 0.64 | 0.02 | 0.22 | -0.06 | 0.51 | -0.04 | 0.16 | 0.11 | <u>0.67*</u> |
| FFNI-Exh | I like being the most popular person at a party | 0.60 | 0.59 | 0.38 | 0.58 | 0.29 | 0.42 | 0.58 | 0.30 | 0.45 | -0.29 | 0.46 | 0.25 | 0.41 | -0.14 | <u>0.67*</u> |

Note. For each factor, the five highest loading items that in are in the table are in bold and underlined. An asterisk indicates that the item is among the five highest loading items for that factor. FFNI [Aro, Exh] = Five Factor Narcissism Inventory – Short Form [Arrogance, Exhibitionism]; GNS [Suf, Exh] = Grandiose Narcissism Scale [Self-sufficiency, Exhibitionism]; NARQ-[A,R] = Narcissistic Admiration and Rivalry Questionnaire [Admiration, Rivalry]; NGS = Narcissistic Grandiosity Scale; NPI [Suf, L/A] = Narcissistic Personality Inventory [Self-sufficiency, Leadership/Authority]; PID-5 [G,A] = Personality Inventory for the DSM-5 [Grandiosity, Attention-seeking]; PNI [CSE, HS] = Pathological Narcissism Inventory [Contingent Self-esteem, Hiding the self]; SCID-NPD = Structured Clinical Interview for DSM-IV Personality Disorders Personality Questionnaire – NPD Scale

Table 3

Factor Score Correlations with Narcissism Scales

| | F1.1 | F2.1 | F2.2 | F3.1 | F3.2 | F3.3 | F4.1 | F4.2 | F4.3 | F4.4 | F5.1 | F5.2 | F5.3 | F5.4 | F5.5 |
|-------------------|-------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| FFNI Total | 0.94 | 0.84 ^a | 0.73 ^b | 0.80 ^a | 0.57 ^b | 0.78 ^a | 0.79 ^a | 0.55 ^b | 0.79 ^a | 0.17 ^c | 0.78 ^a | 0.50 ^b | 0.72 ^{a,d} | 0.27 ^c | 0.67 ^d |
| Antagonism | 0.88 | 0.78 ^a | 0.70 ^b | 0.65 ^a | 0.45 ^b | 0.92^c | 0.64 ^a | 0.43 ^b | 0.92^c | 0.18 ^d | 0.67 ^a | 0.39 ^b | 0.89^c | 0.23 ^d | 0.52 ^c |
| Extraversion | 0.76 | 0.82^a | 0.34 ^b | 0.89^a | 0.31 ^b | 0.35 ^b | 0.90^a | 0.30 ^b | 0.36 ^b | 0.01 ^c | 0.80^a | 0.23 ^b | 0.26 ^b | 0.17 ^b | 0.83^a |
| Neuroticism | 0.04 | -0.27 ^a | 0.58 ^b | -0.18 ^a | 0.77^b | -0.06 ^c | -0.17 ^a | 0.78^b | -0.04 ^c | -0.11 ^{a,c} | -0.15 ^a | 0.80^b | -0.02 ^c | -0.12 ^{a,c} | -0.11 ^{a,c} |
| FFNI Grandiose | 0.90 | 0.93 ^a | 0.47 ^b | 0.88 ^a | 0.27 ^b | 0.74 ^c | 0.87 ^a | 0.25 ^b | 0.74 ^c | 0.08 ^d | 0.82 ^a | 0.19 ^b | 0.67 ^c | 0.19 ^b | 0.76 ^d |
| Acclaim-seeking | 0.51 | 0.63 ^a | 0.09 ^b | 0.69 ^a | 0.07 ^b | 0.17 ^b | 0.70 ^a | 0.06 ^b | 0.17 ^{b,c} | 0.21 ^c | 0.66 ^a | 0.01 ^b | 0.07 ^b | 0.30^c | 0.55 ^d |
| Arrogance | 0.78 | 0.76 ^a | 0.50 ^b | 0.66 ^a | 0.27 ^b | 0.78^c | 0.65 ^a | 0.25 ^b | 0.78^c | 0.12 ^b | 0.71 ^a | 0.22 ^b | 0.73^a | 0.09 ^b | 0.43 ^c |
| Authoritativeness | 0.56 | 0.70 ^a | 0.09 ^b | 0.76 ^a | 0.04 ^b | 0.22 ^c | 0.76 ^a | 0.04 ^b | 0.24 ^c | 0.00 ^b | 0.61 ^a | -0.04 ^b | 0.15 ^c | 0.21 ^c | 0.79^d |
| Entitlement | 0.78 | 0.74 ^a | 0.54 ^b | 0.66 ^a | 0.34 ^b | 0.74 ^c | 0.65 ^a | 0.32 ^b | 0.75 ^c | -0.02 ^d | 0.72 ^a | 0.30 ^b | 0.69 ^a | -0.08 ^c | 0.43 ^d |
| Exhibitionism | 0.61 | 0.61 ^a | 0.36 ^b | 0.68 ^a | 0.36 ^b | 0.26 ^b | 0.68 ^a | 0.38 ^b | 0.29 ^b | -0.30 ^c | 0.54 ^a | 0.32 ^b | 0.22 ^b | -0.12 ^c | 0.77 ^d |
| Exploitativeness | 0.68 | 0.59 | 0.55 | 0.46 ^a | 0.31 ^b | 0.79^c | 0.45 ^a | 0.30 ^b | 0.80^c | -0.06 ^d | 0.44 ^a | 0.27 ^b | 0.80^c | -0.02 ^d | 0.42 ^a |
| Grand. fantasies | 0.64 | 0.57 | 0.51 | 0.59 ^a | 0.47 ^b | 0.41 ^b | 0.60 ^a | 0.46 ^b | 0.42 ^b | 0.11 ^c | 0.63 ^a | 0.43 ^b | 0.34 ^b | 0.12 ^c | 0.42 ^b |
| Indifference | 0.19 | 0.36 ^a | -0.19 ^b | 0.27 ^a | -0.39 ^b | 0.29 ^a | 0.26 ^a | -0.41 ^b | 0.26 ^a | 0.33^a | 0.27 ^a | -0.44 ^b | 0.25 ^{a,c} | 0.35^a | 0.15 ^c |
| Lack of empathy | 0.42 | 0.36 | 0.35 | 0.17 | 0.08 | 0.72 ^c | 0.16 ^{a,b} | 0.05 ^a | 0.70 ^c | 0.27 ^b | 0.22 ^a | 0.05 ^b | 0.22 ^a | 0.25 ^a | 0.07 ^b |
| Manipulativeness | 0.66 | 0.71 ^a | 0.30 ^b | 0.69 ^a | 0.16 ^b | 0.50 ^c | 0.68 ^a | 0.15 ^b | 0.51 ^c | -0.04 ^d | 0.56 ^a | 0.09 ^b | 0.46 ^c | 0.15 ^b | 0.73 ^d |
| Thrill-seeking | 0.46 | 0.43 | 0.33 | 0.37 ^a | 0.21 ^b | 0.45 ^a | 0.37 ^a | 0.21 ^b | 0.46 ^a | -0.08 ^c | 0.32 ^a | 0.18 ^b | 0.45 ^c | 0.01 ^d | 0.40 ^c |
| FFNI Vulnerable | 0.40 | 0.07 ^a | 0.84 ^b | 0.08 ^a | 0.88 ^b | 0.36 ^c | 0.09 ^a | 0.87 ^b | 0.36 ^c | 0.28 ^c | 0.16 ^a | 0.88 ^b | 0.36 ^c | 0.28 ^{a,c} | 0.02 ^d |
| Distrust | 0.29 | 0.13 ^a | 0.46 ^b | 0.08 ^a | 0.40 ^b | 0.36 ^b | 0.08 ^a | 0.37 ^b | 0.33 ^b | 0.56^c | 0.15 ^a | 0.37 ^b | 0.34 ^b | 0.58^c | -0.02 ^d |
| Need for Ad. | 0.19 | -0.13 ^a | 0.69 ^b | -0.09 ^a | 0.81^b | 0.14 ^c | -0.08 ^a | 0.81^b | 0.15 ^c | -0.01 ^a | -0.04 ^a | 0.83^b | 0.17 ^c | -0.03 ^a | -0.06 ^a |
| Reactive Anger | 0.62 | 0.42 ^a | 0.73^b | 0.37 ^a | 0.64 ^b | 0.59 ^b | 0.37 ^a | 0.62 ^b | 0.59 ^b | 0.22 ^c | 0.45 ^a | 0.61 ^b | 0.57 ^b | 0.20 ^c | 0.22 ^c |
| Shame | 0.12 | -0.17 ^a | 0.60 ^b | -0.10 ^a | 0.76^b | 0.02 ^c | -0.09 ^a | 0.76^b | 0.03 ^c | 0.08 ^c | -0.05 ^a | 0.77^b | 0.04 ^{a,c} | 0.09 ^c | -0.07 ^a |
| GNS Total | 0.89 | 0.91 ^a | 0.50 ^b | 0.89 ^a | 0.35 ^b | 0.64 ^c | 0.89 ^a | 0.34 ^b | 0.65 ^c | 0.08 ^d | 0.81 ^a | 0.27 ^b | 0.57 ^c | 0.24 ^b | 0.82 ^a |
| Authority | 0.55 | 0.69 ^a | 0.08 ^b | 0.75 ^a | 0.04 ^b | 0.22 ^c | 0.75 ^a | 0.03 ^b | 0.23 ^c | 0.00 ^b | 0.60 ^a | -0.04 ^b | 0.14 ^c | 0.21 ^c | 0.78 ^d |
| Self-sufficiency | 0.26 | 0.24 | 0.18 | 0.23 | 0.14 | 0.21 | 0.24 ^a | 0.11 ^b | 0.16 ^{a,b} | 0.72^c | 0.26 ^a | 0.08 ^b | 0.15 ^b | 0.81^c | 0.10 ^b |
| Superiority | 0.75 | 0.81^a | 0.34 ^b | 0.77 ^a | 0.17 ^b | 0.58 ^c | 0.77^a | 0.15 ^b | 0.58 ^c | 0.15 ^b | 0.77 ^a | 0.10 ^b | 0.50 ^c | 0.19 ^b | 0.58 ^c |
| Vanity | 0.35 | 0.37 ^a | 0.17 ^b | 0.43 ^a | 0.19 ^b | 0.11 ^b | 0.43 ^a | 0.19 ^b | 0.13 ^b | -0.05 ^c | 0.38 ^a | 0.16 ^b | 0.07 ^b | 0.03 ^b | 0.40 ^a |
| Exhibitionism | 0.72 | 0.68 ^a | 0.50 ^b | 0.66 ^a | 0.40 ^b | 0.53 ^c | 0.66 ^a | 0.41 ^b | 0.57 ^c | -0.33 ^d | 0.51 ^a | 0.35 ^b | 0.53 ^a | -0.13 ^c | 0.81^d |
| Entitlement | 0.84 | 0.81 ^a | 0.55 ^b | 0.75 ^a | 0.37 ^b | 0.70 ^a | 0.75 ^a | 0.35 ^b | 0.71 ^a | 0.11 ^c | 0.83^a | 0.32 ^b | 0.63 ^c | 0.06 ^d | 0.47 ^c |
| Exploitativeness | 0.69 | 0.60 | 0.58 | 0.48 ^a | 0.37 ^b | 0.76 ^c | 0.47 ^a | 0.36 ^b | 0.77^c | -0.08 ^d | 0.43 ^{a,d} | 0.32 ^a | 0.77^b | 0.02 ^c | 0.50 ^d |
| HSNS | 0.55 | 0.26 ^a | 0.85 ^b | 0.22 ^a | 0.80 ^b | 0.58 ^c | 0.22 ^a | 0.78 ^b | 0.57 ^c | 0.30 ^a | 0.30 ^a | 0.78 ^b | 0.57 ^c | 0.29 ^a | 0.11 ^d |
| NARQ | 0.93 | 0.87 ^a | 0.65 ^b | 0.82 ^a | 0.47 ^b | 0.78 ^a | 0.81 ^a | 0.45 ^b | 0.79 ^a | 0.07 ^c | 0.84 ^a | 0.41 ^b | 0.72 ^c | 0.10 ^d | 0.63 ^c |
| Admiration | 0.83 | 0.92^a | 0.33 ^b | 0.94^a | 0.22 ^b | 0.49 ^c | 0.93^a | 0.21 ^b | 0.51 ^c | 0.02 ^d | 0.91^a | 0.15 ^b | 0.40 ^c | 0.08 ^b | 0.74 ^c |
| Rivalry | 0.71 | 0.52 ^a | 0.78^b | 0.40 ^a | 0.58 ^b | 0.82^c | 0.39 ^a | 0.56 ^b | 0.83^c | 0.10 ^d | 0.46 ^a | 0.55 ^a | 0.82^b | 0.08 ^c | 0.28 ^d |
| NGS | 0.82 | 0.93 ^a | 0.30 ^b | 0.91 ^a | 0.13 ^b | 0.58 ^c | 0.90 ^a | 0.11 ^b | 0.58 ^c | 0.13 ^b | 0.91 ^a | 0.06 ^b | 0.48 ^c | 0.16 ^b | 0.67 ^d |
| NPI Total | 0.87 | 0.95 ^a | 0.38 ^b | 0.97 ^a | 0.26 ^b | 0.53 ^c | 0.97 ^a | 0.25 ^b | 0.55 ^c | 0.05 ^d | 0.89 ^a | 0.17 ^b | 0.44 ^c | 0.19 ^b | 0.86 ^d |
| G/E | 0.78 | 0.79 ^a | 0.44 ^b | 0.79^a | 0.34 ^b | 0.52 ^c | 0.79^a | 0.35 ^b | 0.55 ^c | -0.26 ^d | 0.71 ^a | 0.29 ^b | 0.47 ^c | -0.14 ^d | 0.77 ^c |
| L/A | 0.73 | 0.86^a | 0.21 ^b | 0.90^a | 0.12 ^b | 0.38 ^c | 0.90^a | 0.11 ^b | 0.38 ^c | 0.07 ^b | 0.80^a | 0.04 ^b | 0.28 ^c | 0.23 ^c | 0.82^a |
| E/E | 0.83 | 0.79 ^a | 0.56 ^b | 0.76 ^a | 0.43 ^b | 0.64 ^c | 0.76 ^a | 0.41 ^b | 0.65 ^c | 0.11 ^d | 0.75 ^a | 0.36 ^b | 0.58 ^c | 0.18 ^d | 0.62 ^c |
| PDQ-4+ NPD | 0.87 | 0.75 | 0.74 | 0.68 ^a | 0.56 ^b | 0.80 ^c | 0.67 ^a | 0.54 ^b | 0.81 ^c | 0.10 ^d | 0.71 ^a | 0.51 ^b | 0.76 ^a | 0.12 ^c | 0.52 ^b |
| PES | 0.82 | 0.80 ^a | 0.53 ^b | 0.75 ^a | 0.36 ^b | 0.67 ^c | 0.74 ^a | 0.35 ^b | 0.67 ^c | 0.16 ^d | 0.85 ^a | 0.32 ^b | 0.59 ^c | 0.08 ^d | 0.43 ^b |
| PID-5 NPD | 0.92 | 0.89 ^a | 0.60 ^b | 0.85 ^a | 0.44 ^b | 0.72 ^c | 0.85 ^a | 0.43 ^b | 0.75 ^c | -0.12 ^d | 0.80 ^a | 0.38 ^b | 0.67 ^c | -0.03 ^d | 0.76 ^a |
| Atten-seeking | 0.76 | 0.70 ^a | 0.56 ^b | 0.72 ^a | 0.48 ^b | 0.51 ^b | 0.72 ^a | 0.49 ^b | 0.55 ^b | -0.33^d | 0.59 ^a | 0.44 ^b | 0.49 ^b | -0.16 ^c | 0.81^d |
| Grandiosity | 0.85 | 0.86^a | 0.49 ^b | 0.77^a | 0.27 ^b | 0.77^a | 0.76 ^a | 0.25 ^b | 0.77 ^a | 0.14 ^b | 0.83^a | 0.21 ^b | 0.70 ^c | 0.11 ^b | 0.51 ^d |
| PNI Total | 0.76 | 0.50 ^a | 0.92 ^b | 0.53 ^a | 0.92 ^b | 0.55 ^a | 0.53 ^a | 0.91 ^b | 0.56 ^a | 0.15 ^c | 0.56 ^a | 0.89 ^b | 0.51 ^{a,d} | 0.20 ^c | 0.42 ^d |
| PNI Grandiose | 0.75 | 0.67 | 0.59 | 0.74 ^a | 0.60 ^b | 0.38 ^c | 0.75 ^a | 0.60 ^b | 0.40 ^c | 0.08 ^d | 0.72 ^a | 0.55 ^b | 0.31 ^c | 0.17 ^c | 0.63 ^b |
| Grand. fantasy | 0.63 | 0.49 ^a | 0.62 ^b | 0.55 ^a | 0.64 ^b | 0.35 ^c | 0.55 ^a | 0.64 ^b | 0.35 ^b | 0.16 ^c | 0.58 ^a | 0.61 ^a | 0.28 ^{b,c} | 0.19 ^b | 0.40 ^c |
| Exploitative | 0.66 | 0.73 ^a | 0.28 ^b | 0.73 ^a | 0.16 ^b | 0.44 ^c | 0.72 ^a | 0.15 ^b | 0.45 ^c | 0.04 ^b | 0.62 ^a | 0.09 ^b | 0.38 ^c | 0.22 ^b | 0.73 ^d |
| SSSE | 0.40 | 0.33 | 0.36 | 0.44 | 0.46 | 0.06 ^c | 0.45 ^a | 0.47 ^a | 0.08 ^b | -0.08 ^c | 0.44 ^a | 0.44 ^a | 0.00 ^b | -0.05 ^b | 0.36 ^a |
| PNI Vulnerable | 0.64 | 0.33 ^a | 0.95 ^b | 0.33 ^a | 0.94 ^b | 0.55 ^c | 0.33 ^a | 0.93 ^b | 0.55 ^c | 0.17 ^d | 0.39 ^a | 0.92 ^b | 0.53 ^c | 0.18 ^d | 0.24 ^d |
| Contingent SE | 0.48 | 0.17 ^a | 0.85^b | 0.20 ^a | 0.90^b | 0.37 ^c | 0.20 ^a | 0.91^b | 0.40 ^c | -0.12 ^d | 0.23 ^a | 0.91^b | 0.38 ^c | -0.11 ^d | 0.20 ^a |
| Devaluing | 0.55 | 0.30 ^a | 0.79^b | | | | | | | | | | | | |

Table 4

Factor Score Correlations with Five Factor Model

| | F1.1 | F2.1 | F2.2 | F3.1 | F3.2 | F3.3 | F4.1 | F4.2 | F4.3 | F4.4 | F5.1 | F5.2 | F5.3 | F5.4 | F5.5 |
|-------------------|--------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Neuroticism | 0.07 | -0.24 ^a | 0.61 ^b | -0.26 ^a | 0.66 ^b | 0.19 ^c | -0.25 ^a | 0.66 ^b | 0.19 ^c | 0.13 ^c | -0.18 ^a | 0.69 ^b | 0.23 ^c | 0.08 ^d | -0.25 ^a |
| Anxiety | 0.04 | -0.23 ^a | 0.52^b | -0.22 ^a | 0.60^b | 0.09 ^c | -0.21 ^a | 0.60^b | 0.09 ^c | 0.17 ^c | -0.14 ^a | 0.63^b | 0.12 ^c | 0.13 ^c | -0.23 ^d |
| Anger | 0.24 | 0.05 ^a | 0.49^b | 0.01 ^a | 0.44^b | 0.34 ^c | 0.01 ^a | 0.43 ^b | 0.33 ^{b,c} | 0.21^c | 0.05 ^a | 0.44 ^b | 0.35 ^{b,c} | 0.22 ^c | -0.02 ^a |
| Depression | 0.01 | -0.27 ^a | 0.52^b | -0.27 ^a | 0.59^b | 0.10 ^c | -0.27 ^a | 0.59^b | 0.10 ^c | 0.11 ^c | -0.22 ^a | 0.62^b | 0.15 ^c | 0.09 ^c | -0.22 ^a |
| Self-con. | -0.10 | -0.37 ^a | 0.42 ^b | -0.38 ^a | 0.50^b | 0.04 ^c | -0.38 ^a | 0.50^b | 0.04 ^c | 0.07 ^c | -0.26 ^a | 0.54^b | 0.09 ^c | -0.05 ^c | -0.42 ^d |
| Impulsiveness | 0.13 | -0.05 ^a | 0.40 ^b | -0.05 ^a | 0.42 ^b | 0.15 ^c | -0.05 ^a | 0.42 ^b | 0.16 ^c | 0.04 ^{a,c} | -0.03 ^a | 0.43 ^b | 0.17 ^c | 0.05 ^{a,c} | -0.03 ^a |
| Vulnerability | 0.00 | -0.26 ^a | 0.47^b | -0.29 ^a | 0.50^b | 0.15 ^c | -0.29 ^a | 0.50^b | 0.16 ^c | -0.03 ^d | -0.21 ^{a,d} | 0.54^b | 0.21 ^c | -0.10 ^a | -0.26 ^d |
| Extraversion | 0.34 | 0.55 ^a | -0.17 ^b | 0.63 ^a | -0.17 ^b | -0.02 ^c | 0.63 ^a | -0.16 ^b | 0.01 ^c | -0.25 ^b | 0.48 ^a | -0.22 ^b | -0.08 ^c | -0.08 ^{b,c} | 0.69 ^d |
| Friendliness | 0.14 | 0.33 ^a | -0.25 ^b | 0.41 ^a | -0.21 ^b | -0.15 ^b | 0.41 ^a | -0.20 ^b | -0.12 ^b | -0.36^c | 0.28 ^a | -0.24 ^b | -0.19 ^b | -0.24^b | 0.50^c |
| Gregariousness | 0.28 | 0.41^a | -0.05 ^b | 0.44^a | -0.07 ^b | 0.07 ^c | 0.44^a | -0.06 ^b | 0.10 ^c | -0.35^d | 0.33 ^a | -0.10 ^b | 0.05 ^c | -0.24^b | 0.52^d |
| Assertiveness | 0.35 | 0.54^a | -0.13 ^b | 0.60^a | -0.15 ^b | 0.04 ^c | 0.60^a | -0.15 ^b | 0.06 ^c | -0.07 ^{b,c} | 0.45^a | -0.21 ^b | -0.02 ^c | 0.13 ^c | 0.67^d |
| Activity Level | 0.18 | 0.33 ^a | -0.15 ^b | 0.38 ^a | -0.15 ^b | -0.04 ^b | 0.31 ^a | -0.15 ^b | -0.04 ^{b,c} | 0.05 ^c | 0.31 ^a | -0.19 ^b | -0.10 ^b | 0.15 ^c | 0.37 ^a |
| Excite-Seeking | 0.36 | 0.40^a | 0.13 ^b | 0.44^a | 0.10 ^b | 0.16 ^b | 0.44^a | 0.10 ^b | 0.17 ^b | -0.07 ^c | 0.37^a | 0.07 ^b | 0.12 ^b | 0.02 ^b | 0.44 ^a |
| Cheerfulness | 0.12 | 0.32 ^a | -0.28 ^b | 0.40 ^a | -0.24 ^b | -0.18 ^b | 0.41 ^a | -0.23 ^b | -0.16 ^b | -0.20^b | 0.31 ^a | -0.27 ^b | -0.23 ^{b,c} | -0.12 ^c | 0.41 ^d |
| Openness | 0.04 | 0.04 | 0.01 | 0.12 ^a | 0.09 ^a | -0.14 ^b | 0.12 ^a | 0.10 ^a | -0.14 ^b | -0.01 ^{a,b} | 0.08 ^a | 0.08 ^a | -0.16 ^b | 0.05 ^a | 0.14 ^a |
| Imagination | 0.15 | 0.10 | 0.18 | 0.17 ^a | 0.25 ^a | -0.02 ^b | 0.17 ^{a,c} | 0.25 ^a | -0.02 ^{b,c} | 0.07 ^c | 0.14 ^a | 0.24 ^a | -0.04 ^b | 0.13 ^a | 0.17 ^a |
| Aesthetics | -0.04 | 0.01 ^a | -0.11 ^b | 0.09 ^a | -0.01 ^a | -0.23 ^b | 0.10 ^a | 0.00 ^a | -0.23 ^b | -0.01 ^a | 0.08 ^a | -0.02 ^a | -0.26 ^b | 0.02 ^a | 0.09 ^a |
| Emotionality | -0.02 | -0.16 ^a | 0.24 ^b | -0.08 ^a | 0.38 ^b | -0.14 ^a | -0.07 ^a | 0.39 ^b | -0.13 ^a | -0.10 ^a | -0.08 ^a | 0.40 ^b | -0.13 ^a | -0.09 ^a | -0.02 ^a |
| Adventurousness | 0.04 | 0.17 ^a | -0.21 ^b | 0.18 ^a | -0.23 ^b | -0.04 ^c | 0.18 ^a | -0.23 ^b | -0.04 ^c | -0.11 ^{b,c} | 0.11 ^a | -0.25 ^b | -0.06 ^c | -0.04 ^c | 0.22 ^d |
| Intellect | 0.00 | 0.07 ^a | -0.13 ^b | 0.13 ^a | -0.08 ^b | -0.15 ^b | 0.13 ^{a,c} | -0.08 ^{b,c} | -0.16 ^b | 0.07 ^c | 0.08 ^a | -0.10 ^b | -0.18 ^b | 0.14 ^a | 0.15 ^a |
| Liberalism | 0.00 | -0.03 | 0.06 | -0.05 ^a | 0.04 ^{a,b} | 0.06 ^b | -0.05 ^a | 0.03 ^{a,b} | 0.06 ^b | 0.04 ^{a,b} | -0.03 | 0.04 | 0.07 ^a | 0.01 | -0.07 ^b |
| Agreeableness | -0.59 | -0.51 | -0.50 | -0.35 ^a | -0.24 ^a | -0.78 ^b | -0.34 ^a | -0.22 ^b | -0.77 ^c | -0.21 ^{a,b} | -0.37 ^a | -0.20 ^b | -0.78 ^c | -0.24 ^b | -0.27 ^b |
| Trust | -0.14 | -0.03 ^a | -0.28 ^b | 0.05 ^a | -0.19 ^b | -0.29 ^b | 0.05 ^a | -0.17 ^b | -0.26 ^b | -0.49^c | -0.01 ^a | -0.17 ^b | -0.29 ^b | -0.50^c | 0.12 ^d |
| Morality | -0.62 | -0.53 | -0.52 | -0.45^a | -0.36 ^a | -0.63^b | -0.44^a | -0.35 ^a | -0.65^b | 0.08 ^c | -0.39^{a,d} | -0.32 ^a | -0.64^b | -0.01 ^c | -0.47^d |
| Altruism | -0.17 | -0.05 ^a | -0.33 ^b | 0.13 ^a | -0.11 ^b | -0.56^c | 0.14 ^a | -0.09 ^b | -0.54^c | -0.15 ^b | 0.05 ^a | -0.12 ^b | -0.60^b | -0.08 ^{a,b} | 0.18 ^d |
| Cooperation | -0.49 | -0.39 | -0.47 | -0.30 ^a | -0.31 ^a | -0.57^b | -0.29 ^a | -0.30 ^a | -0.57^b | -0.13 ^c | -0.29 ^a | -0.28 ^a | -0.57^b | -0.18 ^a | -0.27 ^a |
| Modesty | -0.62 | -0.73^a | -0.18 ^b | -0.69^a | -0.02 ^b | -0.48 ^c | -0.69^a | -0.01 ^b | -0.50 ^c | 0.12 ^b | -0.65^a | 0.04 ^b | -0.43 ^c | 0.07 ^b | -0.59^a |
| Sympathy | -0.25 | -0.23 | -0.18 | -0.08 ^a | 0.04 ^a | -0.51^b | -0.07 ^a | 0.06 ^b | -0.50^c | -0.14 ^a | -0.12 ^a | 0.06 ^{b,d} | -0.53^c | -0.12 ^{a,d} | -0.01 ^d |
| Conscientiousness | -0.14 | 0.08 ^a | -0.48 ^b | 0.16 ^a | -0.42 ^b | -0.35 ^b | 0.17 ^a | -0.42 ^b | -0.36 ^b | 0.08 ^a | 0.11 ^a | -0.45 ^b | -0.40 ^b | 0.13 ^a | 0.14 ^a |
| Self-efficacy | 0.11 | 0.32 ^a | -0.30 ^b | 0.39 ^a | -0.27 ^b | -0.15 ^c | 0.39 ^a | -0.28 ^b | -0.16 ^c | 0.14 ^d | 0.33 ^a | -0.32 ^b | -0.23 ^b | 0.23^a | 0.34 ^a |
| Orderliness | -0.09 | 0.01 ^a | -0.22 ^b | 0.06 ^a | -0.18 ^b | -0.20 ^b | 0.07 ^a | -0.17 ^b | -0.21 ^b | 0.03 ^a | 0.04 ^a | -0.19 ^b | -0.23 ^b | 0.06 ^a | 0.06 ^a |
| Dutifulness | -0.34 | -0.18 ^a | -0.47 ^b | -0.07 ^a | -0.33 ^b | -0.53^c | -0.06 ^a | -0.32 ^b | -0.54^c | 0.09 ^d | -0.09 ^a | -0.33 ^b | -0.57^c | 0.11 ^d | -0.08 ^a |
| Achieve Strive | 0.15 | 0.30 ^a | -0.18 ^b | 0.39 ^a | -0.13 ^b | -0.14 ^b | 0.40 ^a | -0.13 ^b | -0.15 ^b | 0.15 ^c | 0.33^a | -0.17 ^b | -0.22 ^b | 0.24^a | 0.34 ^a |
| Self-discipline | -0.11 | 0.10 ^a | -0.44 ^b | 0.13 ^a | -0.44 ^b | -0.22 ^c | 0.13 ^a | -0.44^b | -0.22 ^c | 0.00 ^a | 0.07 ^a | -0.46^b | -0.25 ^c | 0.04 ^a | 0.13 ^a |
| Cautiousness | -0.29 | -0.14 ^a | -0.44 ^b | -0.11 ^a | -0.41 ^b | -0.30 ^c | -0.11 ^a | -0.40 ^b | -0.31 ^b | -0.02 ^a | -0.13 ^a | -0.40 ^b | -0.31 ^b | -0.03 ^a | -0.11 ^a |

Note. All correlations greater than or equal to $|r| = .11$ are significant at $p < .01$. At each factor level (i.e., F3.1, F3.2, F3.3), correlations in the same row with different superscripts are significantly different from one another at $p < .01$. The five largest facet-level correlations for each factor are underlined and in bold. Con. = Conscientiousness; Excite = Excitement; Achieve Strive = Achievement Striving

Table 5

Profile Similarity of Narcissism Factors and Factor Score Correlations

| | F1.1 | F2.1 | F2.2 | F3.1 | F3.2 | F3.3 | F4.1 | F4.2 | F4.3 | F4.4 | F5.1 | F5.2 | F5.3 | F5.4 | F5.5 |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|-------|------|------|-------|
| F1.1 | | 0.93 | 0.73 | 0.88 | 0.56 | 0.81 | 0.88 | 0.54 | 0.82 | 0.10 | 0.89 | 0.49 | 0.74 | 0.15 | 0.70 |
| F2.1 | <u>0.84</u> | | 0.42 | 0.97 | 0.23 | 0.69 | 0.96 | 0.21 | 0.70 | 0.07 | 0.94 | 0.15 | 0.60 | 0.15 | 0.78 |
| F2.2 | 0.47 | -0.08 | | 0.38 | 0.93 | 0.70 | 0.38 | 0.92 | 0.71 | 0.11 | 0.44 | 0.91 | 0.69 | 0.11 | 0.27 |
| F3.1 | 0.77 | <u>0.99</u> | -0.20 | | 0.28 | 0.50 | 1.00 | 0.27 | 0.52 | 0.03 | 0.95 | 0.20 | 0.40 | 0.13 | 0.84 |
| F3.2 | 0.31 | -0.25 | <u>0.98</u> | -0.34 | | 0.39 | 0.28 | 1.00 | 0.41 | 0.06 | 0.32 | 0.99 | 0.38 | 0.07 | 0.23 |
| F3.3 | <u>0.83</u> | 0.45 | 0.80 | 0.31 | 0.65 | | 0.49 | 0.36 | 1.00 | 0.17 | 0.57 | 0.35 | 0.99 | 0.14 | 0.32 |
| F4.1 | 0.76 | <u>0.98</u> | -0.20 | <u>1.00</u> | -0.34 | 0.30 | | 0.28 | 0.50 | 0.03 | 0.95 | 0.20 | 0.39 | 0.14 | 0.84 |
| F4.2 | 0.30 | -0.25 | <u>0.97</u> | -0.34 | <u>1.00</u> | 0.63 | -0.34 | | 0.38 | 0.01 | 0.30 | 1.00 | 0.36 | 0.03 | 0.24 |
| F4.3 | <u>0.84</u> | 0.47 | 0.79 | 0.33 | 0.64 | <u>1.00</u> | 0.32 | 0.63 | | 0.10 | 0.58 | 0.36 | 0.99 | 0.07 | 0.35 |
| F4.4 | -0.05 | -0.27 | 0.35 | -0.33 | 0.35 | 0.23 | -0.33 | 0.33 | 0.19 | | 0.19 | 0.02 | 0.09 | 0.92 | -0.30 |
| F5.1 | <u>0.83</u> | <u>0.99</u> | -0.09 | <u>0.99</u> | -0.24 | 0.40 | 0.99 | -0.25 | 0.42 | -0.26 | | 0.25 | 0.46 | 0.18 | 0.63 |
| F5.2 | 0.23 | -0.32 | <u>0.96</u> | -0.41 | <u>1.00</u> | 0.59 | -0.41 | <u>1.00</u> | 0.59 | 0.34 | -0.32 | | 0.35 | 0.02 | 0.16 |
| F5.3 | 0.76 | 0.34 | 0.85 | 0.19 | 0.71 | <u>0.99</u> | 0.18 | 0.70 | <u>0.99</u> | 0.25 | 0.29 | 0.67 | | 0.06 | 0.27 |
| F5.4 | 0.25 | 0.14 | 0.23 | 0.09 | 0.18 | 0.31 | 0.09 | 0.16 | 0.28 | <u>0.90</u> | 0.15 | 0.14 | 0.28 | | -0.02 |
| F5.5 | 0.75 | 0.97 | -0.21 | 0.99 | -0.34 | 0.28 | <u>0.99</u> | -0.34 | 0.30 | -0.42 | 0.97 | -0.41 | 0.16 | 0.01 | |

Note. The lower diagonal depicts the *profile similarity* of the factors as measured by the Pearson correlation coefficient of the profiles from Table 4. The factors with the most similar profiles at each level of the analysis are underlined. The upper diagonal identifies the Pearson correlations of the factor scores across each of the levels.

Table 6

Factor Score Correlations with Narcissism Scales

| | F1.1 | F2.1 | F2.2 | F3.1 | F3.2 | F3.3 | F4.1 | F4.2 | F4.3 | F4.4 | F5.1 | F5.2 | F5.3 | F5.4 | F5.5 |
|---------------------|-------|-------------------------|--------------------------|-------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|--------------------------|-------------------------|
| Self-esteem | 0.01 | <u>0.31^a</u> | <u>-0.53^b</u> | <u>0.33^a</u> | <u>-0.58^b</u> | <u>-0.13^c</u> | <u>0.33^a</u> | <u>-0.58^b</u> | <u>-0.13^c</u> | <u>-0.06^c</u> | <u>0.27^a</u> | <u>-0.62^b</u> | <u>-0.19^c</u> | <u>-0.03^d</u> | <u>0.27^a</u> |
| CAB | | | | | | | | | | | | | | | |
| Substance Use | -0.02 | -0.04 | 0.02 | -0.03 | 0.03 | -0.02 | -0.03 | 0.03 | -0.02 | 0.07 | -0.07 ^a | 0.02 | -0.01 | 0.13 ^b | 0.03 ^b |
| Antisocial Behavior | 0.14 | 0.12 | 0.12 | 0.10 | 0.07 | 0.16 | 0.10 | 0.07 | 0.15 | 0.06 | 0.05 ^a | 0.05 | 0.16 | 0.14 | 0.16 ^b |
| IPV | 0.06 | 0.02 | 0.11 | 0.02 | 0.12 | 0.05 | 0.02 | 0.12 | 0.04 | 0.10 | 0.01 | 0.11 | 0.04 | 0.14 | 0.04 |
| Proactive | 0.35 | 0.28 | 0.32 | 0.20 ^a | 0.18 ^a | 0.43 ^b | 0.20 ^a | 0.18 ^a | 0.44 ^b | 0.00 ^c | 0.19 ^a | 0.16 ^{a,c} | 0.45 ^b | 0.04 ^c | 0.21 ^a |
| Reactive | 0.26 | 0.14 ^a | 0.37 ^b | 0.13 ^a | 0.36 ^b | 0.24 ^c | 0.13 ^a | 0.35 ^b | 0.23 ^a | 0.17 ^a | 0.12 ^a | 0.34 ^b | 0.23 | 0.24 | 0.15 ^a |
| Distress | 0.06 | -0.20 ^a | 0.50 ^b | -0.19 ^a | 0.57 ^b | 0.10 ^c | -0.19 ^a | 0.57 ^b | 0.10 ^c | 0.19 ^c | -0.13 ^a | 0.59 ^b | 0.13 ^c | 0.17 ^c | -0.19 ^a |

Note. All correlations greater than or equal to $|r| = .11$ are significant at $p < .01$. At each factor level (i.e., F3.1, F3.2, F3.3), correlations in the same row with different superscripts are significantly different from one another at $p < .01$. The five largest facet-level correlations for each factor are underlined and in bold. CAB = Crime and Analogous Behavior Scale; IPV = Intimate Partner Violence; Proactive = Proactive Aggression; Reactive = Reactive Aggression; Distress = Emotional Distress

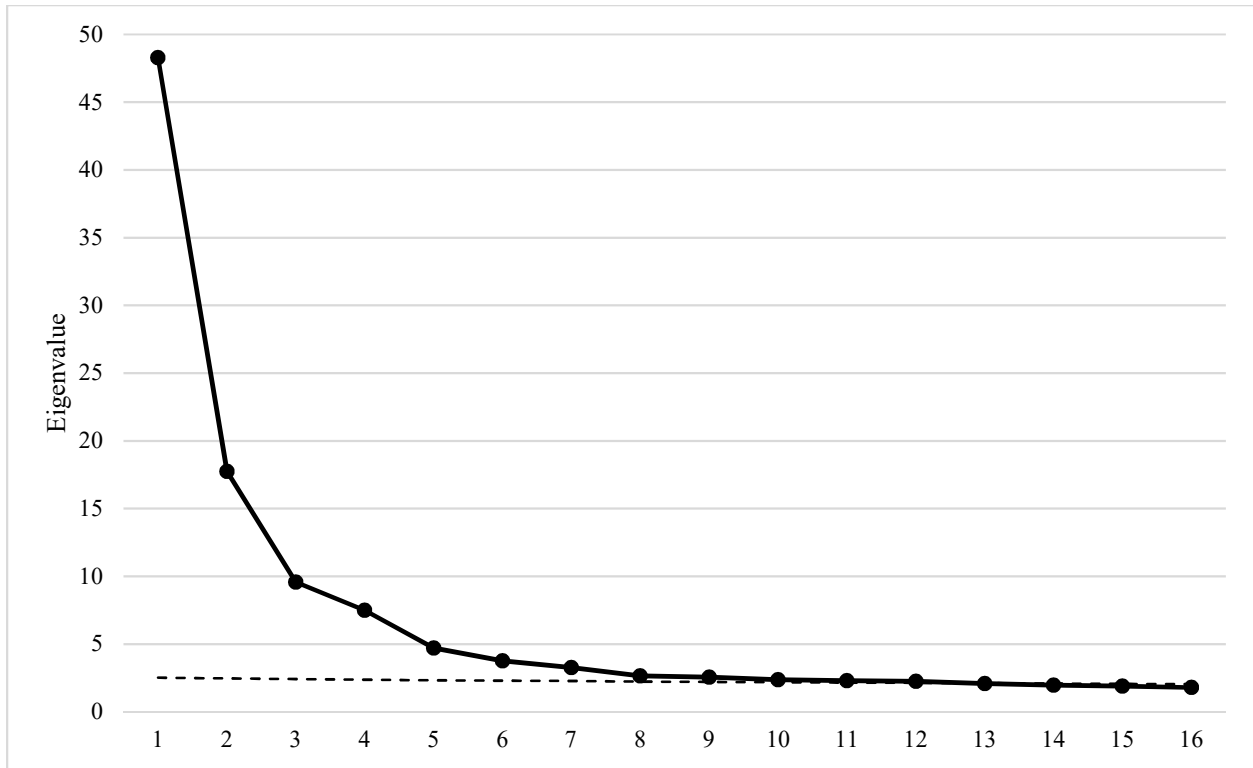


Figure 1. Narcissism Parallel Analysis

Note. Dashed line indicates simulated eigenvalues.

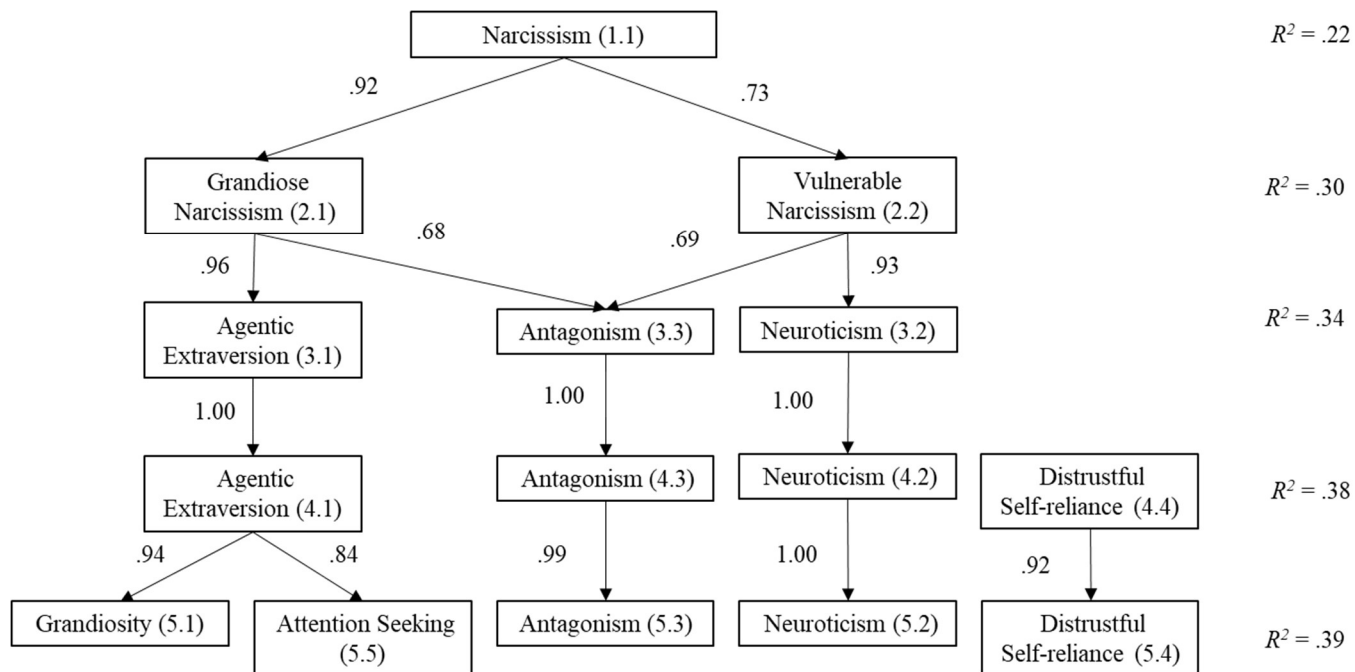


Figure 2. Hierarchical Structure of Narcissism

Note. Only correlations going from one level of the hierarchy to the next are depicted. Correlations less than .65 were removed.

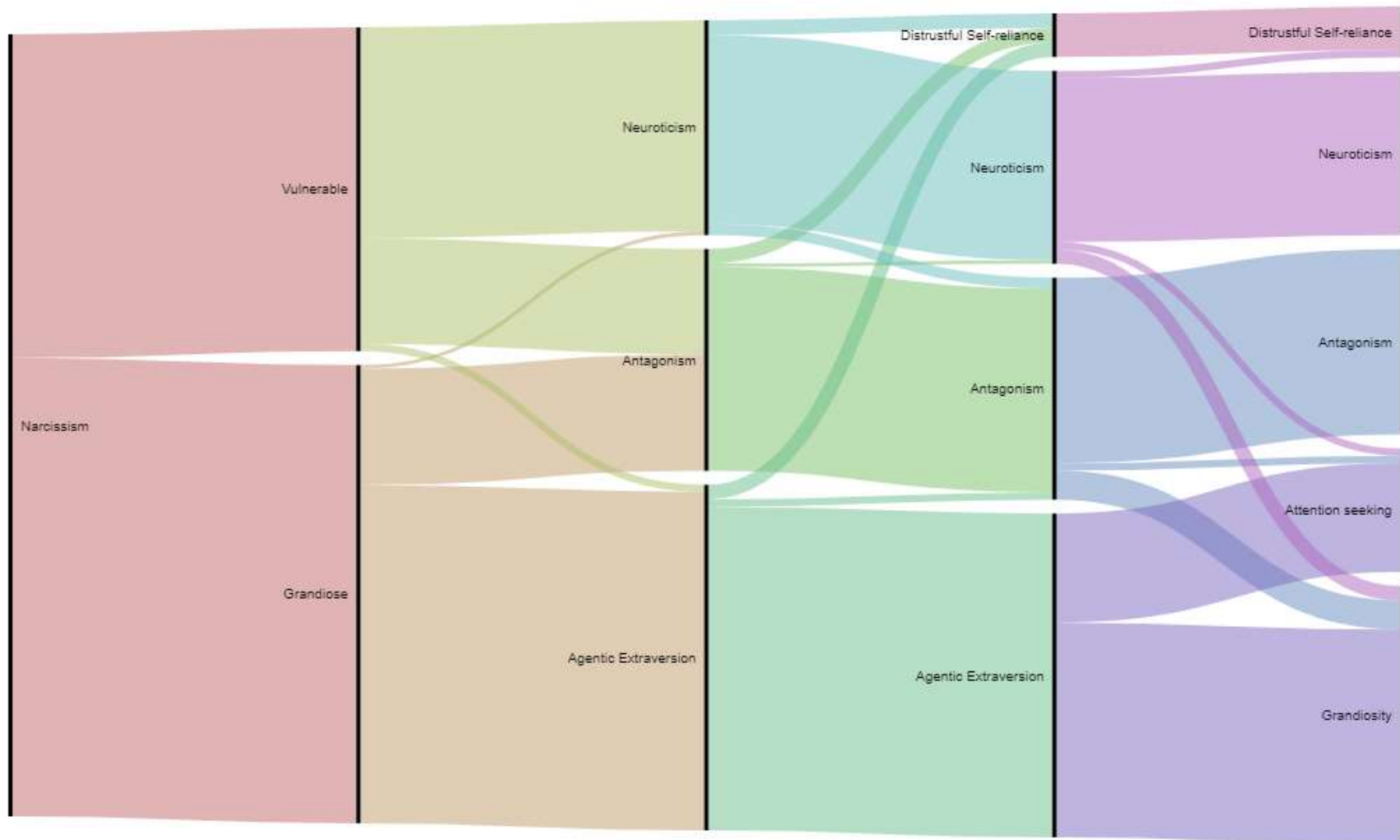


Figure 3. Alluvial Diagram of Primary Item Loadings

Note. Far left of diagram represents the one-factor solution in which all 215 items have their primary loading on the single factor. The flow of items' primary loadings in each factor solution is depicted. Diagram was created using RAWGraphs (Mauri, Elli, Caviglia, Uboldi, & Azzi, 2017).

CHAPTER 4

DISCUSSION

A factor structure unifying grandiose and vulnerable narcissism is necessary to identify the conceptual boundaries of the domain. Underlying structures have been proposed previously, but most have been theoretically driven or more limited in scope (e.g., Miller et al., 2016; Pincus et al., 2009; Wink, 1991). There is consensus among narcissism researchers that antagonism and entitlement are defining features of the domain (Campbell & Miller, 2013; Krizan & Herlache, 2017; Pincus et al., 2009; Wright & Edershile, 2018). This is made clear by the consistency with which such content appears across the range of narcissism measures. What additional factors should be incorporated into domain has been a major source of contention and the basis for the now well-known distinction between grandiose and vulnerable narcissistic expressions.

However, if grandiose and vulnerable narcissism are simply divergent expressions of a single broader pathology, an underlying structural model that can account for both expressions must be present. Three-factor models that can account for grandiose and vulnerable profiles have been proposed (Krizan & Herlache, 2017; Miller, Lynam, McCain, et al., 2016), but they may not fully describe the domain.

The goal of the present analysis was to identify and describe a comprehensive, empirical structure of narcissism. The “Bass-ackward” factor-analytic approach was used to describe narcissism’s factor structure at a range of bandwidths, rather a single level of analysis. This approach allows for a more comprehensive understanding of the factor space and where current measures fall within that factor space. While the intent of the analysis was not to identify a

“correct” number of factors, a base of the hierarchy did have to be selected. To that end, factor content was evaluated with the goal of balancing parsimony with coverage and the five-factor solution was identified as a reasonable base for analysis.

Structure of Narcissism

These analyses build upon previous work by using a more comprehensive item pool and more flexible analyses. The first factor (F1.1) was characterized by entitlement, antagonism, and grandiosity. This factor was consistent with the expectation that facets relevant to antagonistic and entitled behaviors are likely to be the common thread that runs through all conceptualizations of narcissism. From a trait perspective, this factor was most strongly related to the domains of agreeableness and extraversion, consistent with expert rating, clinician ratings, and lay public conceptualizations of narcissism and NPD (Lynam & Widiger, 2001; Miller, Lynam, Siedor, Crowe, & Campbell, 2018; Samuel & Widiger, 2004).

Forcing two factors from the item pool revealed grandiose and vulnerable factors with nomological nets consistent with those previously established (Miller, Gentile, & Campbell, 2013; Miller et al., 2014; Miller, Hoffman, et al., 2011; Thomas, Wright, Lukowitsky, Donnellan, & Hopwood, 2012). Grandiose Narcissism (F2.1) was characterized by high extraversion (e.g., gregariousness, assertiveness, and excitement-seeking) and low agreeableness (e.g., morality, modesty). Vulnerable Narcissism (F2.2) was characterized by high neuroticism and low agreeableness (e.g., morality, cooperation). The two factors manifested FFM trait profiles consistent with the broader literature on these dimensions of narcissism (*rs* of .94 and .90 with meta-analytic profiles of grandiose and vulnerable narcissism, respectively; Campbell & Miller, 2013).

Previous analyses attempting to identify a comprehensive narcissism structure have argued for similar three-factor models (Krizan & Herlache, 2017; Miller, Lynam, McCain, et al., 2016). These models identified the unique components of grandiose (e.g., immodesty, assertiveness) and vulnerable narcissism (e.g., emotional vulnerability) as well as a central factor that was common to both expressions. The trifurcated model identified Antagonism (Miller et al., 2016) as core while the Narcissistic Spectrum Model identifies a somewhat more narrowly defined trait, entitled self-importance (Krizan & Herlache, 2017). The present analyses are roughly consistent with both of these models as Agentic Extraversion (F3.1) and Neuroticism (F3.2) seem to be highly congruent with the peripheral factors that have been previously suggested. However, the differing bandwidths of the third “core” factor proposed in previous models do yield some competing hypotheses. The third factor identified here (Antagonism; F3.3) seems to be more comparable to the more broadly defined Antagonism factor of the trifurcated model (Miller et al., 2016) as the two constructs were near identical. This finding alone does not preclude the accuracy of the Narcissism Spectrum Model. Research on the interpersonal consequences of entitled attitudes indicates that entitlement and facets of antagonism are highly related (Campbell et al., 2004; Pryor, Miller, & Gaughan, 2008). In this case, however, most measures of entitlement revealed associations with Agentic Extraversion (F3.1) that were equal or greater than their association with Antagonism (F3.3). It is possible that the three-factor model observed here is a slightly different rotation than that proposed by the Narcissistic Spectrum Model, and that entitlement is a facet of narcissism that covaries with both Agentic Extraversion (F3.1) and Antagonism (F3.3). In that case, an entitlement facet that accounted for some of the substantial covariation between Agentic Extraversion and Antagonism would be expected to emerge within the narcissism hierarchy. No such factor emerged. A final possible explanation is

that entitlement (i.e., the expectation of special treatment) is a necessary extension of grandiosity (i.e., the belief that one is special). Near perfect covariation between grandiosity and entitlement would result in a single shared factor. When compared to the FFM meta-analytic profile of grandiose and vulnerable narcissism (Campbell & Miller, 2013), Antagonism's (F3.3) FFM correlational profile was near equally related to both expressions: grandiose ($r = .49$) and vulnerable narcissism ($r = .62$), consistent with the notion that antagonism is the "glue" that holds the narcissism dimensions together. Conversely, the Agentic Extraversion (F3.1) trait profile was strongly related to the meta-analytic profile for grandiose narcissism ($r = .91$) but negatively related to the meta-analytic profile for vulnerable narcissism ($r = -.45$). Similarly, Neuroticism (F3.2) demonstrated an FFM profile aligned with the meta-analytic profile for vulnerable but not grandiose narcissism ($r_s = .91$ and $-.15$, respectively).

The three-factor solution was the final extraction on which explicit evidence-based hypotheses could be made. The four-factor solution identified a Distrustful Self-reliance (F4.4) factor that had no clear associations with any other factors in the narcissism domain. This factor was characterized by both the intention to independently manage one's own affairs as well as a fundamental distrust of the intentions and good nature of others. As shown in Figure 3, the Distrustful Self-reliance factor (F4.4; F5.4) was relatively small by item count. The dearth of items could be indicative of a factor that does not belong within the construct, or of a factor that is simply under-represented within the most popular narcissism scales. Distrust (from the FFNI) and Self-sufficiency (from the GNS), the factor's two strongest correlates, are both relatively unique in item content. The factor's null association with other components of narcissism indicate that it may be better conceptualized as falling outside the scope of the narcissism domain. However, empirical support has been found for the relevance of Trust (vs. Distrust) to

the FFM Agreeableness domain (Crowe et al., 2017), as well as the narcissism construct. The Mistrust subscale of the Schedule for Nonadaptive and Adaptive Personality-Second Edition (SNAP-2) correlates with grandiose and vulnerable narcissism, although more so with vulnerable (Thomas et al., 2012). Low trust in others has also been rated as characteristic of NPD by expert academicians (Lynam & Widiger, 2001), clinicians (Samuel & Widiger, 2004), and the lay public (Miller et al., 2018). It is therefore surprising both that it is so poorly represented across narcissism scales and that it does not have stronger covariation with other components of the construct. Further research is necessary to evaluate what role, if any, Distrustful Self-reliance (F4.4, F5.4) plays within narcissism's factor structure.

At the five-factor level Agentic Extraversion (F4.1) split to yield Grandiosity (F5.1) and Attention-seeking (F5.5). These factors are comparable to the PID-5 traits identified as indicative of NPD. While the content of these factors is distinguishable, the extent to which Grandiosity (F5.1) and Attention-seeking (F5.5) represent unique constructs is open for debate. They have a near-identical pattern of association with the FFM facets and their factor scores are strongly correlated. Among the few criterion variables that were collected, only a single divergent relationship (correlation with CAB antisocial behavior) was observed. Grandiosity (F5.1) indicates that a grandiose sense of superiority (i.e., grandiosity) and an expectation of special treatment (i.e., entitlement) are components of the same factor. Given this association, it is no surprise that Grandiosity (F5.1) and Antagonism (F5.3) are so highly correlated. It is notable that many identified factors at this level of analysis maintain relatively broad coverage, especially when compared to the faceted scales in active use. Neuroticism (F5.2) and Antagonism (F5.3) are stable factors broad enough to account for much of the variance in their FFM counterparts.

Distrustful Self-reliance (F5.4) and Attention Seeking (F5.5) are more narrowly defined, but the value of these unique factors in terms of additional prediction power is as yet unestablished.

It must be emphasized again here that the validity of this method is dependent on the content of the item pool and its ability to cover the breadth of the narcissism domain. All components of narcissism are assumed to be included within the item pool. Given the use of many different narcissism measures, many of which were developed from discrepant perspectives on this construct, this seems to be a reasonable assumption. By selecting every major narcissism scale, available at the time of this manuscript, the construct has been comprehensively represented in a form consistent with its use in the field today.

Criterion Associations and Assessment Implications

These analyses indicate that within the diversity of narcissism scales and subscales, there lies a relatively parsimonious factor structure. As with any hierarchical factor model, the best level of analysis is going to be dependent on the research question at hand. These analyses highlight levels of analysis that could reasonably be considered by correlating the narcissism factors with several relevant criterion variables. A one-factor narcissism solution has been generally ruled out for most contexts since the recognition of grandiose and vulnerable narcissisms' divergent nomological nets (Dickinson & Pincus, 2003; Miller, Hoffman, et al., 2011; Wink, 1991). These analyses replicate that finding. Narcissism's (F1.1) null association with self-esteem and emotional distress hides substantial divergence at the two-factor level.

Much of the narcissism research currently being conducted occurs at the two-factor level with separate measures of grandiose and vulnerable narcissism. This level of analysis allows researchers to account for many of the divergent patterns of association between grandiose and vulnerable narcissism, but it fails to assess the effect of the core component of the narcissism

domain. For example, at the two-factor level grandiose and vulnerable narcissism have comparable associations with proactive aggression ($r \approx .30$). Without measuring antagonism, a researcher has no means of evaluating the effects of grandiosity or vulnerability relative to the antagonistic interpersonal style shared between them. Only at the three-factor level can these effects be parsed apart, allowing us to recognize that while antagonism accounts for some of the shared relationship with proactive aggression, the phenotype-specific components each maintain small associations with the construct.

The three-factor level of analysis seems to be a necessary level of specificity for most types of analyses. Limiting analyses to only two factors hides relevant divergence in self-esteem, aggression, and emotional distress that is observed at three factors and beyond. This will be particularly necessary as the field progresses towards evaluating the stability of narcissism's phenotypic expressions. It may be necessary to account for grandiose narcissism and vulnerable narcissism's shared association with antagonism to accurately evaluate the extent to which the phenotype-specific factors covary across time. The need for three factors is also relevant to the current status of the PID-5 NPD assessment, which confounds interpersonal antagonism with grandiosity because of the measurement of introversion only (i.e., Detachment) rather than a bipolar domain that includes pathology at both poles (introversion and extraversion). The value of factors beyond the three-factor level (i.e., Distrustful Self-reliance, F4.4; Grandiosity, F5.1; Attention-Seeking, F5.5) are less clear. Distrustful Self-reliance seems generally unrelated to the narcissism domain and shows little divergence among the few criterion variables collected in these analyses. However, the factor does appear to internally consistent as well as relevant to expert conceptualizations of the construct. Separating Agentic Extraversion (F4.1) into unique constructs (i.e., Grandiosity, F5.1; Attention-seeking, F5.5) is consistent with arguments for the

use of homogeneous facets (Smith et al., 2009), but the magnitude of their covariance and similarity of their nomological nets may favor the more parsimonious Agentic Extraversion (F3.1) factor. Additional analyses with a more diverse range of criterion may be necessary to evaluate the necessity of the fourth and fifth factors.

Regardless of factor level, these analyses show that there are a range of applicable measures currently available for each factor, but all similarly labeled measures do not assess the same construct. If interested in measuring a single narcissism construct, the FFNI-SF total score is likely to be most appropriate, or, for a somewhat shorter measure, the NARQ, SCID-II NPD, and PID-5 NPD total scores seem equally effective. The single measure most closely associated with Grandiose Narcissism (F2.1) was the NPI total score, providing further support to literature on the NPI's continued validity and function (e.g., Miller, Lynam, & Campbell, 2016; Miller, Maples, & Campbell, 2011; Miller, Price, & Campbell, 2012). The FFNI-SF Grandiose subscale, NGS, and NARQ Admiration subscale also effectively capture this level of the domain. The NGS is particularly noteworthy in this regard given its brief form and ability to capture narcissistic grandiosity at both the trait and momentary state level (Edershile et al., 2018). Although the PNI does not seem sufficient for capturing the grandiosity construct, the PNI vulnerability subscale and PNI total score were the strongest indicators of narcissistic vulnerability as it is defined by Factor 2.2. At the three-factor level the NPI continued to be the best indicator of Agentic Extraversion. Other options for this level of analysis include the NARQ Admiration subscale, the NGS, NPI L/A subscale, SD3 Narcissism scale, and FFNI Extraversion scale. As Agentic Extraversion is stable to the four-factor level these same measures could be applied to that context. The PNI Vulnerability subscale was the single best indicator of Neuroticism (F3.2) through the five-factor level. Additional measures for this construct include

the PNI total score, FFNI Vulnerability subscale, and, interestingly, the PNI Contingent Self-esteem (CSE) subscale. By the final level of analysis, the eight items of the PNI CSE subscale had a near-equal association with the Neuroticism (F5.2) domain as the entire PNI vulnerability scale. FFNI Antagonism was the single best indicator of the Antagonism (F3.3) factor. This was true through the five-factor level. Other measures to consider for this level of analysis would include the SCID-II NPD scale and NARQ Rivalry scale. As indicated above, the Distrustful Self-reliance is less clearly indicated by common narcissism measures, but the single best correlate at both the four- and five-factor level is the GNS Self-sufficiency subscale. At the five-factor level of analysis the NARQ Admiration subscale and the NGS are equally effective at capturing the Grandiosity (F5.1) factor. That the PES, a measure specific to psychological entitlement, is among the top four indicators of this factor (F5.1 and PES $r = .85$) is indicative of how heavily entitlement-related items loaded on this factor. The single best indicator of Attention-seeking (F5.5) was the NPI, but it, like the other top indicators of Factor 5.5, was not specific to that factor. These results indicate that the GNS Exhibitionism or PID-5 Attention-seeking subscales are most appropriate for a researcher interested in attempting to differentiate between Grandiosity (F5.1) and Attention-seeking (F5.5).

Limitations and Future Directions

While this study had a number of strengths including a large sample size, a comprehensive collection of narcissism measures, and a focus on item-, rather than scale-level content, limitations must be acknowledged. The sample was composed entirely of MTurk participants. Reliance on online data collection methods has a number of advantages that make it among the most viable options for large questionnaire-based analyses (Chandler & Shapiro, 2016; Miller, Crowe, et al., 2017), but participants were somewhat homogeneous and limited to

individuals residing within the United States. There is no guarantee that the structure identified here will replicate in other countries, cultures, or administration formats (i.e., paper and pencil). Additional research is needed to test the generalizability of these results.

The sole reliance on self-report measures is an additional limitation. It is possible that the strength of associations between identified factors and criterion measures are inflated due to shared method variance, but such inflation effects are likely offset by the imperfect reliability of the items (Chan, 2009). It is also possible that acquiescence or extreme response styles may have inflated the magnitude of correlations, and while the effect of acquiescence could not be directly evaluated here, other analyses on similar samples have indicated minimal effect (Crowe et al., 2017).

The present analyses emphasized inclusion of a comprehensive set of narcissism items and was therefore limited in its ability to include a wide array of criterion measures. Future research should consider inclusion of a wider array of relevant criterion. Doing so will aid in evaluating patterns of convergence and divergence among the identified factors.

Conclusions. The present study expands on previous work (Krizan & Herlache, 2017; Miller, Lynam, et al., 2017; Miller, Lynam, McCain, et al., 2016) directed at identifying a comprehensive structural model of narcissism. Until recently, no empirical analyses identifying the conceptual boundaries of narcissism and its phenotypic expressions had been conducted. These results support previous findings and indicate that antagonism-related traits are the “core” of narcissistic pathologies (i.e., those traits shared by all expressions of the domain) while Agentic extraversion (e.g., assertiveness, immodesty) and Neuroticism (e.g., emotional vulnerability) are traits specific to particular configurations of narcissism. Additional factors (i.e., Distrustful Self-reliance, Grandiosity, Attention-seeking) were identified, additional

analyses with a more diverse range of criterion variables will be necessary to determine if such factors should be incorporated into the model.

REFERENCES

- Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the Narcissistic Personality Inventory really measure? *Assessment, 18*, 67–87.
- American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders: DSM-III*.
- Back, M. D., Küfner, A. C., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology, 105*, 1013–1037.
- Cain, N. M., Pincus, A. L., & Ansell, E. B. (2008). Narcissism at the crossroads: Phenotypic description of pathological narcissism across clinical theory, social/personality psychology, and psychiatric diagnosis. *Clinical Psychology Review, 28*, 638–656.
- Campbell, W. K., Bonacci, A. M., Shelton, J., Exline, J. J., & Bushman, B. J. (2004). Psychological entitlement: Interpersonal consequences and validation of a self-report measure. *Journal of Personality Assessment, 83*, 29–45.
- Campbell, W. K., & Miller, J. D. (2013). Narcissistic personality disorder and the five-factor model: Delineating narcissistic personality disorder, grandiose narcissism, and vulnerable narcissism. In T. A. Widiger & P. T. Costa Jr. (Eds.), *Personality disorders and the five-factor model of personality (3rd ed.)*. (pp. 133–145). Washington, DC US: American Psychological Association.

- Chan, D. (2009). So why ask me? Are self-report data really that bad? In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends: Doctrine, verity and fable in the organizational and social sciences* (pp. 309–336). New York, NY, US: Routledge/Taylor & Francis Group.
- Chandler, J., & Shapiro, D. (2016). Conducting clinical research using crowdsourced convenience samples. *Annual Review of Clinical Psychology, 12*, 53–81.
- Costa, P. T., & MacCrae, R. R. (1992). *Revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO FFI): Professional manual*. Psychological Assessment Resources.
- Crowe, M. L., Carter, N. T., Campbell, W. K., & Miller, J. D. (2016). Validation of the Narcissistic Grandiosity Scale and creation of reduced item variants. *Psychological Assessment, 28*, 1550–1560.
- Crowe, M. L., Lynam, D. R., & Miller, J. D. (2017). Uncovering the structure of agreeableness from self-report measures. *Journal of Personality*. <https://doi.org/10.1111/jopy.12358>
- Dickinson, K. A., & Pincus, A. L. (2003). Interpersonal analysis of grandiose and vulnerable narcissism. *Journal of Personality Disorders, 17*, 188–207.
- Edershile, E. A., Woods, W. C., Sharpe, B. M., Crowe, M. L., Miller, J. D., & Wright, A. G. C. (manuscript under review). A day in the life of narcissus: Measuring narcissistic grandiosity and vulnerability in daily life.
- First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B., & Benjamin, L. S. (1997). *Structured clinical interview for DSM-IV personality disorders (SCID-II): Interview and questionnaire*. Washington, D.C.: American Psychiatric Press.

- Foster, J. D., McCain, J. L., Hibberts, M. F., Brunell, A. B., & Johnson, R. B. (2015). The Grandiose Narcissism Scale: A global and facet-level measure of grandiose narcissism. *Personality and Individual Differences, 73*, 12–16.
- Glover, N., Miller, J. D., Lynam, D. R., Crego, C., & Widiger, T. A. (2012). The five-factor narcissism inventory: A five-factor measure of narcissistic personality traits. *Journal of Personality Assessment, 94*, 500–512.
- Goldberg, L. R. (2006). Doing it all bass-ackwards: The development of hierarchical factor structures from the top down. *Journal of Research in Personality, 40*, 347–358.
- Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality, 40*, 84–96.
- Hendin, H. M., & Cheek, J. M. (1997). Assessing hypersensitive narcissism: A reexamination of Murray's Narcism Scale. *Journal of Research in Personality, 31*, 588–599.
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika, 30*, 179–185.
- Horton, R. S., Bleau, G., & Drwecki, B. (2006). Parenting narcissus: What are the links between parenting and narcissism? *Journal of Personality, 74*, 345–376.
- Hyler, S. E. (1994). *PDQ-4+ personality questionnaire*. New York, NY: New York State Psychiatric Institute.
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the Short Dark Triad (SD3) A Brief Measure of Dark Personality Traits. *Assessment, 21*, 28–41.
- Krizan, Z., & Herlache, A. D. (2017). The Narcissism Spectrum Model: A Synthetic View of Narcissistic Personality. *Personality and Social Psychology Review, 1*–29.

- Krizan, Z., & Johar, O. (2015). Narcissistic rage revisited. *Journal of Personality and Social Psychology, 108*, 784–801.
- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine, 42*, 1879–1890.
- Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research, 39*, 329–358.
- Lynam, D. R., Gaughan, E. T., Miller, J. D., Miller, D. J., Mullins-Sweatt, S., & Widiger, T. A. (2011). Assessing the basic traits associated with psychopathy: development and validation of the Elemental Psychopathy Assessment. *Psychological Assessment, 23*, 108–124.
- Lynam, D. R., & Widiger, T. A. (2001). Using the five-factor model to represent the DSM-IV personality disorders: An expert consensus approach. *Journal of Abnormal Psychology, 110*, 401–412.
- Maples, J. L., Guan, L., Carter, N. T., & Miller, J. D. (2014). A test of the International Personality Item Pool representation of the Revised NEO Personality Inventory and development of a 120-item IPIP-based measure of the five-factor model. *Psychological Assessment, 26*, 1070–1084.
- Marsh, H. W., Lüdtke, O., Nagengast, B., Morin, A. J., & Von Davier, M. (2013). Why item parcels are (almost) never appropriate: Two wrongs do not make a right—Camouflaging misspecification with item parcels in CFA models. *Psychological Methods, 18*, 257–284.

- Mauri, M., Elli, T., Caviglia, G., Uboldi, G., & Azzi, M. (2017). RAWGraphs: A visualisation platform to create open outputs. In *Proceedings of the 12th Biannual Conference on Italian SIGCHI Chapter* (pp. 28:1-28:5). New York, NY: ACM.
- Miller, J. D., & Campbell, W. K. (2008). Comparing clinical and social-personality conceptualizations of narcissism. *Journal of Personality, 76*, 449–476.
- Miller, J. D., Crowe, M. L., Weiss, B., Maples-Keller, J. L., & Lynam, D. R. (2017). Using online, crowdsourcing platforms for data collection in personality disorder research: The example of Amazon’s Mechanical Turk. *Personality Disorders: Theory, Research, and Treatment, 8*, 26–34.
- Miller, J. D., Gentile, B., & Campbell, W. K. (2013). A test of the construct validity of the Five-Factor Narcissism Inventory. *Journal of Personality Assessment, 95*(4), 377–387.
- Miller, J. D., Gentile, B., Carter, N. T., Crowe, M., Hoffman, B. J., & Campbell, W. K. (2017). A comparison of the nomological networks associated with forced-choice and likert formats of the narcissistic personality inventory. *Journal of Personality Assessment*.
<https://doi.org/10.1080/00223891.2017.1310731>
- Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Keith Campbell, W. (2011). Grandiose and vulnerable narcissism: A nomological network analysis. *Journal of Personality, 79*, 1013–1042.
- Miller, J. D., & Lynam, D. R. (2003). Psychopathy and the Five-factor model of personality: A replication and extension. *Journal of Personality Assessment, 81*, 168–178.
- Miller, J. D., Lynam, D. R., & Campbell, W. K. (2016). Measures of narcissism and their relations to DSM-5 pathological traits: A critical reappraisal. *Assessment, 23*, 3–9.

- Miller, J. D., Lynam, D. R., Hyatt, C. S., & Campbell, W. K. (2017). Controversies in narcissism. *Annual Review of Clinical Psychology, 13*, 291–315.
- Miller, J. D., Lynam, D. R., McCain, J. L., Few, L. R., Crego, C., Widiger, T. A., & Campbell, W. K. (2016). Thinking structurally about narcissism: An examination of the Five-Factor Narcissism Inventory and its components. *Journal of Personality Disorders, 30*, 1–18.
- Miller, J. D., Lynam, D. R., Siedor, L., Crowe, M., & Campbell, W. K. (2018). Consensual lay profiles of narcissism and their connection to the Five-Factor Narcissism Inventory. *Psychological Assessment, 30*, 10–18.
- Miller, J. D., Maples, J., & Campbell, W. K. (2011). Comparing the construct validity of scales derived from the Narcissistic Personality Inventory: A reply to Rosenthal and Hooley (2010). *Journal of Research in Personality, 45*, 401–407.
- Miller, J. D., McCain, J., Lynam, D. R., Few, L. R., Gentile, B., MacKillop, J., & Keith, W. (2014). A comparison of the criterion validity of popular measures of narcissism and narcissistic personality disorder via the use of expert ratings. *Psychological Assessment, 26*, 958–969.
- Miller, J. D., Price, J., & Campbell, W. K. (2012). Is the narcissistic personality inventory still relevant? A test of independent grandiosity and entitlement scales in the assessment of narcissism. *Assessment, 19*, 8–13.
- Miller, J. D., Widiger, T. A., & Campbell, W. K. (2010). Narcissistic personality disorder and the DSM-5. *Journal of Abnormal Psychology, 119*, 640–649.
- Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry, 12*, 177–196.
- Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.

- Pilkonis, P. A., Choi, S. W., Reise, S. P., Stover, A. M., Riley, W. T., & Cella, D. (2011). Item Banks for Measuring Emotional Distress From the Patient-Reported Outcomes Measurement Information System (PROMIS®): Depression, Anxiety, and Anger. *Assessment, 18*, 263–283.
- Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G., & Levy, K. N. (2009). Initial construction and validation of the Pathological Narcissism Inventory. *Psychological Assessment, 21*, 365–379.
- Pincus, A. L., & Lukowitsky, M. R. (2010). Pathological narcissism and narcissistic personality disorder. *Annual Review of Clinical Psychology, 6*, 421–446.
- Pryor, L. R., Miller, J. D., & Gaughan, E. T. (2008). A comparison of the Psychological Entitlement Scale and the Narcissistic Personality Inventory's Entitlement Scale: Relations with general personality traits and personality disorders. *Journal of Personality Assessment, 90*, 517–520.
- Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological Methodology, 25*, 111–163.
- Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., ... Liu, J. (2006). The Reactive–Proactive Aggression Questionnaire: Differential Correlates of Reactive and Proactive Aggression in Adolescent Boys. *Aggressive Behavior, 32*, 159–171.
- Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology, 54*, 890–902.

- Rhodewalt, F., & Morf, C. C. (1995). Self and Interpersonal Correlates of the Narcissistic Personality Inventory: A Review and New Findings. *Journal of Research in Personality*, 29, 1–23.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, N.J.: Princeton University Press.
- Rosenthal, S. A., Hooley, J. M., & Steshenko, Y. (2007). *Distinguishing grandiosity from self-esteem: Development of the Narcissistic Grandiosity Scale*. Unpublished Manuscript.
- Samuel, D. B., & Widiger, T. A. (2004). Clinicians' personality descriptions of prototypic personality disorders. *Journal of Personality Disorders*, 18, 286–308.
- Schmitt, T. A., Sass, D. A., Chappelle, W., & Thompson, W. (2018). Selecting the “Best” Factor Structure and Moving Measurement Validation Forward: An Illustration. *Journal of Personality Assessment*. <https://doi.org/10.1080/00223891.2018.1449116>
- Sedikides, C., Rudich, E. A., Gregg, A. P., Kumashiro, M., & Rusbult, C. (2004). Are normal narcissists psychologically healthy?: Self-esteem matters. *Journal of Personality and Social Psychology*, 87, 400–416.
- Sherman, E. D., Miller, J. D., Few, L. R., Campbell, W. K., Widiger, T. A., Crego, C., & Lynam, D. R. (2015). Development of a short form of the Five-Factor Narcissism Inventory: The FFNI-SF. *Psychological Assessment*, 27, 1110–1116.
- Smith, G. T., McCarthy, D. M., & Zapolski, T. C. B. (2009). On the value of homogeneous constructs for construct validation, theory testing, and the description of psychopathology. *Psychological Assessment*, 21, 272–284.

- Soto, C. J., & John, O. P. (2017). The next Big Five Inventory (BFI-2): Developing and assessing a hierarchical model with 15 facets to enhance bandwidth, fidelity, and predictive power. *Journal of Personality and Social Psychology, 113*, 117–143.
- Thomas, K. M., Wright, A. G., Lukowitsky, M. R., Donnellan, M. B., & Hopwood, C. J. (2012). Evidence for the criterion validity and clinical utility of the Pathological Narcissism Inventory. *Assessment, 19*, 135–145.
- Twenge, J. M., & Campbell, W. K. (2003). “Isn’t it fun to get the respect that we’re going to deserve?” Narcissism, social rejection, and aggression. *Personality and Social Psychology Bulletin, 29*, 261–272.
- Velicer, W. F. (1976). Determining the number of components from the matrix of partial correlations. *Psychometrika, 41*, 321–327.
- Watson, D., Stasik, S. M., Ellickson-Larew, S., & Stanton, K. (2015). Extraversion and psychopathology: A facet-level analysis. *Journal of Abnormal Psychology, 124*, 432–446.
- Wink, P. (1991). Two faces of narcissism. *Journal of Personality and Social Psychology, 61*, 590–597.
- Wright, A. G. C., & Edershire, E. A. (2018). Issues resolved and unresolved in pathological narcissism. *Current Opinion in Psychology, 21*, 74-79.

APPENDIX

Table A1.

Factor 6.6 Item Content and Factor Loadings

| Scale | Item | 1.1 | 2.1 | 2.2 | 3.1 | 3.2 | 3.3 | 4.1 | 4.2 | 4.3 | 4.4 | 5.1 | 5.2 | 5.3 | 5.4 | 5.5 | 6.1 | 6.2 | 6.3 | 6.4 | 6.5 | 6.6 |
|-------------|--|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|-------|------|------|-------|
| PNI-GF | I often fantasize about having a huge impact on the world around me | 0.44 | 0.37 | 0.39 | 0.44 | 0.44 | 0.16 | 0.45 | 0.43 | 0.16 | 0.18 | 0.48 | 0.41 | 0.09 | 0.18 | 0.28 | 0.39 | 0.32 | 0.12 | 0.18 | 0.29 | 0.73* |
| PNI-GF | I often fantasize about performing heroic deeds | 0.43 | 0.32 | 0.45 | 0.35 | 0.46 | 0.25 | 0.36 | 0.45 | 0.26 | 0.07 | 0.38 | 0.44 | 0.21 | 0.08 | 0.26 | 0.29 | 0.36 | 0.24 | 0.07 | 0.26 | 0.67* |
| FFNI-GF | I often fantasize about someday being famous | 0.52 | 0.41 | 0.49 | 0.44 | 0.48 | 0.32 | 0.44 | 0.47 | 0.33 | 0.08 | 0.48 | 0.45 | 0.28 | 0.08 | 0.30 | 0.41 | 0.38 | 0.30 | 0.08 | 0.31 | 0.62* |
| PNI-GF | I often fantasize about accomplishing things that are probably beyond my means | 0.44 | 0.30 | 0.51 | 0.34 | 0.52 | 0.28 | 0.34 | 0.51 | 0.27 | 0.19 | 0.36 | 0.50 | 0.24 | 0.22 | 0.24 | 0.29 | 0.43 | 0.26 | 0.23 | 0.25 | 0.58* |
| FFNI-GF | I often fantasize about having lots of success and power | 0.61 | 0.53 | 0.52 | 0.55 | 0.47 | 0.41 | 0.55 | 0.47 | 0.41 | 0.12 | 0.56 | 0.43 | 0.35 | 0.15 | 0.42 | 0.50 | 0.38 | 0.36 | 0.16 | 0.43 | 0.58* |
| PNI-GF | I often fantasize about being rewarded for my efforts | 0.52 | 0.41 | 0.51 | 0.44 | 0.51 | 0.32 | 0.44 | 0.50 | 0.32 | 0.12 | 0.47 | 0.48 | 0.27 | 0.14 | 0.32 | 0.41 | 0.43 | 0.28 | 0.15 | 0.32 | 0.51 |
| FFNI-GF | I rarely fantasize about becoming famously successful (R) | 0.29 | 0.23 | 0.28 | 0.25 | 0.27 | 0.18 | 0.25 | 0.27 | 0.18 | 0.07 | 0.28 | 0.26 | 0.15 | 0.05 | 0.15 | 0.22 | 0.20 | 0.17 | 0.04 | 0.16 | 0.48 |
| SCID-II NPD | I think a lot about the perfect romance that will be mine someday | 0.43 | 0.33 | 0.43 | 0.38 | 0.45 | 0.22 | 0.39 | 0.45 | 0.23 | 0.11 | 0.43 | 0.43 | 0.17 | 0.09 | 0.23 | 0.38 | 0.38 | 0.18 | 0.10 | 0.24 | 0.47 |
| NPI-E | I want to amount to something in the eyes of the world | 0.32 | 0.22 | 0.36 | 0.31 | 0.45 | 0.05 | 0.32 | 0.45 | 0.06 | 0.11 | 0.32 | 0.43 | 0.01 | 0.15 | 0.23 | 0.26 | 0.37 | 0.02 | 0.16 | 0.23 | 0.47 |
| NPI-Sup | I wish someone would someday write my biography | 0.47 | 0.45 | 0.32 | 0.46 | 0.28 | 0.31 | 0.46 | 0.27 | 0.31 | 0.08 | 0.48 | 0.25 | 0.26 | 0.08 | 0.31 | 0.44 | 0.20 | 0.26 | 0.08 | 0.32 | 0.46 |
| PNI-SSSE | I try to show what a good person I am through my sacrifices | 0.25 | 0.19 | 0.25 | 0.26 | 0.32 | 0.03 | 0.27 | 0.32 | 0.03 | 0.06 | 0.29 | 0.31 | -0.01 | 0.06 | 0.17 | 0.24 | 0.27 | -0.01 | 0.07 | 0.18 | 0.35 |

Note. An asterisk indicates that the item is among the five highest loading items for that factor. PNI = Pathological Narcissism Inventory; GF = Grandiose Fantasy; SSSE = Self-sacrificing Self Enhancement; FFNI = Five Factor Narcissism Inventory - Short form; SCID-II NPD = Structured Clinical Interview for DSM-IV Personality Disorders Personality Questionnaire – NPD Scale; NPI = Narcissistic Personality Inventory; E = Entitlement