



Self-centered and self-employed: Gender and the relationship between narcissism and self-employment

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ABSTRACT

The present study draws from Person-Environment (P-E) Fit theory to examine the relationship between Narcissistic Personality Disorder (NPD) and self-employment status as well as the potential for gender to moderate this relationship. Two-wave archival data involving 29,000 respondents of a representative sample provided overall support for our predictions. The results show that although there is a small positive overall effect linking NPD with self-employment, this relationship is moderated by gender such that narcissistic women are less likely to be self-employed than narcissistic men. Moreover, exploratory results demonstrate that narcissists do not ultimately benefit from self-employment status. Specifically, there was no difference in the incomes of narcissists who were self-employed and those who were not. These results suggest that the effects of narcissism on career choice is more complicated than initially believed.

1. Introduction

There has been considerable research in recent years within the organizational scholarship literature aimed at trying to understand the psychology of individuals who leave, or refrain from entering to begin with, the traditional workforce and instead become self-employed (e.g. Aguinis & Lawal, 2013; Kitching & Smallbone, 2012; Kuhn, 2016; Kuhn & Maleki, 2017). Prior explanations for this shift in the workplace have ranged from attributing the shift to technological innovation to shifting values and preferences in the millennial generation which has recently entered the workforce (Friedman, 2014). More recently, however, there has been a growing interest in examining the role of psychological disorders in influencing such career-related decisions (Verheul et al., 2015; Wiklund, Hatak, Patzelt, & Shepherd, 2018; Wiklund, Patzelt, & Dimov, 2016). Of the numerous psychological disorders that have been speculated to be associated with self-employment decisions, *Narcissistic Personality Disorder* (NPD), has been frequently identified as a likely determinant of the decision to become self-employed (Johnson, Madole, & Freeman, 2018; Obschonka, Lievens, Wille, & De Fruyt, 2015; Wu, Wang, Zheng, & Wu, 2019). NPD is defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) as “a pervasive pattern of grandiosity (in fantasy or behavior), need for admiration, and lack of empathy, beginning by early adulthood and present in a variety

of contexts” (American Psychiatric Association, 1994). Prior research suggests that NPD may be a strong inhibitor of occupational functioning, such that narcissistic individuals may have difficulty adjusting to traditional work roles (Horowitz, 2009; Miller, Campbell, & Pilkonis, 2007).

But despite its often maladaptive nature, many of the qualities of NPD appear to be conducive to entrepreneurial environments, such as increased risk tolerance, confidence, and the ability to convince others of one's ideas (McGee, Peterson, Mueller, & Sequeira, 2009; Navis & Ozbek, 2017; Nieß & Biemann, 2014; Wiklund et al., 2018). Despite a considerable amount of theorizing and research on the subject (Grijalva & Harms, 2014; Kets de Vries, 1996), this literature remains limited in two main ways. First, although several studies have investigated the relationship between narcissism and individuals' intentions to start their own business (e.g., Baldegger, Schroeder, & Furtner, 2017; Hmieleski & Lerner, 2016; Kramer, Cesinger, Schwarzing, & Gelléri, 2011; Mathieu & St-Jean, 2013; Smith, Hill, Wallace, Recendes, & Judge, 2018; Wu et al., 2019), there remains little empirical evidence to date examining whether narcissism is associated with self-employment, especially those that utilize samples of working adults. This is unsurprising, given the inherent difficulty in obtaining trained assessments of NPD in the general population. But as recent research calls indicate (Wiklund et al., 2018), examining such psychological outliers

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is an important endeavor for furthering our understanding of what is also a relatively infrequent phenomenon, the decision to be self-employed.

Second, although prior research suggests that gender may play an important role in the narcissism–self-employment relationship, current research on the expected effects of gender remains limited. Indeed, prior work suggests that there may exist important differences in the way antisocial personality disorders such as NPD manifest in women and men (Cale & Lilienfeld, 2002; Grijalva et al., 2015; Hamburger, Lilienfeld, & Hogben, 1996). At the same time, the literature has found significant gender gaps between male and female preferences for self-employment that may reflect some of these differences (Kirkwood, 2009; Verheul, Thurik, Grilo, & van der Zwan, 2012). Specifically, prior work suggests that narcissistic motives in men and women may be expressed differently in terms of career choices, depending on what the expectations are of ultimately achieving their goals (Wood, Harms, Spain, & Lowman, 2018).

Drawing from a P-E fit perspective (Kristof, 1996), we address these limitations and advance this literature by examining the relationship between non-clinically diagnosed NPD and self-employment among a large-scale, representative sample. Briefly, P-E fit posits that people are attracted to and tend to perform better in work environments that are comprised of challenges, values, and demands that are congruent with their idiosyncratic preferences and needs (Kristof-Brown, Zimmerman, & Johnson, 2005). Following P-E fit theory (Kristof, 1996), individuals with NPD may be particularly attracted to self-employment career paths, as such environments are likely to be *perceived* as effective sources of “narcissistic-supply” (e.g., attention, control, admiration from others, etc.; Kernberg, 1975, p. 17). Accordingly, we propose a positive relationship between NPD and self-employment. In addition, we draw further on P-E fit theory to examine the moderating role of gender in the relationship between NPD and self-employment. Specifically, we hypothesize that because narcissistic females may expect to incur social costs from gender role expectations, their perceptions of self-employment as a useful context for need fulfillment may be weaker relative to their male counterparts. Thus, we predict NPD will be a stronger driver of self-employment for men rather than women.

In addition, we seek to shed light on whether self-employment provides a conducive environment for individuals with NPD by exploring the relationship between NPD, self-employment, and income. According to the demands-abilities tenet of P-E fit theory (Kristof, 1996), the success of an individual in a particular environment depends on whether they have skills that are compatible with the environment. Although prior research suggests that dark traits such as narcissism may be conducive to self-employed career paths (Mathieu & St-Jean, 2013), NPD constitutes a particularly dysfunctional personality disorder that may also prove maladaptive in such environments. We thus adopt an exploratory approach to understanding the relationship between self-employed narcissists and their reported income levels.

Importantly, although we utilize prior theorizing and research from the entrepreneurship literature, we would note that there is an important distinction between being self-employed and being an entrepreneur and acknowledge that our data does not allow us to distinguish between self-employed and entrepreneurs. Based on recent work by Kwon and Sohn (2019) and van Stel and van der Zwan (2019) this distinction is an essential element to entrepreneurship research. Self-employed is a very broad term that encompasses anyone who does not have an employer. Entrepreneurs engage in more innovative tasks, focus on developing high-growth businesses and are the primary drivers of job creation (Henrekson & Sanandaji, 2019). Self-employed are engaged in routine activities, are perhaps in solo endeavors of managing a small business, or are contractors. Entrepreneurs pursue innovation and business opportunities under uncertainty and whereas self-employed face lower uncertainty, work in traditional businesses, and at times, engage in self-employment due to unemployment (push-based entrepreneurship) or due to discrimination in labor markets.

We contribute to the extant literature in three main ways. First, we answer recent calls on the role of psychological disorders in entrepreneurship (Klotz & Neubaum, 2016; Wiklund et al., 2018) by utilizing a large-scale, representative sample with a targeted assessment of NPD to provide a more accurate estimate of the nature of its relationship with self-employment than has been possible in prior research (e.g. Obschonka et al., 2015). Second, by examining the moderating role of gender, we shed light on the potential differences in which narcissism may be displayed across males and females and its importance in understanding the present gender gap in self-employment preferences. Finally, we help illuminate whether NPD is ultimately (mal)adaptive for individuals who pursue self-employment by exploring income as a distal outcome of the relationship between NPD and self-employment status.

2. Conceptual foundations and hypothesis development

NPD is classified as a Cluster B personality disorder comprised of three main characteristics: a grandiose self-image, a lack of interest in or need for interpersonal intimacy, and persistent engagement in strategies intended to maintaining their grandiose self-image (Campbell & Baumeister, 2006). Indeed, NPD is marked by a “pervasive pattern of interpersonal difficulties, occupational problems, and significant psychosocial distress” (Kacel, Ennis, & Pereira, 2017, p. 1). Although this work suggests that NPD can lead to occupational impairment, it may be most commonly associated with impairment within interpersonal domains (Miller et al., 2007). This raises the interesting question of whether individuals with NPD may self-select into self-employment career paths, and whether they can thrive in such environments.

2.1. Narcissism and self-employment

Drawing on P-E fit theory, we examine the relationship between NPD and self-employment. We propose two primary justifications for why NPD will be positively associated with higher rates of self-employment.

First, individuals with NPD are likely to perceive self-employment as a viable strategy for maintaining and enhancing their grandiose self-image. According to the *needs-supplies* tenet of P-E fit theory (Kristof, 1996), individuals are likely to achieve a good “fit” with those environments that satisfy their idiosyncratic preferences and desires. Narcissists are, by nature, consumed with fantasies of grandiosity and often seek out opportunities that can fulfill their narcissistic-supply (Carnevale, Huang, & Harms, 2018a, 2018b; Kernberg, 1975). Self-employment may be perceived as a suitable context in which to fulfill this narcissistic supply, given its increasing glorification and allure in business and society. For example, the fetishization of self-employment as a path to unparalleled success is evident in countless business press articles praising the benefits of self-employment (Cain, 2012; Higuera, 2016; Mulvehill, 2005; Tracy, 2004). According to these accounts, self-employment provides the opportunity to demonstrate agentic qualities, such as leadership ability, intelligence, and status, and those who pursue self-employment are often portrayed as having the ability to “change the world” (Templeman, 2016). As Wu et al. (2019: 3) note, “entrepreneurship has become an admirable and individualized career choice that satisfies the psychological needs of narcissists, namely self-display and others’ admiration.” Importantly, we suggest that irrespective of whether self-employment can fulfill such promises, narcissists, in their quest to affirm their grandiose self-image, may very well be drawn to self-employment for such reasons.

Second, individuals with NPD likely believe they have the qualities necessary to be successful in self-employed career paths. According to the *demands-abilities* tenet of P-E fit theory (Kristof, 1996), individuals who possess attributes or abilities conducive to the demands of the environment they are in are likely to perceive a strong fit with that environment (Kristof, 1996). Narcissists are characterized by extremely

high levels of self-confidence and risk-taking (Foster & Brennan, 2011; Miller & Campbell, 2010; Vecchio, 2003), qualities that may enable narcissists to convince themselves that they possess the abilities needed to meet the demands in self-employment career paths (Cassar, 2010; Koellinger, Minniti, & Schade, 2005). Indeed, self-employment represents a decision to eschew working for traditional organizations and to take on considerable financial risks, particularly since a high proportion of new ventures tend to fail. Consequently, individuals who become self-employed or intend to start their own business venture are frequently characterized by high levels of self-confidence (e.g. McGee et al., 2009; Zhao, Siebert, & Lumpkin, 2010) and risk-taking (e.g. Nieß & Biemann, 2014; Rauch & Frese, 2007).

We thus propose a positive relationship between NPD and self-employment. Indirect support for these arguments comes from prior narcissism research, which has found that self-reported, sub-clinical measures of narcissism are predictive of entrepreneurial intentions (e.g. Baldegger et al., 2017; Hmieleski & Lerner, 2016; Kramer et al., 2011).

H1.. NPD is positively associated with self-employment.

2.2. Gender as a moderator of NPD and self-employment

Although we anticipate that there will, overall, be a positive relationship between NPD and self-employment, we draw further on P-E fit theory to suggest that this relationship may be somewhat contingent on gender. First, from a needs-supplies perspective, although narcissistic males may perceive self-employment as providing the narcissistic-supply they crave, narcissistic females may view such environments as a poor fit for achieving their needs. Self-employment is often considered to be a non-traditional career path for women (Santos, Muhammad, & Francisco, 2016; Wilson, Kickul, & Marlino, 2007). For example, the results of Santos et al. (2016) suggest that women may be less likely to view entrepreneurship as a viable career opportunity. Moreover, according to the 2018 Global Entrepreneurship Monitor (Bosma & Kelley, 2018), men appear to be much more active in entrepreneurship than women, especially in Western countries where entrepreneurial activity for women is frequently half that of men.

There is accumulating evidence that women are not only disproportionately punished for successfully performing roles traditionally viewed as male-oriented (Heilman, Wallen, Fuchs, & Tamkins, 2004) but also for engaging in male-typical, agentic behaviors commonly associated with personality disorders (Bono et al., 2017; De Hoogh, Den Hartog, & Neuvicka, 2015; Harms, 2016; Landay, Harms, & Credé, 2019; Wilson et al., 2007). These social consequences were implicated as likely reasons for the existence of gender differences in the facets of narcissism (Grijalva et al., 2015). That is, more agentic, goal-driven aspects of narcissism such as displays of self-confidence and risk-taking are more likely to face social sanctions when performed by women. As a result, female narcissists (relative to their male-counterparts) may be less likely to engage in the more agentic behavioral aspects of narcissism that are often associated with self-employment because they will be less likely to perceive the same potential benefits that male narcissists receive. For instance, prior research suggests that male (vs. female) narcissists may be more likely to view hierarchical work environments as providing the potential to fulfill their need for status and dominance (Zitek & Jordan, 2016). Likewise, it is entirely plausible that narcissists' perceptions of self-employment as providing the fulfillment of their needs and desires may be weaker for women than for men.

Second, from a demands-abilities perspective, narcissistic males may display behaviors more compatible with self-employed career paths than their female counterparts. Narcissism is not unidimensional, but rather is a phenotypic expression of the combination of several other characteristics (Harms, Spain, & Wood, 2014). Further, the gender difference in narcissism does not extend to all aspects of narcissism. Men tend to be higher in both the more "positive" (dominance/confidence) and "negative" (exploitativeness/entitlement) aspects of

narcissism (Grijalva et al., 2015), but not those associated with vanity and exhibitionism. Relatedly, there is evidence that women are less likely to report a desire for self-employment because they are more risk-averse and tend to have lower levels of self-efficacy (Kirkwood, 2009; Verheul et al., 2012). Westhead and Solesvik (2016), for instance, found that men and women differ in their entrepreneurial intentions, such that high-risk perceptions lead to greater intentions for men but lower intentions for women. These results are suggestive that narcissism may ultimately be displayed differently across genders and may have important consequences for occupational choice preferences (Vedel & Thomsen, 2017; see also Lange, 2012). Consequently, we expect that the relationship between narcissism and self-employment may be reduced or even reversed for women.

H2.. The positive relationship between NPD and self-employment will be moderated by gender, such that narcissistic males are more likely to be self-employed and narcissistic females are less likely to be self-employed.

2.3. Narcissism and income

Earlier, we theorized based on the demands-abilities tenet of P-E fit theory that narcissists are more likely to be self-employed, in part, because they are likely to perceive that they have the skills needed to be successful in such environments. But the question remains as to whether narcissists will achieve fit and be successful in such environments, such as by earning higher levels of income. Narcissism is a trait is often considered to be a "mixed blessing" (Ackerman, Donnellan, & Wright, 2019; Back et al., 2013; Miller, Lynam, Hyatt, & Campbell, 2017; Paulhus, 1998), and it is unclear from prior theory nor has it been established in prior empirical studies whether narcissists are more or less likely to have higher incomes when they are self-employed. Therefore, rather than offering a directional hypothesis, we propose competing arguments for why self-employed narcissists may be more or less likely to have higher incomes than those who work for others.

On the one hand, interactionist perspectives suggest that certain environments may "activate" individuals' behavioral proclivities in ways that can be useful (Tett & Burnett, 2003) or destructive (Spain, Harms, & Wood, 2016). Under conditions of self-employment, the rewards of the individual are more closely tied to their own performance (Douglas & Shepherd, 2002). We also know that narcissism can be associated with greater goal persistence (Manley, Roberts, Beattie, & Woodman, 2018) and performance (Harms, Spain, & Hannah, 2011), particularly when there is an opportunity to show off (Wallace & Baumeister, 2002). So it is possible that narcissists will be triggered by their self-employed status to work extraordinarily hard to achieve success and that this effort, in turn, will make it more likely that they will ultimately be more financially successful than they would have otherwise (Spurk, Keller, & Hirschi, 2016).

On the other hand, such an impetus to succeed may result in self-employed narcissists resorting to overly aggressive and even exploitative behaviors that might prove ultimately maladaptive to their self-employment success. For example, not only do narcissists tend to be interpersonally insensitive and dismissive with their constituents (Carnevale, Huang, & Harms, 2018b), but they are likely to respond aggressively when their ego is threatened (Bushman & Baumeister, 1998). Moreover, narcissists' strong drive to succeed may result in overly risky behavior or escalation of commitment in their ventures. For example, narcissists are more likely to make risky investment decisions and to gamble relative to their non-narcissistic counterparts (Lakey, Rose, Campbell, & Goodie, 2008). Further, narcissists are more likely to ignore past failures and mistakes and to persist in unsuccessful ventures for longer than others (Baron, 2000; Hayward, Forster, Sarasvathy, & Fredrickson, 2010). Based on this prior reasoning and evidence, self-employed narcissists may be less successful than those in traditional employment. We, therefore, pose the following research question:

Research Question 1. *Do self-employed narcissists earn significantly more or less than narcissists who work for others?*

3. Data and method

3.1. Sample

To test for the proposed hypotheses, we draw on waves 1 (2001–2002) and 2 (2004–2005) of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). Wave 1 of the data is publicly available, and Wave 2 data access is available through the Census Bureau. The access to data for Wave 2 was provided by the US Census Bureau and based on the models specified by the third author the analysis was completed by the statistician at the Census Bureau. The US Census Bureau's Disclosure Review Board approval number for the analysis tables is CBDRB-FY2019-311. The NPD, income, and self-employment measures, along with a variety of controls, are based on data from Wave 2, and income, occupation, and several psychological conditions measured in Wave 1 are also included as controls to lower previous period effects.

NESARC is the largest co-morbidity study in the US and conducted by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). The study collects data on a variety of demographic and psychological characteristics along with information on drugs, alcohol, tobacco, and illicit drug consumption. The psychological disorders, including NPD, are assessed using the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV). We include a range of psychological co-morbidities to lower omitted variable bias. The sampling frame includes non-institutionalized adults in the US. Importantly, the data used for this study relies on *non-clinical diagnoses* of psychiatric conditions obtained through face-to-face interviews by data collectors at the U.S. Census Bureau trained in administering DSV-IV. Thus, the present analyses represent the sub-clinical range of disorders even though they are assessed using clinical models. Our approach is thus consistent with the accepted practice in the mental-health field in which large-scale data-collection efforts focus on obtaining mental conditions that lie on a continuum with normality (David, 2010).

In total, the final sample was 43,093 respondents in Wave 1 and 34,653 respondents in Wave 2, based on case-wise deletion our final sample was 29,000. Both waves collected common demographic characteristics but collected different comorbidities and psychological characteristics. Additional details on the data collection are available from NIAAA. Finally, all the analyses were weighted using the variable, *w2weight* in NESARC II.

3.2. Measures

3.2.1. Self-employed (NESARC II)

Self-employed is coded as 1 if the individual reports "Self-employed in own business, professional practice, or farm". All other categories are coded as zero (A private for-profit company, business, or individual; A private not-for-profit, tax-exempt, or charitable organization; Federal government (exclude Armed Forces); State government; Local government; Armed Forces; and Unpaid in family business or farm).

3.2.2. Personal Income (NESARC II)

The outcome measure is individual income in the past 12 months in thousands (*W2SIQ18A*) reported in wave 2. We also conducted a robustness check using a continuous measure of the log of income, which led to similar results.

3.2.3. Narcissistic Personality Disorder (NESARC II)

NPD item responses were collected by trained data collectors who assessed individuals for NPD based on the *Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition* (DSM-IV) in interview sessions.

Additional details for the measure are available at: <https://behavenet.com/diagnostic-criteria-30181-narcissistic-personality-disorder>. The items include: (1) grandiose sense of self-importance; (2) preoccupied with fantasies; (3) believes he/she is special/unique; (4) requires excessive admiration; (5) sense of entitlement; (6) interpersonally exploitative; (7) lack of empathy; (8) envious; (9) arrogant/haughty behaviors/attitudes. We use the continuous measure based on the sum of 0/1 responses.

Gender. Gender is coded as 0 = male and 1 = female.

3.2.4. Controls

We include the number of children in the household, age, the square of age, and race (1 = Hisp., Non-Hisp Black. 2 = American Indian, 3 = Asian, 4 = Black, 5 = White). We also control for marital status (1 = married or cohabiting; 2 = widowed or divorced or separated; 3 = never married) and education (1 = dropout; 2 = diploma; 3 = some college; 4 = degree).

To control for occupation and income conditions in Wave 1, we include whether the respondent was unemployed in wave 1 (1 = yes; 0 = no); not in labor force in Wave 1 (1 = yes; 0 = no); income group in Wave 1 (1 = [\$0-\$20,000] 2 = [\$20 k-\$35 k] 3 = [\$35 k-\$70 k], 4 = [\$70 k and up]; 5 = [0–6,7–9,10–13,14–17]), log of family income minus personal income Wave 1; and whether family income minus personal income in Wave 1 is zero or negative.

Next, we include a range of disorders to address potential concerns about comorbidity of mental disorders with NPD (Kacel et al., 2017) including Antisocial Personality Disorder (With Conduct Disorder); Avoidant Personality Disorder (Lifetime Diagnosis); Dependent Personality Disorder (Lifetime Diagnosis); Obsessive-Compulsive Personality Disorder; Paranoid Personality Disorder (Lifetime Diagnosis); Schizoid Personality Disorder (Lifetime Diagnosis); Histrionic Personality Disorder (Lifetime Diagnosis); Wave 2, Borderline Personality Disorder - Lifetime; and Wave 2, Schizotypal Personality Disorder - Lifetime (0/1).

Finally, we include occupational status in Wave 1 (1 = Priv firm employment; 2 = Govt.; 3 = Armed Force; 4 = self-emp.) and industry in Wave 2.

3.3. Results

In reporting the estimates, only the estimates allowed for reporting from the Disclosure Board at the US Census Bureau are included in all the tables (the output we received on April 18, 2019, is under the release number CBDRB-FY2019-311).

Table 1 presents the sample descriptives for the full sample, and by self-employed and wage earner subgroups. Table 1a, reports the correlations among the key variables of interest. Personal income reported in NESARC II had no association with self-employment (tetrachoric correlation = 0.009). However, those scoring high on NPD had a negative association with personal income reported in NESARC II (Spearman correlation = -0.022 , $p < 0.05$). As expected, females also had a negative association with income reported in NESARC II (tetrachoric correlation = -0.221 , $p < 0.05$). In Table 1b, the correlations for the subsample of wage earners showed that personal income is negatively associated with NPD and with females. However, in Table 1c, the correlations for the subsample of self-employed showed that personal income was not correlated with narcissism and females had a negative correlation with income.

Due to the reporting restrictions from the Census Bureau, the minimum and maximum values are not reported in Table 1.

Due to the large sample size, we do not make inferences based on significance levels and base our inferences on effect sizes of the significant estimates. Supporting Hypothesis 1, in Table 2, model 2b, for those scoring high on NPD, the odds of being self-employed are 1.06 times larger than the odds for those scoring low on NPD being self-employed ($p < 0.01$). For females, the odds of being self-employed are

Table 1
Sample descriptives. N = 29,000.

Variable	Full sample		Self-employed, Wave 2		Not self-employed, Wave 2	
	Weighted mean	std. dev.	Weighted mean	std. error (mean)	Weighted mean	std. error (mean)
1 Personal income in past year (Wave 2' \$' 000)	36.2	45.0	37.5	1.26	36.1	0.264
2 Self-employed, Wave 2	0.084	0.277				
3 Narcissism symptoms	1.91	2.007	1.90	0.042	1.91	0.012
4 Female (0 = male; 1 = female)	0.495	0.500	0.456 *	0.010	0.499 *	0.003
5 Number of children below 17	0.808	1.136	0.770	0.024	0.812	0.007
6 Age	42.1	15.5	47.3 *	0.324	41.6 *	0.094
7 Age-square (*0.01)	20.1	14.5	24.7 *	0.329	19.7 *	8.70
8 Hispanic	0.118	0.322	0.087 *	0.006	0.120 *	0.0019
ALAN non-Hispanic	0.024	0.154	0.027	0.003	0.024	0.0009
Asian non-Hispanic	0.039	0.194	0.026 *	0.003	0.040 *	0.0011
Black non-Hispanic	0.113	0.316	0.068 *	0.005	0.117 *	0.0020
White non-Hispanic	0.723	0.447	0.809 *	0.008	0.715 *	0.0028
9 Married	0.632	0.482	0.738 *	0.009	0.622 *	0.003
Widowed/divorced/separated	0.143	0.350	0.130	0.007	0.143	0.0021
Never married	0.226	0.418	0.132 *	0.007	0.234 *	0.0026
10 High school dropout	0.126	0.332	0.132	0.007	0.125	0.0020
Diploma	0.279	0.449	0.269	0.009	0.280	0.0027
Some college	0.227	0.419	0.203 *	0.008	0.229 *	0.0026
College degree	0.368	0.482	0.396 *	0.010	0.365 *	0.0029
11 Unemployed in wave 1 (1 = yes; 0 = no)	0.036	0.186	0.031	0.004	0.036	0.0011
12 Not in labor force in wave 1 (1 = yes; 0 = no)	0.196	0.397	0.245 *	0.009	0.192 *	0.0024
13 Personal income under \$20 k	0.417	0.493	0.433	0.010	0.415	0.003
Personal income \$20 k - \$35 k	0.241	0.427	0.213 *	0.009	0.243 *	0.0026
Personal income \$35 k - \$70 k	0.249	0.432	0.222 *	0.009	0.251 *	0.0026
Personal income \$70 k and above	0.094	0.292	0.132 *	0.007	0.091 *	0.0018
14 Log family income minus personal income wave 1	6.40	4.935	6.53	0.102	6.39	0.030
15 Zero or negative family income minus personal income in wave 1	0.367	0.482	0.357	0.010	0.368	0.003
16 Antisocial personality disorder (with conduct disorder)	0.040	0.195	0.042	0.004	0.039	0.0012
17 Avoidant personality disorder (lifetime diagnosis)	0.024	0.153	0.022	0.003	0.024	0.0009
18 Dependent personality disorder (lifetime diagnosis)	0.004	0.059	0.0003 *	0.0004	0.004 *	0.0004
19 Obsessive-compulsive personality disorder	0.085	0.278	0.103 *	0.006	0.083 *	0.0017
20 Paranoid personality disorder (lifetime diagnosis)	0.045	0.208	0.038	0.004	0.046	0.0013
21 Schizoid personality disorder (lifetime diagnosis)	0.031	0.172	0.026	0.003	0.031	0.0011
22 Histrionic personality disorder (lifetime diagnosis)	0.019	0.138	0.015	0.003	0.020	0.0008
23 Borderline personality disorder (lifetime diagnosis)	0.061	0.239	0.060	0.005	0.061	0.0015
24 Schizotypal personality disorder (lifetime diagnosis)	0.041	0.198	0.037	0.004	0.041	0.0012
25 Wave 1 occupation as:						
Private firm employee	0.730	0.444	0.422 *	0.010	0.758 *	0.0026
Government employee	0.148	0.355	0.036 *	0.004	0.158 *	0.0022
Armed Forces employee	0.007	0.085	(D)	(D)	0.008	0.0005
Self-employed	0.069	0.254	0.475 *	0.010	0.032 *	0.0011
Employed, no pay	0.005	0.072	(D)	(D)	0.005	0.0004
SAMPLE SIZE	29,000		2,300		27,000	

Notes:

*p < 0.05 (two-tailed).

The sample size, N, has been adjusted to satisfy the Census Bureau data release policies.

The US Census Bureau's Disclosure Review Board approval number for the analysis tables is CBDRB-FY2019-311.

not different from those of males ($p > 0.01$, model 2c). However, in support of Hypothesis 2, females scoring higher on NPD have 0.938 lower odds of being self-employed than males scoring higher on NPD ($p < 0.05$).

To test for Research Question 1, in Table 3, self-employed narcissists did not differ from employed narcissists in terms of income (Model 3c: 0.017, $p > 0.1$) and female self-employed narcissists and male self-

employed narcissists also did not differ in terms of income (Model 3e: 0.155, $p > 0.1$).

3.4. Robustness checks

A series of robustness checks are presented in the Online Appendix.

Table 1a
Panel 1. Correlations, full sample.

Variable	w/ pers. Income (\$1000 s)	w/self- employed	w/narcissism	w/female
Personal income in past year (wave 2, in \$1,000)	1			
[Pearson corr.]				
Self-employed, Wave 2	0.009	1		
[tetrachoric corr.]				
Narcissism	−0.022*	−0.004	1	
[Spearman corr.]				
Female (0 = male; 1 = female)	−0.221*	−0.054*	−0.079*	1
[tetra. corr.]				

Table 1b
Panel 2. Correlations, not self-employed.

Variable	w/ pers. Income (\$1000 s)	w/ narcissism	w/female
Personal income in the past year (wave 2, in \$1,000) [Pearson corr.]	1		
Narcissism [Spearman corr.]	−0.028*	1	
Female (0 = male; 1 = female) [tetra. corr.]	−0.221*	−0.077*	1

Table 1c
Panel 3. Correlations, self-employed.

Variable	w/ pers. income (\$1000 s)	w/ narcissism	w/female
Personal income in past year (wave 2, in \$1,000) [Pearson corr.]	1		
Narcissism [Spearman corr.]	0.025	1	
Female (0 = male; 1 = female) [tetra. corr.]	−0.227*	−0.102*	1

Notes:

* $p < 0.05$ (two-tailed).

The sample size, N, has been adjusted to satisfy the Census Bureau data release policies.

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Table 2

Logit estimates of self-employment (Yes = 1; No = 0). Adjusted odds ratios reported, with standard errors of the aOR in parentheses.

	(2a)	(2b)	(2c)	(2d)	(2e)
Narcissism		1.06** (0.019)		1.06** (0.019)	1.08*** (0.026)
Female			0.973 (0.069)	1.00 (0.071)	1.13 (0.105)
Narcissism × Female					0.938* (0.029)
Control variables	Included	Included	Included	Included	Included
Margins	(dPr/dx)	(dPr/dx)	(dPr/dx)	(dPr/dx)	(dPr/dx)
Narcissism		0.003** (0.001)		0.003** (0.001)	0.003** (0.001)
Female			−0.0016 (0.004)	4.6e−5 (0.004)	1.2e−5 (0.004)
Pseudo-R-squared	0.259	0.260	0.259	0.260	0.260
Wald chi2	2573	2567	2576	2569	2583
N	29,000	29,000	29,000	29,000	29,000

Notes:

Multivariate regression models included measures of age, age squared, race and Hispanic ethnicity (5), educational categories (4), personal income categories (4), rest-of-family income, marital status (3), personality disorder indicators (9), type of Wave 1 employer (5; private, government, armed forces, no-cash, self-employed), and indicator of industry group (17).

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$ (two-tailed).

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3.4.1. Non-linear effects of NPD

In Table A1, neither the squared term of NPD nor its interaction with female was significantly associated with the odds of self-employment (see Grijalva, Harms, Newman, Gaddis, & Fraley, 2015 for comparison). Similarly, in Table A2, the direct effect of squared term of narcissism, its interaction with self-employment or its interaction with

self-employment and income was not associated with income. Overall, the squared term of narcissism was not significantly associated with self-employment or income from self-employment.

3.4.2. Race and education as additional moderators

We further control for interaction of race and education with NPD in predicting self-employment (Table A3) or income (Table A4). In Tables A3 and A4 the effects are consistent with the main effects.

3.4.3. Inferences for those scoring above and below mean levels of narcissism

We further test for a subsample of individuals scoring below mean level of narcissism (tables A5–A7) and those scoring above mean level of NPD (tables A8–A10). For the subsample of individuals scoring below mean levels of NPD, neither of the two hypotheses (Table A6) were supported and Research Question 1 (Table A8) was not significant. Similarly, those score above the mean level of NPD, the neither the two hypotheses (Table A9) nor the Research Question 1 (Table A10) were supported. Therefore, the effects in the main analysis are perhaps a result of relative differences between high and low levels of narcissism.

4. Discussion

4.1. Theoretical implications

Our study advances the literature on NPD and self-employment in several ways. First, our study contributes to the nascent study of psychological disorders in the entrepreneurship and organizational behavior literature. Our results suggest that NPD has important implications for entrepreneurial research. Specifically, we theorized that individuals with NPD tend to be attracted to self-employed careers and, indeed, found a positive relationship between NPD self-employment. Although this relationship has been examined in prior research, the present study represents the first time that this relationship has been examined using a large-scale representative study with a direct assessment of NPD. Consequently, the present results represent the most accurate estimate to date of the magnitude and nature (linear or nonlinear) of the relationship between NPD and self-employment status. This finding provides further evidence that psychological disorders (Wiklund et al., 2018), and NPD in particular, are viable paths for future investigations into understanding the psychological outliers that drive individuals to engage in self-employed work, whether it be trying to start their own business or simply engaging in more temporary arrangements such as those found in the gig economy.

Second, our study provides insight into the significant gender gap in self-employment decisions. Interestingly, the relationship between narcissism and self-employment was reversed for women such that female narcissists were less likely to be self-employed than female non-narcissists. This finding is suggestive that future research investigating the psychological antecedents of the decision to be self-employed or to engage in entrepreneurial activities needs to take into account gender as a potential moderator and confound of the effects of personality. Moreover, it provides some initial evidence that the gender differences in narcissism (Grijalva et al., 2015) are potentially more complicated than initially thought. That is, that the differences go beyond mean-level differences and that narcissistic behavior may be displayed differentially depending on social or demographic factors that make it more or less likely that an individual's narcissistic goals will be met (Cale & Lilienfeld, 2002; Hamburger et al., 1996).

Finally, the present study laid the groundwork for future research investigating the relationship between personality, career decisions, and life success. Specifically, it examined whether or not the decision of narcissists to be self-employed was likely to pay off. The results showed that although narcissists did seem more prone to be self-employed,

Table 3

OLS Estimates – Personal Income in Wave 2 (in \$1000 s). Standard errors of the OLS coefficient are in parentheses.

Variable	(3a)	(3b)	(3c)	(3d)	(3e)
Self-employed	– 2.14* (0.89)	– 2.25* (0.89)	– 2.28* (1.16)	0.963 (1.13)	1.59 (1.56)
Narcissism		0.586*** (0.119)	0.585*** (0.123)		0.203 (0.157)
Self-employed × Narcissism			0.017 (0.384)		– 0.323 (0.485)
Female				– 8.89*** (0.507)	– 9.46*** (0.671)
Female × Narcissism					0.373 (0.225)
Self-employed × Female				– 6.87*** (1.55)	– 7.21*** (2.13)
Self-employed × Female × Narcissism					0.155 (0.802)
Control variables	Included	Included	Included	Included	Included
Margins					
	(dy/dx)	(dy/dx)	(dy/dx)	(dy/dx)	(dy/dx)
Self-employed	– 2.14* (0.89)	– 2.25* (0.89)	– 2.25* (0.89)	– 2.44** (0.887)	– 2.47** (0.888)
Narcissism		0.586*** (0.119)	0.586*** (0.119)		0.367** (0.12)
Female				– 9.47*** (0.493)	– 9.33*** (0.496)
Adj. R-square	0.343	0.344	0.343	0.351	0.352
F	332.1	325.8	319.0	330.4	305.3
N	29,000	29,000	29,000	29,000	29,000

Notes:

Multivariate regression models included measures of age, age squared, race and Hispanic ethnicity (5), educational categories (4), personal income categories (4), rest-of-family income, marital status (3), personality disorder indicators(9), type of Wave 1 employer (5; private, government, armed forces, no-cash, self-employed), and indicator of industry group (17).

***p < 0.001; **p < 0.01; *p < 0.05 (two-tailed).

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however, this decision did not make much of a difference in terms of their income.

4.2. Practical implications

The present findings also have implications for the field of career counseling and entrepreneurship education. For example, if a counselor believes that a client's or student's interest in self-employment is driven by narcissistic ambition, should they attempt to make that individual aware of other opportunities in occupations that they can also satisfy those needs? For entrepreneurship instructors at universities, the present results may also provide some insights into the minds and motivations of their students. Moreover, as prior research has suggested that narcissism can be associated with positive training outcomes (Harms et al., 2011), instructors may consider trying to leverage the narcissistic ambitions of their students to encourage more of them to leap starting their ventures. That said, it should be noted that our findings concerning the gender differences in the relationship between NPD and self-employment raise questions as to whether such appeals will be effective and productive for females considering to pursue a self-employment career path. For example, as we have theorized in this study, due to societal gender-role expectations, narcissistic females who decide to pursue self-employed might perceive or potentially even achieve a better fit in certain self-employment industries (such as those providing the opportunity for exhibitionism) as opposed to others (such as those providing the opportunity for status and dominance). Consequently, career counselors or entrepreneurship instructors should carefully consider how they can communicate self-employment opportunities to students in ways that account for potential differences in both gender and narcissism.

4.3. Limitations and future directions

As with any study, the present study has its limitations. First and foremost, we did not examine the underlying motives or needs associated with NPD in our model. Given the archival nature of the sample, this is unavoidable, but future research may want to follow-up on the present results to examine in greater detail how each of the facets of narcissism might impact career decisions or income levels. For example, it possible that narcissistic individuals seek out self-employment contexts because it is difficult for them to function well in traditional work environments (Horowitz, 2009; Miller et al., 2007). Consistent with the needs-supply tenet of P-E fit theory, this would suggest an alternative explanation for the relationship between narcissism and self-employment, such that narcissists may seek out self-employment contexts means to regain a sense of control and assert their hegemony. We encourage future research to explore such possibilities.

Second, despite the strengths associated with our data-collection methods, including a large-scale, representative sample and the use of trained interviewers to assess NPD scores, we did not collect clinically-significant diagnoses of NPD. Accordingly, we caution against making assumptions regarding the potential utility of psychological disorders for self-employment career paths. Consequently, future research will be needed to examine whether the findings here will extend to individuals diagnosed with pathological narcissism. Finally, how the present data was collected does not allow us to firmly establish the causal direction of the relationship between NPD and self-employment decisions. Self-employment may drive people to become more narcissistic. Prior research suggests that narcissists are more likely to become self-employed and that self-employment also drives the development of narcissism. Such personality-experience transactions are known as corresponsive effects and have been found for other traits and work situations (e.g. Li,

Fay, Frese, Harms, & Gao, 2014; Roberts, Caspi, & Moffitt, 2003). Although evidence exists that suggests that this might be the case (see Obschonka et al., 2015), our focus on non-clinically diagnosed NPD makes this alternative somewhat unlikely. Nonetheless, future multi-wave research will be needed to determine the exact nature of this relationship.

Third, the present findings are anchored in a specific cultural context and in a specific period of time. Prior research has established that cultural factors such as in-group collectivism can tend to weaken the effects of narcissism on work outcomes (Grijalva & Newman, 2015), that vocational interest choices and patterns are impacted by cultural factors as well (Rounds & Tracey, 1996) and that such cultural effects may also be moderated by gender (Ryan, Tracey, & Rounds, 1996). Consequently, there is a need to establish whether the relationships between narcissism and self-employment and the degree to which this is moderated by gender is present in other cultures. Similarly, it possible that the present results concerning narcissism and vocational choices are anchored at a particular moment in history. There has been considerable interest in research exploring whether or not our society is becoming increasingly narcissistic (Twenge & Foster, 2010; Twenge, Konrath, Foster, Campbell, & Bushman, 2008). If such trends are real, and if the present results hold, we may see an increasing shift towards self-employment in younger generations (and potentially a drop in expected incomes). Of course, these trends will be confounded with technological and economic trends, but it will be interesting to see how the rise of the gig economy and non-permanent work arrangements might correspond with the reported rise in narcissism in youth. Alternatively, the normalization of such avenues of self-employment may ultimately mean that a wider array of individuals reflecting a great variety of personalities will be attracted to such professions. Fourth, due to the lack of longitudinal data, we were unable to explore the complex dynamics of unemployment spells followed by self-employment and employment choices. Future research needs to assess how narcissists react to unemployment spells and make self-employment choices. Relying on rich longitudinal data would also help assess whether narcissists engage in serial entrepreneurship, are less prone to push-based entrepreneurship, or consider self-employment or entrepreneurship as a career of choice. Using duration models we based on the transition to self-employment and the associated change in income could shed further light on whether narcissists are better able to leverage their human capital in self-employment. An essential element of narcissism is its time-varying effects over the course of an entrepreneurial venture. Though we lack the longitudinal data assess whether exploitative or haughty behaviors multiple and coalesce to increase the odds of business failure or underperformance is important for future research.²

As a final limitation, as acknowledged earlier we were not able to parse self-employed from employed status. The fundamental distinction between self-employed and entrepreneurs implies that narcissism could be leveraged distinctly by the two groups. It is possible that lumping these two categories together could mask plausibly stronger effect size of the other. Therefore, the smaller effect size observed in the study could be driven by our limited ability to separate self-employed from the employed in the data. We call on future studies to explore this limitation in our study.³

5. Conclusion

The present study adopted a P-E fit perspective to understand the relationship between NPD self-employment. The present analyses, which utilized a representative sample of 29,000 individuals, showed that there was a small, but significant positive relationship between

narcissism and self-employment. Moreover, our results further showed that this positive relationship was moderated by gender, such that narcissistic females were less likely to be self-employed than narcissistic males. Finally, results from our exploratory analysis demonstrate that narcissists may not ultimately benefit from self-employment, as there was no significant relationship between NPD and their reported income levels.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Disclaimer

This paper is released to inform interested parties of research and to encourage discussion. Any views expressed on statistical, methodological, technical, or operational issues are those of the authors and not necessarily those of the U.S. Census Bureau. The Disclosure Review Board approval number for the analysis tables is CBDRB-FY2019-311.

Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jbusres.2020.08.028>.

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