The International Journal of Management Education 14 (2016) 63–73

Contents lists available at ScienceDirect

The International Journal of Management Education

journal homepage: www.elsevier.com/locate/ijme

Research notes

Faculty narcissism and student outcomes in business higher education: A student-faculty fit analysis

James W. Westerman [a, *], Brian G. Whitaker [a], Jacqueline Z. Bergman [a], Shawn M. Bergman [b], Joseph P. Daly [a]

[a] Department of Management, Appalachian State University, ASU Box 32089, Boone, NC 28608-2089, USA
[b] Department of Psychology, Appalachian State University, Boone, NC 28608, USA

ARTICLE INFO

Article history:
Received 8 September 2015
Received in revised form 2 February 2016
Accepted 3 February 2016
Available online xxx

Keywords:
Narcissism
Management education
Student performance
Status
Person-environment fit

ABSTRACT

We examined the relationship between personality congruence on faculty and student narcissism with student perceptions of professor status, the perceived difficulty of the class, and student performance in the classroom. Data were collected from business students and faculty at an AACSB-accredited business school at a comprehensive state university. Results indicated that narcissism congruence was significantly related to a student's final grade in the class such that less congruence was associated with lower course grades and that this negative association was partially mediated by perceived professor status and perceived class difficulty. Particularly concerning was the finding that more narcissistic faculty were associated with detrimental outcomes for less narcissistic students. Considering the well-documented and profoundly negative implications of narcissism for workplace environments, this finding suggests a need for future research on the impact of narcissistic faculty on business students and on successful intervention strategies.

Recent evidence suggests that, over the last 25 years, U.S. college students have become increasingly narcissistic (Twenge, Konrath, Foster, Campbell, & Bushman, 2008), and that business students may possess significantly higher levels of narcissism than students in other disciplines (Robak, Chiffriller, & Zappone, 2007; Westerman, Bergman, Bergman, & Daly, 2012). Not surprisingly, high levels of narcissism have been associated with counterproductive behaviors of particular interest to business and industry. These behaviors include white collar crime (Blickle, Schlegel, Fassbender, & Klein, 2006), aggression (Bushman & Baumeister, 1998), distorted judgments of one's abilities (Paulhus, Harms, Bruce, & Lysy, 2003), rapidly depleting common resources (Campbell, Bush, Brunell, & Shelton, 2005), and risky decision-making (Campbell, Goodie, & Foster, 2004). Moreover, narcissistic managers are likely to create toxic work cultures that lead to low productivity and high turnover (Lubit, 2002). Overall, rising levels of narcissism present significant challenges for the business community.

Enhanced levels of narcissism may also raise concerns for higher education. For example, a 2008 survey of college students found a significant positive relationship between narcissism and academic entitlement (Greenberger, Lessard, Chen, & Farruggia, 2008). Of the students surveyed, 66 percent believed that their professor should give them special consideration if they explained that they were trying hard, and nearly 25 percent believed that their professor should lend them his/

* Corresponding author.
E-mail addresses: westermanjw@appstate.edu (J.W. Westerman), whitakerbg@appstate.edu (B.G. Whitaker), bergmanjz@appstate.edu (J.Z. Bergman), bergmans@appstate.edu (S.M. Bergman), dalyjp@appstate.edu (J.P. Daly).

http://dx.doi.org/10.1016/j.ijme.2016.02.001
1472-8117/

her course notes if they ask for them. Furthermore, narcissists tend to be hypersensitive to evaluation and criticism (Beck, Freeman, & Associates, 1990; Bushman & Baumeister, 1998), and are likely to be poor team players as they often take credit for success, but scapegoat in instances of failure (Campbell, Reeder, Sedikides, & Elliot, 2000). And there is evidence that this increase in narcissism may be more pronounced among business students than among those in other disciplines (Robak et al., 2007; Westerman et al., 2012).

Perhaps most concerning for business educators is that narcissism may also be beneficial for individuals in temporary work environments similar to the business education classroom. Narcissists tend to have higher explicit and discrepant self-esteem (Zeigler-Hill, 2006), are more extraverted (e.g., Emmons, 1984), have greater short-term likeability (Oltmanns, Friedman, Fiedler, & Turkheimer, 2004; Paulhus, 1998), outperform others on tasks involving public evaluation (Wallace & Baumeister, 2002), and often emerge as leaders (Blair, Hoffman, & Helland, 2008; Brunell, Gentry, Campbell, & Kuhnert, 2006; Galvin, Waldman, & Balthazard, 2010; Resick, Whitman, Weingarden, & Hiller, 2009). Research also indicates that narcissists can thrive in short-term creative performance environments (Goncalo, Flynn, & Kim, 2010), which bear similarities to a business higher education classroom. Overall, narcissistic students may have an advantage in the business school classroom – an environment with a short-term focus (academic sessions of only a few months), in which qualities such as assertiveness, talkativeness, creativity, and overt confidence are encouraged and rewarded. More broadly, if the outcome of faculty-student fit on narcissism in business education includes higher grades for more narcissistic students and graduates, this may be especially worrisome for the business community due to the dysfunctional work environments narcissists tend to create (Blickle et al., 2006; Bushman & Baumeister, 1998; Campbell et al., 2005; Campbell et al., 2004; Lubit, 2002; Paulhus et al., 2003). Further, as younger generation employees enter the business faculty ranks, there is a risk that they will possess enhanced levels of narcissism in comparison with past generations of faculty. If so, the effects of narcissistic faculty on student learning and development represent a fertile area for examination.

Given that narcissism is associated with numerous counterproductive behaviors in the classroom and in the workplace, it is incumbent upon management researchers to better understand the role of faculty in the creation or suppression of narcissistic tendencies. Business schools could work to ensure that they graduate business men and women who will be positive organizational citizens and who are capable of and willing to introduce positive organizational change. Business school professors, because of their status, may find themselves well-positioned to influence their students' narcissistic tendencies, as narcissists typically respond well to those they view with respect and of perceived higher status (American Psychiatric Association, 2000). Thus, the current study examines the relationship between the personality congruence of faculty and students on the dimension of narcissism, and student perceptions of a professor's status, the perceived difficulty of the class, and student outcomes (Fig. 1).

1. Narcissism, personality fit, and business education

As this study specifically examines student-faculty personality congruence with regard to the personality dimension of narcissism, a description of narcissism is in order. Narcissists possess an inflated, yet vulnerable, self-view, but are unable to regulate this fragile self-esteem, and must rely on others for affirmation (Campbell, Rudich, & Sedikides, 2002; Morf & Rhodewalt, 2001). Thus, despite a lack of empathy and difficulty forming close relationships, narcissists have a strong desire for social contact, as such contacts are their key source of attention and admiration. Narcissists, then, in order to maintain their inflated egos, engage in a variety of social behaviors designed to garner attention and praise, which manifest as displays of self-importance and self-focus. Common examples include expectations of special treatment with explicit beliefs of owing little or nothing in return (American Psychiatric Association, 2000; Millon, 1996), exhibitionism and other types of attention-seeking behavior (Buss & Chiodo, 1991), hyper-competitiveness (Emmons, 1984; Raskin & Terry, 1988), anger and

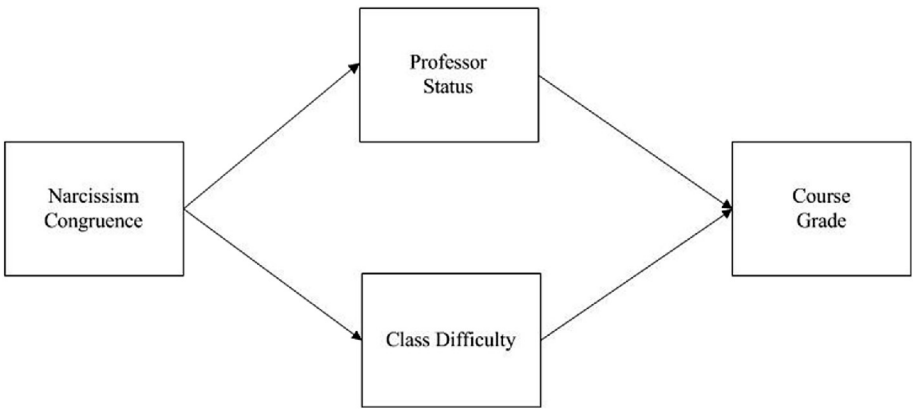

Fig. 1. Hypothesized mediation model.

self-enhancing attributions in response to criticism (Farwell & Wohlwend-Lloyd, 1998), and derogation of those who provide threatening feedback (Kernis & Sun, 1994). Narcissism represents one of three personality dimensions of the Dark Triad (with Machiavellianism and psychopathy), which has been linked in a meta-analysis by O'Boyle, Forsyth, Banks, and McDaniel (2012) to counterproductive work behaviors and decreased performance in organizations.

1.1. Personality traits and outcomes in education

Although there currently exists a gap in the literature in regards to research on the specific personality dimension of narcissism and its effects on classroom outcomes, the more holistic importance of personality and personality congruence to academic outcomes has been well-established. A review of the literature on personality and personality congruence in higher education provides a foundation for the influence of narcissism on student academic outcomes. Research that spans five decades has shown that personalities relate systematically and predictably to a range of educational outcomes (Furnham, Christopher, Garwood, & Martin, 2008). For example, personality has been generally related to academic performance (Caspi, Chajut, Saporta, & Beyth-Marom, 2006), and personality traits are among the individual-difference characteristics that have been predictive of college attrition and dropout rates (Lounsbury, Saudargas, Gibson, & Leong, 2005). Personality traits have also been related to classroom behaviors including amount of participation, oral expression, written expression, motivation, work habits, and grasp of subject matter (Furnham et al., 2008). Personality has been found to be predictive of learning styles across multiple studies (Zhang, 2006), and has been related to student preference for grading or evaluation method in educational settings (Furnham et al., 2008). Students' personality traits have also been related to residence hall placement, orientation, leadership development, and advising (Lounsbury et al., 2005). Essentially, personality information may be influential in nearly every college situation where a student has to make a choice concerning commitment, involvement, membership, and/or participation (Lounsbury et al., 2005).

1.2. Personality congruence in the classroom

The research on person-organization (P—O) fit has further refined our understanding and measurement of the implications of individual/environment interaction, and provides the potential for a more nuanced understanding of the student/faculty narcissism fit relationship. The roots of the P—O fit approach stem from Murray's (1938) need-press theory, which described the interaction between an individual's needs and the demands of an environment in determining individual attitudes and outcomes. Pace and Stern (1958) suggested that the "congruence between personal needs and environmental press will be more predictive of (student) achievement, growth and change than any single aspect of either the person or the environment" (p. 277). One approach to P—O fit is to examine the degree to which a person "supplements, embellishes, or possesses characteristics which are similar to other individuals" in an environment (Muchinsky & Monahan, 1987: 269). The implication of this approach to fit is that individuals possess cognitive prototypes of successful personalities in organizations, and congruence with such perceptions can reduce cognitive dissonance, out-group effects, and enhance attitudes and performance. Research has generally supported the congruence hypothesis in predicting student satisfaction and performance in educational settings (e.g., Bay, 1962; Fisher & Fraser, 1983; Funkenstein, 1962; Moos, 1979). Moreover, the widely documented tendency of individuals to prefer others who are similar to themselves (e.g., Brewer & Miller, 1984; Kramer, 1991; Messick & Mackie, 1989; Tajfel & Turner, 1986) indicates the potential for students to prefer and thrive in classrooms in which the instructor's personality is similar to their own. Furthermore, it may even be possible that student divergence from the instructor's personality increases out-group effects directed toward that individual. Such effects may decrease the attractiveness of the class for the group member, negatively influencing thoughts regarding the class.

Improved outcomes in student-faculty interpersonal interactions within learning environments may also be partially a function of personality congruence, as similarity in personality can result in a correspondence in interests (Gottfredson, Jones, & Holland, 1993) and communication styles (McCroskey, Heisel, & Richmond, 2001). The degree to which an individual's personality is congruent with that of an instructor has been shown to result in improved student outcomes in several studies. Research by So Young Sohn and Yong Kwan Jo (2003) indicated that personality similarity between instructors and students in flight crew training resulted in enhanced student performance on NASA exams. Personality congruence between students and professors in the higher education classroom has also predicted higher grades for students (Westerman, Nowicki, & Plante, 2002). The research evidence seems to indicate that instructor-student personality congruence plays a role in student outcomes. As a result, we anticipate that personality congruence on the dimension of narcissism will have a similar relationship with student outcomes in the classroom. Further, personality fit, as noted previously, functions to minimize out-group effects, communication difficulties, and learning style differences. If personality fit exists with a faculty member, these students may be more likely to view the course as being less difficult. Finally, a meta-analysis by Kristof-Brown, Zimmerman, and Johnson (2005) indicated that perceived dyadic fit with one's supervisor has a significant influence on satisfaction with one's supervisor and potentially with leader-member exchange. As a result, we anticipate that student-faculty congruence on narcissism may lead to enhanced perceptions of faculty, who function as supervisors of their classrooms. This research extends previous findings linking fit on specific personality dimensions (such as conscientiousness and agreeableness; Pawlowska, Westerman, Bergman, & Huelsman, 2014) in the higher education classroom to the specific personality dimension of narcissism, and leads to the following hypotheses:

H1. Student-faculty narcissism congruence will be significantly related to a student's grade in the course.

H2. Perceptions of professor status will at least partially mediate the relationship between student-faculty narcissism congruence and course grade.

H3. Perceptions of class difficulty will at least partially mediate the relationship between student-faculty narcissism congruence and course grade.

This research also seeks to further understand and specify *how* an asymmetry between student and faculty narcissism is associated with student performance. The literature on narcissism and discrepant self-esteem may offer insights (e.g., Dreyer-Oren, 2012). Narcissists tend to be high on discrepant self-esteem (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003; Zeigler-Hill, 2011), which is characterized by high explicit self-esteem (such as those reported by self-report measures) and low implicit self-esteem (an internal or 'true' measure of self-esteem) (Greenwald & Banaji, 1995; Greenwald & Farnham, 2000). Those with discrepant self-esteem display defensive behavior patterns and attributional styles (Greenwald & Banaji, 1995) which function to protect a positive sense of self-worth by seeking ways to maximize positive and minimize negative self-referent information (Greenwald & Farnham, 2000; Kernis, 2003). Thus, individuals with high discrepant self-esteem are more likely to hold and attempt to protect positive illusions about the self (Bosson, Brown, Zeigler-Hill, & Swann, 2003).

In the process of taking a course, students implicitly collect information used to develop cognitions regarding their P–O "fit" with the context-specific educational environment offered in the classroom, which includes the aforementioned fit with the professor. If dyadic instructor-student incongruence results in negative cognitions about the classroom context, a sense of social rejection or performance deficit can trigger an ego threat (a threat to one's self-esteem (Leary, Terry, Allen, & Tate, 2009)), in turn catalyzing self-protective mechanisms including social comparison and self-affirmation utilized to protect a sense of self-worth (Greenberg & Pyszczynski, 1985; Tesser, Crepaz, Beach, Cornell, & Collins, 2000). Research indicates that those with discrepant self-esteem are more sensitive to ego threats in an academic setting (Borton, Crimmins, Ashby, & Ruddiman, 2012; Jordan, Spencer, Zanna, & 2005; Schröder-Abé, Rudolph, Wiesner, & Schütz, 2007), as they seek to protect their relatively fragile self-views. The explicitly negative self-referential information conveyed in an ego threat is particularly intimidating to narcissistic individuals possessing such hyper-awareness. Research conducted by Jordan et al.,(2005) indicates that failure on an academic task activated those with higher discrepant self-esteem to engage in self-worth bolstering through social comparison by stereotyping and denigrating others to enhance their self-perceptions. This process functions as a coping strategy to protect self-esteem and to reduce one's cognitive dissonance (Jordan et al., 2003).

We argue that perceptions of professorial status and class difficulty act as two concomitant mechanisms, both initiated and controlled by the student, which result from personality incongruence and ultimately influence course grade. Based on the discussion above, if fit does not exist between highly narcissistic students and faculty, coping strategies should be activated to reduce the ego threat of academic failure, which will be particularly salient amongst students higher in narcissism. Thus, we expect more highly narcissistic students to be more likely to view a less narcissistic faculty member as possessing lower status, and the course as being more difficult as a result of personality incongruence which maximizes out-group effects, communication difficulties, and learning style differences.

Conversely, we expect coping strategies to be activated for less narcissistic students who have more narcissistic faculty members. Narcissism is a characteristic that can be easily identified, even by those who have little or no acquaintance with the narcissist (Vazire, Naumann, Rentfrow, & Gosling, 2008). As a result of the strategies that narcissistic individuals employ to protect and maintain their grandiose (yet vulnerable) self-concepts, narcissistic individuals are often referred to by others as arrogant, competitive, unpleasant, selfish, and/or aggressive (Golmaryami & Barry, 2010; Lustman, Wiesenthal, & Flett, 2010; Malkin, Zeigler-Hill, Barry, & Southard, 2013). A vast literature indicates that stressors from interpersonal relationships, such as professor–student relationships, form a substantial portion of students' everyday stressors (Barnes, Potter, & Fiedler, 1983; Felsten & Wilcox, 1992; Seiffge-Krenke, 2011) and that such interpersonal relations can have dramatic effects on academic achievement (Kaplan, Liu, & Kaplan, 2005). Such stressors likely serve as ego threats to students in the form of social rejection or performance deficit in the classroom. As such, a lack of student-instructor fit on the dimension of narcissism may decrease the attractiveness of the class for the out-group member and negatively influence thoughts regarding the class. As part of a coping strategy, a student will be more likely to view the narcissistic instructor as possessing lower status and also view the class as having a higher level of difficulty. Based on the above, we hypothesize the following:

H4. In student-professor narcissism-incongruent dyads, students perceive professors to have lower status.

H5. In student-professor narcissism-incongruent dyads, students perceive course difficulty to be higher.

2. Method

2.1. Sample and procedure

Participants were 405 undergraduate business students at a comprehensive AACSB-accredited state university in the southeastern United States. Our sample included 21 classes, 9 instructors of business (7 males, 2 females), and students from

all majors within the business discipline. We eliminated one hundred thirty-three participants with incomplete data. Five additional cases were identified as univariate and/or multivariate outliers according to standardized residuals, Cook's D, and Mahalanobis distance criteria (Tabachnik & Fidell, 1996) and were omitted from further analyses. Dropping these participants resulted in a final sample of 267 subjects. Course grades for respondents ($M = 85.96$, $SD = 7.32$) did not differ significantly from those of non-respondents ($M = 85.22$, $SD = 6.882$); $t(403) = .98$, $p = .33$. The mean age of our final sample was 21.7 years, with a range of 17–30 years. The sample was 56.8% male and 43.2% female. Participation in the study was voluntary, and no extra credit was provided. Participants completed a survey at the mid-point of an academic semester, administered by a third party during class time, consisting of demographic information including age, gender, and cumulative GPA, and several inventories representing our independent and dependent variables. Informed consent was utilized to collect information regarding participants' classroom performance (i.e., final course grades and attendance) from instructors after the conclusion of the courses.

2.2. Measures

2.2.1. Narcissism

To assess narcissism, participants completed the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). The NPI contains 40 paired statements; each pair includes a narcissistic response and a non-narcissistic response. Respondents were asked to select the statement that best matched their own feelings and beliefs. Items included: "Modesty doesn't become me" versus "I am essentially a modest person" and "I can usually talk my way out of anything" versus "I try to accept the consequences of my behavior." Narcissistic responses were averaged and higher scores on the NPI indicated a more narcissistic personality. The NPI has been shown to have adequate reliability and validity (Raskin & Terry, 1988; Rhodewalt & Morf, 1995). Cronbach's alpha for the present sample was .83.

2.2.2. Narcissism congruence

An absolute value difference score was calculated based on student and faculty responses to the NPI. Thus, this research used a form of dyadic objective fit, whereby, after an individual describes his or her own characteristics, these characteristics are then matched to a corresponding external measure, in this case, faculty narcissism. In a meta-analysis of the three forms of person-organization fit approaches (subjective, perceived, and objective fit), objective fit was found to be the most predictive of behavioral outcomes (Hoffman & Woehr, 2006). Based on this finding, fit in this study was operationalized as the congruence between an individual's self-description and the faculty member's self-description of narcissism, where higher values are indicative of higher discrepancy.

2.2.3. Classroom performance

At the conclusion of the academic session, each instructor was given a list of the students who consented to participate, and the instructor provided the final course grade and attendance for each student. Both variables were in percentages, with higher scores indicating better performance and greater attendance.

2.2.4. Perceptions of professor status

Student perceptions of professor status were assessed with a three-item scale ($\alpha = .77$) constructed for the purposes of this study. This measure was designed to tap the extent to which students perceived that the professor was deserving of his/her respect. The items were as follows: "I believe this professor to be well-educated and knowledgeable"; "I hold this professor in high regard"; and "I have very little respect for this professor" (reverse-coded). Subjects responded on a Likert-type scale with seven options ranging from "strongly agree" to "strongly disagree."

2.2.5. Perceptions of class difficulty

Perceptions of class difficulty were assessed with a three-item scale ($\alpha = .70$), also constructed for the purposes of this study. This measure was designed to assess the extent to which students perceived that their class required significant exertion. The items were as follows: "This class was more challenging than I had expected"; "This class was beyond my level of comprehension"; and "This class was more difficult than it should have been." Subjects responded on a Likert-type scale with seven options ranging from "strongly agree" to "strongly disagree."

2.2.6. Control variables

In order to isolate the influence of narcissism congruence, we included student age, gender, GPA, class level (sophomore, junior, senior), and class attendance as covariates in all analyses.

3. Results

Because this study employed measures tapping perceptions of professor status and class difficulty that have not been previously validated in the literature, exploratory and confirmatory factor analytic procedures were conducted to obtain factor structure. We began by conducting a parallel analysis (Hoyle & Duvall, 2004) as well as a minimum average partial correlation analysis (MAP; Velicer, Eaton, & Fava, 2000). The results of both analyses indicated that two factors should be

retained for interpretation. These results were corroborated via an EFA using principal axis factoring and an oblique rotation. Based on standard guidelines for assessing dimensionality (retaining items with loadings of .40 or above, Ford, MacCallum, & Tait, 1986; deleting items with cross-loadings of .40 or higher, Tabachnik & Fidell, 1996), no items were deleted. Subsequent to exploratory factor analyses, a confirmatory factor analysis was conducted on the six items comprising the newly-developed scales. The resulting fit indices indicated excellent fit and a high degree of simple structure ($\chi 2\,(8) = 13.64$, $p = .106$, CFI = .98; RMSEA = .07; SRMR = .07).

Means, standard deviations, internal reliabilities, and intercorrelations among the variables are reported in Table 1. All measures showed adequate internal reliabilities, with Conbach's alpha ranging from .70 to .92. The bivariate correlations were largely consistent with the hypothesized relationships. Greater differences in student and faculty narcissism scores were significantly associated with lower course grades ($r = -.15$, $p = .012$), lower perceptions of professor status ($r = -.18$, $p = .002$), and heightened perceptions of class difficulty ($r = .26$, $p < .001$). Moreover, perceptions of professor status and perceptions of class difficulty were both significantly related to course grade ($r = .17$, $p = .004$ and $r = -.35$, $p < .001$, respectively).

Following best practices for tests of mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2008; Shrout & Bolger, 2002), we tested our multiple mediator model using Preacher and Hayes (2008) SPSS macro that incorporates the Sobel test and bootstrapped confidence intervals in the estimation of indirect effects. Estimating the analysis model from the bootstrap samples yields an empirical sampling distribution for each parameter, the standard deviation of which estimates the standard error. Scholars have advocated for the use of bootstrap resampling when such statistical assumptions are violated, as bootstrap standard errors display less bias and more variability than maximum-likelihood-based standard errors (Hancock & Liu, 2012; Nevitt & Hancock, 2001). Unstandardized regression coefficient estimates and bias-corrected 95% confidence intervals for evidence of mediation are presented in Table 2. As shown, greater differences in student and faculty narcissism were significantly and negatively related to student course grades as indicated by the significant unstandardized regression coefficient, ($b = -.12$, $t = -2.06$, $p = .040$), supporting Hypothesis 1. Furthermore, perceptions of professor status positively related to narcissism congruence, controlling for class difficulty ($b = -.02$, $t = -1.99$, $p = .047$). Moreover, perceptions of professor status were found to mediate the negative relationship between narcissism differential and course grade (.03). Conversely, perceptions of class difficulty were negatively associated with narcissism congruence, controlling for perceptions of professor status ($b = .03$, $t = 3.21$, $p = .001$), and mediated the influence of narcissism differential on course grade (−.05). Lastly, as indicated by the bootstrapped 95% confidence intervals, the indirect effect did not contain zero (Table 2). Given the significant and direct influence of narcissism differential on course grade, these findings support Hypotheses 2 and 3 and indicate that perceptions of professor status and class difficulty partially mediate this direct effect.

In order to test Hypotheses 4 and 5, an extreme groups design (MacCallum, Zhang, Preacher, & Rucker, 2002; Preacher, Rucker, MacCallum, & Nicewander, 2005) was utilized. This type of design involves isolating scores from highest and lowest scores of a distribution, thus increasing the variance in the sample with respect to the population and, consequently, statistical power (Aguinis, 2004). This design is ideal for studies in the early stages of validating relationships, detecting general trends, or in exploratory research in which little prior knowledge exists (Preacher et al., 2005). Accordingly, we placed students into one of three groups; Students whose standing on narcissism was higher than their respective faculty (over-matched), students whose standing on narcissism was lower than their respective faculty (under-matched), and students whose narcissism scores were equivalent to faculty narcissism (evenly-matched). Those in the overmatched group ($n = 41$) represent students whose score on the net student faculty NPI difference was one standard deviation above the mean or higher on the net difference distribution, indicating higher student narcissism relative to faculty narcissism. Those in the under-matched condition ($n = 45$) represent students one standard deviation below the mean or lower on net narcissism difference, reflecting lower student narcissism relative to faculty. The remainder of the student-faculty dyads constituted the evenly-matched condition ($n = 181$) and represented a control group against which to compare the under- and over-matched groups.

Table 1
Means, standard deviations, and correlations of all variables.

Study Variables	Mean	SD	Range	1	2	3	4	5	6	7	8	9	10	11
1. Student Narcissism	17.42	6.51	1–37	(.82)										
2. Faculty Narcissism	8.47	4.02	3–13	−.03	(.92)									
3. Professor Status	6.10	.69	1–7	.02	.29*	(.77)								
4. Class Difficulty	3.09	1.04	1–7	−.12*	.18**	−.18**	(.70)							
5. Course Grade	85.96	7.32	42–100	.17*	.00	.17**	−.35**	–						
6. Student Age	21.68	1.69	19–45	.12*	−.17*	−.02	.12*	−.24**	–					
7. Student Gender	1.65	.48	NA	.17*	−.02	.09	.00	−.05	.14**	–				
8. GPA	3.05	.44	1.7–4	.03	−.04	−.06	−.15**	.43**	−.30**	−.19**	–			
9. Class Level	3.15	.62	NA	.06	−.54**	−.07	−.19**	−.01	.32**	.10	−.14*	–		
10. Attendance	90.52	9.60	45–100	−.05	.15*	−.11	.08	.22**	−.10	−.16**	.26**	−.07	–	
11. Narcissism Congruence	9.71	6.57	NA	.52**	−.46**	−.18**	.26**	−.15**	.15*	.17**	−.03	−.30**	−.12	–

Note: Reliabilities reported in parentheses (where applicable). *$p < .05$, **$p < .01$. Student Gender coded 1 = Female, 2 = Male. Class Level coded 2 = Sophomore, 3 = Junior, 4 = Senior.

Table 2
Regression results for mediation.

Variables	*B*	*SE*	*t*	*p*
Course grade regressed on narcissism congruence	−.12	.05	−2.06	.040
Professor status regressed on narcissism congruence, controlling for class difficulty	−.02	.01	−1.99	.047
Class Difficulty regressed on Narcissism Congruence, controlling for Professor Status	.03	.01	3.21	.001
Course grade regressed on narcissism congruence, controlling for professor status & class difficulty	−.09	.05	−2.01	.046

	M	*SE*	LL 95% CI	UL 95% CI	*z*	*p*
Bootstrap results for indirect effects						
Indirect effect through professor status	.03	.01	.01	.06	2.22	.013
Indirect effect through class difficulty	−.05	−.01	.02	.09	2.65	.004

Note: Unstandardized regression coefficients reported. Bootstrap sample size 10,000. LL = lower limit; CI = confidence interval; UL = upper limit. Student age, gender, GPA, class level, and class attendance included as covariates, however none reached the level of statistical significance. For ease of interpretation, they have been omitted.

Hypothesis 4 postulated that, compared to student-professor narcissism-congruent dyads, perceptions of professor status would be lower for more narcissistic students who have less narcissistic faculty and less narcissistic students who have more narcissistic faculty. Results from one-way ANOVA revealed significant differences across the over-matched and under-matched conditions ($F(2,432) = 11.17$, $p = .001$). A Tukey post-hoc test revealed that perceptions of professor status for both the over-matched ($6.31 \pm .75$, $p = .004$) and under-matched groups (5.91 ± 1.57, $p = .024$) were significantly lower than the evenly-matched group ($6.60 \pm .51$), supporting Hypothesis 4. In testing Hypothesis 5, which proposed that perceptions of course difficulty would be higher for more narcissistic students who have less narcissistic faculty and less narcissistic students who have more narcissistic faculty, relative to narcissism-congruent dyads, a one-way ANOVA indicated significant differences across conditions ($F(2,432) = 10.23$, $p < .001$). A Tukey post-hoc test showed that perceptions of course difficulty were significantly higher for the under-matched group (3.87 ± 1.92, $p = .024$) than the evenly-matched group (3.10 ± 1.10) and marginally significantly higher for the over-matched group ($3.50 \pm .83$, $p = .08$). These results provide partial support for Hypothesis 5 (see Fig. 2).

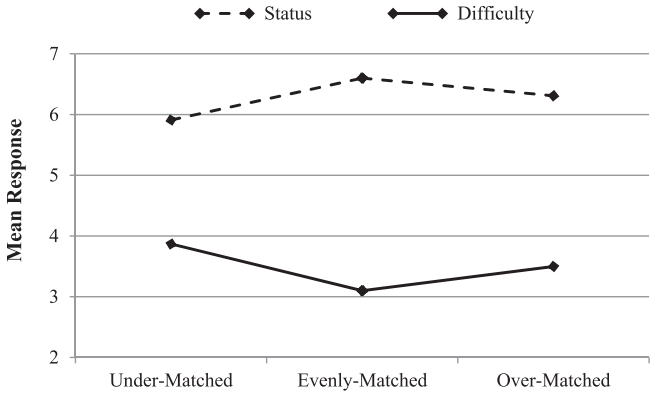

Fig. 2. Student perceptions of professor status and course difficulty as a function of group condition.

4. Discussion

A rising tide of employee narcissism could present significant problems for organizations, their productivity, and long-term profitability. The research clearly finds significant negative outcomes associated with narcissism — many of which directly relate to business, such as rapidly depleting common resources (Campbell et al., 2005), white collar crime (Blickle et al., 2006), and risky decision-making (Campbell et al., 2004). Considering the evidence indicating significant increases in narcissism among Millennials (Twenge et al., 2008) and even higher levels of narcissism amongst business students (Bergman, Westerman, & Daly, 2010; Westerman et al., 2012), we must work toward a greater understanding of the role of business higher education in stemming this tide. This research represents the first study to examine whether narcissism plays a role in the educational process. Specifically, this study investigated the relationship between faculty-student congruence on narcissism and student performance and student perceptions of the difficulty of the class and status of the professor. Results supported the hypotheses, in that narcissism fit was significantly related to a student's final grade in the class such that less congruence was associated with lower course grades and that this association is partially mediated by perceived professor status and class difficulty. Moreover, our results indicated that professor status and class difficulty were influenced by dyadic

discrepancies in trait narcissism such that perceptions were lower for students with either significantly higher or lower levels of narcissism than their respective faculty.

As noted previously, for reasons currently unknown, business schools seem to be attracting more narcissistic students (Westerman et al., 2012). A disproportionate student emphasis on extrinsic values, financial success, and materialism (Bergman, Westerman, Bergman, Westerman, & Daly, 2014) may play a primary role in this phenomenon. Additionally, jobs today often require enhanced team behaviors and interpersonal skills of their employees. These are problem areas for narcissists. As a result, the narcissistic tendencies of business students may need to be dampened, which could also function to change business schools such that they would be less attractive to narcissists. Considering the core role that faculty play in the student educational experience, the potential effects of student-faculty fit on narcissism deserves particular attention. Lower narcissism among faculty was associated with desirable effects in our study, as less narcissistic students flourish with less narcissistic professors (they view their classes as being less difficult, their grades are higher, and they view the professor as being of higher status). Less narcissistic faculty had the opposite effect on more narcissistic students, who viewed these classes as more difficult, had less respect for their professor, and ultimately obtained lower course grades. Unfortunately, viewing the faculty member as being lower in status may limit the influence a faculty member can have in shaping behavior and reducing narcissistic tendencies amongst students.

However, the results indicated that more narcissistic faculty may be particularly problematic to business higher education's efforts to reduce narcissism within its student population. Less narcissistic students struggled in classes with more narcissistic faculty, receiving lower grades, perceiving higher class difficulty, and also viewing the faculty member as possessing lower status. However, more highly narcissistic students thrived with narcissistic faculty, viewing the class as less difficult, and earning higher grades. What may be of particular concern is that these students also viewed their narcissistic faculty as being of higher status. In short, higher narcissism among faculty seemed to have a dual relationship which is of dismay to those who desire reduced levels of narcissism in business education – they discouraged less narcissistic students, yet rewarded and provided a potential model for future behavior for more highly narcissistic students through their enhanced status. As a result, student-faculty fit on narcissism may play a critical role in reducing narcissism, with more highly narcissistic faculty being a linchpin in any strategy to reduce it in the classroom.

A primary question for future research may be how to reduce narcissism amongst professors in business schools. One potential suggestion is to enhance our faculty selection processes with an eye toward lower narcissism levels among faculty hires. This may be accomplished by enhancing the awareness of faculty on selection committees of the nature of narcissism, and its effects on students and the broader business community. Another approach would be to consider interventions to reduce narcissism amongst current narcissistic faculty. Cognitive behavioral therapy (CBT) has shown success in treating clinical narcissism (Beck et al., 1990). CBT emphasizes increasing patients' awareness of the impact of their narcissistic behaviors and statements on interpersonal relationships (Beck et al., 1990). CBT treatment strategies are based on the three major components of narcissism: lack of empathy, grandiosity, and hypersensitivity to evaluation. CBT interventions include attempts at enhancing perspective-taking and an awareness of others' feelings, activating more empathy, and adjusting a patient's grandiose self-view. Apart from clinical therapy, a less-invasive approach in a business school setting may be effective behavioral modeling provided by selected less-narcissistic others viewed as high status by faculty (such as Deans or highly respected or accomplished faculty within one's discipline) may provide mentoring and career development opportunities that help guide classroom behavior and interactions. In addition, suggestions provided in prior research to reduce narcissism amongst students which focus on enhancing empathy and emotional schemas which recognize the feelings and reactions of others, and providing alternative ways of interacting with others (Bergman et al., 2010), may also be of value for faculty. Such suggestions include faculty involvement in a curriculum that provides a greater emphasis on external outreach and service to others (including study abroad opportunities, real-world internships, and service learning) which may serve to reduce the attraction of the discipline for overly materialistic and self-absorbed faculty, and may serve to increase perspective-taking and empathy amongst faculty (i.e., decrease narcissism).

Narcissistic faculty may also receive additional developmental training so that they are more effective with the less narcissistic students in the classroom. Training faculty on enhancing their interpersonal sensitivity and on utilizing multiple perspectives on a classroom issue may provide faculty with expanded abilities in managing student teamwork in the classroom and on giving and receiving constructive feedback. Additional classroom training strategies for narcissistic faculty may include using peer feedback, and the enhanced usage of guest speakers, case studies, and role playing to expand the perspectives of both faculty and students. Faculty also could be sensitized to the fit issue and counseled to demonstrate improved consistency in grading and interpersonal treatment, and an enhanced reliance on the syllabus as an explicit and equitable contract. From the instructor's perspective, possessing an awareness of the potential impact of narcissism congruence on student performance may help alleviate potential bias that may occur in performance assessment and grading. Additional measures can be employed, including grading assignments or exams identified only by a student's ID number. Finally, faculty can be trained on appropriate interventions that are immediate in dealing with student narcissistic classroom behaviors, particularly those that directly detract from teamwork, values, or the overall performance of the class (Baker, Comer, & Martinak, 2008).

Conclusions based on the findings of this study should be tempered by consideration of several methodological issues, including the use of difference scores as a measure of fit, which has been the subject of much debate in the literature (Edwards, 2001). We followed Edwards' (2001) recommendations for the analysis of algebraic difference scores because our hypotheses focused on the discrepancy between faculty and student narcissism. This procedure assumes that a proper test of

an algebraic difference score in regression-type analyses requires a test of an unconstrained regression equation in which the dependent variable is regressed on the centered components of the difference score, supplemented by higher-order quadratic terms to represent the relationships of interest. The unstandardized regression coefficients from a polynomial regression equation were used to generate three-dimensional surface graphs of the relationships between faculty and student narcissism and the endogenous variables under study (status, difficulty, and grade). Based on these analyses, we found that adding the independent variables (faculty narcissism and student narcissism) to the model increased model fit, faculty narcissism and student narcissism exhibited significant independent effects on the dependent measures, and the results of the regression equation involving the narcissism congruence score (faculty narcissism subtracted from student narcissism) and the separate components of the congruence score lead to the same substantive conclusions. Thus, these supplementary analyses revealed that in this sample, alternative analytic approaches did not change the results. In the interest of parsimony, we reported the results using the difference scores. There also may be limitations to the study's generalizability. The students in this study may not be typical of those in other student populations. It also was not possible to determine the extent to which individual instructors influenced the outcomes, as the sample was limited to nine instructors and 21 class sections. Future research could expand the number of instructors and students in the sample, and also examine the potential effects of gender-based differences, which were only a control variable in the current study.

Finally, we must consider the potential broader implications resulting from this study. As Millennials enter the faculty ranks, will they be disproportionately narcissistic? If so, the effects of narcissistic faculty on a student's learning and development represent a promising direction for future research. Will they be enhancing the employment prospects of our more narcissistic students to the detriment of their organizations and the business community? These are critical questions to be answered, as the Millennial Generation is as large in number as the Baby Boomer Generation (Pew Research Center, 2010), and represents a major influence on the changing business environment and degree of competitiveness of the U. S. economy.

In summary, this research represents the first study to examine the relationships and potential effects of faculty narcissism on business students, and outcomes from fit. Considering the well-documented and profoundly negative implications of enhanced narcissism in our workplace mileus, future research in business education needs to explore its implications and develop effective intervention strategies.

References

Aguinis, H. (2004). *Moderated regression*. New York: Guilford.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Baker, S. D., Comer, D. R., & Martinak, M. L. (2008). All I'm askin' is for a little respect: how can we promote civility in our classrooms? *Organization Management Journal, 5*(2), 65–80.

Barnes, V., Potter, E. H., & Fiedler, F. E. (1983). Effect of interpersonal stress on the prediction of academic performance. *Journal of Applied Psychology, 68*(4), 686.

Bay, C. A. (1962). A social theory of higher education. In N. Sanford (Ed.), *The American college* (pp. 972–1005). New York: Wiley.

Beck, A. T., Freeman, A., & Associates. (1990). *Cognitive therapy of personality disorders*. New York: Guilford Press.

Bergman, J., Westerman, J., Bergman, S., Westerman, J., & Daly, J. (2014). Narcissism, materialism, and environmental ethics in business students. *Journal of Management Education, 38*(14), 489–510.

Bergman, J., Westerman, J., & Daly, J. (2010). Narcissism in management education. *Academy of Management Learning and Education, 9*(1), 119–131.

Blair, C. A., Hoffman, B. J., & Helland, K. R. (2008). Narcissism in organizations: a multisource appraisal reflects different perspectives. *Human Performance, 21*(3), 254–276.

Blickle, G., Schlegel, A., Fassbender, P., & Klein, U. (2006). Some personality correlates of business white-collar crime. *Applied Psychology: An International Review, 55*(2), 220–233.

Borton, J. L., Crimmins, A. E., Ashby, R. S., & Ruddiman, J. F. (2012). How do individuals with fragile high self-esteem cope with intrusive thoughts following ego threat? *Self and Identity, 11*, 16–35.

Bosson, J. K., Brown, R. P., Zeigler-Hill, V., & Swann, W. B., Jr. (2003). Self-enhancement tendencies among people with high explicit self-esteem: the moderating role of implicit self-esteem. *Self and Identity, 2*, 169–187.

Brewer, M. B., & Miller, N. (1984). *Beyond the contact hypothesis: Theoretical perspectives on desegregation. Groups in contact:The psychology of contact* (pp. 281–302). New York: Academic.

Brunell, A. B., Gentry, W., Campbell, W. K., & Kuhnert, K. (2006). Narcissism and emergent leadership. In *Poster presented at the annual meeting of the society for personality and social psychology*. Palm Springs.

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology, 75*(1), 219–229.

Buss, D. M., & Chiodo, L. M. (1991). Narcissistic acts in everyday life. *Journal of Personality, 59*(2), 179–215.

Campbell, W. K., Bush, C. P., Brunell, A. B., & Shelton, J. (2005). Understanding the social costs of narcissism: the case of the tragedy of the commons. *Personality and Social Psychology Bulletin, 31*(10), 1358–1368.

Campbell, W. K., Goodie, A. S., & Foster, J. D. (2004). Narcissism, confidence, and risk-attitude. *Journal of Behavioral Decision Making, 17*(4), 297–311.

Campbell, W. K., Reeder, G. D., Sedikides, C., & Elliot, A. J. (2000). Narcissism and comparative self-enhancement strategies. *Journal of Research in Personality, 34*(3), 329–347.

Campbell, W. K., Rudich, E. A., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: two portraits of self-love. *Personality and Social Psychology Bulletin, 28*(3), 358–368.

Caspi, A., Chajut, E., Saporta, K., & Beyth-Marom, R. (2006). The influence of personality on social participation in learning environments. *Learning and Individual Differences, 16*, 129–144.

Dreyer-Oren, S. E. (2012). *Discrepeant self-esteem, ego threat, and risk-taking*. Doctoral dissertation. Hamilton College.

Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods, 4*, 264–286.

Emmons, R. A. (1984). Factor analysis and construct validity of the narcissistic personality inventory. *Journal of Personality Assessment, 48*(3), 291–300.

Farwell, L., & Wohlwend-Lloyd, R. (1998). Narcissistic processes: optimistic expectations, favorable self-evaluations, and self-enhancing attributions. *Journal of Personality, 66*(1), 65–83.

Felsten, G., & Wilcox, K. (1992). Influences of stress and situation-specific mastery beliefs and satisfaction with social support on well-being and academic performance. *Psychological Reports, 70*(1), 291–303.

Fisher, D., & Fraser, B. (1983). Validity and use of the classroom environment scale. *Educational Evaluation and Policy Analysis, 5*, 261–271.

Ford, J., MacCallum, R., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: a critical review and analysis. *Personnel Psychology, 35*, 291–314.
Funkenstein, D. H. (1962). Failure to graduate from medical school. *Journal of Medical Education, 37*, 585–603.
Furnham, A., Christopher, A., Garwood, J., & Martin, N. G. (2008). Ability, demography, learning style, and personality trait correlates of student preference for assessment method. *Educational Psychology, 28*, 15–27.
Galvin, B. M., Waldman, D. A., & Balthazard, P. (2010). Visionary communication qualities as mediators of the relationship between narcissism and attributions of leader charisma. *Personnel Psychology, 63*, 509–537.
Golmaryami, F. N., & Barry, C. T. (2010). The associations of self-reported and peer-reported relational aggression with narcissism and self-esteem among adolescents in a residential setting. *Journal of Clinical Child & Adolescent Psychology, 39*(1), 128–133.
Goncalo, J. A., Flynn, F. J., & Kim, S. H. (2010). Are two narcissists better than one? the link between narcissism, perceived creativity, and creative performance. *Personality and Social Psychology Bulletin, 36*, 1484–1495.
Gottfredson, G. D., Jones, E. M., & Holland, J. L. (1993). Personality and vocational interests: the relation of Holland's six interest dimensions to five robust dimensions of personality. *Journal of Counseling Psychology, 40*(4), 518–524.
Greenberger, E., Lessard, J., Chen, C., & Farruggia, S. P. (2008). Self-entitled college students: contributions of personality, parenting, and motivational factors. *Journal of Youth and Adolescence, 37*, 1193–1204.
Greenberg, J., & Pyszczynski, T. (1985). Compensatory self-inflation: a response to the threat to self-regard of public failure. *Journal of Personality and Social Psychology, 49*(1), 273.
Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: attitudes, self-esteem, and stereotypes. *Psychological Review, 102*(1), 4.
Greenwald, A. G., & Farnham, S. D. (2000). Using the implicit association test to measure self- esteem and self-concept. *Journal of Personality and Social Psychology, 79*(6), 1022.
Hancock, G. R., & Liu, M. (2012). Bootstrapping standard errors and data-model fit statistics. In R. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 296–306). New York: Guilford Press.
Hoffman, B. J., & Woehr, D. J. (2006). A quantitative review of the relationship between person–organization fit and behavioral outcomes. *Journal of Vocational Behavior, 68*, 389–399.
Hoyle, R. H., & Duvall, J. L. (2004). Determining the number of factors in exploratory and confirmatory factor analysis. In *Handbook of quantitative methodology for the social sciences* (pp. 301–315).
Jordan, C. H., Spencer, S. J., & Zanna, M. P. (2005). Types of high self-esteem and prejudice: how implicit self-esteem relates to ethnic discrimination among high explicit self-esteem individuals. *Personality and Social Psychology Bulletin, 31*(5), 693–702.
Jordan, C. H., Spencer, S. J., Zanna, M. P., Hoshino-Browne, E., & Correll, J. (2003). Secure and defensive high self-esteem. *Journal of Personality and Social Psychology, 85*(5), 969.
Kaplan, D. S., Liu, R. X., & Kaplan, H. B. (2005). School related stress in early adolescence and academic performance three years later: the conditional influence of self expectations. *Social Psychology of Education, 8*(1), 3–17.
Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry, 14*(1), 1–26.
Kernis, M. H., & Sun, C. (1994). Narcissism and reactions to interpersonal feedback. *Journal of Research in Personality, 28*, 4–13.
Kramer, R. M. (1991). Intergroup relations and organizational dilemmas: the role of categorization processes. In B. M. Staw, & L. L. Cummings (Eds.), *Research in organizational behavior, 13* pp. 191–228). Greenwich, CT: JAI Press.
Kristof-Brown, A., Zimmerman, R., & Johnson, E. (2005). Consequences of individuals fit at work: a meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology, 58*(2), 281–342.
Leary, M. R., Terry, M. L., Allen, A. B., & Tate, E. B. (2009). The concept of ego threat in social and personality psychology: is ego threat a viable scientific construct? *Personality and Social Psychology Review, 13*(3), 151–164.
Lounsbury, J. W., Saudargas, R. A., Gibson, L. W., & Leong, F. T. (2005). An investigation of broad and narrow personality traits in relation to general and domain-specific life satisfaction of college students. *Research in Higher Education, 46*, 707–729.
Lubit, R. (2002). The long-term organizational impact of destructively narcissistic managers. *Academy of Management Executive, 16*(1), 127–138.
Lustman, M., Wiesenthal, D. L., & Flett, G. L. (2010). Narcissism and aggressive driving: Is an inflated view of the self a road hazard? *Journal of Applied Social Psychology, 40*(6), 1423–1449.
MacCallum, R. C., Zhang, S., Preacher, K. J., & Rucker, D. D. (2002). On the practice of dichotomization of quantitative variables. *Psychological Methods, 7*(1), 19.
MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods, 7*, 83–104.
Malkin, M. L., Zeigler-Hill, V., Barry, C. T., & Southard, A. C. (2013). The view from the looking glass: how are narcissistic individuals perceived by others? *Journal of Personality, 81*(1), 1–15.
McCroskey, J. C., Heisel, A. D., & Richmond, V. P. (2001). Eysenck's big three and communication traits: three correlational studies. *Communication Monographs, 68*(4), 360–366.
Messick, D. M., & Mackie, D. M. (1989). Intergroup relations. In M. R. Rosenwieg, & L. W. Porter (Eds.), *Annual review of psychology, 40* pp. 45–81). Palo Alto, CA: Annual Reviews.
Millon, T. (1996). *Disorders of personality. DSM-IV and beyond* (2nd ed.). New York: Wiley-Interscience.
Moos, R. H. (1979). *Evaluating educational environments: Procedures, methods, findings, and policy implications*. San Francisco: Jossey-Bass.
Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: a dynamic self-regulatory processing model. *Psychological Inquiry, 12*(4), 177–196.
Muchinsky, P. M., & Monahan, C. J. (1987). What is person-environment congruence? Supplementary versus complementary models of fit. *Journal of Vocational Behavior, 31*(3), 268–277.
Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.
Nevitt, J., & Hancock, G. R. (2001). Performance of bootstrapping approaches to model test statistics and parameter standard error estimation in structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal, 8*, 353–377.
O'Boyle, E., Forsyth, D., Banks, G., & McDaniel, M. (2012). A meta-analysis of the dark triad and work behavior: a social exchange perspective. *Journal of Applied Psychology, 97*(3), 557–579.
Oltmanns, T. F., Friedman, J. N. W., Fiedler, E. R., & Turkheimer, E. (2004). Perceptions of people with personality disorders based on thin slices of behavior. *Journal of Research in Personality, 38*, 216–229.
Pace, C. R., & Stern, G. G. (1958). An approach to the measurement of psychological characteristics of college environments. *Journal of Educational Psychology, 49*, 269–277.
Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: a mixed blessing? *Journal of Personality and Social Psychology, 74*(5), 1197–1208.
Paulhus, D. L., Harms, P. D., Bruce, M. N., & Lysy, D. C. (2003). The over-claiming technique: measuring self-enhancement independent of ability. *Journal of Personality and Social Psychology, 84*(4), 890–904.
Pawlowska, D., Westerman, J., Bergman, S., & Huelsman, T. (2014). Student personality, classroom environment, and student outcomes: a person-environment fit analysis. *Learning and Individual Differences, 36*, 180–193.
Pew Research Center. (March 22, 2010). *The millennial count*. Available at: http://www.pewresearch.org/daily-number/the-millennial-count/ Accessed 11.11.13..

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891.
Preacher, K. J., Rucker, D. D., MacCallum, R. C., & Nicewander, W. A. (2005). Use of the extreme groups approach: a critical reexamination and new recommendations. *Psychological Methods, 10*(2), 178.
Raskin, R., & Terry, H. (1988). A principal-components analysis of the narcissistic personality inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology, 54*(5), 890–902.
Resick, C. J., Whitman, D. S., Weingarden, S. M., & Hiller, N. J. (2009). The bright-side and the dark-side of CEO personality: examining core self-evaluations, narcissism, transformational leadership, and strategic influence. *Journal of Applied Psychology, 94*(6), 1365–1381.
Rhodewalt, F., & Morf, C. C. (1995). Self and interpersonal correlates of the narcissistic personality inventory: a review and new findings. *Journal of Research in Personality, 29*, 1–23.
Robak, R., Chiffriller, S., & Zappone, M. (2007). College students' motivations for money and subjective well-being. *Psychological Reports, 100*(1), 147–156.
Schröder-Abé, M., Rudolph, A., Wiesner, A., & Schütz, A. (2007). Self-esteem discrepancies and defensive reactions to social feedback. *International Journal of Psychology, 42*(3), 174–183.
Seiffge-Krenke, I. (2011). Coping with relationship stressors: a decade review. *Journal of Research on Adolescence, 21*(1), 196–210.
Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological Methods, 7*(4), 422.
Sohn, So Y., & Jo, Y. K. (2003). A study on the student pilot's mental workload due to personality types of both instructor and student. *Ergonomics, 46*(15), 1566–1578.
Tabachnik, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed.). New York: HarperCollins College Publishers.
Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worschel, & W. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago, IL: Nelson-Hall.
Tesser, A., Crepaz, N., Beach, S. R. H., Cornell, D., & Collins, J. C. (2000). Confluence of self-esteem regulation mechanisms: on integrating the self-zoo. *Personality and Social Psychology Bulletin, 26*, 1476–1489.
Twenge, J. M., Konrath, S., Foster, J. D., Campbell, W. K., & Bushman, B. J. (2008). Egos inflating over time: a cross-temporal meta-analysis of the narcissistic personality inventory. *Journal of Personality, 76*(4), 876–901.
Vazire, S., Naumann, L. P., Rentfrow, P. J., & Gosling, S. D. (2008). Portrait of a narcissist: manifestations of narcissism in physical appearance. *Journal of Research in Personality, 42*(6), 1439–1447.
Velicer, W. F., Eaton, C. A., & Fava, J. L. (2000). Construct explication through factor or component analysis: a review and evaluation of alternative procedures for determining the number of factors or components. In *Problems and solutions in human assessment* (pp. 41–71). Springer US.
Wallace, H. M., & Baumeister, R. F. (2002). The performance of narcissists rises and falls with perceived opportunity for glory. *Journal of Personality and Social Psychology, 82*(5), 819–834.
Westerman, J., Bergman, J., Bergman, S., & Daly, J. (2012). Are universities creating millennial narcissist employees? an empirical examination of narcissism in business students and its implications. *Journal of Management Education, 36*(1), 5–32.
Westerman, J., Nowicki, M., & Plante, D. (2002). Fit in the classroom: predictors of student performance and satisfaction in management education. *Journal of Management Education, 26*(1), 5–18.
Zeigler-Hill, V. (2006). Discrepancies between implicit and explicit self-esteem: implications for narcissism and self-esteem instability. *Journal of Personality, 74*(1), 119–143.
Zeigler-Hill, V. (2011). The connections between self-esteem and psychopathology. *Journal of Contemporary Psychotherapy, 41*(3), 157–164.
Zhang, L. (2006). Thinking styles and the big five personality traits revisited. *Personality and Individual Differences, 40*, 1177–1187.