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Brief report

# The NPI-16 as a short measure of narcissism

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## Abstract

Narcissism has received increased attention in the past few decades as a sub-clinical individual difference with important everyday consequences, such as self-enhancement in perceptions of one's own behavior and attributes. The most widespread measure used by non-clinical researchers, the 40-item Narcissistic Personality Inventory or NPI-40, captures a range of different facets of the construct but its length may prohibit its use in settings where time pressure and respondent fatigue are major concerns. In this article, we draw from the NPI-40 set of items to create and validate a shorter, unidimensional measure, the NPI-16. In five studies, we show that this short NPI closely parallels the NPI-40 in its relation to other personality measures and dependent variables. We conclude that the NPI-16 has notable face, internal, discriminant, and predictive validity and that it can serve as an alternative measure of narcissism when situations do not allow the use of longer inventories.

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## 1. Introduction

Narcissism is increasingly recognized as an important complex of personality traits and processes that involve a grandiose yet fragile sense of self and entitlement

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as well as a preoccupation with success and demands for admiration (see Morf & Rhodewalt, 2001 for a recent review). In the past few decades, sub-clinical variance in narcissism has received growing attention as a personality dimension, showing an impressive ability to predict a wide range of dependent variables, ranging from emotional reactivity to self-appraisals of performance.

Much current research on narcissism relies on either a 40-item Narcissistic Personality Inventory (the NPI-40, Raskin & Terry, 1988) or a 37-item measure (Emmons, 1987). In this paper, we develop a shorter measure, the NPI-16, a new tool that could expand scholarship on narcissism. Our hope is that the NPI-16 will facilitate research where a longer measure would be impractical, as in certain field work and/or with time- and attention-strapped respondents. We do not wish to obscure the subcomponents of narcissism or to short-change its complexity; rather, our intent is to expand researchers' opportunities to further explore narcissism's consequences.

Several studies have explored the factor structure of narcissism (e.g., Emmons, 1984, 1987; Raskin & Terry, 1988). However, nearly all recent empirical results examining the effects of narcissism have revolved around total NPI scores. Indeed, in their work on narcissism and self-enhancement, Wallace and Baumeister (2002) noted that total NPI scores were consistently more predictive than any of the subscale scores. Thus, our approach was to create a short measure of narcissism as a single construct, albeit one that represents the different aspects of narcissism as reflected in the original NPI.

We developed and tested a short measure of narcissism (the NPI-16) in five studies. In Study 1, we selected items from the larger NPI-40 and compared the short and long measures as well as their relationships with the Big Five personality traits. In Study 2, we considered convergent/discriminant validity and in Study 3, we examined test–retest data. In Studies 4 and 5, we explored predictive validity.

## 2. Study 1

In Study 1, we identified and initially validated a short measure of narcissism, drawing on items in the NPI-40 (Raskin & Terry, 1988). To reflect different aspects of narcissism captured in the NPI-40, we considered prior work such as Emmons's (1987) factors of exploitiveness-entitlement and self-absorption/self-admiration as well as Raskin and Terry's (1988) dimensions including authority and self-sufficiency. We also sought to balance psychometric properties and speed, reasoning that a measure with more than 20 items would not provide enough time-savings and that a measure of fewer than 10 items would not provide sufficient reliability.

We chose 16 pairs of items from the NPI-40 with two criteria in mind. First, we pursued face validity by selecting items primarily representative of narcissism rather than related but distinct constructs such as leadership self-efficacy, assertiveness, vanity, and envy. Thus, for instance, we omitted the item pairs featuring the narcissistic responses "I see myself as a good leader," "I am assertive," "I usually dominate any conversation," and "I am envious of other people's good fortune," focusing instead

on items such as “I really like to be the center of attention” and “I am an extraordinary person.” Our second consideration was coverage of domains: we selected items spanning the range of dimensions identified by Emmons (1987) as well as Raskin and Terry (1988). We sought to avoid a scale dominated by a single facet of narcissism. Instead, we attempted to reflect the various facets of narcissism captured by the full NPI, such as self-ascribed authority, superiority, and entitlement, as well as self-absorption. The 16 item pairs are shown in Appendix A.

In Study 1, we compared this subset with the full scale. We administered the NPI-40 to a large university student sample and also measured the Big Five personality factors and self-esteem. We expected that the NPI-16 and -40 would be strongly correlated and that they would show the same pattern of correlations with other measures. To test discriminant validity, we measured belief in a just world, expecting it would not correlate with either the NPI-16 or -40.

### 2.1. Method

Seven hundred seventy-six undergraduate university students completed packets of personality measures as a course requirement for introductory-level courses in psychology (434 women, 342 men). Mean age was 20.50 years ( $SD = 2.64$ ). Packets included several personality measures in counterbalanced order. Along with the NPI-40, participants completed Costa and McCrae’s (1992) 60-item NEO Five Factor Inventory. Participants rated their agreement with items such as “I really enjoy talking to people” (Extraversion) on a five-point scale ranging from “Strongly disagree” (1) to “Strongly agree” (5). Using the same rating scale, participants also completed a 10-item self-esteem scale (Rosenberg, 1965) and, to establish discriminant validity, the 20-item Just World Scale (Rubin & Paplau, 1973).

### 2.2. Results

The NPI-16 score was computed as the mean across the 16 items, with narcissism-consistent responses coded as 1 and narcissism-inconsistent responses coded as 0. The NPI-16 had an  $\alpha$  of .72 while the full 40-item measure revealed an  $\alpha$  of .84<sup>1</sup>. The mean interitem correlations were .12 for the 40-item scale and .13 for the 16-item scale. For the 40-item scale, loadings on the first unrotated factor ranged from .06 to .59 with the first factor capturing 15.0 percent of variance. For the NPI-16, loadings on the first unrotated factor ranged from .13 to .66 with the first factor capturing 19.9 percent of variance. The two measures were correlated at  $r = .90$  ( $p < .001$ ). The 16-item scale correlated with the remaining 24 items from the NPI-40 at  $r = .71$  ( $p < .001$ ). The mean was .35 (.20) for the NPI-16 and .39 (.17) for the NPI-40 (see Table 1).

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<sup>1</sup> To confirm our expectations about scale length, we tested a number of alternative measures. Reliability dropped substantially with shorter measures (e.g., an 8-item subset yielded an  $\alpha$  of .59 and showed more divergent correlations with other personality measures). Longer measures showed improved reliability but few gains in correlations.

Table 1  
Mean values and gender differences in narcissism

	16-item scale			40-item scale		
	<i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>df</i> )	<i>p</i>	<i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>df</i> )	<i>p</i>
Study 1						
All	.35 (.20)			.39 (.17)		
Men	.37 (.20)	1.83 (772)	.07	.40 (.18)	1.61 (772)	.10
Women	.34 (.20)			.38 (.17)		
Study 2						
All	.40 (.19)					
Men	.41 (.19)	1.66 (165)	.10	—	—	—
Women	.36 (.17)			—		
Study 3						
All	.31 (.19)					
Men	.39 (.24)	3.00 (141)	<.01	—	—	—
Women	.29 (.16)			—		
Study 4						
All	.37 (.19)			.40 (.17)		
Men	.41 (.17)	2.22 (173)	.03	.44 (.16)	2.66 (173)	<.01
Women	.35 (.20)			.38 (.17)		
Study 5						
All	.39 (.18)					
Men	.43 (.21)	1.75 (40)	.09	—	—	—
Women	.33 (.11)			—		

Note. *t* and *p* values indicate tests of mean differences for men versus women.

As seen in Table 2, the NPI-16 and NPI-40 scales had extremely similar patterns of correlations with the Big Five personality constructs. Both the 16- and 40-item scales correlated positively with Openness to Experience, Conscientiousness, and Extraversion and both correlated negatively with Agreeableness and Neuroticism. None of the correlations between the two narcissism measures and the Big Five dimensions differed by more than .10. Consistent with prior work on self-esteem and narcissism (Campbell, Rudich, & Sedikides, 2002), the scales showed similar moderate and significant correlations with self-esteem. As expected, neither the 16- nor the 40-item measures showed a significant correlation with the Just World Scale.

This same pattern of parallel correlations emerged when the NPI-16 was used for a randomly selected half of the dataset and the NPI-40 was used for the other half (NPI-16 and -40 correlations were within .10 of one another and consistent in direction and significance). Finally, as found in previous work (e.g., Foster, Campbell, & Twenge, 2003; Watson, Grisham, Trotter, & Biderman, 1984), men had slightly higher mean levels of narcissism across both measures (see Table 1).

In sum, the NPI-16 showed satisfactory internal consistency, correlated strongly with the 40-item NPI, exhibited correlations to Big Five constructs and self-esteem that were very similar to those of the longer measure, and showed the same sex differences as the longer measure.

Table 2  
Correlations with narcissism measures

	16-item scale	40-item scale
Study 1		
40-Item NPI	.90**	—
Remaining NPI items (24 non-included items)	.71**	—
Openness to experience (NEO measure)	.24**	.24**
Conscientiousness (NEO measure)	.14**	.09*
Extraversion (NEO measure)	.36**	.26**
Agreeableness (NEO measure)	-.23**	-.25**
Neuroticism (NEO measure)	-.21**	-.13**
Self-esteem (Rosenberg measure)	.30**	.38**
Belief in a just world	.04	.06
Study 2		
Openness to experience (BFI measure)	.32**	—
Extraversion (BFI measure)	.41**	—
Self-esteem (Robins et al. measure)	.24**	—
Self-monitoring	.37**	—
Dispositionism	.06	—
Study 3		
16-item scale retest (5 weeks later)	.85**	—
Study 4		
40-item NPI	.90**	—
Self overall performance ranking	-.25**	-.24**
Self effort ranking	-.17**	-.20**
Self creativity ranking	-.28**	-.21**
Self power rating	.29**	.23**
Self attractiveness rating	.37**	.31**
Self cooperativeness ranking	.05	-.04
Study 5		
Actual performance	.15	—
Self-esteem	.34*	—
Estimated relative accuracy	.38*	—
Estimated relative accuracy after controlling for self-esteem and actual performance	.36*	—

Note. Study 1,  $n = 776$ ; Study 2,  $n = 167$ ; Study 3,  $n = 117$ ; Study 4,  $n = 176$ ; Study 5,  $n = 43$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

### 3. Study 2

Study 2 sought additional convergent validity for the NPI-16 in a different adult population: master's of business administration students (MBAs). We expected narcissism would correlate positively with self-esteem, extraversion, openness to experience, and self-monitoring. For discriminant validity, we measured dispositionism, expecting it to be unrelated to narcissism.

### 3.1. Method

#### 3.1.1. Participants

One hundred sixty-seven full-time MBA students (44 women, 123 men) participated in Study 2 as part of a class exercise. Mean age was 28.31 ( $SD = 3.53$ ).

#### 3.1.2. Materials

Participants completed the NPI-16 as well as measures of self-esteem, extraversion, openness, self-monitoring, and dispositionism. Self-esteem was measured using the Robins, Hendin, and Trzesniewski (2001) single-item self-esteem scale. Participants indicated agreement with the statement “I have high self-esteem” on a scale ranging from “Disagree strongly” (1) to “Agree strongly” (5). Extraversion and Openness to Experience were measured with the related items from the Big Five Inventory (John, Donahue, & Kentle, 1991) on a scale ranging from “Disagree strongly” (1) to “Agree strongly” (5). Self-monitoring was measured with the Lennox and Wolfe (1984) measure, with ratings on a six-point scale ranging from “Certainly always false” (1) to “Certainly always true” (6). Dispositionism was measured using a three-item scale (Chiu, Hong, & Dweck, 1997), including “The kind of person someone is something very basic about them and it can’t be changed very much.” Items were rated on a five-point scale ranging from “Disagree strongly” (1) to “Agree strongly” (5).

### 3.2. Results and discussion

The NPI-16 had an  $\alpha$  of .68 and a mean of .40 ( $SD = .19$ ). As expected, and as shown in Table 2, narcissism was positively correlated with openness, extraversion, self-esteem, and self-monitoring. Consistent with our expectations of divergent validity, narcissism was not significantly correlated with dispositionism. As in Study 1, men scored higher in narcissism than women (see Table 1). Study 2 thus provided additional evidence of convergent validity for the NPI-16. The correlations we observed with our 16-item narcissism measure were similar to those observed by Emmons (1984) in his examination of a longer version of the Narcissistic Personality Inventory.

## 4. Study 3

In Study 3, we examined the test–retest reliability for the NPI-16 over a 5-week interval. We expected a high correlation between narcissism scores over this period.

### 4.1. Method

At Time 1, 158 undergraduate university students completed a packet of personality measures (118 women, 40 men). Mean age was 25.23 ( $SD = 7.53$ ). At Time 2 (5 weeks later), 117 of these students completed a second questionnaire packet. Students

received extra course credit for their participation. The NPI-16 was included at the end of each questionnaire packet.

#### 4.2. Results and discussion

The NPI-16 had an  $\alpha$  of .69 at Time 1 and an  $\alpha$  of .78 at Time 2. The Time 1 mean for the NPI-16 was .31 (.19) while the Time 2 mean was .32 (.22). As shown in Table 2, scores on the NPI-16 were stable over a 5-week period ( $r = .85, p < .01$ ). As in Studies 1 and 2, men scored significantly higher in narcissism than women (see Table 1).

### 5. Study 4

In Study 4, we sought evidence of the predictive validity of the NPI-16. Prior work suggests that narcissists tend to give high estimates of their contributions to group tasks (e.g., John & Robins, 1994) and their attractiveness (e.g., Gabriel, Critelli, & Ee, 1994). Participants completed the NPI-40 and then participated in a group decision-making task. After the task, they ranked their own contributions to the discussion and their own attractiveness. We expected the NPI-16 to parallel the NPI-40 in predicting judgments of one's own performance, effort, and creativity. Likewise, we expected both measures to similarly predict participants' ratings of their own power and attractiveness. We did not expect either narcissism measure to predict rankings of cooperativeness (which we included to test discriminant validity; cf. Campbell et al., 2002).

#### 5.1. Method

##### 5.1.1. Participants

One hundred and seventy-six undergraduate university students participated in Study 4 as part of a research credit program for introductory-level courses in psychology (105 women, 71 men). Mean age was 20.34 ( $SD = 3.19$ ).

##### 5.1.2. Materials and procedure

Participants completed the NPI-40 as part of prescreening materials before participating in the session. Participants were recruited in 44 groups of four in which all members were unfamiliar with one another. Participants engaged in a group decision-making task, rank ordering the importance of 15 items (e.g., matches, compass) for their ability to aid a crew's survival after crashlanding on the moon, with the goal of making the best possible decisions as a group. After 20 minutes, discussion was ended and participants completed post-discussion materials through a computer-based survey. Participants ranked themselves and their three teammates (from "1" to "4") on several dimensions, including overall performance, effort, creativity, and cooperativeness. Participants also rated their own power and influence as well as their own attractiveness. Power/influence over the group discussion was rated on a scale ranging from "None at all" (1) to "Very much" (7). Attractiveness was rated on a scale ranging from "Not attractive at all" (1) to "Very attractive" (7).

## 5.2. Results and discussion

The NPI-16 had an  $\alpha$  of .69 while the NPI-40 had an  $\alpha$  of .83. The NPI-16 correlated with the 40-item scale at  $r = .90$  ( $p < .001$ ).

Our expectations were confirmed: narcissism was related to higher rankings for overall performance, effort, and creativity (Table 2). As predicted, narcissism was also related to the tendency to rate oneself as more powerful and influential in the discussion and as more attractive. As expected, narcissism was not significantly related to self-rankings of cooperativeness. As before, men showed higher levels of narcissism (Table 1).

## 6. Study 5

In Study 5, we sought additional evidence of the predictive validity of the NPI-16 using a different task and sample. MBA student participants completed a judgment task and then estimated their performance relative to classmates. As in Study 4 and in prior work (e.g., John & Robins, 1994), we expected that narcissism would correlate with these estimates and that this link would remain after controlling for actual performance as well as self-esteem.

### 6.1. Method

Forty-three full-time MBA students (15 women, 28 men) participated as part of a class exercise. Mean age was 28.33 ( $SD = 2.34$ ). Participants completed the NPI-16 as well as a measure of self-esteem (see Study 2). Participants gave ranges for 10 quantity estimation questions, such as “How many murders were there in the United States in 1999?” and “What is the total revenue generated in the US market for lawn and garden equipment?” Participants were asked to give a range that they were 90 percent sure would contain the actual value. After recording ranges, students noted how accurate they thought their estimates were relative to their classmates, on a scale ranging from 0 (“I’m at the very bottom”) to 99 (“I’m at the very top”).

### 6.2. Results and discussion

The NPI-16 had an  $\alpha$  of .65 and a mean of .39 ( $SD = .18$ ). As shown in Table 2, narcissism was not significantly linked with actual performance, but was significantly correlated with participants’ estimates of their relative accuracy. Narcissism was also positively correlated with self-esteem, though self-esteem was not significantly correlated with either actual or estimated relative accuracy ( $r_s = -.05$  and  $.06$ , *ns*, respectively). In a multiple regression predicting self-estimates of accuracy with narcissism, self-esteem, and actual percentile, only narcissism emerged as significantly predictive. The partial correlation between narcissism and estimated accuracy controlling for self-esteem and actual accuracy was  $r = .36$ ,  $p = .03$ . Consistent with the results of the prior studies, men showed marginally higher levels of narcissism (Table 1).



In sum, as expected, Study 5 showed additional evidence for the predictive validity of the NPI-16. Narcissism was significantly and positively correlated with participants' estimates of their own relative performance in a judgment task.

## 7. Additional support and analyses

Further evidence for the validity of the NPI-16 comes from recent work by Ames and Kammrath (2004) on self-estimated performance in interpersonal judgments. In two studies, participants estimated their relative performance on social judgment tasks (e.g., reading a partner's emotions). The pattern of results parallel those reported here in Study 5: estimated performance was largely unrelated to actual performance, but estimated performance was strongly predicted by narcissism (measured using the NPI-16). The effect of narcissism on self-estimates persisted after controlling for self-esteem and actual performance.

After our validation work on the NPI-16, we learned of unpublished and in-press work on a 15-item measure of narcissism (the NPI-15; Armor, 2002; Schütz, Marcus, & Sellin, 2004; NPI-40 items 1, 4, 7, 9, 10, 12, 13, 18, 27, 30, 32, 33, 34, 36, and 40; nine items in common with the NPI-16). These items were selected on the basis of loadings on the first unrotated principal component in Raskin and Terry's analysis (1988). This strategy produced a highly reliable scale, though one that is more concentrated on certain narcissism components than the NPI-16. Seven of the 15 items fall on Emmons's (1987) leadership/authority factor. With Raskin and Terry's (1988) dimensions, six of the 16 fall on the authority factor. In contrast, our NPI-16 items are, by design, more evenly distributed across components (e.g., four items from each of the Emmons factors).

Having used the NPI-40 in Studies 1 and 4, we compared the NPI-16 with the NPI-15. The NPI-15 revealed substantial alphas (.81 in Study 1; .78 in Study 4) and was significantly correlated with both the NPI-16 (.86 in Study 1; .84 in Study 4) and the NPI-40 (.91 in both studies). The NPI-15, -16, and -40 all showed virtually the same pattern of correlations with our other measures in both Studies 1 and 4. In only one case was there is a difference in significance: while the NPI-16 and -40 were significantly negatively related to self-rankings of creativity in Study 4, the NPI-15 correlation was not significant ( $r = -.11, p = .17$ ). Our conclusion is that both the NPI-15 and the NPI-16 are meaningful short measures of narcissism with good predictive validity. However, while the NPI-15 yields greater internal consistency by focusing more on the authority dimension of narcissism, the NPI-16 spans more of the components of narcissism identified in past research.

## 8. Conclusion

In closing, we believe that work to date on narcissism is revealing a fascinating story. Much is left to be understood about the nature and important consequences of narcissism, and we suggest that the NPI-16 is a valid way to capture this construct

in situations in which use of a longer measure would be impractical. We sense that some of those situations—such as field settings and/or those featuring respondents with limited willingness to complete longer measures—are ones in which narcissism may have especially intriguing effects. We look forward to seeing work on narcissism continue to expand and to seeing what this new measure reveals.

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## Appendix A

### 16-item pair measure of narcissism

Narcissistic response	Non-narcissistic response	NPI-40 item
I know that I am good because everybody keeps telling me so	When people compliment me I sometimes get embarrassed	4
I like to be the center of attention	I prefer to blend in with the crowd	7
I think I am a special person	I am no better or nor worse than most people	9
I like having authority over people	I don't mind following orders	12
I find it easy to manipulate people	I don't like it when I find myself manipulating people	13
I insist upon getting the respect that is due me	I usually get the respect that I deserve	14
I am apt to show off if I get the chance	I try not to be a show off	20
I always know what I am doing	Sometimes I am not sure of what I am doing	21
Everybody likes to hear my stories	Sometimes I tell good stories	23
I expect a great deal from other people	I like to do things for other people	24
I really like to be the center of attention	It makes me uncomfortable to be the center of attention	30
People always seem to recognize my authority	Being an authority doesn't mean that much to me	32
I am going to be a great person	I hope I am going to be successful	34
I can make anybody believe anything I want them to	People sometimes believe what I tell them	35
I am more capable than other people	There is a lot that I can learn from other people	39
I am an extraordinary person	I am much like everybody else	40

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