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The magnificent "I" in business education: Evidence from Greece

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The magnificent “I” in business education: Evidence from Greece

Abstract

Purpose

The goal of this research study has been twofold. First, to examine the level of narcissism and its individual traits in students who study business, in the particular context of a regional country such as Greece and second, to test how several demographic variables are related to narcissism levels.

Design/methodology/approach

The study consists of a theoretical part on narcissism in business education and an empirical part that was based on a survey conducted with the use of a questionnaire. The analysis includes hypothesis testing and basic statistical tests.

Findings

Findings suggest that sex, study levels, years of business experience and (personal/family) income do impact specific narcissistic dimensions, which may be cause for concern both for employers and higher education providers.

Research limitations/implications

The study was conducted in a regional country, the participants were students of public higher education institutions only, and the questionnaire was self-reported, and this could lead to likely social desirability effects.

Practical implications

The investigation of narcissism in the Greek business education might be of interest to: (a) business education providers (for providing curriculum that help future managers/leaders to deploy the positive characteristics of narcissism and avoid or not to develop the negative ones) and (b) to future employers to apply more effective human resource practices, i.e. selection, training, rewarding.

Originality/value

The study at hand aimed to investigate the presence of narcissism and its individual (narcissistic) behavioral dimensions in students studying business in Greece.

Article Type: Research Paper

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1. Introduction

Narcissism is theorized as a set of characteristics and behaviors of an individual that reveals various degrees of: a) passion and obsession with itself, b) interest or aloofness for understanding others' feelings, c) egocentric and relentless pursuit of personal gratification, domination and ambition through the admiration of its own personal capabilities (Kets de Vries, 2014; Campbell and Miller, 2011; Morf and Rhodewalt, 2001; Maccoby, 2000).

As a concept, narcissism is present in social personality (Foster and Campbell, 2007) and psychiatric literature (e.g. Campbell *et al.*, 2011). By being one of the three dark sides of personality along with Machiavellianism and psychopathy (Paulhus and Williams, 2002), it is usually unveiled by an individual's extremely positive view of itself (ego), a peculiar self-regulation pattern, namely a tendency to maintain this positive view of itself at any cost and a tendency to form shallow relationships with other people (Brunell *et al.*, 2008). According to the various degrees of narcissism present in every individual, there are two main categories: a) healthy/productive narcissism which reflects the basic human need for love and admiration and is related to age and maturity level of individuals who are presented as self-confident, having empathy and a sense of what they can truly accomplish while they may be willing to take risks and combine their passion and energy to create/innovate, and b) unhealthy narcissism that reflects a strong lack of empathy, a distorted view of personal abilities, it entails manipulating and exploiting people while aggressive and antisocial behavior may be displayed (Harrison and Clough, 2006; Maccoby, 2000; Kernberg, 1975; Kohut, 1972; Freud, 1914).

Narcissism is linked to several positive characteristics and outcomes, such as self-esteem and positive affect, extraversion and satisfaction from life (Sedikides and Campbell, 2017; Sedikides *et al.*, 2004; Campbell *et al.*, 2002). Narcissism is also related to charisma and vision (Rosenthal and Pittinsky, 2006), to an increased tendency for leadership (Anninos, 2018; Resick *et al.*, 2009) and to high performance in short term creativity contexts, such as classroom context (Westerman *et al.*, 2016; Goncalo *et al.*, 2010). Nevertheless, narcissistic personalities can often resort to negative behaviors such as violence, aggression, white collar crime (Martinez *et al.*, 2008; Lakey *et al.*, 2008; Blickle *et al.*, 2006; Luhtanen and Crocker, 2005; Campbell, *et al.*, 2005) and morally questionable behavioral patterns, such as the use of resources to achieve personal goals and the pursuit of risky strategies (Campbell *et al.*, 2004).

In addition, there are converging findings documenting the impact of narcissism on various organizational parameters such as leadership (Kets de Vries, 2014; Resick *et al.*, 2009; Brunell *et al.*, 2008; Rosenthal and Pittinsky, 2006), task performance (Wallace and Baumeister, 2002), management practices and decision making (Foster and Trimm, 2008; Chatterjee and Hambrick, 2006). The behavior of narcissistic individuals holding leadership positions in organizations impacts those organizational parameters which are preconditions for organizational excellence such as people, values and self-improvement (Anninos, 2018). It is therefore clear how this is a matter of concern not only for potential employers but also for business schools, which need to have relevant strategies and policies in place to diagnose narcissism of faculty and students, understand its causes and/or manage relevant behavioral cases.

2. Narcissism in business schools

Even though the significance of intangible elements (e.g. vision, values, service) in modern times is increasing, it is believed that young individuals tend to be more passionate about themselves and rather more materialistic than older people (Stein, 2013; Westerman *et al.*, 2012; Bergman *et al.*, 2010; Twenge *et al.*, 2008) and this is something that can be ascribed to both the way of their upbringing and education and the changes happening in social and cultural context (Lieberman, 2004; Nelson, 1977). A recent study by Wetzel *et al.*, (2017) however that was conducted in the United States presents contrasting evidence and supports that narcissism has not been increased among college students. Hence, it is imperative to point out that more data and studies are needed (in different cultures and contexts) and control for more variables to verify or not the increase of narcissism in young generations (Roberts *et al.*, 2010). The so called “Me Me Me” generation appears as rather obsessive with glory and social acceptance, lack of empathy and exaggerating demands which are based on their belief that they deserve them (sense of entitlement). This trend is particularly obvious among business education students (Robak *et al.*, 2007). They have higher expectations for success (Campbell *et al.*, 2006) and some narcissism related traits like materialistic orientation and overconfidence appear to have been increased in relation to the past (Pew Research Center, 2007; Morf and Rhodewalt, 2001). It is common for professors to have students who believe that they are entitled to everything; from personal attention and guidance to complaining and negotiating grades if they are different to what they expected (Turnipseed and Cohen, 2015). In some cases, students possessing high entitlement resort to threats and psychological pressures in order to get exactly what they want (Twenge and Campbell, 2009). Instead of focusing on improving themselves, this perception of their perfect “self” lead them to put the blame on the professor and his/her methods of teaching and/or evaluating.

In literature, there are several studies that investigate narcissism in business education. Most of these studies have been conducted in the US and use the Narcissistic Personality Inventory (NPI) to unveil the degree of narcissism among students. To the best of our knowledge, Carroll (1987) was the first that examined narcissism of MBA students, in order to identify the characteristics of the narcissistic individuals related to motives for affiliation, intimacy and power. Her findings suggest that there are differences between males and females regarding narcissism and that narcissism is positively correlated with the need for power and negatively with the need for intimacy (Carroll, 1987).

Twenge *et al.*, (2008) observed increased narcissism levels in 85 samples of American college students between 1980 and 2006 by using a cross temporal meta-analysis. This means that narcissism scores (based on the NPI) are significantly correlated with year of data collection (weighted by sample size). Among the results of their study is the rise of individualistic traits like assertiveness, agency, self-esteem, and extraversion. In the same year, Trzesniewski *et al.*, (2008) present contradictory evidence in relation to the study of Twenge *et al.*, (2008) and reported that narcissism is not significantly changed among students, based on data between 1982-2007 at campuses of the University of California. In another study, Twenge *et al.*, (2008b) corroborated the above findings of Trzesniewski *et al.*, (2008) which can be justified by cultural and ethnic shifts that took place at the University of California.

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4 Three more studies on narcissism and more specifically on the relationship between
5 narcissism and leadership were undertaken by Brunell *et al.*, (2008). The first two
6 involved psychology college students and the third managers in an executive MBA
7 program. In the first two studies it was found that narcissism is a predictor of leader
8 emergence and that it was positively correlated with the desire to lead and self-ratings
9 on leadership. However, in the third study it was shown that students rated highest in
10 narcissism were most likely to be identified as emerging leaders (Brunell *et al.*, 2008).
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13
14 Brown *et al.*, (2010) based on the hypothesis that ethical behavior has its roots on
15 personality characteristics, surveyed business students (by using “selfism” questions)
16 to investigate the role of empathy or narcissism in ethical decision making. They indeed
17 documented that empathetic and narcissistic personality traits significantly predict
18 ethical decision making and suggested that students studying finance exhibited a
19 statistically significant tendency for less empathy and more narcissism compared to
20 other business students. This means that the discipline of finance appears to attract or
21 cultivate students that have those personality characteristics which lead to less ethical
22 decision making.
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25 Traiser and Eighmy (2011) conducted a survey in undergraduate students studying in
26 public and private universities and found that private university students had higher
27 narcissism scores in comparison with students from public institutions. They moreover
28 found a positive relationship between narcissism and family income and a negative one
29 between narcissism and age (as individuals grow, expectations dissipate). While it is
30 believed that students who take ethics courses tend to make more ethical decisions, this
31 study concludes that this is something that has no impact on students` moral reasoning.
32 Also, the connection of narcissism and entitlement becomes apparent in the Menon and
33 Sarland (2011) study which found that exploitative attitude is a mediator in the
34 relationship between narcissism, entitlement and academically wrong behavior.
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38 In another relevant study, (Westerman *et al.*, 2012) by using data from undergraduate
39 business and psychology students at Appalachian State University, they compared the
40 level of narcissism between students of these two disciplines and examined if
41 narcissism influences salary and career expectations. Their findings suggest that
42 business students are more narcissists than their psychology colleagues; narcissism
43 does not appear to have any significant relationship with class activities and that
44 narcissistic individuals seem to be more successful in terms of employment, salary and
45 promotions. This finding can be explained by the fact that narcissism is related with
46 undertaking risks and entrepreneurial intentions (Mathieu and St Jean, 2013).
47
48

49
50 Brown *et al.*, (2013) conducted a survey with the aim to examine the level of narcissism
51 as well as potential differences between accounting students at a public and a private
52 institution in the Midwest US. By using the NPI, they found out that: a) accounting
53 students have a lower level of narcissism in comparison with other business students
54 and the general population of college students, b) there are not significant differences
55 between state and private school students, something that contradicts Traiser and
56 Eighmy`s findings, c) there are differences between men and women regarding vanity
57 (women score higher) and entitlement (men scored higher), d) students who hold
58 leadership positions attain higher NPI scores. It is noted that the average NPI score of
59 15,75 of this study was somewhat higher than the average score for the general U.S.
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3 population (15.3), but below the average for MBA students (16.18) and celebrities
4 (17.8) (Foster *et al.*, 2003; Young and Pinsky, 2006). Accounting students appear to be
5 less narcissistic than celebrities and MBA students on Self-sufficiency, Exhibitionism,
6 Vanity and Entitlement, have mixed results on Authority and Exploitativeness and
7 scored higher than both of the other groups on Superiority.
8
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10 Bergman *et al.* (2013) studied the relationship between narcissism, materialism, and
11 environmental ethics in undergraduate business students at an AACSB accredited
12 business school. Their findings reassure the connection of narcissism and materialism
13 and their relationship to low environmental ethics even though they present an indirect
14 impact of narcissism and students' environmental ethics.
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16
17 The relationship of narcissism and academic entitlement was studied by Turnipseed and
18 Cohen (2015). The authors suggest that students' narcissism (male students score
19 higher on dark personality traits) is indeed related to academic entitlement which is
20 translated to several behavioral patterns such as negotiating grades, exercising
21 psychological pressure on teaching staff and feeling invincible (Turnipseed and Cohen,
22 2015). If students manage to achieve what they want, it is highly likely that these
23 behaviors will be repeated in the future.
24

25
26 Recently, Westerman *et al.*, (2016) studied the congruence of faculty and students'
27 narcissism. According to their findings students that score low on narcissism tend to
28 struggle in classes with narcissistic professors, feeling high difficulty and considering
29 teaching staff to be of lower status. On the contrary when there is congruence between
30 high narcissism of both students and faculty, students perceive classes less difficult, get
31 high grades and view professor as being of high status. Hence, student faculty
32 narcissism fit is a key parameter in any attempt to harness narcissism in educational
33 contexts.
34

35
36 The issue of narcissism in the Greek higher education context and more specifically in
37 business education has been underdeveloped. Gkika and Sahinidis (2013) explored
38 narcissism in undergraduate business students at a large higher education institution in
39 Athens and found that students had higher narcissism levels than their parents. More
40 specifically, male students scored higher on some narcissism traits like self-absorption,
41 self-admiration, leadership/authority and superiority/arrogance while they reassured
42 that aging reduce narcissistic traits.
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45 The above studies are briefly presented in Table 1.
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47
48 Insert Table 1
49

50 3. The Greek context and study rationale

51 It is widely known that during the last three years, Greece has been facing the worst
52 crisis in its modern history; a multilevel and multifaceted crisis that was a direct
53 consequence of a) the country's growth model that was adopted primarily after the
54 restoration of democracy in 1974, b) the lack of a proper business mentality and a clear
55 vision for the future and c) the country's specific cultural and historical developments.
56 A combination of political, social and economic factors had contributed in developing
57 a mentality that was incompatible for sustainable growth that gradually became
58 apparent in many fields of life and corroded significantly the country's future
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3 perspectives. This led to low competitiveness, low foreign direct investments and an
4 inherent inability to create new wealth and thus new employment opportunities.
5

6 The onset of the crisis has been followed by soaring numbers in unemployment, salaries
7 and pensions cutbacks, rising income inequality and cost of living (Sotiropoulos, 2014).
8 In 2013, Greek overall and youth unemployment reached record heights of 27% and
9 59.5% respectively. It is known that young people in Greece were more adversely hit
10 by the crisis in comparison with other crisis-hit countries. In addition, the impact of
11 structural inefficiencies, such as the weak higher education - labour market cooperation,
12 the high informal employment, the underdeveloped sector of vocational education and
13 the regional and gender disparities can be considered responsible for young people's
14 feelings of marginalization from the economic and social life, strong eagerness to
15 migrate for study/work in other countries (400,000 young Greeks left the country during
16 the six year period from 2011 to 2017) and increase in the percentage of NEET
17 individuals that live with their parents (Kraatz, 2015).
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21 In such a social and economic context someone might expect low narcissism levels,
22 perhaps lower than those recorded in other countries. So, several questions arise, such
23 as: Do the limitations in satisfying materialistic needs impact narcissism? Are the young
24 peoples' (especially those studying business) ambitions and overconfidence crumbled
25 and what implications does this have for future growth?
26

27 Hence, the rationale for this study and based on the analysis of relevant literature was
28 to examine the level of narcissism in business students of a regional country hit by a
29 severe crisis, possible differentiations among the three higher education levels
30 (undergraduate, postgraduate, doctoral) and factors that might account for potential
31 differences in narcissism scores. These parameters have been underdeveloped in
32 relevant literature.
33
34

35 **4. Research Hypotheses and Method**

36
37 The goal of this research study has been twofold. First, to examine the level of
38 narcissism and its individual traits in students who study business, in the particular
39 context of a regional country such as Greece and second, to test how several
40 demographic variables are related to narcissism levels. The investigation of narcissism
41 in the Greek business education might be of interest to: (a) business education providers
42 (for providing curriculum that help future managers/leaders to deploy the positive
43 characteristics of narcissism and avoid or not to develop the negative ones) and (b) to
44 future employers to apply more effective human resource practices, i.e. selection,
45 training, rewarding.
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48 In order to address the goal of the study at hand, the quantitative methodology was used.
49 Hence, the investigation of the first part of this study's goal (regarding the level of
50 narcissism and its inherent dimensions) was achieved through the calculation of the
51 participants' scores in the NPI questionnaire. The second part of the goal was examined
52 through the development and testing of the following hypotheses:
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54

- 55 • H1. There are no statistically significant differences between **men and women**
56 studying business for individual narcissism traits or categories of narcissism.
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- H2. There are no statistically significant differences between **undergraduate, postgraduate and doctoral students** of public business schools for individual narcissism traits or categories of narcissism.
- H3. There are no statistically significant differences among students with various **levels of business experience** regarding individual narcissism traits or categories of narcissism.
- H4. **Career objectives** do not statistically significant impact the individual narcissism traits or categories of narcissism.
- H5. The **level of gross individual income** does not statistically significant impact the individual narcissism traits or categories of narcissism.
- H6. The level of **gross family income** does not statistically significant impact the individual narcissism traits or categories of narcissism.

4.1 Research design and sample

The survey has been conducted electronically. Third and fourth year students, full time and part time MBA's and doctoral students in business administration, of the two largest business schools in Greece were the sample of this research study. These schools are the top two in Greece, attract students who satisfy the highest requirements and run undergraduate and postgraduate programs according to international standards.

Since the first use of the term narcissism by Ellis in 1898, there have been many attempts to conceptualize and devise a measurement scale for narcissism both as a taxonomy variable and as a distinct construct. Raskin and Terry (1988) presented an overview of these scales. Raskin and Hall in 1979 developed the NPI (Narcissistic Personality Inventory) which was further refined to its current form nine years later by Raskin and Terry. Other forms of the same instrument were developed by Emmons (1984,1987); Ames *et al.*, 2006; Svindseth *et al.*, 2009 and Gentile *et al.*, 2013.

While there have been many and more recent attempts to devise a measurement scale for narcissism (e.g. Konrath *et al.*, 2014; Glover *et al.*, 2012; Pincus *et al.*, 2009), the NPI is considered as the most frequently operationalization attempt of Narcissism for normal populations (Konrath *et al.*, 2014; Del Rosario and White, 2005) and is attaining adequate validity and reliability (Rhodewalt and Morf, 1995; Raskin and Terry, 1988).

Therefore, in order to conduct this study, a two-part questionnaire was designed and used. The first part included the Narcissistic Personality Inventory (NPI-40) in English. It consists of 40 paired statements (which are divided into seven dimensions, namely authority -8 items, entitlement -6 items, exhibitionism -7 items, exploitativeness -5 items, self-sufficiency -6 items, superiority -5 items, and vanity -3 items) and respondents are asked to select the answer that matches their feelings and beliefs. Their responses are then summed (the highest the score the highest the narcissistic personality).

The Cronbach's coefficient (α) for our sample was 0.81. The relevant values for each specific dimension have been Authority (0.65), Self Sufficiency (0.48), Superiority (0.55), Exhibitionism (0.60), Vanity (0.68), Entitlement (0.42), Exploitativeness (0.54).

In 2018, Miller *et al.* published a meta-analysis of coefficient alpha scores on the NPI, in which they included Raskin's and colleagues' range of alpha by individual NPI scale. The unweighted alpha scores for a) authority range from 0.53 to 0.90, b) exhibitionism range from 0.49 to 0.86, c) superiority range from 0.41 to 0.84, d) entitlement range from 0.31 to 0.91, e) exploitativeness range from 0.30 to 0.86, f) self-sufficiency range from 0.30 to 0.68 and g) vanity range from 0.50 to 0.90.

The second self-administrated part asked for some personal and demographic data of respondents which helped us testing our research hypotheses.

The questionnaire including a cover letter explaining the purpose and significance of the study was emailed. Participants were assured of confidentiality and anonymity. For those individuals that did not reply promptly, an oral announcement was made in class followed by a reminding email. The survey was carried out between February and July of 2017, in two phases. More specifically, the first pilot phase took place in February and the second (data collection phase) took place from March to July. The pilot testing was conducted in a random sample of 50 (undergraduate and postgraduate) students to examine survey wording (possible vague terms) and reactions (potential feelings of discomfort), comprehensiveness of instructions and time needed for filling out the questionnaire.

From a sample of 350 individuals, 321 completed the questionnaire with accuracy, thus attaining an overall responsiveness rate of 92%.

The analysis of data with SPSS (v24) includes basic descriptive statistics as well as normality, parametric and non-parametric initial and post hoc statistical tests.

5. Results and discussion

A total of 321 individuals (98.8%, n=317 of Greek origin and 1.2%, n=4 of Cypriot, Albanian and Bulgarian origin) at the two largest Greek business schools participated in this study. The sex composition was 41.7% male (n=134) and 58.3% female (n=187). Regarding the level and type of participants' studies 37.4% (n=120) were junior (3rd year) and senior (4th year) students, 23.7% (n=76) were Full Time MBA students, 31.2% were Part Time MBA students (n=100), and 7.8% (n=25) were doctoral candidates in Business Administration.

Table 2 provides an overview of means, standard deviations for the NPI and its individual dimensions by sex and level of study. Scores on the NPI scale may range from 0 to 40 with higher scores showing increased narcissism. The overall mean NPI score in our study was 15.63. The minimum and maximum value on each individual narcissistic dimension are presented inside the parentheses (Table 2, first line).

Insert Table 2

According to Table 2, male participants seem to score slightly higher than female on the NPI and on every individual narcissistic dimension with the exception for vanity in which female participants score higher. When participants are classified by level of study, full time postgraduate students score higher on NPI, authority, self-sufficiency, exhibitionism, exploitativeness, vanity and entitlement than undergraduate, part time postgraduate and doctoral students. Doctoral students though score higher on superiority possibly due to their increased reference power. The fact that full time

postgraduate students attain higher scores can be explained by the fact that they are in the beginning of their career (they have less years of business experience) and their expectations and ambitions are high.

Since an assessment of the normality of data is a prerequisite for many statistical tests, both Shapiro Wilks and Kolmogorov Smirnov (with Lilliefors significant correction) tests were conducted and a visual inspection of histograms, QQ plots and boxplots was made. In those cases that normality was violated non-parametric statistical tests were run while parametric tests were conducted when normality of data was present. A brief overview of hypotheses testing results appears in Table 3

Insert Table 3

Regarding the testing of the 1st research hypothesis, it was shown that NPI as well as individual NPI dimensions scores are not approximately normally distributed across both groups of the independent variable (SEX). Hence, the use of non-parametric statistical methods was decided to identify potential statistically significant differences between groups. After checking the assumptions for Mann Whitney tests, (1) histograms: the two distributions had a similar pattern, hence the medians can be used to summarize the differences between groups (2) independence of groups and (3) continuous dependent variable, the test was conducted to determine whether there was a difference in the NPI scores between male and female participants. Results from that analysis indicated that there was not a statistically significant difference between sex groups even though mean NPI scores were higher in male than females (Mann-Whitney $U = 11113.5$; $Z = -1,729$; $p = 0.084$). The presence of higher narcissism levels in men has also been recorded by Carroll (1987) and Traiser and Eighmy (2011).

The same procedure was applied in the case of the 7 individual NPI dimensions. There is a statistically significant difference regarding Authority (Mann Whitney $U=9668.5$; $Z=-3.53$; $p=.000$), Self Sufficiency (Mann Whitney $U=10403.5$; $Z=-2.66$; $p=.008$) and Vanity (Mann Whitney $U= 9840.5$; $Z=-3.4$; $p=.001$) between male and female. Male students attained higher scores in Authority and Self Sufficiency while female students reported higher vanity scores. The effect sizes for this analysis ($d = 0.2$; 0.15 ; 0.19) were found not to exceed Cohen's (1988) convention for a moderate effect ($d = 0.3$). This finding (regarding vanity of female participants) was also present in Brown *et al.*, (2013) study. Male participants also reported higher entitlement scores than female (though not at a statistically significant degree).

Regarding the 2nd research hypothesis, there was not a statistically significant difference in NPI scores for the 4 study levels (ANOVA $F(3, 317)=1.615$ $p=0.186$). To check the 2nd hypothesis regarding individual narcissistic traits and after checking for normality, a Kruskal-Wallis H test showed that there was a statistically significant difference between students of different study levels regarding:

a) Authority. In order to investigate which groups differ significantly, a series of post hoc Mann Whitney U tests were performed. Mann-Whitney U value was found to be statistically significant $U = 3305.5$ ($Z = -3.278$), $p = 0.001$, between the undergraduate and full time postgraduate student groups. Full time postgraduate students scored higher in authority. This difference according to Cohen (1988) appears small to moderate ($r = 0.23$).

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3 b) Exploitativeness. After conducting post hoc Mann Whitney tests between study
4 levels, it was found that Mann Whitney U value was statistically significant $U= 3098.5$
5 ($Z=-2.145$), $p=0.032$ between full time postgraduate students and part time
6 postgraduate students. Full time postgraduate students reported higher scores regarding
7 exploitativeness. This difference according to Cohen (1988) appears small ($r=0.16$). In
8 addition, a statistically significant Mann Whitney U value $U=689$ ($Z=-2.108$), $p=0.035$
9 was found between full time postgraduate students and doctoral students. Again, full
10 time postgraduate students scored higher than doctoral students. This difference
11 according to Cohen (1988) appears small to moderate ($r=0.21$).
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13

14 With regard to the 3rd hypothesis, a Kruskal-Wallis H test showed that there was not a
15 statistically significant difference regarding NPI scores between those students that had
16 various levels of business experience (Kruskal Wallis $\chi^2(3) = 2.065$, $p = 0.559$).
17 Additional Kruskal Wallis tests were performed for individual NPI dimensions. Results
18 revealed that there were statistically significant differences in a) authority, b) self-
19 sufficiency c) exploitativeness and d) vanity. In order to investigate which groups differ
20 significantly, a series of post hoc Mann Whitney U tests were performed.
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22

23 a) Authority: Mann Whitney U value was statistically significant $U= 1442.5$ ($Z=-2.288$),
24 $p=0.022$ between 1) those who do not have business experience and those that have
25 only up to 1 year. This difference according to Cohen (1988) appears small to moderate
26 ($r=0.21$), 2) $U = 2457.5$ ($Z=-2.817$), $p=0.005$ those who do not have business
27 experience at all and those who have business experience up to 5 years (small to
28 moderate effect $r=0.22$) and 3) $U=2143$ ($Z=-2.873$), $p= 0.004$ those who do not have
29 business experience at all and those who have business experience for more than 6 years
30 small to moderate effect $r=0.23$). In all three cases, students with no business experience
31 scored lower.
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34 b) Self-sufficiency: Mann Whitney U value was statistically significant $U= 2033.0$ ($Z=-$
35 2.913), $p=0.004$ between those who have up to 1 year business experience and those
36 who have more than 6 years with an almost moderate effect ($r=0.24$). Participants with
37 more than 6 years of business experience scored higher on self-sufficiency.
38
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40 c) Exploitativeness: Mann Whitney U value was statistically significant $U= 2193$ ($Z=-$
41 2.732), $p=0.006$ between those who do not have business experience and those who
42 have more than 6 with an almost moderate effect ($r=0.22$). Mann Whitney U value was
43 statistically significant $U= 3682.00$ ($Z=-3.057$), $p=0.002$ between those who have 2-5-
44 year business experience and those who have more than 6 with an almost moderate
45 effect ($r=0.22$). In both cases, students with less years of business experience scored
46 higher on exploitativeness.
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49 d) Vanity: Mann Whitney U value was statistically significant $U= 1320.5$ ($Z=-2.992$),
50 $p=0.003$ between those who do not have business experience and those who have up to
51 1 year with an almost moderate effect ($r=0.27$). Mann Whitney U value was statistically
52 significant $U= 2599.0$ ($Z=-2.405$), $p=0.016$ between those who do not have business
53 experience and those who have 2-5 years of business experience with a small to
54 moderate effect ($r=0.19$). Mann Whitney U value was statistically significant $U=$
55 1840.5 ($Z=-3.685$), $p=0.000$ between those who do have up to 1 year of business
56 experience and more than 6 years business experience with a moderate effect ($r=0.3$).
57 Mann Whitney U value was statistically significant $U= 3641.5$ ($Z=-3.200$), $p=0.001$
58 between those who do have 2 to 5 years of business experience and more than 6 years
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business experience with a small to moderate effect ($r=0.23$). Vanity seems to decrease as years of business experience increases and this is something particularly obvious in the last two cases.

Regarding hypothesis H4, a Kruskal-Wallis H test (Table 4) showed that there was not a statistically significant difference regarding NPI scores between groups (Kruskal Wallis $\chi^2(9) = 14.472$, $p = 0.106$). While there are findings relating narcissism and entrepreneurship (e.g. Mathieu and St Jean, 2013), we have not been able to find any statistically significant differences between those students that stated “the opening of their own company” as their career plan and other students with different career plans. However, we did find that there are statistically significant differences between groups regarding the trait of superiority (Kruskal Wallis $\chi^2(9) = 17.018$, $p=0.048$).

Insert Table 4

Again, after executing a series of post hoc Mann Whitney U Test, statistically significant differences in superiority were found between those that aspire to be employed in the public sector and those students who are ambitious to work for a foreign MNC ($U=234$, $Z=-2.267$, $p=0.023$). More specifically, results of the analysis showed that students who are planning to work for a foreign MNC have higher sense of superiority than those who plan to be employed in the public sector. This sense of superiority is also prevalent when comparing the former group and those who just want i) to work for any private sector company ($U=1723$, $z=-2.027$, $p=0.043$), ii) to continue studying ($U=7485.5$, $z=-2.992$, $p=0.003$), iii) to continue in the present company ($U=1131.5$, $z=-2.136$, $p=0.033$). It was also found that there is a statistically significant difference between students that want to change company and those who would like to change profession ($U=31$, $Z=-2.098$, $p=0.036$) that reported a higher sense of superiority as well.

Regarding research hypothesis H5, an analysis of variance showed that there were no statistically significant differences between personal income group means (ANOVA $F(5,292) = 0.683$, $p = .637$). However, since the normality hypothesis was not sustained in the case of individual NPI dimensions across all personal income groups, the use of non-parametric statistical methods was decided to identify potential statistically significant differences between groups. A Kruskal-Wallis H test showed that there was a statistically significant difference only regarding vanity scores between the various income scores. In order to investigate which groups, differ significantly, a series of post hoc Mann Whitney U tests were performed. Table 5 presents the statistically significant Mann Whitney U values.

Insert Table 5

The above table also shows that in most of the above cases lower personal income groups is related to higher vanity. While controversial, these results can be explained by the fact that vanity (as a trait of over exposing personal positive self-view and under emphasizing negative perceptions) offer excuses for personal failures, overestimations of efficacy, intelligence and excessive physical view that might compensate for lower income levels.

The 6th hypothesis was also investigated, after checking for normality NPI as well as individual NPI dimensions scores. It was found that dependent variables are not approximately normally distributed across all groups of the independent variable (family income). Hence, the use of non-parametric statistical methods was decided

again to identify potential statistically significant differences between groups. A Kruskal-Wallis H test showed that there was a statistically significant difference regarding NPI scores between family income groups (Kruskal Wallis $\chi^2(4) = 16.277, p = 0.003$).

Insert Table 6

Our findings show that on the four cases appeared in Table 6, students with higher family income tend to score higher regarding NPI. This finding agrees with previous research results (e.g. Traiser and Eighmy, 2011).

A similar procedure was undertaken for the case of individual NPI dimensions. A Kruskal-Wallis H test showed that there were statistically significant difference regarding authority, superiority, exhibitionism and entitlement among family income groups. In order to investigate which groups differ significantly, a series of post hoc Mann Whitney U tests were performed. Table 7 presents the statistically significant Mann Whitney U values.

Insert Table 7

Table 7 shows that students whose family income does not exceed €20,000 euros have lower authority scores in comparison with those students that come from a family with high income (€90,000 euros).

Authority (in the context of narcissism) refers to skills of leadership and ambitions for leading and gaining power. Narcissistic individuals who are mentally framed in their own mirrors of personal omnipotence consider themselves as having absolute authority. This characteristic is also related to superiority, which in our study, is higher in student groups with high family income (€ 70,000-€ 90,000) than student groups with lower family incomes. It is common that people reporting higher superiority to bloat about their own successes, think they are special, like receiving complements by other people and look down to all those they consider as being less accomplished.

Exhibitionism seems to be higher amongst students whose family income ranges from medium to high (€40,000-€90,000). It translates to a tendency for being to the center of attention and showing off.

Entitlement is getting higher as students family income is getting bigger. Our findings suggest that students with low family income (up to €20,000) have lower entitlement scores than students with medium and high family income (€40,000-€90,000). Entitlement in the context of narcissism is translated to personal beliefs of deserving favorable outcomes in any case.

6. Conclusions

The results support the view that the overall level of narcissism, in our sample of business students, does not differ from similar results reported in literature, in countries like the US and Canada. This might be attributed to the fact that Greek business schools' curriculum and academic staff are mostly affected by the Anglo-Saxonic school of business thought. It is important to note that such similarity is not even affected as one would expect by the economic crisis in Greece (high unemployment, rising income inequalities, salaries cutbacks, etc.). To the best of our knowledge there is no study investigating the narcissism of business students during economic crisis.

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3 A higher overall score in narcissism is present in male participants in comparison with
4 female participants, though not statistically significant. This is also true for all
5 individual NPI dimensions but one (vanity). Among the 4 study level groups, there was
6 not a statistically significant difference in NPI scores, however full time MBA students
7 seem to have a stronger sense of authority than undergraduate students and scored
8 higher on exploitativeness than part time and doctoral students.
9

10
11 More years of business experience lead to higher authority and self-sufficiency scores
12 but to lower exploitativeness and vanity scores, which sounds logical as maturity (at
13 work) grows. Even though in literature it is reported that students-entrepreneurs are
14 more narcissists than other vocational groups, higher narcissism was not reported
15 among the students of our sample with entrepreneurial intent. Perhaps, this could be
16 related with the timing of this research, in which low aspirations and pessimism due to
17 the harsh economic conditions, in combination with bureaucratic procedures that have
18 been impeding the flourish of entrepreneurship in Greece, have somehow crumbled
19 motivation for new ventures, youngsters' self-confidence and personal well-being.
20
21

22 Higher vanity scores were noted in those cases with lower personal income, while
23 students that come from families with high income score higher on narcissism
24 (something which support similar findings in literature) and on authority, superiority,
25 exhibitionism and entitlement.
26

27 **7. Implications**

28
29 Previous research (Westerman *et al.*, 2012; Bergman *et al.*, 2010; Twenge *et al.*, 2008;
30 Blickle *et al.*, 2006; Campbell *et al.*, 2004) has shown that (a) college students have
31 become increasingly narcissistic, (b) business schools seem to attract more narcissistic
32 students.
33

34
35 The testing of our research hypothesis suggests that individual NPI dimensions (such
36 as authority, vanity, self-sufficiency, exploitativeness, entitlement) are associated with
37 sex, age, study level and income. These findings call of attention to be paid, by business
38 schools and employers.
39

40
41 Business schools constitute learning societies where character molding is taking place.
42 They should neither underestimate character molding (teach/encourage/facilitate the
43 correct ways to gain virtues) of students nor the consequences of possible
44 (unproductive) narcissism to students, faculty, potential employers and society. For
45 example, there are indeed cases in which students protest and claim higher grades (than
46 those achieved during exams) and when they fail to get what they want, they sometimes
47 insult faculty or raise issues of merit and injustice in the grading process. If these
48 situations are not addressed by institutions with the help of suitable policies and
49 practices, it is highly likely that they will be repeated not only in the educational context
50 but also (and possibly combined with power) in the workplace and be translated to
51 irrational decisions and managerial misbehaviors. In an era of required teamwork,
52 participative decision making, interpersonal skills graduates (as future employees) with
53 high levels of narcissism may be problematic resources for business success, as they
54 are associated with counter-productive behaviors.
55
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58 In literature, there are several practices that can be adopted. Practices aiming to reduce
59 narcissism among business schools such as a strong responsible management
60 orientation (e.g. PRME signatories), the inclusion of "soft" courses in curriculum, the

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2
3 provision of opportunities for service learning during internships must be employed. Of
4 course, such practices would be of low value unless collaborative learning, team-
5 working, regular and personalized performance feedback and guidance, role-playing
6 and simulations are adopted by the faculty in their teaching methodology portfolio
7 (Bergman *et al.*, 2010). These practices enable students view situations from multiple
8 perspectives at the same time, to develop empathy and sensitivity but not in the expense
9 of limiting initiatives or encouraging risk taking or innovative thinking (through
10 business ideas' competitions, company projects etc.). Of course, it must be noted that
11 behavioral modelling by academic staff is crucial for harnessing students' unproductive
12 narcissism. In order to be successful on that, they need to be supported by acquiring
13 relevant knowledge and skills.
14
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16
17 Companies on the other hand, as prospective employers, should shift their focus of
18 selection from grades and problem-solving abilities to character issues (Crossan *et al.*,
19 2013) of their potential employee. While charisma, vision, creativity and risk taking
20 may be among the positive dimensions of narcissism, it is supported that unproductive
21 narcissism may endanger a company's journey to excellence through its impact on
22 people, self-improvement, customer orientation, values, decision making and
23 performance (Anninos, 2018). Through the use of psychometric tests and interviews
24 they are expected to be able to diagnose narcissistic individuals during selection
25 processes but also diagnose and eliminate companywide problematic situations through
26 appropriate mechanisms and policies (e.g. obligatory seminars for and discussions with
27 highly ranked executives about self-awareness and the ability to diagnose personal
28 weaknesses, utilization of employee evaluation data, careful fact and behavior based
29 selection of executives for promotion, development of emergency succession plans).
30
31

32 **8. Further research issues**

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34 A comparative study in countries hit by economic crisis would be of interest to support
35 or reject our findings.
36

37
38 Research can be replicated in a larger sample of public and private business schools to
39 unveil potential differences in NPI and NPI dimensions' scores. Comparative studies
40 can also be conducted in other (non-western) cultures. One more comparative study
41 could be conducted in business schools globally that are either accredited or they have
42 adopted the Principles for Responsible Management, to investigate whether their strong
43 orientation to ethics and sustainability and broader business education perspective
44 harnesses unhealthy narcissism and/or cultivates the positive characteristics of
45 narcissism.
46

47 **9. Limitations**

48
49 Though the study provides useful insights, it has some limitations. First, it was
50 conducted in a regional country, second the participants were students of public higher
51 education institutions only, third the questionnaire was self-reported, and this could
52 lead to likely social desirability effects. So, caution must be exercised in generalizing
53 the findings to public and private business schools as well as to countries with different
54 context and culture.
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Table 1: Previous studies of narcissism in business education

Author(s)	Instrument	Sample	Main Findings
Carroll (1987)	NPI, Thematic Apperception Test	MBA students (n=65)	Differences between men and women regarding narcissism. Narcissism has been found to be positively correlated with the need for power and negatively with the need for intimacy.
Twenge et al., (2008)	NPI	85 samples of American college students (1980- 2006) (n=16475, USA)	Narcissism scores are significantly correlated with year (weighted by sample size). Rise of individualistic traits like assertiveness, agency, self-esteem, and extraversion.
Trzesniewski et al. (2008)	NPI	College students (n=26887, USA) 1982-2007	No evidence that college students' scores on the Narcissistic Personality Inventory increased (Univ California Campuses) Small changes in specific facets of narcissism.
Twenge et al., (2008b)	NPI	7 samples University of California (n=2652, USA)	Corroborate the above findings of Trzesniewski et al. (2008) which can be justified by cultural and ethnic shifts that took place at the University of California. Excluding the California samples, narcissism increased 1988–2006 across 27 campuses
Brunell et al., (2008)	Studies 1,2: NPI Big Five Inventory Rosenberg Self-Esteem Inventory	Study 1: introductory psychology Students (n=432) Study 2: introductory psychology Students (n=408)	In the first two studies it was found that narcissism is a predictor of leader emergence and that it is positively correlated with the desire to lead and self-ratings on leadership.
	Study 3: California Psychological Inventory- Narcissism scale	Study 3: managers enrolled in an executive MBA (EMBA) program at a large southeastern university (2002-2005) (n=153)	In the third study it was shown that students rated highest in narcissism were most likely to be identified as emerging leaders
	Phares and Erskine Selfishism Test	Business students at a large research university (n=309)	Empathy and narcissism are factors that determine if a student makes an ethical decision. Students studying finance exhibited a statistically significant tendency for less empathy and more narcissism compared to other business students.
Traiser & Eighmy (2011)	Defining Issues Test version 2 (DIT-2) & NPI	Undergraduate business students in North Dakota and Minnesota (n=269, USA)	Private college students showed higher NPI scores than public college students Males were found to be more narcissistic than females NPI scores increase as family income increases As age increases, NPI scores decrease The number of ethics courses that students take does not impact their moral reasoning or narcissism
Menon & Sarland (2011)	NPI & Machiavellian Index (Mach 4)	Undergraduate and graduate students (USA)	Correlation of narcissism and academic entitlement Narcissism and academic entitlement are predictors of exploitative attitude. The exploitative attitude is acting as a mediator in the relationship between narcissism and academic entitlement, and academic dishonesty. Current college students have higher narcissistic scores than college students of the past
Westerman et al., (2012)	NPI	Undergraduate business and psychology students of an AACSB state university (n=536, USA)	Business students are more narcissists than their psychology colleagues Narcissism does not appear to have any significant relationship with class activities Narcissistic individuals seem to be more successful in terms of employment, salary and promotions
Mathieu & St Jean (2013)	NPI -16	On line survey; 1572 students accepted the invitation, and 89% of them were enrolled from Universities across Quebec, Canada.	Student entrepreneurs are more narcissistic than other vocational groups. Narcissism is positively correlated with general self-efficacy, locus of control and risk propensity. Narcissism plays a significant role in explaining entrepreneurial intentions, even after controlling for self-efficacy, locus of control and risk propensity.
Brown et al., (2013)	NPI	College accounting majors (n=120, USA)	Accounting students have a lower level of narcissism in comparison with other business students and the general population of college students. There are not significant differences between state and private school students. There are differences between men and women regarding vanity (women score higher) and entitlement (men scored higher). Students who hold leadership positions attain higher NPI scores
Bergman et al., (2013)	NPI		
	Material Values Scale New Ecological Paradigm Scale	Business students of an AACSB -accredited business school (n=405, USA)	Strong connection of narcissism and materialism which was significantly related to lower levels of environmental ethics. This could have negative implications for societies. Narcissism has an indirect (no direct) effect on students' environmental ethics. Narcissism related to materialism and materialism to lower environmental ethics
Gkika & Sahinidis (2013)	NPI	1449 business students (TEI Athens, Greece) and their parents	Aging reduces traits of narcissism Males score higher than female regarding self-absorption, self-admiration, leadership/authority and superiority/arrogance Students narcissism level is higher than the one of their parents Especially male students high in narcissism and psychopathy are predisposed to academic entitlement
Turnipseed & Cohen (2015)	Academic Entitlement Scale Dark Triad concise measure	169 students	Male students score significantly higher than females on the dark personalities, and on externalized responsibility.
Westerman et al.,(2016)	NPI	405 undergraduate business students at a AACSB-accredited state university - Southeastern United States	Narcissism congruence was significantly related to a student's final grade in the class Less congruence was associated with lower course grades and this negative association was partially mediated by perceived professor status and perceived class difficulty. More narcissistic faculty were associated with detrimental outcomes for less narcissistic students. The student-faculty fit on narcissism is a key parameter in reducing narcissism

Table 2: Descriptives of NPI and NPI dimensions

(UG=Undergraduate students, PG (FT)= Postgraduate students-Full time, PG (PT)=Postgraduate students-Part Time, DOC-Doctoral students)

		<i>NPI</i> (0-40)	<i>Authority</i> (0-8)	<i>Self Sufficiency</i> (0-6)	<i>Superiority</i> (0-5)	<i>Exhibitionism</i> (0-7)	<i>Exploitativeness</i> (0-5)	<i>Vanity</i> (0-3)	<i>Entitlement</i> (0-6)		
<i>EDUCATION LEVEL</i>	<i>SEX</i>	Male	16.3 (SD=6.58)	4.66 (SD=1.82)	1.91 (SD=1.37)	1.98 (SD=1.33)	2.49 (SD=1.72)	1.74 (SD=1.41)	1.07 (SD=1.06)	2.4 (SD=1.39)	
		Female	15.15 (SD=6.14)	3.89 (SD=1.99)	1.51 (SD=1.3)	1.92 (SD=1.28)	2.44 (SD=1.74)	1.73 (SD=1.37)	1.49 (SD=1.11)	2.19 (SD=1.46)	
	<i>EDUCATION LEVEL</i>	<i>SEX</i>	UG	15.10 (SD=5.97)	3.79 (SD=1.9)	1.44 (SD=1.1)	1.9 (SD=1.26)	2.53 (SD=1.77)	1.82 (SD=1.26)	1.35 (SD=1.1)	2.23 (SD=1.4)
			PG (FT)	17.01 (SD=6.99)	4.67 (SD=1.94)	1.87 (SD=1.48)	1.95 (SD=1.36)	2.54 (SD=1.87)	1.99 (SD=1.46)	1.49 (SD=1.24)	2.49 (SD=1.53)
		<i>SEX</i>	PG (PT)	15.26 (SD=5.97)	4.29 (SD=1.9)	1.85 (SD=1.48)	1.95 (SD=1.34)	2.34 (SD=1.53)	1.55 (SD=1.47)	1.15 (SD=1.02)	2.17 (SD=1.44)
			DOC	15.44 (SD=7.18)	4.52 (SD=2.26)	1.56 (SD=1.29)	2.08 (SD=1.26)	2.4 (SD=1.94)	1.32 (SD=1.25)	1.28 (SD=1.06)	2.32 (SD=1.31)

Table 3: Hypotheses Tests

	<i>H1 (sex)</i>	<i>H2 (level of study)</i>	<i>H3 (business experience)</i>	<i>H4 (career objectives)</i>	<i>H5 (individual income)</i>	<i>H6 (family income)</i>
<i>NPI</i>	Tenable	Tenable	Tenable	Tenable	Tenable	Non tenable
<i>Authority</i>	Non tenable	Non tenable	Non tenable	Tenable	Tenable	Non tenable
<i>Self Sufficiency</i>	Non tenable	Tenable	Non tenable	Tenable	Tenable	Tenable
<i>Superiority</i>	Tenable	Tenable	Tenable	Non tenable	Tenable	Non tenable
<i>Exhibitionism</i>	Tenable	Tenable	Tenable	Tenable	Tenable	Non tenable
<i>Exploitativeness</i>	Tenable	Non tenable	Non tenable	Tenable	Tenable	Tenable
<i>Vanity</i>	Non tenable	Tenable	Non tenable	Tenable	Non tenable	Tenable
<i>Entitlement</i>	Tenable	Tenable	Tenable	Tenable	Tenable	Non tenable

Table 4: Kruskal Wallis Test (NPI & NPI Dimensions_Career Plans)

	<i>NPI</i>	<i>Authority</i>	<i>Self sufficiency</i>	<i>Superiority</i>	<i>Exhibitionism</i>	<i>Exploitativeness</i>	<i>Vanity</i>	<i>Entitlement</i>
$X^2 (9)$	14,472	7,631	8,873	17,018	4,079	13,628	14,489	12,038
p	0,106	0,572	0,449	0,048	0,906	0,136	0,106	0,211

Table 5: Mann Whitney U results (Vanity_Personal Income)

<i>Mann Whitney U</i>	<i>Z</i>	<i>p</i>	<i>Cohen`s (r)</i>	<i>Personal Income Groups (in EUR)</i>
788.00	-2.575	0.010	0.23 Small to moderate	0; over 30000
658.00	-2.376	0.017	0.25 Small to moderate	5001-10000; 10001-20000
185.00	-2.392	0.001	0.45 Almost large	5001-10000; over 30000
224.00	-2.060	0.039	0.29 Almost moderate	20001-30000; over 30000

Table 6: Mann Whitney U results (NPI_Family Income)

<i>Mann Whitney U</i>	<i>Z</i>	<i>p</i>	<i>Cohen's (r)</i>	<i>Family Income Groups (in EUR)</i>
1348.5	-2.836	0.005	0.25 Small to moderate	Up to 20000; 40001-70000
217	-2.789	0.005	0.29 almost moderate	Up to 20000; 70001-90000
2170	-2.249	0.025	0.17 Small to moderate	20001-40000; 40001-70000
342.5	-2.613	0.009	0.23 Small to moderate	20001-40000; 70001-90000

Table 7: Mann Whitney U results (NPI Dimensions_Family Income)

	<i>Mann Whitney U</i>	<i>Z</i>	<i>p</i>	<i>Cohen's (r)</i>	<i>Family Income Groups (in EUR)</i>
<i>Authority</i>	1301	-3.102	0.002	0.27 Small to moderate	Up to 20000; 40001-70000
	231	-2.652	0.008	0.28 Small to moderate	Up to 20000; 70001-90000
<i>Superiority</i>	246	-2.499	0.012	0.26 Small to moderate	Up to 20000; 70001-90000
	321	-2.87	0.004	0.25 Small to moderate	20001-40000; 70001-90000
	153.5	-2.125	0.034	0.28 Small to moderate	40001-70000; 70001-90000
<i>Exhibitionism</i>	1435.5	-2.446	0.014	0.22 Small to moderate	Up to 20000; 40001-70000
	240.5	-2.549	0.011	0.26 Small to moderate	Up to 20000; 70001-90000
	418	-2.012	0.044	0.18 Small to moderate	20001-40000; 70001-90000
<i>Entitlement</i>	1318.5	-3.039	0.002	0.27 Small to moderate	Up to 20000; 40001-70000
	241.5	-2.540	0.011	0.26 Small to moderate	Up to 20000; 70001-90000
	2154	-2.356	0.018	0.18 Small to moderate	20001-40000; 40001-70000
	402.5	-2.155	0.031	0.19 Small to moderate	20001-40000; 70001-90000