



# Detecting Narcissistic Grandiosity in a Job Interview: The Validation of the Narcissism Interview Scale for Employment

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## ABSTRACT

Although employee selection is typically oriented toward the assessment of knowledge, skills, and abilities to identify employees who will complement such an environment, it is perhaps equally important to distinguish employees with the potential to disrupt it. Workers high in narcissistic grandiosity tend to abuse their power and control for personal gain, engage in abusive behaviors toward others, and disobey organizational policies. Across four studies, we sought to develop the Narcissism Interview Scale for Employment (NISE) to assess narcissistic grandiosity. Study 1 created interview questions that elicited responses with narcissistic grandiosity content, structured as both behavioral/situational and work-specific. Study 2 identified the best performing items and developed rating materials. Study 3 demonstrated the NISE is associated with traditional survey assessments of narcissistic grandiosity and predicted interpersonal aggression. Study 4 demonstrated that applicants are likely to perceive the NISE at least as favorably as other popular interview questions. Overall, the results showed that the NISE may be incorporated into the interview process to assess applicant narcissistic grandiosity tendencies, but additional research is needed to further establish the construct validity of the instrument, clarify applicant reactions to its use, and assess its predictive utility across a variety of work contexts.

## ARTICLE HISTORY

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Workers high in narcissistic grandiosity pose a unique dilemma to organizations because the workers present themselves as highly motivated and competent, but their behaviors are often destructive within team settings. A workforce higher in narcissistic grandiosity may put an organization at risk of pursuing short-term gains over long-term economic health, valuing profit over corporate responsibility, and adopting a transactional “what’s in it for me” orientation over the needs of the organization’s clients (Campbell et al., 2011). People showing high levels of narcissism also tend to respond emotionally to issues at work, which can lead to them completely disengaging from their tasks (Chen et al., 2013). Employees high in narcissism are more prone to engaging in workplace incivility, show higher levels of anger in response to workplace incivility, and are more likely to experience workplace incivility from others due to their perceived vulnerability (Liu et al., 2020; Meier & Semmer, 2013). The negative consequences of narcissistic grandiosity in the workplace are likely to become more prevalent because some research indicates narcissistic grandiosity is on the rise within Western societies (e.g., Twenge & Foster, 2008, 2010; Twenge et al., 2008).

Although organizations may be interested in assessing narcissistic grandiosity amongst applicants, narcissistic grandiosity might be difficult to measure through self-report because the construct involves distorted favorable self-views (Grijalva & Zhang, 2016; Hart et al., 2015; Judge et al., 2006). In addition, research indicates that self-report

personality tests are viewed negatively by job applicants (Rosse et al., 1994; Smither et al., 1993; Steiner & Gilliland, 1996). Negative applicant reactions impact the employee selection process because they have been associated with reduced likelihood of pursuit and acceptance of a job offer, reluctance to refer other potential employees, and lowered test taker motivation (Hausknecht et al., 2004; Macan et al., 1994; Murphy, 1986; Rynes & Barber, 1990; Smither et al., 1993; Truxillo et al., 2002). An employment interview is one of the most common selection tools, often perceived positively by applicants, and may overcome the limitations of self-report (Hausknecht et al., 2004). Several empirical studies have used structured employment interviews to assess personality (Barrick et al., 2000; Huffcutt et al., 2001; Van Iddekinge et al., 2005), but a validated interview tool to measure narcissism has not been created. We developed interview questions to measure narcissistic grandiosity within an employment setting. The Narcissism Interview Scale for Employment (NISE) was developed from four studies that addressed item development, construct validation, and applicant reactions.

## Narcissism

The term narcissism comes from the mythical Greek character Narcissus, who fell in love with his own image reflected in the water. A common conceptualization of narcissism is narcissistic grandiosity, which includes inflated views of the

self, explicit and outward displays of immodesty, beliefs of superiority, desire to be in authority, self-centeredness, self-absorption, and manipulative (Miller et al., 2017; Raskin & Hall, 1979; Raskin & Terry, 1988). In a leadership context, narcissistic grandiosity can manifest into harmful behaviors, such as the abuse of power for personal gain, inflicting damage on others (e.g., bullying), over-exercise of control for personal needs, and rule breaking for personal gain (Higgs, 2009).

Psychologists debate upon the breadth of the narcissism construct (Miller et al., 2017). Narcissism has been described as comprising of two factors: grandiosity and vulnerability (Hendin & Cheek, 1997; Wink, 1991). Narcissistic vulnerability involves feelings of distrust while presenting distress and fragility (e.g., “I have often felt that strangers are looking at me critically”). A three factor of narcissism has also been proposed, which includes characteristics of agentic and assertive aspects of extraversion, antagonism (disagreeableness), and neuroticism (lack of emotional stability; Miller et al., 2016; Miller et al., 2018). It remains unclear which narcissistic characteristics are most central or peripheral within narcissism content domain (Miller et al., 2017), but the focus of current study is on the assessment of narcissistic grandiosity during job interviews.

### **Job interviews and personality assessment**

There is evidence that interviews can be designed to elicit information about personality characteristics. Huffcutt et al. (2001) developed a comprehensive taxonomy of seven types of constructs that interviews could assess. The mapping process between psychological constructs and interview dimensions found that personality (35%) and applied social skills (28%) were the most frequently rated constructs. Other researchers have developed interview questions to measure Five Factor Model traits such as extraversion and conscientiousness (Barrick et al., 2000; Van Iddekinge et al., 2005). This research has recently extended to asynchronous video interviews (AVIs), which was the method used for data collection in the current studies. Hickman et al. (2021), for example, found that AVIs have utility for measuring personality traits, and Suen et al. (2019) demonstrated that an AI-based scoring algorithm of AVIs successfully recognized Five Factor Model traits with a high degree of accuracy. Composite AVI ratings of a variety of constructs, including conscientiousness, have also been shown to predict job performance (Gorman et al., 2018).

### **Item development for the Narcissism Interview Scale for Employment (NISE)**

Studies 1 and 2 included item generation, item selection, and scoring guide development for the NISE. Items for the NISE were written to elicit content relevant to either higher or lower narcissistic grandiosity. We relied upon the social-personality trait definition of narcissistic grandiosity (Raskin & Hall, 1979; Raskin & Terry, 1988) to define the content domain construct. To develop the item structure, we

utilized two types of question formats: context-specific and behavioral/situational.

### **Context-specific questions**

Context-specific personality refers to the general tendencies of person in a specific context. For example, a person may have different tendencies while in a professional setting compared to a romantic setting because there are different rules, expectations, and social norms in each setting. Context-specific personality assessments (e.g., work locus of control, organizational-based self-esteem) have yielded stronger correlations with workplace outcomes compared to general personality assessments (e.g., general locus of control, general self-esteem; Bowling et al., 2010; Wang et al., 2010) because of the contextual alignment between predictor and outcome variables. In addition, applicant reactions to selection tools are partly based upon the relevance of the tool to the workplace (Bauer et al., 2001). Ensuring that the interview items were work-specific is likely to increase predictive validity and ensure favorable applicant reactions. Whereas traditional self-report scales of narcissistic grandiosity instruct respondents to think about their life in general (Raskin & Hall, 1979; Raskin & Terry, 1988), the NISE items elicit exclusively work-specific responses.

### **Behaviorally-oriented/situational questions**

Behaviorally-oriented and situational interview questions are standardized questions that elicit responses about past behaviors (e.g., “Tell be about a time you...”) or hypothetical behaviors (e.g., “What would you do if you were in the following situation?”). In contrast, interview questions could ask about technical knowledge, credentials, achievements, biographical facts, or self-evaluative information. Structured behaviorally-oriented interviews yield strong interrater reliability, do not rely upon nonverbal cues for reliable interview ratings (Motowidlo et al., 1992), and combat against adverse impact and indirect discrimination (Alonso et al., 2017). Whereas traditional self-report scales of narcissistic grandiosity instruct respondents to indicate if they possess a characteristic (e.g., “I have a natural talent for influencing others;” Raskin & Terry, 1988), the NISE items elicit behavioral examples of a characteristic. The interview items developed in the current study targeted behaviors and situations pertaining to interpersonal situations, power, and leadership because narcissistic grandiosity often manifests into poor interpersonal interactions within both team or leadership settings (Higgs, 2009). As a result, the NISE is most relevant for selection of roles involving teamwork or leadership.

### **Validation of the NISE**

Study 3 will use the best performing items from Studies 1 and 2 to create the NISE and measure narcissistic grandiosity. The validity of the NISE will be evaluated by testing for convergent/divergent validity and criterion validity.

### Convergent and divergent validity

With no existing employment interview scale for narcissism, convergent validity must be tested by comparing the NISE with existing self-report narcissistic grandiosity scales. The NISE development relied upon the common social-personality perspective of narcissistic grandiosity using the various forms of the Narcissistic Personality Inventory (NPI). As a result, we expect the NISE to be positively correlated with measures of narcissistic grandiosity (i.e., NPI). The convergence between the two measures is expected to be weak to moderate because the measures are likely assessing some different content. The NISE is work-specific and rated by the interviewer whereas the NPI is general and self-report. Prior efforts to develop structured interview questions to measure personality have found that self-report and interview ratings of Five Factor Model traits yield correlations between  $r = .10$  and  $.42$  (Barrick et al., 2000; Van Iddekinge et al., 2005). These moderate correlations between interview and self-report personality ratings provide a benchmark for convergence in the current study.

**Hypothesis 1:** The NISE will have a positive relationship with measures of narcissistic grandiosity.

Although the NPI is the most common measure of narcissistic grandiosity, the measure has been criticized for being too narrow of a conceptualization of the trait. The NPI primarily does not capture narcissistic vulnerability (Hendin & Cheek, 1997; Wink, 1991). Empirical tests of convergence between self-report measures of narcissistic grandiosity and narcissistic vulnerability have yield non-significant relationships (Hendin & Cheek, 1997). As a result, we expect that the NISE will be more strongly associated with measures of narcissistic grandiosity (i.e., NPI) compared to measures of narcissistic vulnerability.

**Hypothesis 2:** The NISE will have a stronger relationship with a measure of narcissistic grandiosity compared to a measure of narcissistic vulnerability.

The nomological network of narcissistic grandiosity is almost exclusively based upon self-report assessments of narcissistic grandiosity and other personality traits. Given the well-established limitations of self-report narcissistic grandiosity, the empirical overlap between narcissistic grandiosity and other traits is often inconsistent from conceptual/theoretical expectations. Extraversion and agreeableness are two well-established traits that have conceptual overlap with narcissistic grandiosity. Extraversion is a Five Factor Model trait that includes a preference for companionship with many people, enjoyment of social stimulation, and emergence as leaders in social settings (Costa & McCrae, 1988). Similarly, those higher in narcissistic grandiosity believe they are entitled to the admiration and respect of others and pursue leadership roles (Baumeister et al., 1996). Consistent with the conceptual overlap, the correlation between extraversion and self-report narcissistic grandiosity is positive and moderate in strength (Bradlee & Emmons, 1992; Clark et al., 2010; Hart et al., 2019; Marshall et al., 2015). We expect the NISE to positively correlate with measures of extraversion.

**Hypothesis 3:** The NISE will have a positive relationship with a measure of extraversion.

Agreeableness is a Five Factor Model trait that includes a willingness to defer to others during interpersonal conflict, rule following, readiness to accommodate, and cooperation in group settings (Costa & McCrae, 1988). Conversely, those higher in narcissistic grandiosity have difficulty maintaining healthy interpersonal relationships, unaccommodating in social situations, and stubborn in their views of how to pursue a goal (Campbell et al., 2011). Consistent with the conceptual overlap, the correlation between agreeableness and self-report narcissistic grandiosity is negative and weak to moderate in strength (Bradlee & Emmons, 1992; Clark et al., 2010; Furnham et al., 2013; Hart et al., 2019). We expect the NISE to be negatively correlated with measures of agreeableness.

**Hypothesis 4:** The NISE will have a negative relationship with a measure of agreeableness.

### Criterion validity

An outcome commonly linked to narcissistic grandiosity both conceptually and empirically is aggression (Kjærviik & Bushman, 2021), which also has significant workplace implications. Examples of aggression that are related to narcissistic grandiosity include interpersonal deviance at work (e.g., “I insulted someone about their job performance”; Penney & Spector, 2002), verbal aggression (e.g., “I tell my friends openly that I disagree with them;” Okada, 2010), and relational aggression (e.g., “If others make me mad, I tell their secrets;” Schreer, 2002). Those higher in narcissistic grandiosity are likely to engage in aggression when they perceive provocation from others, such as others attacking their self-worth, attempting to discredit their successes, or undermining their power (Baumeister et al., 1996; Baumeister et al., 2000). The aggression is often extreme and targeted toward the perceived attacker. Consistent with the conceptual overlap, the correlation between aggression and self-report narcissistic grandiosity is positive and moderate in strength ( $r = .26$ ;  $K=437$ ;  $N=12,304$ ; Kjærviik & Bushman, 2021). We expect the NISE to positively correlate with measures of aggression.

**Hypothesis 5:** The NISE will have positive relationships with measures of aggression: interpersonal deviance (H5a), verbal aggression (H5b), and relational aggression (H5c).

### Applicant reactions to the NISE

Study 4 will evaluate applicant reactions to the NISE. The NISE is being developed for use during employment settings so it is important for the tool to be perceived favorably by applicants. Applicant reactions include perception of comfortability during the interview and perception that the interview was suitable to evaluate the applicant (Alonso & Moscoso, 2018). Comfortability includes feelings of comfort, motivation during the interview, and the belief that the interview respects personal privacy. Suitability includes

perceptions of fairness, interview evaluations are objective, and the belief that interview performance will predict future job performance. Both the NISE item content and the general structure are likely to contribute to favorable applicant reactions. Applicants favor selection process that provides an opportunity to perform with some control over their performance (e.g., Gilliland, 1993), consistency across applicants (Gilliland, 1993), and job relevant questions (Truxillo et al., 2015).

**Hypothesis 6:** Applicants will have more favorable reactions to the NISE compared to generic AVI interview questions. Specifically, applicants will perceive greater comfortability (H6a) and greater suitability (H6b).

## Item and scoring guide development (Study 1)

### Method – Study 1

Nineteen potential items were developed by researchers with expertise in personnel selection and personality assessment. In addition, item feedback was provided by a clinician who has published on psychological disorders. The goal of Study 1 was to develop a pool of items, reduce the number of potential items to a manageable set for further testing, and identify content for a scoring guide (e.g., quotes, contextual cues). After item generation, data were collected for all nineteen items to evaluate the content provided within the responses.

Participants ( $N=261$ ) were senior college students in the United States who were currently employed. On average, participants were 24 years old and worked 28 h per week. The sample identified as 79% female, 17% male, 4% gender queer non-conforming, 36% Latina/o/x, 24% Asian American, 17% Caucasian, and 6% African American.

Data were collected from career development courses that are mandatory for students pursuing a psychology degree at the university. The course curriculum includes information about careers in psychology, goal setting strategies, reflection exercises, informational interviews with professionals in the field, and mock employment interviews. At the end of the course, 96% of students agreed to share their course data for research purposes. Participants completed mock employment interviews using AVI software as part of their course learning activities. In addition, participants received a video training about best practices during an employment interview (e.g., eye contact, professional attire) and common interview formats (e.g., AVI, in-person, behavioral scenarios) prior to data collection. Each participant completed all 19 AVI questions in randomized order across three different AVI activities (six or seven per session). Participants could rerecord their responses if they were not pleased with their response, and participants were instructed to provide responses of at least 30 s per question so that they could receive automated feedback regarding eye contact, vocabulary, tone, lighting, speech rate, and frequency of “umm statements.” The average response time per question was 57 s.

A single rater (graduate student research assistant in the field of industrial organizational psychology) received rater

training from the first author. The training included readings and discussions pertaining to widely cited studies on the measurement of narcissism (i.e., Ames et al., 2006; Brown et al., 2009; Foster et al., 2015; Jonason & Webster, 2010; Paulhus & Williams, 2002) and the implications of narcissism in the workplace (i.e., Grijalva et al., 2015; Higgs, 2009; Resick et al., 2009). The rater evaluated 4,959 video responses for “count” and “clarity” for each question. Count represented the number of participants per question who provided a response that contained some narcissistic grandiosity content. Clarity was the rater’s perceived ease of coding for narcissistic grandiosity, which was rated from 1 (very unclear) to 10 (very clear).

## Results – Study 1

We identified five of the top performing items to be further evaluated (Table 1). These five items were selected because the count score was above the mean for all items (10.4) and the clarity score was at least the scale midpoint ( $\geq 5$ ). Individual responses identified as higher or lower narcissistic grandiosity were used to create rater training materials. The materials included video examples with tips for scoring and a rating sheet for each item. The rating sheets were modeled after a behavioral anchored rating scale by including quotes and contextual cues for either lower or higher narcissistic grandiosity responses (see Appendix A for a scoring guide to one of the retained items). Please contact the lead author for copies of the scoring guides or requests for data access.

## Item evaluation (Study 2)

The goal of Study 2 was to further evaluate the five retained items using a standardized scoring guide and identify the best performing items to be used in the NISE.

**Table 1.** Items retained from initial item development within Study 1.

Interview question	Count (z-score)	Clarity
Do you consider yourself a natural born leader or someone who has had to learn how to lead? Please provide an example of your leadership approach.	11 (0.08)	8
Imagine you were working on a team that requires unanimous consent to move forward on a project. The other members have agreed upon a plan for the project that you strongly disagree with. How do you proceed?	25 (1.99)	6
Imagine you are a leader of a group and someone on your team openly expressed their concern with one of your decisions to you and others. It turns out that your decision was the correct call. How would you handle this situation?	11 (0.08)	5
Describe a time in which you had authority over other people. What was your approach to leading?	13 (0.35)	7
Describe a time you were in a team setting and the group was successful. What were the primary reasons the group succeeded?	12 (0.21)	10
Mean for all 19 Items =	10.4	5.9
Standard Deviation for all 19 items =	7.3	6.0
Median for all 19 items =	8.0	2.2

Note. Study 1,  $N=261$ ; z-score = the number of standard deviations the count score for an item was from the average count score for all items.



## Method – Study 2

### Procedure and participants

Participants ( $N=225$ ) were junior and senior college students in the United States who were currently employed. On average, participants were 21 years old and worked 23 h per week. The sample identified as 76% female, 23% male, 1% gender queer non-conforming and transgender, 47% Latina/o/x or Hispanic American, 35% Asian American, 21% Caucasian, 3% African American, and 1% Native American.

Data were collected using the same career development activities and courses as Study 1. Data for Study 2 were collected from a separate course sample to ensure participants did not overlap across studies. Ninety-two percent of students in the course agreed to participate in the research and share their data. Data were collected in two waves separated by two months. During wave 1, participants completed a self-report narcissistic grandiosity scale. During wave 2, participants completed a mock employment interview using AVI software. The AVI was comprised of the five NISE questions from Study 1. Participants could rerecord their responses, and were instructed to provide responses of at least 30 s per question so that they could receive automated feedback regarding eye contact, vocabulary, tone, lighting, speech rate, and frequency of “umm statements.” The average response time per question was 75 s.

### Measures

**Narcissistic grandiosity interview ratings.** A structured rater training video was created to train raters. The rater training video was 22 min in length. Trainees reported rewatching and reengaging with the training video multiple times. Trainees reported spending approximately 90 min engaging with the training video. The rater training video summarized the key points extracted from the Study 1 training, which included the measurement, definition, and workplace implications of narcissistic grandiosity. The rater training video described the rating sheets developed in Study 1 and included 10 practice rating activities (with answers). The practice rating activities were real video responses extracted from Study 1 data.

Ratings for each item were provided using the scoring guide from Study 1 (see Appendix A). Responses were scored from (1) “very low narcissism,” (2) “slightly lower narcissism” (3) “slightly higher narcissism,” and (4) “very high narcissism.” The raters were graduate and undergraduate students pursuing a degree within industrial organizational psychology. One primary rater (graduate student) evaluated all 1,125 videos. A secondary score was also calculated to test for interrater reliability. The secondary score was based upon nine secondary raters (6 graduate students, 3 undergraduate students) who each evaluated a subset of videos. A participant’s score for each NISE item was calculated using the average of the primary and secondary raters.

**Narcissistic grandiosity self-report.** Grandiose narcissism self-report was measured with the 16-item short version

of the NPI (Ames et al., 2006). Participants were instructed to select the statement that best describes them in general. Each item includes two response options that represent either higher or lower narcissistic grandiosity. Eight of the items presented higher narcissistic grandiosity statements first whereas the other eight items presented lower grandiose narcissism statements first. An example item included the options of either “I know that I am good because everybody keeps telling me so” (higher narcissism) or “When people compliment me I sometimes get embarrassed” (lower narcissism). The Cronbach’s alpha for the self-report narcissistic grandiosity scale in Study 2 was .60.

### Results – Study 2

Each item was evaluated using scoring frequency (Table 2), the Pearson  $r$  correlation with self-report narcissistic grandiosity (Table 2), and inter-item Pearson  $r$  correlations (Table 3). We identified three items that best met these criteria. We sought to develop an interview scale of three items because it allows for some breadth of content while reducing time commitment. Items 1, 2, and 3 were identified as the best performing items. Each of the retained items were correlated with self-report narcissistic grandiosity ( $r$  range of .23 to .28), had scores that included higher narcissistic grandiosity values of “3” or “4” on the rating scale (12–23% frequency), and demonstrated significant inter-item correlations ( $r$  range of .24–.47). The three retained items were used to calculate an NISE composite score.

Reliability coefficients were calculated using the three retained items. Inter-rater reliability was calculated using an intraclass correlation coefficient (ICC) between the NISE scores from the primary rater and secondary rater. The NISE had an inter-rater reliability of ICC = .71. Internal consistency was calculated using item scores averaged across raters. The NISE had a Cronbach’s alpha reliability of .61.

### Construct validity (Study 3)

Whereas Study 2 was used to identify the final items for the NISE, Study 3 evaluated the construct validity and nomological network.

## Method – Study 3

### Procedure and participants

Interview, self-report, and significant-other data were collected in Study 3. Participants ( $N=381$ ) were senior college students in the United States who were currently employed. On average, participants were 23 years old and worked 25 h per week. The sample identified as 72% female, 24% male, 4% gender queer non-conforming and transgender, 44% Latina/o/x or Latin American, 33% Asian American or Asia Origin, 23% Caucasian, 8% African American, and 5% Native American.

Data were collected using the same career development activities and courses as used for Studies 1 and 2. Data for

**Table 2.** Descriptive statistics and convergent validity coefficients for potential items within Study 2.

	Item	Mean	SD	Scoring frequency				NPI <i>r</i>
				1	2	3	4	
1	Do you consider yourself a natural born leader or someone who's had to learn how to lead? Provide an example of your leadership approach.	1.80	0.95	50%	27%	16%	7%	.28**
2	Imagine you are working on a team that requires unanimous consent to move forward on a project. The other members have agreed upon a plan for the project that you strongly disagree with. How do you proceed?	1.77	0.81	43%	40%	14%	3%	.23**
3	Imagine you are the leader of a group and someone on your team openly expressed their concern with one of your decisions to you and others. It turns out that your decision was the correct call. How would you handle this situation?	1.47	0.77	67%	21%	9%	3%	.23**
4	Describe a time in which you had authority over other people. What was your approach to leading?	1.58	0.74	56%	31%	12%	1%	.09
5	Describe a time you were in a team setting and the group was successful. What were the primary reasons the group succeeded?	1.26	0.69	86%	6%	6%	3%	-0.06

Note. *N* = 225; *M* = mean; *SD* = standard deviation; Scoring Frequency is based upon the scores being rounded to nearest whole number; NPI *r* = correlation with the 16-item Narcissistic Personality Inventory self-report.

**Table 3.** Inter-item correlations for the potential items within Study 2.

Items		1	2	3	4	5
1	Do you consider yourself a natural born leader or someone who's had to learn how to lead? Provide an example of your leadership approach.	(.56)				
2	Imagine you are working on a team that requires unanimous consent to move forward on a project. The other members have agreed upon a plan for the project that you strongly disagree with. How do you proceed?	.24**	(.30)			
3	Imagine you are the leader of a group and someone on your team openly expressed their concern with one of your decisions to you and others. It turns out that your decision was the correct call. How would you handle this situation?	.47**	.34**	(.50)		
4	Describe a time in which you had authority over other people. What was your approach to leading?	.48**	.25**	.30**	(.44)	
5	Describe a time you were in a team setting and the group was successful. What were the primary reasons the group succeeded?	.18*	-0.02	.10	.05	(.11)

Note. *N* = 225; *M* = mean; *SD* = standard deviation; Corrected item-total correlations are presented on diagonal in parentheses; \**p* < .05; \*\**p* < .01.

Study 3 were collected from a separate course sample to ensure participants did not overlap across studies. Eighty five percent of students in the course agreed to participate in the research and share their data. The interview data were collected first during a mock interview activity using the one-way video interview platform described in the prior studies. Participants were familiar with the one-way video interview process and completed mock interviews on the interview platform prior to participating in the study. The mock interview only included the NISE questions, participants could rerecord their responses if they were not pleased with their response, and participants were instructed to provide responses of at least 30s per question so that they could receive automated feedback. The average response time per question was 61s.

Self-report data were collected in multiple waves. Participants responded to personality measures (e.g., extraversion) one month prior to the mock interview. Participants completed aggression measures one month after the mock interview. After completing the final survey, participants were instructed to recruit a significant other who knew them well. Significant others completed a survey one month after the mock interview. Significant others were instructed to evaluate the personality and aggression tendencies of the participant. Significant others were asked to indicate how well they knew the participant on a three-point scale: 1% indicated "a little," 25% indicated "well," and 74% indicated "very well." On average, significant others were 28 years old and knew the participant for 10 years. Relationships included family (35%), romantic partner/lover (37%), friends (25%), roommate/housemate (2%), and coworker (1%). The sample of significant others identified as 54% female, 41% male, 5%

gender queer non-conforming and transgender, 34% Latina/o/x or Latin American, 25% Asian American, 27% Caucasian, 6% African American, and 4% Native American.

### Measures

**NISE score.** The 3-item NISE was used to assess narcissistic grandiosity during the interview. Six graduate students from an industrial organizational psychology research laboratory scored the interviews independently. The same rater training materials from Study 2 were used in Study 3, but the rating sheet included updated examples and descriptions of potential responses. To reduce scoring fatigue, each rater scored one third of the sample (127 participants; 381 videos) so that each participant had two ratings. A participant's score for each interview question was calculated using the average score across two raters. The NISE score was calculated by averaging the three item scores for each participant.

**Personality.** Reports of narcissistic grandiosity, narcissistic vulnerability, extraversion, and agreeableness were provided by both participants and significant others. The same measures were used for both sources of data, but items were adapted from a self-view ("I") to an other-view ("they") for the reports provided by significant others. Response options for the measures ranged from (1) "strongly disagree" to (7) "strongly agree."

Narcissistic grandiosity was measured with the same scale as Study 2 (NPI; Ames et al., 2006). The narcissistic

grandiosity scale had Cronbach's alphas of .64 (self-report) and .68 for (other-report).

Narcissistic vulnerability (e.g., "my feelings are easily hurt by ridicule or the slighting remarks of others") was measured with the 10-item Hypersensitive Narcissism Scale (Fossati et al., 2009). The narcissistic vulnerability scale had Cronbach's alphas of .78 (self-report) and .81 (other-report).

Extraversion (e.g., "I seek to influence others") was measured with 10 items from the International Item Pool (IPIP, 2019; Goldberg et al., 2006). The extraversion scale had Cronbach's alphas of .85 (self-report) and .86 (other-report).

Agreeableness (e.g., "I value cooperation over competition") was measured with 10 items from the International Item Pool (IPIP, 2019; Goldberg et al., 2006). The agreeableness scale had Cronbach's alphas of .61 (self-report) and .64 (other-report).

**Aggression.** Reports of interpersonal deviance, verbal aggression, and relational aggression were provided by both participants and significant others. The same measures were used for both sources of data, but items were adapted from a self-view ("I") to an other-view ("they") for the reports provided by significant others.

Interpersonal deviance (e.g., "I publicly embarrassed someone") was measured with seven items from the Interpersonal Deviance Scale (Bennett & Robinson, 2000). The phrase "at work" was removed from each to ensure all significant others could observe the behavior. Responses indicated the frequency of the participant's behavior within the past 12 months and ranged from (1) "never" to (7) "daily." The interpersonal deviance scale had Cronbach's alphas of .81 (self-report) and .83 (other-report).

Verbal aggression (e.g., "I can't help getting into arguments when people disagree with me") was measured with five items (Buss & Perry, 1992; Buss & Warren, 2000). Responses indicated the agreement to statements that described the participant in general and ranged from (1) "strongly disagree" to (7) "strongly agree." The verbal aggression scale had Cronbach's alphas of .72 (self-report) and .76 (other-report).

Relational aggression (e.g., "I try to keep certain people from attending a group event.") was measured with four items (Crick & Grotpeter, 1995). Responses indicated the agreement to statements that described the participant in general and ranged from (1) "strongly disagree" to (7) "strongly agree." The relational aggression scale had Cronbach's alphas of .64 (self-report) and .68 (other-report).

## Results – Study 3

### Reliability and descriptive statistics

Reliability of the NISE was evaluated using both inter-rater and internal consistency metrics. Inter-rater reliability was calculated using an ICC between the NISE scores from the two raters. The NISE had an inter-rater reliability of ICC = .68. Internal consistency was calculated using item scores averaged across raters. The NISE had a Cronbach's alpha reliability of .62 with inter-item Pearson  $r$  correlations

ranging from .29 to .42 (mean  $r = .37$ ). The NISE had a mean score of 1.59 ( $SD=0.62$ ) when scores were averaged across raters.

### Convergent validity

Pearson  $r$  correlations between the Study 3 variables are provided in Table 4. Consistent with Hypothesis 1, the NISE was positively correlated with measures of narcissistic grandiosity. The NISE had correlations of .34 ( $p < .01$ ) with self-report narcissistic grandiosity and .43 ( $p < .01$ ) with other-report narcissistic grandiosity. Steiger's  $Z$  (Steiger, 1980; Lee & Preacher, 2013) was used to compare dependent Pearson  $r$  correlations and test Hypothesis 2. Consistent with Hypothesis 2, the NISE was more strongly associated with measures of narcissistic grandiosity compared to measures of narcissistic vulnerability when comparing either self-reports ( $z=3.59, p < .01$ ) or other-reports ( $z=4.69, p < .01$ ).

Partial support was found for Hypothesis 3, which predicted a positive relationship between the NISE and measures of extraversion. The NISE had a correlation of .17 ( $p < .01$ ) with self-report extraversion but no significant relationship ( $r = .08, p > .05$ ) with other-report extraversion. Partial support was found for Hypothesis 4, which predicted a negative relationship between the NISE and measures of agreeableness. The NISE had no significant relationship ( $r=-0.08, p > .05$ ) with self-report agreeableness but a negative correlation of  $-0.18$  ( $p < .01$ ) with other-report agreeableness.

### Criterion validity

Support was found for Hypothesis 5a, which predicted positive Pearson  $r$  correlations between the NISE and measures of interpersonal deviance. The NISE had positive correlations of .10 ( $p < .05$ ) with self-report interpersonal deviance and .20 ( $p < .01$ ) with other-report interpersonal deviance. Support was found for Hypothesis 5b, which predicted a positive correlation between the NISE and measures of verbal aggression. The NISE had positive correlations of .11 ( $p < .05$ ) with self-report verbal aggression and .26 ( $p < .01$ ) with other-report verbal aggression. Partial support was found for Hypothesis 5c, which predicted a positive relationship between the NISE and measures of relational aggression. The NISE had no significant relationship ( $r = .04, p > .05$ ) with self-report relational aggression but a positive correlation of .23 ( $p < .01$ ) with other-report relational aggression.

## Applicant reactions (Study 4)

### Method – Study 4

#### Participants and procedure

Participants ( $N=303$ ) were senior college students in the United States who were currently employed. Participants were 24 years old on average and worked 22 h per week. The sample identified as 72% female, 21% male, 7% gender queer non-conforming and transgender, 39% Latina/o/x or Latin American, 32% Asian American or Asia Origin, 31% Caucasian, 9% African American, and 4% Native American.

Table 4. Descriptive statistics and correlations for variables within Study 3.

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 NISE	1.59	0.53	(.62)														
Self-reports																	
2 Narcissistic Grandiosity	1.25	0.16	.34**	(.64)													
3 Narcissistic Vulnerability	3.80	0.94	.10*	.04	(.78)												
4 Extraversion	5.14	0.92	.17**	.36**	-.020**	(.85)											
5 Agreeableness	5.24	0.62	-.008	-.07	-.011*	.33**	(.61)										
6 Interpersonal Deviance	2.53	1.06	.10*	.12**	.26**	-.007	-.15**	(.81)									
7 Verbal Aggression	3.83	1.07	.11*	.11*	.19**	.01	-.12**	.33**	(.72)								
8 Relational Aggression	2.33	0.98	.04	.15**	.25**	-.011*	-.16**	.30**	.35**	(.64)							
Significant Other-reports																	
9 Narcissistic Grandiosity	1.26	0.17	.43**	.45**	.06	.21**	-.14**	.11*	.16**	.08	(.68)						
10 Narcissistic Vulnerability	3.71	1.05	.16**	.07	.29**	-.013**	-.17**	.11*	.10*	.20**	.27**	(.81)					
11 Extraversion	5.23	0.98	.08	.23**	-.08	.48**	.14**	-.04	.01	-.02	.07	-.033**	(.86)				
12 Agreeableness	5.18	0.72	-.018**	-.05	-.012**	.13**	.38**	-.018**	-.017**	-.015**	-.026**	-.028**	.37**	(.64)			
13 Interpersonal Deviance	2.09	1.10	.20**	.11*	.16**	-.003	-.023**	.40**	.18**	.16**	.26**	-.019**	-.040**	-.040**	(.83)		
14 Verbal Aggression	3.86	1.23	.26**	.24**	.09*	.04	-.021**	.16**	.34**	.09*	.34**	.30**	.02	-.035**	.39**	(.76)	
15 Relational Aggression	2.44	1.10	.23**	.10*	.15**	-.007	-.022**	.11*	.16**	.28**	.25**	.42**	-.015**	-.031**	.37**	.38**	(.68)

Note. Study 3,  $N = 381$ ;  $M =$  mean;  $SD =$  standard deviation; Cronbach's alpha presented on diagonal in parentheses; \* $p < .05$ ; \*\* $p < .01$ .

Data were collected using the same career development courses as used for Studies 1, 2, and 3. Data for Study 4 were collected from a separate course sample to ensure participants did not overlap across studies. Ninety percent of students in the courses agreed to participate in the research and share their data. As part of the skills building portion of the course, participants completed two AVIs one month apart. The order of the interviews was random for participants. One interview included the NISE whereas the other interview included 9 generic questions. The generic questions were derived from a list of the most popular interview questions given to new college graduates according to BigInterview (2022), which is an interview training platform used in the study and is a popular resource within university career centers. The generic interview questions are not created from academic research, so the underlying constructs being assessed are unclear. Example questions include, "Can you walk me through your background?," "How has your education prepared you for this role?," and "What are your long-term career goals?." Immediately after each interview, participants completed a survey about their reactions to the interview process.

### Measures

Comfortability (e.g., "I would find it difficult to answer the question" reverse-scored; "the interview would respect my privacy") and suitability (e.g., "the interview questions allow me to fake responses" reverse-scored; "the interview would seem fair") were measured with existing 5-item scales (Alonso & Moscoso, 2018). The items were on a response scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Comfortability had Cronbach's alphas ranging .57–.65 across interviews and conditions. Suitability had Cronbach's alphas ranging .55–.66 across interviews and conditions.

### Results – Study 4

Pearson  $r$  correlations are reported in Table 5. Hypotheses were tested using a repeated measures ANOVA. The main effect for each variable indicates the difference between the NISE interview and generic interview. Consistent with Hypothesis 6a, the NISE ( $M = 3.82$ ;  $SD = 0.44$ ) was perceived with greater comfortability reactions (Mean Difference = .12,  $p < .01$ ) compared to the generic interview ( $M = 3.69$ ;  $SD = 0.50$ ). Contrary to Hypothesis 6b, the NISE ( $M = 3.53$ ;  $SD = 0.53$ ) did not differ in perceptions of suitability reactions (Mean Difference = .00,  $p > .05$ ) compared to the generic interview ( $M = 3.54$ ;  $SD = 0.51$ ).

Table 5. Correlations for variables within Study 4.

Variable	1	2	3	4
1 Comfortability – Generic	(.58)			
2 Comfortability – Narcissistic Grandiosity	.47**	(.57)		
3 Suitability – Generic	.31**	.30**	(.64)	
4 Suitability – Narcissistic Grandiosity	.24**	.41**	.57**	(.66)

Note.  $N = 303$ ; Cronbach's Alpha presented in parentheses on the diagonal; \*\* $p < .01$ .



## Discussion

The significance of narcissistic grandiosity for employee selection is emphasized by Campbell et al. (2011) within their literature review of narcissism in the workplace:

In sum, narcissism is problematic in organizational contexts because it is both destructive in multiple ways but also attractive in the recruitment process. HR professionals need to be aware of this so as not to be seduced but ultimately disappointed by narcissistic employees. (p. 281)

The current project represents the first attempt to address this issue by designing and validating an interview-based tool for assessing narcissistic grandiosity in job applicants. Across four studies, we developed the Narcissism Interview Scale for Employment (NISE) and gathered evidence related to content, construct, and criterion validity. We also collected data to explore applicant reactions to the measure. Regarding content validity, we utilized a review of the research literature and consultations with clinical experts to develop an initial pool of nineteen potential interview items that were context specific and behavioral or situational in structure. Using data collection, and qualitative and quantitative review, those items were eventually narrowed to 3 that reliably provided narcissistic grandiosity content and produced consistent coding from trained raters.

Self-report and other-report data were utilized to gather evidence for the construct validity of the NISE. The measure showed significant convergence, in the form of positive correlations, with self and other-reports of the most common measure of narcissistic grandiosity, the NPI. The correlation between interview ratings and self-reports is relatively strong compared to other research efforts to measure personality using a structured interview (Barrick et al., 2000; Huffcutt et al., 2001; Van Iddekinge et al., 2005).

Our findings also generally aligned with the nomological network of the narcissism construct. The NISE was more strongly correlated with a measure of narcissistic grandiosity than with a measure of narcissistic vulnerability. It was also positively related to self-reported extraversion and negatively related to other-reported agreeableness. Preliminary evidence for the criterion validity of the NISE was also obtained. The NISE was significantly correlated with self and other-reports of interpersonal deviance and verbal aggression, and with other-reports of relational aggression. This suggests that the measure has potential for identifying employees who are more likely to engage in counterproductive work behaviors. Notably, the relationships between the NISE and other-reports of both narcissistic grandiosity and interpersonal aggression were consistently significant and moderate in strength, which indicates that the NISE may predict how coworkers would perceive a potential applicant.

Support for hypotheses related to applicant reaction to the NISE were mixed. As predicted, participants had more favorable comfortability reactions to the NISE compared to generic employment interview questions. However, there was no difference in ratings of suitability between the NISE interview questions and generic questions. Although the results did not support this hypothesis, this finding is

promising for the use of NISE questions in an authentic selection context, suggesting that applicants find NISE interview questions and generic interview questions equally suitable for the selection process. The construct of suitability focuses on more logical reactions to the process of an interview, including whether answers can be faked, performance ratings can be objective, and performance is indicative of job success, opposed to the more emotion-focused reactions captured by comfortability (Alonso & Moscoso, 2018). The fact that the NISE and the standard interview were both administered *via* an asynchronous video interview, with consistent administration and equitable opportunity to perform, could explain the similar ratings for suitability.

## Implications

The current study demonstrates the value of the screening job applicants for narcissistic grandiosity using the NISE. In addition to using the NISE interview questions, it is essential for organizations to use both rater training and scoring guides to accurately assess narcissistic grandiosity. Organizations should note that the NISE is not a tool to diagnose narcissistic personality disorder, which is an extreme pathological condition that requires diagnosis during an interview by a trained clinical psychologist (see APA, 2000). Organizations interested in assessing psychological disorders should consider the applicant's right to privacy.

The use of asynchronous video interviews (AVIs) to develop the NISE has important implications for the increasingly popular technology. AVIs have been dubbed the "new norm" by the business press (Sellers, 2014; Toldi, 2011). HireVue and Montage Talent were the first to offer AVI software in 2004 and 2007, respectively (VidCruiter, 2023). In the past several years, due to improvements in technology, and accelerated by the COVID-19 pandemic, the rise in the use of AVIs for candidate screening and hiring has been precipitous (Handler, 2020; Mejia & Torres, 2018). AVI practice/training services, such as BigInterview (2022), have also emerged to help prepare job seekers for the emerging selection tool. Some business analysts project that the AVI software market, which was recently estimated at 250 million dollars, will approach 900 million dollars by 2030 (Hankel, 2022; Hankel, 2022b, Mathur, 2023; Maurer, 2020). AVIs provide advantages for both employers and applicants, including significant time and cost savings, the ability to conduct large numbers of interviews with no geographical or time zone restrictions, positive applicant reactions, and equivalent applicant performance compared to traditional face-to-face interviews (Dunlop et al., 2022; Kleinlogel et al., 2023; Suen et al., 2019; Toldi, 2011). In sum, the current findings are beneficial to organizations and researchers seeking to use AVIs to assess personality.

## Limitations and future directions

Future research should continue the validation of the NISE within different interview settings (e.g., real-time interviews) because AVIs may minimize the effect of impression

management that hinders the measurement of grandiose narcissism during a face-to-face interview. Research indicates that interview ratings are influenced by pre-interview exchanges that are common in face-to-face interviews (Swider et al., 2016). In addition to eliminating the pre-interview exchange, AVIs lessen the primacy effects of physical appearance and initial impressions among human raters, compared to a synchronous face-to-face interview (Suen et al., 2019). The primary mechanisms for impression management in an AVI are the option to re-record responses and preparation time. However, evidence indicates that only 40% of interviewees utilize the option to re-record when it is offered, and longer preparation times impact overall performance but not impression management (Basch et al., 2021; Dunlop et al., 2022). Future research is needed to determine if the current findings generalize to other settings, such as real-time or face-to-face interviews.

Another limitation is that the studies were conducted with samples of employed undergraduate psychology students, which limits the external validity of the findings. However, the results do have generalizability to the population of young professionals about to enter the workforce. Narcissistic grandiosity has been speculated to be on the rise amongst young professionals (Twenge & Foster, 2010), so detecting narcissistic grandiosity during selection could be of particular interest to employers targeting this demographic. Similarly, we did not provide evidence regarding the utility of the NISE in an actual employment setting. It is possible that the NISE will yield more extreme high scores when respondents are incentivized by a job opportunity. We recommend future research test the validity of the NISE among a sample seeking selection to position of power (leadership role). Both the position and the selection process are incentives that are likely to allow the NISE questions to better elicit narcissistic grandiosity responses than found in the current study.

Future research should expand the assessment of the construct validity of the NISE by exploring its relationship to other facets of narcissism beyond narcissistic grandiosity and narcissistic vulnerability. Many measures and proposed factors of narcissism are available, such as measures of isolation, enmity (Ragoza et al., 2022), or rivalry (Back et al., 2013). Measures of pathological levels of narcissism are also available (Pincus and Lukowitsky, 2010). More peripheral to the narcissistic content domain may include individual difference variables with known relationships to narcissistic grandiosity including defensive self-enhancement (Raskin et al., 1991) and perfectionism (Trumpeter et al., 2006).

Further development of the NISE scoring guides and rater training is also recommended. The scoring guides include both contextual cues and behavioral examples, which are broadly written to cover all industries and work contexts. We recommend that scoring guides be tailored to specific positions or industries when being used in an applied setting. For example, a scoring guide designed for a sales manager position could have behavioral examples exclusively related to managing a sales team. Scoring guides that are specific to a position or industry should increase rater accuracy and inter-rater reliability.

## Conclusions

Most organizations endeavor to create a high functioning environment comprised of productive employees who interact with one another in a thriving organizational culture. Although employee selection is typically oriented toward the assessment of knowledge, skills, and abilities, it is perhaps equally important to distinguish employees with the potential to disrupt it. These four studies represent the first attempt to develop an AVI tool to measure one of these potentially disruptive characteristics, narcissistic grandiosity. Results showed that the NISE may be incorporated into the interview process to assess applicant narcissistic tendencies. Additional research is needed to establish the construct validity of the instrument, clarify applicant reactions to its use, and assess its predictive utility across a variety of work contexts.

## Declaration of interest

No potential conflict of interest was reported by the author(s).

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## Appendix A

### Score Guide – Item 3

**Interview Question:** Imagine you are a leader of a group and someone on your team openly expressed their concern with one of your decisions to you and others. It turns out that your decision was the correct call. How would you handle this situation?

Score:			
1	2	3	4
Very Low Narcissism	Slightly Lower Narcissism	Slightly Higher Narcissism	Very High Narcissism
Very Low Narcissistic Grandiosity Contextual Cues		Very High Narcissistic Grandiosity Contextual Cues	
<ul style="list-style-type: none"> <li>• Focuses on growth and development opportunity</li> <li>• Expresses encouragement of honest, open communication from subordinates to leaders</li> <li>• Describes importance of empathy and respect for others</li> <li>• Describes importance of privacy/confidentiality</li> </ul>		<ul style="list-style-type: none"> <li>• Expresses that they are always right</li> <li>• Views situation as way to validate their leadership</li> <li>• Describes how they made the right call</li> <li>• Expresses frustration/anger over being questioned</li> </ul>	
Example Responses		Example Responses	
<ul style="list-style-type: none"> <li>• "It's important to hear these types of concerns because I am not always right, and this could be a learning opportunity for me."</li> <li>• "I wouldn't brag or rub it in their face. I would try to make sure they are feeling okay about the disagreement and let them know their opinion always matters."</li> <li>• "Even if my decision is right it is still important to hear the voices of my colleagues."</li> </ul>		<ul style="list-style-type: none"> <li>• "I wouldn't say or do anything – just let the fact that I was right demonstrate that I am in charge for a reason."</li> <li>• "I would prove to everyone that I was correct."</li> <li>• "I would remind them I am the group leader for a reason and that I make my decisions in a highly careful and calculated way."</li> <li>• "This would be a frustrating situation because they need to respect my authority."</li> </ul>	