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Self- and Informant-Reported Perspectives on Symptoms of Narcissistic Personality Disorder

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Abstract

Because narcissistic individuals tend to have an inflated view of themselves and their abilities, the reliance on self-reported information in the assessment and diagnosis of narcissistic personality disorder (NPD) is problematic. Hence, the use of informants in the assessment of NPD may be necessary. In the current study we examined self- and informant-reported features of NPD using agreement, frequency, and discrepancy analyses. The results indicated that informants tended to report more NPD features than selves, and that there were either low or nonsignificant levels of self-informant agreement among the 9 NPD diagnostic criteria and its categorical diagnosis. Informants were increasingly more likely to report higher raw scores relative to selves, indicating that the discrepancy between self- and informant reports increases with the NPD scale. Informants also reported NPD features that selves often did not, suggesting that current prevalence estimates of NPD, which use only self-reported information, are most likely underestimates. These results highlight the importance of gathering informant-reported data in addition to self-reported data when assessing NPD.

Keywords

informant-report; narcissistic personality disorder; pathological narcissism; peer-report; self-other agreement

Exclusive reliance on self-reported information in psychological assessment is problematic (see Achenbach, Krukowski, Dumenci, & Ivanova, 2005, and Meyer et al., 2001, for meta-analyses and reviews). As Achenbach et al. noted, individuals "may often provide different pictures of their problems than would be obtained from informants who know them" (p. 370), and as Meyer et al. noted, self-reported information may yield an "incomplete or biased understanding" of individuals (p. 150). The most common methods of personality disorder (PD) assessment and diagnosis, however, rely on self-reported information (e.g., Klonsky, Oltmanns, & Turkheimer, 2002). Although this relatively narrow focus can be troublesome in all areas of psychological assessment, dependence on self-reported data in the assessment of PD may be particularly problematic (Widiger & Frances, 1987): Many PD diagnostic criteria require an external judge (Perry, 1992), knowledge of how one's behavior

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affects others (e.g., Klein, 2003; Oltmanns, Turkheimer, & Strauss, 1998; Zimmerman, 1994), or intrapersonal insight—an ability that individuals with PDs may lack (e.g., Clark, Livesley, & Morey, 1997; Ganellen, 2007; Grove & Tellegen, 1991; Zimmerman, 1994) and that may even be diagnostic of some PDs (e.g., Westen, 1997). Furthermore, self-reported PD features may be biased by "defensive denial" (Oldham, 2005, p. 378), affected by the acute psychiatric states (Peselow et al., 1994; see Zimmerman, 1994) that frequently co-occur with PDs (e.g., Oldham et al., 1995), or are underreported because of the social undesirability (McKeeman & Erickson, 1997; Oltmanns et al., 1998) and egosyntonicity (e.g., American Psychiatric Association, 2000; Dreessen, Hildebrand, & Arntz, 1998) of many PD features. Finally, diagnostic features of certain PDs—for example, acquiescence (histrionic, Bernstein et al., 1997), deception (antisocial, e.g., Walters, Moran, Choudhury, Lee, & Mann, 2004), grandiosity (narcissistic, e.g., Raskin, Novacek, & Hogan, 1991), guardedness (schizoid and antisocial, Bernstein et al., 1997; paranoid, Widiger & Boyd, 2009), and self-denigration (dependent, Widiger & Boyd, 2009) —may affect individuals' ability or willingness to accurately self-report on their PD features.

For reasons such as these, some have relied solely on PD data gathered from informants (e.g., Mann, Jenkins, Cutting, & Cowen, 1981). But because self- and informant-reports each provide relevant and unique PD information (e.g., Bernstein et al., 1997; Clifton, Turkheimer, & Oltmanns, 2005; Dreesen et al., 1998; Ferro & Klein, 1997; Fiedler, Oltmanns, & Turkheimer, 2004; Klein, 2003; Miller, Pilkonis, & Clifton, 2005; Miller, Pilkonis, & Morse, 2004; Oltmanns et al., 1998; Ready, Watson, & Clark, 2002; Riso, Klein, Anderson, Ouimette, & Lizardi, 1994; Zimmerman, Pfohl, Stangl, & Corenthal, 1986), a more common practice is to integrate the data gathered from both sources (e.g., Bernstein et al., 1997; Pilkonis, Heape, Ruddy, & Serrao, 1991; Zimmerman et al., 1986; Zimmerman, Pfohl, Coryell, Stangl, & Corenthal, 1988). Integrating data from an informant generally increases, rather than decreases, the number of PD diagnoses when consensus methods are used (e.g., Riso et al., 1994; Zimmerman et al., 1986), but a point of debate that remains unresolved in the PD assessment literature is who reports more personality pathology: selves or informants. In their reviews, Klonsky et al. (2002) and Zimmerman (1994) determined that there may be a slight trend for informants to report more personality pathology than selves.

Of the 10 PDs outlined in the text-revised fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM–IV–TR*; American Psychiatric Association, 2000), the reliance on self-reported assessment data for narcissistic PD (NPD) may be particularly problematic. This is perhaps due to the great likelihood that the features of narcissism may impede accurate self-assessment. Many have suggested that these features consist of two broad domains: grandiosity and vulnerability (e.g., Cain, Pincus, & Ansell, 2008; Fossati et al., 2005; Morf & Rhodewalt, 2001; Wink, 1991). Both of these domains likely affect the accuracy of an individual's self-reported personality pathology. For example, individuals high in narcissism (as measured by the Narcissistic Personality Inventory; see Raskin & Terry, 1988) tend to overestimate their actual abilities or performance (Farwell & Wohlwend-Lloyd, 1998; Gabriel, Critelli, & Ee, 1994; Gosling, John, Craik, & Robins, 1998; John & Robins, 1994; Robins & John, 1997) and often view themselves more positively than how others rate them (Gosling et al., 1998; John & Robins, 1994), which is perhaps due to an egoistic response style (Paulhus & John, 1998), related to their narcissistic grandiosity. And although all individuals tend to self-enhance (e.g., Sedikides, 1993), those with narcissistic features self-enhance more and across a greater number of situations (Campbell, Reeder, Sedikides, & Elliot, 2000), which is perhaps due to the need for a positive self-presentation (Collins & Stukas, 2008; Raskin et al., 1991), resulting from their narcissistic vulnerability. In short, both theory and research suggest that those with

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narcissistic characteristics are inaccurate, biased raters—they tend to overestimate themselves and their abilities.

Informants, on the other hand, may be able to provide NPD data that self-reporters are either unwilling to admit (e.g., because of denial or self-enhancement) or unable to perceive (e.g., because of grandiosity). Not only are informants' ratings removed from ties to their own self-worth, thus hypothetically bypassing any self-enhancement biases; but informants, due to their different perspective, may also be able to detect NPD features that selves are unable to report. Therefore, one would expect that informants would report more NPD features on average than selves; and in fact, this hypothesis is generally supported (Clifton et al., 2005; Ferro & Klein, 1997; Miller et al., 2005; Peselow et al., 1994; Zimmerman et al., 1988; cf. McKeeman & Erickson, 1997). When comparing PD data gathered from selves and knowledgeable informants, agreement is usually low (e.g., Bernstein et al., 1997; Ferro & Klein, 1997; Riso et al., 1994; Walters et al., 2004; Zimmerman et al., 1988; Zimmerman et al., 1986), with a median kappa of only 0.14 (Klonsky et al., 2002), indicating that selves and informants often have very different perspectives regarding the presence of personality pathology. This is especially true for NPD, which frequently has the lowest self-informant agreement coefficients (Coolidge, Burns, & Mooney, 1995; Miller et al., 2005; Walters et al.; 2004; see Klonsky et al., 2002), perhaps because of a potential lack of willingness and ability for selves to report on pathological aspects of their personality. Whereas selves may not report the presence of NPD features until the features are more pronounced or more fully integrated into their identities, informants may be able to detect and report on the presence of these features at lower trait levels. In other words, informants may have a lower threshold for detecting and reporting features of pathological narcissism than selves. All of this said, we would like to note that informant reports may have their own limitations. We address these possibilities in the Discussion section of this article.

There have been many methodological limitations in the self-informant PD literature beyond the low agreement between selves and informants (see Klonsky et al., 2002). Two additional limitations are method variance (i.e., data were not gathered from each source using the same procedure or instrument; Perry, 1992) and relatively small sample sizes (which may affect the generaliziability of previous results). Hence, additional self-informant PD studies, which address unresolved issues by accounting for previous methodological limitations, are still needed. In the current study, we analyzed self- and informant-reported NPD data from an epidemiological sample that were gathered with an inventory specifically developed to assess personality pathology when using multiple sources. Consistent with previous literature, we expected that the criterion-level and diagnostic agreement would be low, and that informants would report more NPD than selves. And given the grandiose perceptual biases and vulnerable self-enhancement strategies that are characteristic of narcissists, we expected that, relative to informants, selves would less frequently report elevated levels of NPD. In other words, as the level of narcissism increases, the stronger the selves' grandiosity and self-enhancement strategies should become, which would result in selves less frequently reporting high levels of NPD compared with informants. We also expected that informants would report NPD features at relatively lower levels of narcissism than selves. To test this hypothesis, what is needed is an analysis that allows for the comparison of self- and informant responses at all levels of the latent trait narcissism (low to high). Item response theory (IRT) analyses, which can model response probabilities across all levels of an underlying latent dimension, allow one to make easy comparisons between the two groups (selves and informants) at all levels of the latent trait. The results of the IRT analyses should illuminate the levels where selves and informants begin to report the presence NPD features.

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Method

Participants

Participants were 874 community-residing adults (ages 55–65; *M* = 59.66, *SD* = 2.73), participants in the larger St. Louis Personality and Aging Network (see Oltmanns & Gleason, 2011 for more information about the study and recruitment methods). About half of the sample was female (54%, *n* = 475). Reflecting the expected diversity in the St. Louis community, 70% of the sample was Caucasian (*n* = 611) and 26% was African-American (*n* = 228). As part of the study, participants were asked to nominate an informant who knew them well and who could provide an accurate account of the participant's personality. The majority of the nominated informants were female (68%, *n* = 594) and Caucasian (70%, *n* = 612); most of the remaining informants were African-American (27%, *n* = 239). Generally, the informants were spouses of the participants (42%, *n* = 370), other family members (22%, *n* = 196), or close friends (18%, *n* = 160); the remaining informants were typically neighbors or coworkers of the participants. Five hundred and forty-eight (63%) of the informants were either currently living with the participant or had lived with him or her at one time. Informants and participants were generally very well acquainted and had known each other for an average of approximately 30 years.

Measure

The Multisource Assessment of Personality Pathology (MAPP; Okada & Oltmanns, 2009; Oltmanns & Turkheimer, 2006) is a self-report measure designed specifically to assess *DSM–IV–TR* PDs from the perspectives of multiple individuals. Items were developed by translating the diagnostic criteria into lay language. Each MAPP item assesses a single *DSM–IV-TR* PD diagnostic criterion, except for the NPD criterion, "is often envious of others or believes that others are envious of him or her," which was separated into two items ("is often jealous or envious of other people" and "thinks other people are jealous of him/her") because it assessed more than one feature. In the current study, we recombined into a single item these two MAPP items assessing the "jealous" NPD criterion. It was considered present if either item response was indicated.

On the MAPP, respondents are asked to rate each statement using a scale ranging from 0 (*I am never like this/0% of the time*) to 4 (*I am always like this/100% of the time*). Responses of 2 (*I am sometimes like this/50% of the time*) and greater are considered to be present, whereas responses of 0 and 1 are considered to be absent or subthreshold, respectively. We dichotomized all responses using this cutoff so that the MAPP items, like the *DSM–IV* NPD diagnostic criteria, were considered either present or absent. This is consistent with *DSM* present/not present decisions and is consistent with the development of the MAPP. Dichotomizing the responses has the added advantage here of making the results more digestible (IRT requires much larger samples for response scales with multiple response options). In an attempt to minimize method variance, the only difference between the self- and informant MAPP forms is that the self-report form items are written in first person (e.g., "Being noticed and/or admired by others is important to me") and the informant-report form items are written in the third person (e.g., "Being noticed and/or admired by others is important to him/her"). The MAPP exhibits convergent validity with two other self-report PD questionnaires (Okada & Oltmanns, 2009). Only the items measuring NPD were included in the current analyses.

Data Analyses

To determine whether selves or informants tended to report more pathological narcissism, we conducted chi-square analyses of independence to test (a) if each source more frequently reported the presence of each NPD criterion and (b) which source's reports more frequently

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yielded an NPD diagnosis (using the *DSM–IV–TR* NPD threshold of five diagnostic criteria). We also calculated coefficient kappas to determine the levels of self-informant agreement at the criterion and diagnostic level. Finally, we compared the patterns of each source's raw score reports in two ways: We developed a matrix containing the raw score reports from the 874 dyads, and we compared the frequencies that both sources reported each raw score. These analyses are further discussed in the Results section.

To be consistent with previous studies on self-informant agreement, we computed coefficient kappas to determine the levels of agreement between sources. Kappas were calculated individually for each of the nine NPD features and for the overall diagnostic agreement (i.e., whether NPD was present or absent) using the *DSM–IV–TR* NPD threshold of five diagnostic criteria. We also conducted chi-square tests for independence to compare the observed versus expected frequencies of the self- and informant-reported NPD features and its categorical diagnosis. The results of these chi-square analyses will reveal whether there are significant differences between the frequencies that selves and informants report the presence of each NPD diagnostic criterion and its categorical disorder diagnosis.

We then conducted IRT analyses to determine the item characteristics of the NPD criteria from the perspectives of selves and informants. Two-parameter logistic (2PL) IRT models were fit to the observed self- and informant-reported MAPP NPD data using MULTILOG Version 7 (Thissen, Chen, & Bock, 2003).[1] 2PL models analyze items both in terms of their "difficulty" (the place along the latent trait where the probability of endorsement equals .50) and "discrimination" (the level of relatedness of the item to the latent trait). Using the difficulty (b) and discrimination (a) parameters, we then plotted item characteristic curves (ICCs) along the latent trait, theta (θ). ICCs represent the probability that an item would be endorsed across the defined levels of the latent continuum. Individual ICCs were then summed across theta to form test characteristic curves (TCCs) for the self- and informant-reported data. TCCs represent the aggregate properties of a test's items and are useful when comparing the correspondences between raw scores and latent trait estimates. For both self- and informant-reported data, the 2PL models were a better fit than the more parsimonious (i.e., slope-constrained) one-parameter logistic models, as determined by nested chi-square difference tests using the –2 log likelihood estimates (selves: $\chi^2_{\text{diff}}=77.7$, $df = 9$, $p < .001$; informants: $\chi^2_{\text{diff}}=78.3$, $df = 9$, $p < .001$). The fits of three-parameter logistic models, which model a lower asymptote to account for guessing, were not assessed; there was no reason to assume that participants were guessing in response to the MAPP items.

IRT analyses require that the items of interest are locally independent; that is, after the models have been fit to the data, any residual item variances should be uncorrelated. In other words, the chosen IRT model should account for nearly all meaningful variability among item responses. Unidimensional IRT models also require that item responses are influenced by only a single latent trait. In practice, no set of items is perfectly unidimensional; IRT analyses instead require that there is a dominant factor which influences item responses (Hambleton, Swaminathan, & Rogers, 1991). To determine whether the data were acceptable for IRT analyses, we separately conducted categorical confirmatory factor analyses (CFAs) on the self-and informant-reported data using the weighted least squares mean and variance adjusted estimator in Mplus Version 5.2 (Muthén & Muthén, 2007). If the CFA model fit indices suggest the fit of a one-factor solution, then the unidimensionality

[1]Some studies have found have no significant NPD prevalence rate differences between self- and informant-reported data (e.g., Dreessen et al., 1998; Riso et al., 1994), but we do not know of any studies in which selves reported significantly more pathological narcissism than informants. We are aware of only one study that has specifically analyzed the self-informant agreement for NPD and its diagnostic criteria (Dowson, 1992), and its findings were generally inconclusive regarding which source reported more pathological narcissism.

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assumption is met; and in unidimensional IRT models, unidimensionality also suggests that the items are locally independent (e.g., Hambleton et al., 1991).

Results

First, we analyzed the raw data reported by selves and informants at the criterion level to determine if there were significant differences between the frequencies with which selves and informants reported the presence of each NPD feature. Self- and informant-reported NPD criterion endorsement frequencies are displayed in Table 1. As can be seen on the left half of Table 1, informants reported the presence of all nine NPD features more frequently than selves; the frequencies of seven of the criteria were statistically different. Informant-reported data also yielded a categorical diagnosis of NPD a greater number of times than self-reported data. Table 1 also displays the agreement and disagreement frequencies for the nine NPD features and its categorical diagnosis. As seen on the right side of Table 1, six of the nine kappas indicated statistically significant self-informant agreement; but the consistently low coefficients, which ranged from 0.01 to 0.14 ($Mdn = 0.10$, $M = 0.09$), suggested only slight agreement. Similarly, the correlation between self- and informant-reported raw scores was low, but significant, $r(872) = .11$, $p = .001$. Categorical agreement at the diagnostic level was not significant ($\kappa = .04$, $p = .22$), indicating that there was essentially no reliable self-informant NPD agreement. Consistent with our hypotheses, therefore, informants tended to report the presence of most NPD features more frequently than selves, and the reports from each source yielded a slight or nonsignificant level of agreement.

To analyze the patterns in which selves and informants responded to the NPD criteria, we plotted the 874 self-informant pairs (dyads) in two-dimensional space using each source's raw score reports to determine the patterns in which selves and informants responded to the NPD criteria. The 10 × 10 matrix of values in Table 2 displays the frequencies that dyads reported each raw score combination. The 10 cells highlighted in gray along the diagonal contain the numbers of dyads who agreed on the total number of criteria present at each level of the NPD scale ($n = 206$, 24%). Among these 206 dyads who did agree on the total number of NPD features present, less than half of these dyads ($n = 101$, 49%) also agreed on which specific criteria were present. Hence, only 12% of the 874 dyads agreed both on the number of NPD features present and on which NPD features were present. The other 90 cells represent the frequencies of dyads in which the numbers of criteria reported by each source were inconsistent: The 45 cells above the diagonal contain the frequencies of instances in which informants reported more NPD features than selves, and the 45 cells below the diagonal contain the frequencies of instances in which selves reported more NPD features than informants. When selves and informants disagreed about the total number of NPD features present (which occurred in 76% of the dyads), it was because the informants tended to report more NPD features than selves ($n = 379$, 43%) rather than selves tending to report more NPD features than informants ($n = 289$, 33%), $\chi^2(1) = 12.13$, $p < .001$. The results again suggest that informants report more pathological narcissism than selves.

We also divided Table 2 into quarters at NPD's diagnostic threshold of five. Cells in the upper left quadrant display the frequencies of cases in which both informants and selves reported a subthreshold (i.e., four of fewer) number of NPD features ($n = 752$, 86%). Cells in the upper right quadrant display the frequencies of cases in which informants reported a diagnostic (i.e., five or greater) level of NPD but selves reported a subthreshold number of NPD features ($n = 86$, 10%). Cells in the lower left quadrant display the frequencies of cases in which selves reported a diagnostic level of NPD but informants reported a subthreshold number of NPD features ($n = 30$, 3%). Cells in the lower right quadrant display the frequencies of cases in which selves and informants reported a diagnostic level of NPD ($n =$

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6, < 1%). Whereas only 36 (4%) of the self-reporters endorsed enough criteria to be diagnosed with NPD, informant-reports indicated that 92 (11%) of the self-reporters met the diagnostic requirements for NPD. Hence, there was about a 2.5 time increase in the diagnostic prevalence of NPD when using informant-reported data. When we combined the data from self- and informant reports, a diagnostic level of NPD was reported in 122 (14%) of the cases (122 = the 36 self-reported NPD cases + the 92 informant-reported NPD cases —the 6 NPD cases in which the dyads agreed that NPD was present), a 3.4 time diagnostic increase over self-reports alone.

To determine whether the relative likelihood in which selves and informants reported each raw score changed with respect to the number of NPD items endorsed, we computed the ratios of raw score frequencies reported by selves and informants using the summed frequency data displayed on the lower and rightmost edge of Table 2. For the raw score of 0, for example, we divided the number of selves who reported 0 NPD criteria (n = 269) by the number of informants who reported 0 NPD criteria (n = 231). The quotient (1.17) indicates that selves were slightly more likely than informants to report 0 criteria. For the raw score of 1, we divided the number of selves who reported 1 NPD criterion (n = 257) by the number of informants who reported 1 NPD criterion (n = 230). The result (1.12) indicates that selves are also slightly more likely than informants to report 1 criterion. We repeated these calculations for all 10 raw scores (0–9). The results of these ratios are displayed in Figure 1. As can be seen in Figure 1, there is a strong trend for the ratio of self-and informant-reported frequencies to decrease as the raw score increases. In other words, informants are increasingly likely to report higher levels of narcissism relative to selves. Interpreted differently, the trend displayed in Figure 1 suggests that the discrepancy between self- and informant reports is larger at higher levels of narcissism. While at lower levels of narcissism, selves and informants are about equally likely to report scores of 0, 1, and 2; as the frequencies of raw score reports increase, informants increasingly report greater levels of NPD than selves. At the high end of the NPD scale, the decreasing ratio values indicate that informants are more than twice as likely as selves to report raw scores of 5, 6, 7, and 8. Relative to informants, therefore, selves are increasingly less likely to endorse higher raw scores.

From the results of these analyses, we concluded that there was a strong trend for informants to report more pathological narcissism than selves. However, these analyses did not indicate why this may be the case. Additional analyses were needed to determine the levels of pathological narcissism where the selves and informants begin to endorse the presence of each criterion. To address this question, we used IRT analyses to determine the psychometric properties of the item endorsements given by the selves and others. In order to ensure that the raw data were appropriate for our IRT analyses, we began by testing whether the data reported by each source were unidimensional and locally independent. Hu and Bentler (1999) have shown that hypothesized structural models provide a relatively good fit to the observed data when the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973) and comparative fit index (CFI; Bentler, 1990) values are close to .95 and the root mean squared error of approximation (RMSEA; Steiger & Lind, 1980) is less than .06. Using these recommended cutoffs, we concluded that the self-reported data (CFI = 1.00, TLI = 1.00, RMSEA = 0.00) and informant-reported data (CFI = 0.97, TLI = 0.97, RMSEA = 0.04) were excellent fits to the specified unidimensional models. These results suggested that the self- and informant-reported NPD data were unidimensional (and hence locally independent), and we therefore proceeded with the IRT analyses.

Consistent with our hypothesis, the results of the IRT analyses indicated that the self- and informant-reported perspectives often differed, with informants usually identifying the presence of NPD features at lower levels of NPD than selves. The item parameters for the

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self- and informant-reported NPD criteria are displayed in Table 3. Using two conservative Bonferroni corrected set of *t* tests ($p = .05/9$ comparisons, or $p = .006$), we were able to determine that three of the a parameters were statistically different across selves and informants, such that the selves responses were less related to the dimension of narcissism than the informants responses (the a parameter was lower for selves relative to informants). Five of the b parameters were statistically significant using this same conservative test, all in the expected direction. Selves were less likely to identify the features until narcissism was relatively high. Together, these results show that informants are more sensitive to the presence of narcissism and can more readily identify it at lower levels of the latent trait compared with selves. In other words, relative to selves, informants tend to provide more information, can provide it more sensitively, and can do both at lower levels of narcissism. Of note, no items were statistically significant in the opposite direction. The items that the informants were more sensitive to (higher a parameter) were items 1, 5, and 9 (has a grandiose sense of self-importance, feels entitled, and shows arrogance, respectively). The items that the informants were able and willing to report at relatively less severe levels of narcissism (lower b parameter) were those same three items plus items 3 and 4, which are believes self is special and requires excessive admiration, respectively. The self- and informant-reported ICCs that correspond to these item parameters are displayed in Figure 2. As can be seen among the nine graphs in Figure 2, informants endorsed most NPD diagnostic criteria at relatively lower levels of narcissism than selves. In these figures, the *x*-axis represents narcissism from low (left) to high (right). The y-axis represents the probability that an item would be endorsed across this spectrum of narcissism. This finding suggests that informants are able to detect and report on the presence of many features of NPD at relatively lower levels of narcissism than selves. We then summed the individual ICCs for the self- and informant-reported data across theta to form the TCCs. The TCCs in Figure 3 more clearly display the overall discrepancy between self- and informant-reported perspectives of pathological narcissism.[2] These TCCs show that informants generally reported the presence of pathological narcissism at relatively lower levels of the latent variable than selves. Hence, it appears that informants are able to detect and report the presence of many NPD features at relatively lower levels of narcissism than selves.

Discussion

The purpose of the analyses reported in this article was to compare trends of self- and informant-reported NPD symptoms in a large, representative sample of middle-aged adults. Participants and informants were relatively well-acquainted. (All were spouses, partners, other family members, or close friends. Additionally almost all had known each other for many years.) Using traditional analyses and modern psychometric methods (i.e., IRT), our results revealed a clear trend for informants to report more pathological narcissism than selves. Informants, however, were not simply reporting the same features as selves, plus another additional feature or two; rather, the features endorsed by informants and selves were often quite different, as evidenced by the low (and frequently nonsignificant) coefficient kappas (see Table 1). Of the 874 dyads, only 12% ($n = 101$) agreed both on the

[2]We chose to graph the ICCs generated from the self-and informant-reported data on the same latent NPD axis even though the latent trait has not been equated across groups (in the traditional IRT sense of the term). Traditionally, when comparing ICCs (or item parameters) across different groups using an IRT framework the two groups have provided ratings that are independent of one another, and then those ratings have been used to map parameters onto the same scale through a process called linking and equating. Linking and equating is done to place parameters in the same metric so that valid comparisons across the groups are possible. This process enables, for example, item parameter comparisons to be made for the same math test given to fifth and ninth graders while controlling for mean differences in their differing math abilities. In the current study, we are instead interested in detecting item parameter differences between groups (selves/targets and informants) who have provided ratings of the same thing— the target's personality. Because we are interested in examining parameter differences along a dimension we know is equal across groups (the target's personality), no linking and equating is required. In fact, linking and equating would mask the item parameter differences that are of interest in the current study.

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number of NPD features present and on which NPD features were present. When the dyads were in disagreement, it was usually because informants reported a greater number of NPD features than selves (see Table 2).

The trend that is displayed in Figure 1 suggests that—as the overall level of narcissism increases—the self becomes less likely (relative to informants) to report large numbers of symptoms of NPD. In other words, the discrepancy between self- and informant reports increases with the NPD scale. If one source consistently reported more or fewer symptoms of NPD across the scale, the ratios would have formed a relatively horizontal line across the NPD scale. But as the trend suggests, selves, relative to informants, were less likely to endorse each increasing raw score level. Although the precise reason for this trend is unclear, one reason why selves increasingly report fewer NPD criteria relative to informants may be because self-reports become increasingly biased as their NPD scale increases. Selves may be likely to underreport NPD features at higher levels of narcissism because their levels of grandiosity and vulnerability also likely increase, which may in turn lead to underreporting. Specifically, grandiose individuals may not endorse NPD features because they do not think that the criteria apply to them; and vulnerable individuals, who strive to maintain a positive self-image, may neglect to endorse socially undesirable features.

The results from our IRT analyses indicated that one reason why the reports from selves and informants often disagree is because informants may be able to detect and report on the presence of NPD features at relatively lower levels of narcissism than selves are either able or willing to. Informants tended to report the presence of NPD features at lower levels of narcissism than selves. The overall pattern of results indicated that informants reported more pathological narcissism than selves and that both sources usually reported discrepant information. These findings have clear implications for the prevalence and assessment of NPD.

The prevalence of NPD is difficult to ascertain and varies as a function of many factors, including type of sample (i.e., clinical or community), culture, age, gender, method of assessment (i.e., inventory vs. interview), and perhaps even the theoretical orientation of the assessor (Levy, Chauhan, Clarkin, Wasserman, & Reynoso, 2009). There may not be one best number to represent the prevalence of NPD; nevertheless, estimates from other recent, larger community samples do provide a general basis for comparison. In these studies, the prevalence of NPD has ranged from around 0% (Coid et al., 2006; Samuels et al., 2002; Torgersen, Kringlen, & Cramer, 2001) to 6.2% (Stinson et al., 2008). In a study that used methods similar to ours (i.e., a self-report PD inventory in a community sample), the prevalence of NPD was found to be 2.9% (Ekselius, Tillfors, Furmark, & Fredrikson, 2001). The current study's self-reported prevalence of NPD (4%) falls roughly into the upper-middle range of recent epidemiological estimates regarding the prevalence of NPD. One important note, however, is that these prevalence rates can vary depending upon age (see Stinson et al., 2008), with older adults often reporting a lower prevalence. So the present rates must be considered within the context of this general finding.

Our results also indicate, in addition to the moderators described by Levy et al. (2009), that the prevalence of NPD can vary as a function of the source of information, with informants often reporting more pathological narcissism than selves. The prevalence of NPD increased about 2.5 times (from 36 to 92 cases) when using informant-reported data instead of self-reported data. When we included any case in which either a self- or informant reported a diagnostic level of NPD, the prevalence rose to 14% (a 3.4 time increase over self-reports alone). Although this total NPD prevalence estimate (14%) is likely inflated, the finding that informant reports yield additional cases is consistent with previous research (e.g., Bernstein et al., 1997; Dreessen et al., 1998; Ferro & Klein, 1997; Fiedler et al., 2004; Klein, 2003;

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Miller et al., 2005; Riso et al., 1994; Zimmerman et al., 1988). Therefore, it seems reasonable to consider the possibility that current prevalence estimates of NPD may be underestimates, at least with regard to the frequency with which people exhibit specific features of the disorder. If these studies had incorporated data from knowledgeable informants, all evidence suggests that additional cases of NPD would have emerged. It remains to be seen, of course, whether informant-identified cases will experience at least as much interpersonal burden or impairment as self-identified cases (Paris, 2010). This is an important issue to be explored in further research. In any case, the present results highlight the importance (and perhaps even necessity) of using informant-reported data in the assessment of NPD, and echo the conclusion drawn by many others regarding the importance of informant-reports in assessing PDs (e.g., Clifton et al., 2005; Coolidge et al., 1995; Grove & Tellegen, 1991; Miller et al., 2005; Klein, 2003; Klonsky et al., 2002; Oltmanns & Turkheimer, 2006).

We understand that gathering data from an informant requires additional time and effort, and in some circumstances it may be impossible to obtain information from another person who knows the participant or client well. In these cases, one possibility is to ask the target person to respond to questions from the perspective of some identified peers in addition to answering the questions from his or her perspective. For example, if the item was “Being noticed and/or admired by others is important to me,” one could also ask the self-reporter, “How do you think your peers would rate you on this question? Would they think that being noticed and/or admired by others is important to you?” Previous research has shown that, when asked directly, selves are somewhat aware of how others view them, and that these “expected” informant reports are closer to actual informant reports than self-reports are (Carlson, Vazire, & Oltmanns, 2011; Oltmanns, Gleason, Klonsky, & Turkheimer, 2005). Therefore, when informants may be difficult to obtain or are unavailable, the selves’ expected informant report could perhaps yield additional, “informant-like” information.

Whether this information will influence the development of the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* remains unknown. As of this writing, the *DSM-5* revision process is well underway. It is possible, however, that the next iteration of the *DSM* (after *DSM-5*) will consider both dimensions of personality pathology and the role and ability that selves and informants could play in identifying these constructs. It is conceivable that items will be retained in a future *DSM* only if both selves and informants have the ability to report on their presence to a similar degree. Alternatively, a subset of items might be identified as ones that selves can report readily and another subset of items might be identified as ones that informants can identify more readily. Regardless, our findings suggest that we should not rely on self-report alone, at least for certain aspects of diagnosis. It also should be noted that the present findings are consistent with a dimensional model of personality disorders, and thus are consistent with any potential shift in thinking about this aspect of the *DSM* classification system.

Limitations and Future Directions

One limitation of the current analyses is that we were unable to determine the mechanism(s) driving the discrepancy between self- and informant reports. The results from our IRT analyses suggested that informants may report more pathological narcissism than selves because informants are generally able to detect and report NPD features at relatively lower levels of narcissism than the selves can or do, but our analyses were unable to indicate why this was the case. Specifically, we were unable to determine whether the selves’ seeming underreporting was due to a lack of awareness of their NPD features, as result of denial (effortful or otherwise) of their NPD features, or because of some other psychological mechanism. Or, perhaps it was the informants who were overreporting rather than the selves underreporting; informants may also have their own response biases. While the most likely

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answer is that there may be aspects of both under- and overreporting by the selves and informants, respectively, future research is still needed to answer these questions and to analyze the mechanisms that may contribute to the discrepancy between self- and informant-reported pathological narcissism. Also, our sample is an epidemiological sample of a particular age group from a Midwestern city. The generalizability of the current findings should be considered in light of these sample characteristics.

These findings raise some basic questions about the relationships between the informants and the targets, and how exactly these relationships might contribute to agreement or disagreement. Future analyses should examine whether gender differences, race differences, marital status differences, and/or other acquaintance level variables (neighbor vs. non-neighbor, living together or not) between and among selves and informants might contribute to the differences observed in the current studies. Our own research team is gathering the required data to answer these questions in psychometrically sophisticated and useful ways.

Finally, one other limitation of the IRT analyses should also be noted. The IRT models do not match up perfectly with the trends found in the observed data. This is acceptable here because IRT models are mathematical approximations, and the interpretations we have made from them are consistent with both the models and the observed data. Also, the consensus models analyzed, whether when examining agreement at the diagnostic level or analyzing differences between the test-characteristic curves, show the net impact of the individual items. These models do not speak to individual item properties. So on the one hand, interpretive precision is lost a bit in these models. On the other hand, these models may be helpful for those who think about, report, and understand narcissism at these more global levels.

Conclusions

Self-informant agreement among the nine *DSM–IV–TR* NPD diagnostic criteria and its categorical diagnosis was found to be either low or nonsignificant. When selves and informants disagreed on the number of NPD features, it was generally because informants reported more features than selves. Our interpretation of this finding is that the more narcissistic self-reporters are, the more likely that they are to be grandiose and self-enhancing. Hence, compared with informants, selves may be unable or unwilling to report higher raw scores because of their increased narcissistic biases. Informants seem to be more sensitive to the presence of pathological narcissism than selves, and therefore report features of NPD at relatively lower levels of narcissism than the selves do. Because current epidemiological prevalence rates for NPD are based on self-reported data, these estimates are likely underestimates. These findings strongly underscore the importance of gathering information from an informant when assessing NPD. If an informant-report would be difficult to ascertain, asking the self-reporter to also respond to the items from the assumed perspective of his or her identified peer(s) may serve as a proxy for an informant report. Future research is still needed to determine: (a) the informant-adjusted prevalence rate of NPD, (b) the accuracy and predictive validity of self- and informant reports of NPD, and (c) the precise mechanisms driving the discrepancy between self- and informant-reported pathological narcissism.

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References

Achenbach TM, Krukowski RA, Dunenci L, Ivanova MY. Assessment of adult psychopathology: Meta-analyses and implications of cross-informant correlations. Psychological Bulletin. 2005; 131:361–382.10.1037/0033-2909.131.3.361 [PubMed: 15869333]

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4. Washington, DC: Author; 2000. text revision

Bentler PM. Comparative fit indexes in structural models. Psychological Bulletin. 1990; 107:238–246.10.1037/0033-2909.107.2.238 [PubMed: 2320703]

Bernstein DP, Kasapis C, Bergman A, Weld E, Mitropoulou V, Horvath T, Siever LJ. Assessing Axis II disorders by informant interview. Journal of Personality Disorders. 1997; 11:158–167.10.1521/pedi.1997.11.2.158 [PubMed: 9203110]

Cain NM, Pincus AL, Ansell EB. Narcissism at the crossroads: Phenotypic description of pathological narcissism across clinical theory, social/personality psychology, and psychiatric diagnosis. Clinical Psychology Review. 2008; 28:638–656.10.1016/j.cpr.2007.09.006 [PubMed: 18029072]

Campbell WK, Reeder GD, Sedikides C, Elliot AJ. Narcissism and comparative self-enhancement strategies. Journal of Research in Personality. 2000; 34:329–347.10.1006/jrpe.2000.2282

Carlson EN, Vazire S, Oltmanns TF. You probably think this paper's about you: Narcissists' perceptions of their personality and reputation. Journal of Personality and Social Psychology. 2011; 101:185–201. 10.1037/a0023781 [PubMed: 21604895]

Clark LA, Livesley WJ, Morey L. Personality disorder assessment: The challenge of construct validity. Journal of Personality Disorders. 1997; 11:205–231.10.1521/pedi.1997.11.3.205 [PubMed: 9348486]

Clifton A, Turkheimer E, Oltmanns TF. Self- and peer perspectives on pathological personality traits and interpersonal problems. Psychological Assessment. 2005; 17:123–131.10.1037/1040-3590.17.2.123 [PubMed: 16029099]

Coid J, Yang M, Tyrer P, Roberts A, Ullrich S. Prevalence and correlates of personality disorder in Great Britain. British Journal of Psychiatry. 2006; 188:423–431.10.1192/bjp.188.5.423 [PubMed: 16648528]

Collins DR, Stukas AA. Narcissism and self-presentation: The moderating effects of accountability and contingencies of self-worth. Journal of Research in Personality. 2008; 42:1629–1634.10.1016/j.jrp.2008.06.011

Coolidge FL, Burns EB, Mooney JA. Reliability of observer ratings in the assessment of personality disorders: A preliminary study. Journal of Clinical Psychology. 1995; 51:22–28.10.1002/1097-4679(199501)51:1<22::AID-JCLP2270510105>3.0.CO;2-9 [PubMed: 7782470]

Dowson JH. *DSM–III–R* narcissistic personality disorder evaluated by patients' and informants' self-report questionnaires: Relationships with other personality disorders and a sense of entitlement as an indicator of narcissism. Comprehensive Psychiatry. 1992; 33:397–406.10.1016/0010-440X(92)90062-U [PubMed: 1451453]

Dreessen L, Hildebrand M, Arntz A. Patient-informant concordance on the Structured Clinical Interview for DSM-III-R personality disorders (SCID-II). Journal of Personality Disorders. 1998; 12:149–161.10.1521/pedi.1998.12.2.149 [PubMed: 9661101]

Ekselius L, Tillfors M, Furmark T, Fredrikson M. Personality disorders in the general population: DSM-IV and ICD-10 defined prevalence as related to sociodemographic profile. Personality and Individual Differences. 2001; 30:311–320.10.1016/S0191-8869(00)00048-9

Farwell L, Wohlwend-Lloyd R. Narcissistic processes: Optimistic expectations, favorable self-evaluations, and self-enhancing attributions. Journal of Personality. 1998; 66:65–83.10.1111/1467-6494.00003 [PubMed: 9457770]

Ferro T, Klein DN. Family history assessment of personality disorders: I. Concordance with direct interview and between pairs of informants. Journal of Personality Disorders. 1997; 11:123–136.10.1521/pedi.1997.11.2.123 [PubMed: 9203107]

Fiedler ER, Oltmanns TF, Turkheimer E. Traits associated with personality disorders and adjustment to military life: Predictive validity of self and peer reports. Military Medicine. 2004; 169:207–211. [PubMed: 15080240]

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Fossati A, Beauchanie TP, Grazioli F, Carretta I, Cortinovis F, Maffei C. A latent structure analysis of *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition,* Narcissistic Personality Disorder criteria. Comprehensive Psychiatry. 2005; 46:361–367.10.1016/j.comppsych.2004.11.006 [PubMed: 16122536]

Gabriel MT, Critelli JW, Ee JS. Narcissistic illusions in self-evaluations of intelligence and attractiveness. Journal of Personality. 1994; 62:143–155.10.1111/j.1467-6494.1994.tb00798.x

Ganellen RJ. Assessing normal and abnormal personality functioning: Strengths and weaknesses of self-report, observer, and performance-based methods. Journal of Personality Assessment. 2007; 89:30–40.10.1080/00223890701356987 [PubMed: 17604532]

Gosling SD, John OP, Craik KH, Robins RW. Do people know how they behave? Self-reported act frequencies compared with online codings by observers. Journal of Personality and Social Psychology. 1998; 74:1337–1349. 10.1037/0022-3514.74.5.1337 [PubMed: 9599447]

Grove WM, Tellegen A. Problems in the classification of personality disorders. Journal of Personality Disorders. 1991; 5:31–41.10.1521/pedi.1991.5.1.31

Hambleton, RK.; Swaminathan, H.; Rogers, HJ. Fundamentals of item response theory. Newbury Park, CA: Sage Publications; 1991.

Hu L, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling. 1999; 6:1–55.10.1080/10705519909540118

John OP, Robins RW. Accuracy and bias in self-perception: Individual differences in self-enhancement and the role of narcissism. Journal of Personality and Social Psychology. 1994; 66:206–219.10.1037/0022-3514.66.1.206 [PubMed: 8126650]

Klein DN. Patients' versus informants' reports of personality disorders in predicting 7½-year outcome in outpatients with depressive disorders. Psychological Assessment. 2003; 15:216–222.10.1037/1040-3590.15.2.216 [PubMed: 12847782]

Klonsky ED, Oltmanns TF, Turkheimer E. Informant-reports of personality disorder: Relation to self-reports and future research directions. Clinical Psychology: Science and Practice. 2002; 9:300–311.10.1093/clipsy.9.3.300

Levy KN, Chauhan P, Clarkin JF, Wasserman RH, Reynoso JS. Narcissistic pathology: Empirical approaches. Psychiatric Annals. 2009; 39:203–213.10.3928/00485713-20090401-03

Mann AH, Jenkins R, Cutting JC, Cowen PJ. The development and use of a standardized assessment of abnormal personality. Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences. 1981; 11:839–847.10.1017/S0033291700041337

McKeeman JL, Erickson MT. Self and informant ratings of SCID-II personality disorder items for nonreferred college women: Effects of item and participant characteristics. Journal of Clinical Psychology. 1997; 53:523–533.10.1002/(SICI)1097-4679(199710)53:6<523::AID-JCLP1>3.0.CO;2-L [PubMed: 9316807]

Meyer GJ, Finn SE, Eyde LD, Kay GG, Moreland KL, Dies RR, Reed GM. Psychological testing and psychological assessment: A review of evidence and issues. American Psychologist. 2001; 56:128–165.10.1037/0003-066X.56.2.128 [PubMed: 11279806]

Miller JD, Pilkonis PA, Clifton A. Self- and other-reports of traits from the five-factor model: Relations to personality disorder. Journal of Personality Disorders. 2005; 19:400–419. 10.1521/pedi.2005.19.4.400 [PubMed: 16178682]

Miller JD, Pilkonis PA, Morse JQ. Five-factor model prototypes for personality disorders: The utility of self-reports and observer ratings. Assessment. 2004; 11:127–138.10.1177/1073191104264962 [PubMed: 15171460]

Morf CC, Rhodewalt F. Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. Psychological Inquiry. 2001; 12:177–196.10.1207/S15327965PLI1204_1

Muthén, LK.; Muthén, BO. Mplus (Version 5.2) [Computer software]. Los Angeles, CA: Muthén & Muthén; 2007.

Okada M, Oltmanns TF. Comparison of three self-report measures of personality pathology. Journal of Psychopathology and Behavioral Assessment. 2009; 31:358–367.10.1007/s10862-009-9130-8 [PubMed: 20454642]

$watermark-text

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Oldham JM, Skodol AE, Kellman HD, Hyler SE, Doidge N, Rosnick L, Gallaher PE. Comorbidity of Axis I and Axis II disorders. The American Journal of Psychiatry. 1995; 152:571–578. [PubMed: 7694906]

Oldham JM. Personality disorders. Focus. 2005; 3:372–382.

Oltmanns TF, Gleason MEJ, Klonsky ED, Turkheimer E. Meta-perception for pathological personality traits: Do we know when others think that we are difficult? Consciousness and Cognition: An International Journal. 2005; 14:739–751.10.1016/j.concog.2005.07.001

Oltmanns, TF.; Gleason, MEJ. Personality, health, and social adjustment in later life. In: Cottler, LB., editor. Mental health in public health: The next 100 years. New York, NY: Oxford University Press; 2011. p. 151-179.

Oltmanns TF, Turkheimer E, Strauss ME. Peer assessment of personality traits and pathology in female college students. Assessment. 1998; 5:53–65.10.1177/107319119800500108 [PubMed: 9458342]

Oltmanns, TF.; Turkheimer, E. Perceptions of self and others regarding pathological personality traits. In: Krueger, RF.; Tackett, JL., editors. Personality and psychopathology. New York, NY: Guilford Press; 2006. p. 71-111.

Paris J. Estimating the prevalence of personality disorders in the community. Journal of Personality Disorders. 2010; 24:405–411.10.1521/pedi.2010.24.4.405 [PubMed: 20695802]

Paulhus DL, John OP. Egoistic and moralistic biases in self-perception: The interplay of self-deceptive styles with basic traits and motives. Journal of Personality. 1998; 66:1025–1060. 10.1111/1467-6494.00041

Perry JC. Problems and considerations in the valid assessment of personality disorders. The American Journal of Psychiatry. 1992; 149:1645–1653. [PubMed: 1443240]

Peselow ED, Sanfilipo MP, Fieve RR. Patients' and informants' reports of personality traits during and after major depression. Journal of Abnormal Psychology. 1994; 103:819–824.10.1037/0021-843X.103.4.819 [PubMed: 7822585]

Pilkonis PA, Heape CL, Ruddy J, Serrao P. Validity in the diagnosis of personality disorders: The use of the LEAD standard. Psychological Assessment: A Journal of Consulting and Clinical Psychology. 1991; 3:46–54.10.1037/1040-3590.3.1.46

Raskin R, Novacek J, Hogan R. Narcissism, self-esteem, and defensive self-enhancement. Journal of Personality. 1991; 59:19–38. 10.1111/j.1467-6494.1991.tb00766.x [PubMed: 2037962]

Raskin R, Terry H. A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. Journal of Personality and Social Psychology. 1988; 54:890–902.10.1037/0022-3514.54.5.890 [PubMed: 3379585]

Ready RE, Watson D, Clark LA. Psychiatric patient- and informant-reported personality: Predicting concurrent and future behavior. Assessment. 2002; 9:361–372.10.1177/1073191102238157 [PubMed: 12462756]

Riso LP, Klein DN, Anderson RL, Ouimette PC, Lizardi H. Concordance between patients and informants on the Personality Disorder Examination. The American Journal of Psychiatry. 1994; 151:568–573. [PubMed: 8147455]

Robins RW, John OP. Effects of visual perspective and narcissism on self-perception: Is seeing believing? Psychological Science. 1997; 8:37–42.10.1111/j.1467-9280.1997.tb00541.x

Samuels J, Eaton WW, Bienvenu OJ III, Brown CH, Costa PT Jr, Nestadt G. Prevalence and correlates of personality disorders in a community sample. British Journal of Psychiatry. 2002; 180:536–542.10.1192/bjp.180.6.536 [PubMed: 12042233]

Sedikides C. Assessment, enhancement, and verification determinants of the self-evaluation process. Journal of Personality and Social Psychology. 1993; 65:317–338.10.1037/0022-3514.65.2.317

Steiger, JH.; Lind, JC. Statistically based tests for the number of common factors. Paper presented at the annual meeting of the Psychometric Society; Iowa City, IA. 1980 May.

Stinson FS, Dawson DA, Goldstein RB, Chou SP, Huang B, Smith SM, Grant BF. Prevalence, correlates, disability, and comorbidity of DSM-IV narcissistic personality disorder: Results from the Wave 2 National Epidemiological Survey on Alcohol and Related Conditions. Journal of Clinical Psychiatry. 2008; 69:1033–1045.10.4088/JCP.v69n0701 [PubMed: 18557663]

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$watermark-text

Thissen, D.; Chen, W-H.; Bock, RD. Multilog (Version 7) [Computer software]. Lincolnwood, IN: Scientific Software, Inc; 2003.

Torgersen S, Kringlen E, Cramer V. The prevalence of personality disorders in a community sample. Archives of General Psychiatry. 2001; 58:590–596.10.1001/archpsyc.58.6.590 [PubMed: 11386989]

Tucker LR, Lewis C. A reliability coefficient for maximum likelihood factor analysis. Psychometrika. 1973; 38:1–10.

Walters P, Moran P, Choudhury P, Lee T, Mann A. Screening for personality disorder: A comparison of personality disorder assessment by patients and informants. International Journal of Methods in Psychiatric Research. 2004; 13:34–39.10.1002/mpr.162 [PubMed: 15181485]

Westen D. Divergences between clinical and research methods for assessing personality disorders: Implications for research and the evolution of Axis II. The American Journal of Psychiatry. 1997; 154:895–903. [PubMed: 9210738]

Widiger, TA.; Boyd, SE. Personality disorder assessment instruments. In: Butcher, JN., editor. Oxford handbook of personality assessment. New York, NY: Oxford University Press; 2009. p. 336-363.

Widiger TA, Frances A. Interviews and inventories for the measurement of personality disorders. Clinical Psychology Review. 1987; 7:49–75. 10.1016/0272-7358(87)90004-3

Wink P. Two faces of narcissism. Journal of Personality and Social Psychology. 1991; 61:590–597.10.1037/0022-3514.61.4.590 [PubMed: 1960651]

Zimmerman M, Pfohl B, Coryell W, Stangl D, Corenthal C. Diagnosing personality disorder in depressed patients: A comparison of patient and informant interviews. Archives of General Psychiatry. 1988; 45:733–737. [PubMed: 3395201]

Zimmerman M, Pfohl B, Stangl D, Corenthal C. Assessment of DSM-III personality disorders: The importance of interviewing an informant. Journal of Clinical Psychiatry. 1986; 47:261–263. [PubMed: 3700346]

Zimmerman M. Diagnosing personality disorders: A review of issues and research methods. Archives of General Psychiatry. 1994; 51:225–245. [PubMed: 8122959]

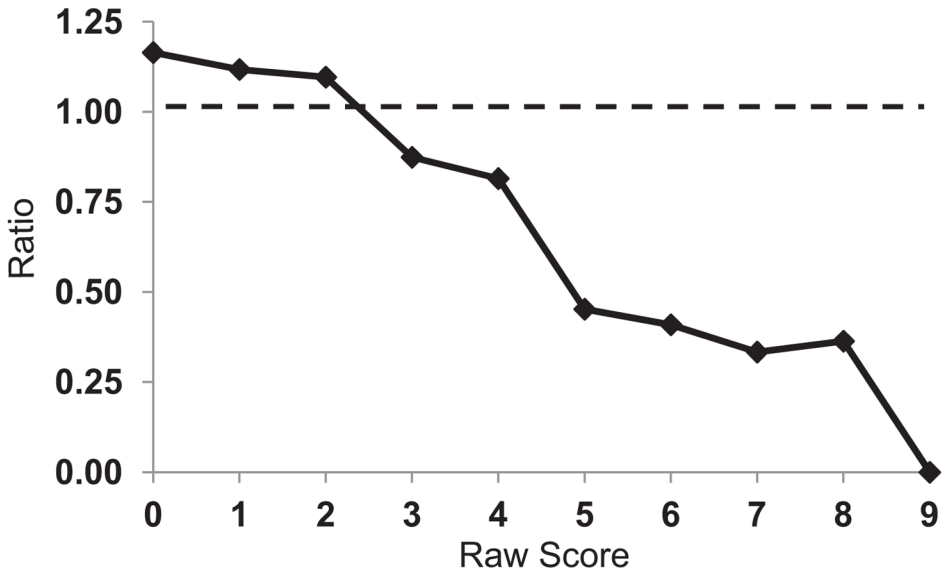

Figure 1.
Ratios (self/informant) of raw score endorsement frequencies across the number of NPD criteria endorsed. Raw score = the number of narcissistic personality disorder criteria endorsed. The horizontal dashed line represents where the data points would lie if selves and informants were equally likely to endorse each raw score.

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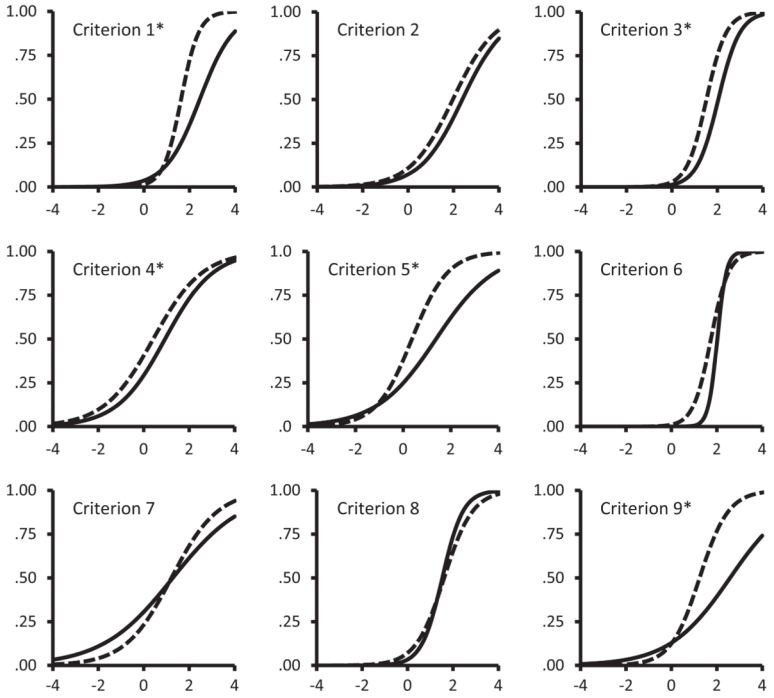

Figure 2.

ICCs for the self- and informant-reported narcissistic personality disorder diagnostic criteria. In all graphs, the horizontal axis represents the latent narcissistic PD trait in *SD* units (range from low, − 4.0, to high 4.0) and the vertical axis represents the probability that an item would be endorsed, from .00 (no probability) to 1.00 (certainty). Solid lines represent the self-reported ICCs; segmented lines represent the informant-reported ICCs. * $p < .006$.

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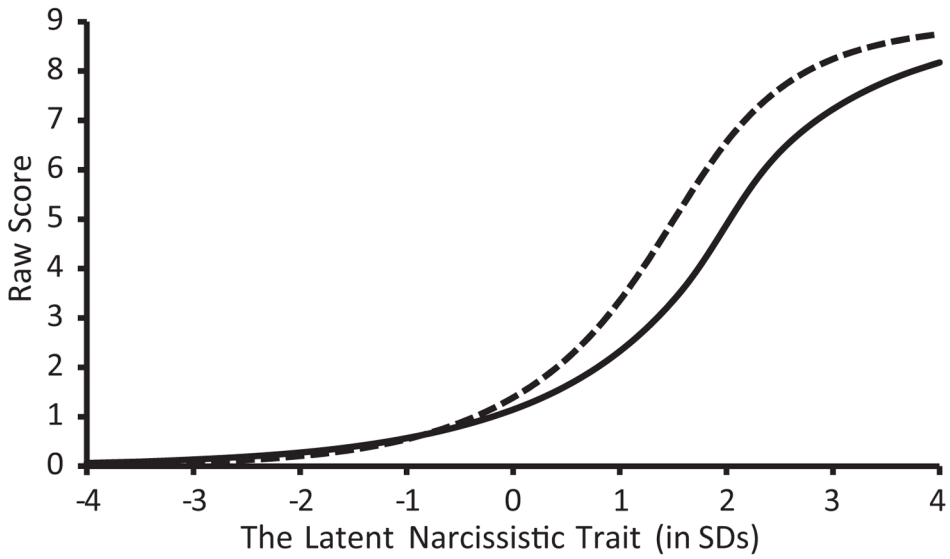

Figure 3.
Test characteristic curves for self-reported data (solid line) and informant-reported data (segmented line). A raw score is equal to the number of NPD features endorsed.

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Table 1

Self- and Informant-Reported Frequencies of Item Endorsements and Agreement Information

Item	S_{Yes}	I_{Yes}	χ^2	S_{No}, I_{No}	S_{Yes}, I_{No}	S_{No}, I_{Yes}	S_{Yes}, I_{Yes}	κ
1. Has a grandiose self-importance	80	110	4.74*	696	60	90	20	.12***
2. Has fantasies of extreme success	79	128	11.60***	671	66	115	13	.01
3. Believes self is special	52	98	14.11***	730	39	85	13	.10***
4. Requires excessive admiration	278	362	11.03***	368	132	216	146	.14***
5. Feels entitled	240	351	20.85***	381	133	244	107	.05
6. Is interpersonally exploitative	24	66	19.6***	787	16	58	8	.14***
7. Lacks empathy	278	323	3.37	444	192	146	86	.07
8. Is envious/views self as envied	101	120	1.63	658	80	99	21	.07*
9. Shows arrogance	129	175	6.96**	603	88	134	41	.12***
Diagnosis	36	92	24.5**	752	30	86	6	.04

Note. S_{Yes} = The number of selves who reported that the item (criterion or diagnosis) was present; I_{Yes} = The number of informants who reported that the item was present; S_{No}, I_{No} = The number of cases that both selves and informants reported that the item was absent (Agree); S_{Yes}, I_{No} = The number of cases that selves reported that the item was present and informants reported that the item was absent (Disagree); S_{No}, I_{Yes} = The number of cases that selves reported that the item was absent and informants reported that item was present (Disagree); S_{Yes}, I_{Yes} = The number of cases that both selves and informants reported that the item was present (Agree). Items are abbreviated for copyright reasons.

*$p < .05$.

**$p \leq .01$.

***$p \leq .001$.

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Table 2

Self- and Informant-reported Frequency Matrix of Raw Score Combinations

		Informant-reported Raw Score										
		0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	
Self-reported Raw Score	0	83	69	59	26	12	8	3	4	4	1	269
	1	74	68	34	33	19	13	7	3	4	2	257
	2	38	46	36	23	9	10	6	3	0	0	171
	3	21	30	15	14	8	4	2	2	1	0	97
	4	6	12	9	7	1	4	1	0	2	2	44
	5	2	5	2	5	2	2	1	0	0	0	19
	6	2	0	1	2	2	0	2	0	0	0	9
	7	3	0	0	0	0	1	0	0	0	0	4
	8	2	0	0	1	1	0	0	0	0	0	4
	9	0	0	0	0	0	0	0	0	0	0	0
		231	230	156	111	54	42	22	12	11	5	

Note. Raw scores represent the number of narcissistic personality disorder (NPD) features reported. Cells shaded in gray along the diagonal indicate the instances in which selves and informants agreed on the total number of NPD features present. Examples of how to interpret table: There were 83 instances in which both selves and informants reported no NPD features (NPD_{00} = 83), There were 69 instances in which selves reported no NPD features and informants reported one NPD feature (NPD_{01} = 69), There were 10 instances in which selves reported two NPD features and informants reported five NPD features and (NPD_{25} = 10), There were three instances in which selves reported seven features and informants reported no NPD features (NPD_{70} = 3), etc. The numbers across the bottom of the table (231, 230, … 5) represent the total number of informants who reported each raw score. The numbers along the rightmost side of the table (269, 257, … 0) represent the total number of selves who reported each raw score.

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Table 3

Item Parameters (and Standard Errors) for Self- and Informant-Reported Narcissistic Personality Disorder Features

	Selves		Informants	
Criterion	***a* (*SE*)**	***b* (*SE*)**	***a* (*SE*)**	***b* (*SE*)**
1. Has a grandiose self-importance	1.33 (0.20)*	2.20 (0.24)*	2.58 (0.31)*	1.38 (0.08)*
2. Has fantasies of extreme success	1.07 (0.18)	2.39 (0.32)	1.07 (0.16)	1.97 (0.24)
3. Believes self is special	2.11 (0.32)	2.04 (0.17)*	2.30 (0.28)	1.52 (0.10)*
4. Requires excessive admiration	0.94 (0.12)	0.94 (0.14)*	0.92 (0.12)	0.42 (0.11)*
5. Feels entitled	0.80 (0.12)*	1.38 (0.21)*	1.33 (0.14)*	0.37 (0.08)*
6. Is interpersonally exploitative	5.06 (1.19)	2.02 (0.10)	2.58 (0.37)	1.74 (0.11)
7. Lacks empathy	0.64 (0.11)	1.28 (0.24)	0.98 (0.13)	1.22 (0.16)
8. Is envious/views self as envied	2.19 (0.27)	1.53 (0.11)	1.59 (0.20)	1.61 (0.14)
9. Shows arrogance	0.74 (0.14)*	2.58 (0.44)*	1.57 (0.18)*	1.24 (0.11)*

Note. *a* = discrimination; *b* = difficulty.

* $p < .006$. Items are abbreviated for copyright reasons.