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MASTER'S FINAL WORK DISSERTATION

**NARCISSISTIC LEADERS AND THEIR EFFECT ON COMPANY
PERFORMANCE: A STUDY OF THE PORTUGUESE CASE**

ANA TERESA DAS NEVES FILIPE

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SUPERVISION:

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Abstract

Narcissists are individuals with excessive self-admiration that always like to be recognized by others and are constantly seeking attention and distinction. CEOs that possess this personality trait have grandiose tendencies and are likely to take riskier actions, while receiving a higher compensation for their work. Due to the great influence of CEOs, it is important, both for academic and hiring purposes, to study how their traits affect the companies they work for. However, authors have yet to reach an agreement regarding the effect of CEO narcissism on company and, mostly, on company performance. Using a sample of CEOs of Portuguese registered companies, data was collected based on a questionnaire held online. To assess the relationship between narcissism and performance, performance was measured using a subjective and self-perception measure. The results show that narcissism is positively related to performance, confirming that narcissists give their work a high evaluation. These findings may suggest an advantage of hiring narcissistic CEOs but the use of objective measures of performance might be needed in order to reach more accurate results.

Keywords: Narcissism; Company Performance; Portuguese Companies; Narcissistic Personality Inventory.

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Abbreviations

APA – American Psychiatric Association

CEO – Chief Executive Officer

CSR – Corporate Social Responsibility

HSNS - Hypersensitive Narcissism Scale

NGS - Narcissistic Grandiosity Scale

NPD – Narcissistic Personality Disorder

NPI – Narcissistic Personality Inventory

PNI - Pathological Narcissism Inventory

SCID - Structured Clinical Interview

SES – Socio-economic Status

SME – Small or Medium Enterprise

SOC – Sense of Control

1. Introduction

The actions and decisions of top-level managers are highly influenced by their personalities and past experiences (Carpenter et al., 2004; Finkelstein & Hambrick, 1996). This is true, in particular, for the Chief Executive Officer (CEO), the leader of the company. For that reason, past research has focused on the CEO, his features and how they may affect the functioning of the company (Finkelstein & Boyd, 1998; Sanders, 2001). The characteristics of the CEO have been studied in order to determine, not only how they may influence the CEO's decision making but also his co-workers and the company.

Narcissism, as a personality trait, is very easily perceived by others and is often viewed more as a disorder rather than an independent dimension of personality (American Psychiatric Association, 2013). Thus, it is associated with something bad and becomes a sensitive and difficult topic to approach (Chatterjee & Hambrick, 2007). Additionally, narcissism is often mixed up with other similar, although distinct, concepts. As a result, the existing research regarding narcissism and, in particular, CEO narcissism is not abundant and has yet to reach an agreement regarding this personality trait. (Chatterjee & Hambrick, 2007; Ham et al., 2014). This lack of information regarding CEO narcissism is even more noticeable in Portugal where there are no studies on this subject. Nevertheless, the discussion of who to hire and how to be a good leader for the future is more and more present in companies, universities and society.

The idea for this dissertation arises from these circumstances and the main objective is to help reach an agreement or at least contribute to the continuation of this topic by investigating the relationship between CEO narcissism and company performance in Portuguese companies.

The dissertation is divided in five chapters, starting with the Introduction. Chapter 2 contains the Literature Review that introduces the issue in study and presents the proposed hypothesis; chapter 3 describes the Data and Methodology used; chapter 4 presents and analyses the obtained Results and chapter 5 contains the conclusions and limitations of the study, as well as suggestions for future investigation on this subject.

2. Literature Review

2.1 Personality Disorders

Personality is, according to the American Psychiatric Association (2013) , the way a person thinks, feels and behaves that differentiates her or him from others and can be influenced by experiences, environment (surroundings or life situations, for example) or inherited characteristics. When personality departs from the expectations of society, the individual is said to have a personality disorder, which can start manifesting itself between late adolescence and early adulthood, causing distress or problems with attitudes that are usually inflexible and last over time if not treated. This pattern is expressed in at least two of the following areas: way of thinking about oneself and others, way of responding emotionally, way of relating to other people and way of controlling one's behavior. The APA distinguishes between ten different personality disorders that are grouped in three clusters (Cluster A: odd or eccentric behavior; Cluster B: dramatic, emotional or erratic behavior; Cluster C: anxious or fearful behavior). Along with Antisocial, Borderline and Histrionic disorders, the Narcissistic Personality Disorder (NPD) is grouped into Cluster B and a person suffering from this disorder is said to display a pattern of need of admiration,

lack empathy for others, easily taking advantage of them, and have a great sense of self-importance and entitlement.

2.2 Narcissism

The term narcissism comes from the Greek myth of Narcissus that falls in love with his own reflection in the water and, unable to leave it, perishes. The word in itself is associated with self-love and admiration. As a psychological concept, narcissism was introduced into literature by Ellis (1898) and later had a major influence in Freud's work (1914, 1957).

The main characteristics of narcissistic individuals include excessive attention to themselves and value of their worth, overvaluation of accomplishments and obsession with power, while also constantly claiming for attention and recognition from others. They are prone to mood swings and like to perform bolder and riskier actions, in a constant search for grandiosity and admiration. When in group, these individuals tend to dominate the processes of decision making and are not willing to receive feedback or to come to a compromise with others, up to the point where they can go to any extreme in order to get their way, disregarding the well-being of others and showing high levels of hostility and aggression towards them (Raskin & Hall, 1981; Emmons, 1987; Wink, 1991; John & Robins, 1994; Rhodewalt & Morf, 1995; Wallace & Baumeister, 2002; Judge et al., 2006; Lakey et al., 2008; Nevicka et al., 2011; Tamborski et al., 2012). Narcissists are very confident about themselves and their capacities, ranking their own performance and skills above others' (John & Robbins, 1994; Campbell et al., 2004) as well as their creativity, convincing others of its superiority when, in the end, their work does not show a higher

creativity level (Gonçalo et al., 2010). These characteristics are common to all narcissists but it is possible to distinguish two types of narcissism, depending on self-perception and the way emotions are experienced: grandiose and vulnerable narcissism. Vulnerable narcissists are more sensitive, more prone to mood swings and have a greater fear of rejection or abandonment, while grandiose narcissists are more confident and vindictive against those who fail to acknowledge their superiority and have a much higher self-esteem (Dickinson & Pincus, 2003; Miller et al., 2011).

As of 2016, narcissism is estimated to affect 6.2% of the general population in the United States of America, being most likely observed in males than in females (Bressert, 2016). However, despite being labeled as a personality disorder (APA, 2013), research has already shown that narcissism is an independent and stable personality dimension and not just a disorder (Raskin & Hall, 1979; Emmons, 1984, 1987; Raskin & Terry, 1988).

The degree of narcissism of each individual can be determined through the use of several measures or scales. The choice of which one to use depends on factors like time available, as there are shorter and longer measures, and the desired measurement goal, for instance, the aim can be to measure narcissism in a clinical context (where it is better to use the Structured Clinical Interview (SCID) developed by Spitzer et al. (1987)), measure only grandiose narcissism (Narcissistic Personality Inventory by Raskin and Terry (1988) or the Narcissistic Grandiosity Scale (NGS) by Rosenthal et al. (2007)) or only vulnerable narcissism (Hypersensitive Narcissism Scale (HSNS) by Hendin & Cheek (1997)), or capture both types in a single scale (Pathological Narcissism Inventory (PNI) by Pincus et al. (2009)) or even use Dark Triad Measures that assess psychopathy and Machiavellianism together with narcissism (The Short Dark Triad by Paulhus & Williams (2002)). Despite all

these options, the most common is to measure grandiose narcissism through the use of a self-report questionnaire and the most prominent measure is the Narcissistic Personality Inventory (NPI). Originally created by Raskin & Hall (1979), the NPI consisted of 54 pairs of statements, one narcissistic and one non-narcissistic phrase (I have a natural talent for influencing people/I am not good at influencing people; I prefer to blend in with the crowd/I like to be the center of attention; I would do almost anything on a dare/I tend to be a fairly cautious person, for example). Newer and shorter versions of this measure have successively been created by several authors. Raskin and Terry (1988) developed the NPI-40 that has remained the most famous and commonly used measure by non-clinics so far. It perceives narcissism as a multidimensional personality trait and points out seven components: authority, self-sufficiency, entitlement, superiority, exhibitionism, vanity and exploitativeness. Emmons (1984) analyzed these components and fitted them into a corresponding four factor scale that replicates the multidimensionality of the narcissistic personality. Those four factors are exploitativeness/entitlement, leadership/authority, superiority/arrogance and self-absorption/self-admiration.

Narcissism can easily be linked and confused with other personality related concepts, so it is important to make some distinctions. The constructs most commonly associated with narcissism are overconfidence and self-esteem.

Narcissism and overconfidence

Overconfidence is not a personality trait, instead it is a tendency to inflate or to be too confident in the occurrence of a certain event. For example, for financial purposes it can also be referred to as wishful thinking or unrealistic optimism and indicates the propensity to deliver promising forecasts (Ham et al., 2014). Overconfidence can be more frequently

observed in individuals with certain personality traits, such as narcissists that tend to be overconfident. The two concepts are positively correlated but are not mutually dependent (Campbell et al., 2004). Individuals that are overconfident are effectively more creative than others, while narcissists convince others of their higher creativity but fail to deliver more creative results. On the other hand, narcissistic individuals are bigger risk takers and are more focused on short term outcomes.

Narcissism and Self-esteem

Self-esteem is different from confidence; it refers to the individual's evaluation of his or her own worth as well as self-acceptance, liking and respect (Chatterjee & Hambrick, 2007). It can be compared to narcissism in what concerns self-admiration and the two are positively correlated (Emmons, 1984) despite being independent concepts. Narcissists have a "fragile self-esteem", focusing on their self-view, being vulnerable to critics and constantly claiming for attention (Raskin et al., 1991; Kernis & Sun, 1994; Kernis, 2005). These elements are not common to self-esteem, which is, according to Hogan & Kaiser (2005), part of the "bright side" of personality and considered a positive trait. Narcissism, on the other hand, is part of the "dark side" of personality due to the grandiose tendencies it implies. Pulver (1970) differentiates between "good" and "bad" narcissism where "good" narcissism applies to non-defensive self-esteem and "bad" narcissism applies to a defensive pride employed against bad self-assessments.

2.3. The role of the company CEO

Management and leadership play a key role in the progress of the company. Managers and leaders are responsible for the decisions made inside the company and for

establishing the direction of its activity. Due to their very significant role, inevitably, the personality of these individuals ends up being reflected in the company and in its results (Carpenter et al, 2004). So it is frequent to find in literature studies of the characteristics of executives and how they influence the company or if there is a pattern consistent to their features that conduces to better or worse results. The majority of these studies focus on the person of the CEO who plays both the role of manager and leader of the company.

As part of the top management team, CEOs play an important role in defining the philosophy of the company and its objectives (Finkelstein & Hambrick, 1996). They influence the decisions made within the company as well as the strategy and performance (Hambrick & Manson, 1984; Schneideer et al., 1995; Boal & Hooijberg, 2001; Schein, 2010). The personality of the CEO may affect decisions in wide domains, such as investment decisions (Ben-David et al., 2007; Hirshleifer et al., 2012), decisions regarding acquisitions (Malmendier & Tate, 2008), sensitivity to cash flows and earnings (Malmendier & Tate, 2005a; Malmendier & Tate, 2005b; Hilary & Hsu, 2011), confidence regarding future performance (Libby & Rennekamp, 2012) and accounting fraud (Schrand & Zechman, 2012). Outside the company the CEO mirrors the reputation of the firm and affects which information is communicated to stakeholders and the way that communication is done (Amernic & Craig, 2010; Vera & Crossan, 2004; Brennan & Conroy, 2013; Dikolli et al., 2014).

2.4 CEO Narcissism

Narcissistic CEOs have, according to Campbell et al. (2004), quite inflated self-views and want to have them permanently acknowledged. Their actions and decisions are

likely to affect, within the company, not only those closer to them and that work with them directly but all stakeholders in general. These CEOs are prone to show tendencies of grandiosity in the strategies they follow and their staffing preferences include more submissive people. When compared to non-narcissistic CEOs, they were found to receive higher compensation, to be more controlling and aggressive in conducting strategies, less likely to be innovative (Nevicka et al., 2011; Ham et al., 2014), more likely to avoid taxes (Olsen & Stekelberg, 2014) and have a shorter tenure (Ham et al., 2014).

Other main characteristics of narcissistic CEOs referred by the literature are related to the distinction between “bright side” and “dark side” of personality. The effect of a CEO with high self-esteem in the company is different from the effect of a narcissistic CEO (Conger, 1990; Hayward & Hambrick, 1997). The first is pointed as a beneficial and positive trait. According to Resick et al. (2009) CEOs with high self-esteem will have a more optimistic perspective while publicizing information regarding the company, providing more details regarding Corporate Social Responsibility (CSR), willing to accept the responsibility for bad outcomes and being less likely to show attributional bias. On the other hand, narcissism in top executives is perceived as negative for the company. CEOs with this personality trait will likely disclose less information regarding the firm and CSR and provide fewer explanations, while the information provided may even be altered to improve the image of the company and its CEO to the outside (Amernic & Craig, 2010); they are also more likely to display attributional bias (Brown, 1997) and refuse bad outcomes, ruling out their responsibility in them, while crediting themselves only for positive outcomes.

All these features seem to suggest only disadvantages associated with hiring a narcissistic CEO. Nevertheless, some authors call narcissists “visionaries” (Deutschman, 2005, page 44) and praise their upside as “enormous” (Maccoby, 2003, xiv) and they are still being hired by companies, although mostly by older and lower growth firms (Ham et al, 2014). That can be explained by some of the scarce advantages that seem to come from hiring a more narcissistic CEO. For instance, these CEOs can easily cause a good impression with the board of directors (Nevicka et al., 2011) and, even though results show that in practice they are not more competent, they manage to give their co-workers an impression of being more capable. They initiate a higher number of negotiations concerning acquisitions, direct them faster and, when in the position of the target, are more likely to obtain a higher premium even if, in the end, these deals are less likely to be finalized (Aktas et al., 2012).

2.5 Company Performance and Narcissism

Company performance is a broad and multidimensional concept (Cameron, 1978; Venkatraman & Ramanujan, 1986). Richard et al. (2009) identify three dimensions of performance for different types of company outcomes. The first concerns financial performance and includes the firm’s profits, return on assets and investments. The second concerns product market performance, where items like sales and market share can be fitted. The third is shareholder return, assessed by total shareholder return or economic value added, for instance. When referring to and measuring company performance it is important to take into account all these dimensions.

Due to the particular characteristics of narcissistic CEOs, it is possible that these individuals may have a significant impact on how well the company performs. The relation between performance and narcissism may be crucial when hiring a CEO. However, it has not been exhaustively explored by past research yet (Chatterjee & Hambrick, 2007) and the existing findings do not agree on the effect CEO narcissism has on performance. Chatterjee & Hambrick (2007) show that narcissism in CEOs is positively correlated with performance volatility but conclude that, overall, it does not translate in a better or worse performance. Ham et al. (2014), on the other hand, find a negative correlation between narcissism and performance, measured by return on assets. These authors find that narcissistic CEOs are prone to irregular investments and tend to overinvest, causing constraint and compromising sales growth. Both studies seem to agree in what regards the tendency of these CEOs to gamble and take bigger risks with their investments, an attitude that is consistent with the constant need to get more attention and show greatness.

Confronted with the lack of agreement in literature, it is difficult to pick a side and pose a hypothesis. However, and in an effort to be coherent with the general negative tendencies that seem to be associated with narcissism, it seems to be more likely that such a characteristic will lower firm performance. Thus, the general proposed hypothesis is:

H1: Highly narcissistic CEOs will deliver lower firm performance.

3. Data Description and Methodology

3.1. Data Description

For this study, data was obtained using an online questionnaire sent via e-mail using the *Qualtrics* software and where it was expressly requested for the respondent to be the

CEO or a member of the top management team of the company. The questionnaire was the chosen method to collect the data since it is fast, low cost and easy to use and, at the same time, ensures the anonymity of the respondents. Its main disadvantages are the possibility of the e-mail being easily ignored and discarded, which frequently leads to low response rates (Hoonakker & Carayon, 2009). With the objective of ensuring the full comprehension of all questions, the questionnaire was tested by management professionals before its final version was sent. The contact of all registered Portuguese companies was requested to Informa D&B and 15,000 e-mail addresses were provided and sent. To achieve a higher number of responses the questionnaire was sent again, three and six weeks after the first mailing, but only to the respondents that had not completed it yet. 1193 e-mails were returned undelivered and a total of 1766 responses were obtained. However, the questionnaires where the respondent was unemployed or did not occupy a management position were excluded. After filtering, 1105 responses were considered, which represents a response rate of approximately 7.37%.

The obtained sample was analyzed and the variables to study were defined. The choice of what variables to use was done, following previous literature, based on how each could influence CEOs' actions, company strategy and, most important to this study, the way relationship between CEO narcissism and company performance. A complete description of the sample is available in Annex I. Out of the 1105 individuals that form the sample 67.5% are male, 75.5% are married and 34.1% are between 41 and 50 years old, being that the most represented age group. 77.4% of respondents do not smoke, 58.2% exercise regularly, 38.8% have an undergraduate degree and the most frequent level of income ranges from 15,000€ to 29,999€, which is 36.5% of the sample. 84.9% of the

companies the respondents work for belong to the private sector and 45.2% have 20 years or more of activity. 55.7% of the companies have 10 employees or less, 50.6% are not a family business, 85.9% are not part of a business group and 58.3% do not have sales in the foreign market.

3.2. Measures and Scales

The objective of this study is to study the presence of narcissism as a personality trait of CEOs of Portuguese companies and investigate the relation between CEO narcissism and company performance. For that it is necessary to measure narcissism and company performance, as well as socio-economic status, sense of control, authority and occupational and socio-demographic variables.

Narcissism

Narcissism was measured using the NPI-16 scale, developed and validated by Ames et al. (2006) and derived from the NPI-40 scale. Since the subject of the study were the companies' CEOs, who usually have busy schedules and limited time available, a shorter scale was preferred. The main advantage of this scale is its shorter dimension, making it easier to fill and less time consuming. Additionally, the results from the use of the NPI-16 scale are still credible, since its authors proved a high correlation with the results obtained when using the original NPI-40 scale. The scale consists of 16 pairs of statements, each pair containing one statement consistent with narcissistic behavior and another with a non-narcissistic behavior. Respondents were asked to pick, for each pair, the statement that best described their way of being, thinking and acting. The narcissistic statement of the pair was scored with one point and the non-narcissistic with zero. The final NPI-16 score is achieved by the sum of the score of all chosen statements and the higher the final value, the more

narcissistic the individual is. The Cronbach's alpha coefficient of the scale is 0.73, meaning the measure has good reliability (DeVellis, 1991).

Company Performance

Company performance can be assessed through the use of objective or subjective measures. Objective measures of performance are collected directly from the company's reports while subjective measures are collected via interview or survey. This study used the subjective measure since all data was collected via questionnaire and the identity of the companies was kept anonymous. Wiklund & Shepherd (2003) developed the performance scale used. This scale has the advantage of taking into account the several dimensions of performance and allowing comparisons between competitive firms. Respondents were asked to evaluate the performance of their company compared to their main competitors and over the last three years in ten fields of performance (sales growth, revenue growth, growth in the number of employees, net profit margin, product/service innovation, process innovation, adoption of new technology, product/service quality, product/service variety and customer satisfaction). The scale ranged from 1 to 5, where 1 was 'much lower' and 5 was 'much higher'. The overall performance was obtained by the sum of all 10 answers (Naldi et al., 2007). The Cronbach's alpha coefficient is 0.87, showing the reliability of the measure is very good (DeVellis, 1991).

Socio-economic Status

Socio-economic status (SES) is the class or position a person or group of people occupy in society and is determined as a combination of education, income and occupation, in accordance with the APA definition. Adler et al. (2000) provide a scale to measure

subjective SES in the form of a ladder that represents the position of the individual in society.

In this study, respondents were given three ladders with 10 rungs (where “1” would stand for people that are lower in society, that have less education, less money and the worst jobs and “10” would stand for those with better jobs, more money and education that, overall, are said to be better placed in society). The three ladders represented community, job and country and the respondents were asked to choose the rung that would represent their position in each context. The final SES score for each individual is obtained by averaging the three results. The reliability of this measure is very good, as shown by the Cronbach’s alpha coefficient which is 0.85 (DeVellis, 1991).

Sense of Control

Power is defined by Anderson et al. (2012, page. 315) as an “individual’s ability to influence another person or other people” and can only be perceived while in relation to others, although it also has a great effect on the individual himself depending on his perception of the power he exerts on others. Respondents’ sense of power, or control, was measured using the Personal Sense of Power Scale, constructed by the same authors, where the accordance with eight sentences, (such as “I can get the others to do what I want”, “My wishes do not carry much weight” and “My ideas and opinions are often ignored”) regarding the individuals’ relationships in general, was indicated by using a Likert (1932) scale ranging from 1, strongly disagree, to 7, strongly agree. The final Sense of Control (SOC) score for each individual was computed after reverse coding the items that needed so by averaging all the answers. Higher SOC values corresponded to a higher perception of

power and influence over others. The Cronbach’s alpha coefficient is 0.77, according to which the measure shows good reliability (DeVellis, 1991).

Authority

Authority is a form of power that allows its holder to make decisions or give orders, while controlling others. The scale used to measure authority and autonomy was provided by Sherman et al. (2012) and consists of 4 items to be rated from 1, much less than others in my organization, to 7, much more than others in my organization (“I can punish or reward subordinates”, “I can promote or demote subordinates”, “I am expected to motivate my subordinates” and “I supervise subordinates and evaluate or correct their work as necessary”). Only respondents that in a previous item of the questionnaire indicated that they were in charge of managing other people in their work place answered this question as a way of distinguishing the leaders, those in charge of managing others (Sherman et al., 2012). The final authority score was obtained by the sum of the answers to all four items. The measure shows very good reliability, as confirmed by its Cronbach’s alpha coefficient of 0.89 (DeVellis, 1991).

3.3 Variables

According to the obtained results the following variables were defined (Table I).

TABLE I – Variables of the model

	Variable	Description
Dependent Variable	Performance (PERF)	Respondents’ perception regarding the sales growth, revenue growth, growth in the number of employees, net profit margin, product/service innovation, process innovation, adoption of new technology, product/service quality, product/service variety and customer satisfaction concerning the company

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		they work for, over the last 3 years and compared to competitor companies. Company overall performance given by the sum of all items.
Independent Variables	Individual related Variables	
	Narcissism (NPI16)	Narcissism score given by the NPI-16 scale.
	Hierarchical Position (HPOS)	1 if first-level management; 2 if middle-level management; 3 if top-level management.
	Professional Experience (EXP)	1 if up to 5 years; 2 if between 6 and 10 years; 3 if 11 - 15 years; 4 if 16 - 20 years; 5 if 21 - 25 years; 6 if 26 - 30 years; 7 if 31 - 35 years; 8 if 36 - 40 years; 9 if more than 40 years.
	Weekly working Hours (WWH)	1 if up to 30 hours per week; 2 if 31 - 35 hours; 3 if 36 - 40 hours; 4 if 41 - 45 hours; 5 if 46 hours or more.
	Exercise (EXE)	0 if does not exercise; 1 if does exercise
	Smoker (SMO)	0 if does not smoke; 1 if smokes
	Age (AGE)	1 if up to 19 years old; 2 if 20 - 29 years old; 3 if 30 - 39 years old; 4 if 40 - 49 years old; 5 if 50 - 59 years old; 6 if 60 - 69 years old; 7 if 70 years old or older.
	Gender (GEN)	0 if female; 1 if male
	Education level (EDU)	1 if up to high school; 2 if undergraduate degree; 3 if master's degree; 4 if post-graduation; 5 if PhD
	Income (INC)	1 if 0-14,999€; 2 if 15,000-29,999€; 3 if 30,000-44,999€; 4 if 45,000-59,999€; 5 if 60,000-74,999€; 6 if 75,000-89,999€; 7 if 90,000-104,999€; 8 if 105,000€ or more
	Company related Variables	
	Age (CAGE)	1 if 1 year or less; 2 if 1-5 years; 3 if 6-19 years; 4 if 20 years or more
	Number of Employees (NEMPL)	1 if 10 or less; 2 if 11-50; 3 if 51-250; 4 if 251 or more employees.
	Sector (SECT)	1 if private sector; 2 if public sector; 3 if non-profit sector
Family Business (FAM)	0 if company is not a family business; 1 if is a family business	
Has sales in the foreign market (FMRKT)	0 if does not have sales in the foreign market, 1 if has sales in the foreign market	
Part of a Business Group (GROUP)	0 if is not part of a business group; 1 if is part of business group	

T-tests were performed for independent samples using the *IBM SPSS Statistics* software. The objective was to test the equality of means for groups of the variables shown in Table I and check if the levels of narcissism change.

To investigate the relationship between CEO narcissism and company performance according to the phrased hypothesis, a multiple linear regression analysis with the robust option was tested for four models, using the same variables and the *STATA* statistic software. The models are presented in equations 1 to 4. Performance is the dependent variable and the narcissism score given by the NPI-16 scale is the main independent variable in all four models. Equation 1 concerns only the relation between performance and narcissism, equation 2 adds as control variables the ones related to the individual (hierarchical position, professional experience, number of weekly working hours, exercise, smoking, income, education level, age and gender), equation 3 adds as control variables, instead, the ones related to the company (company age, number of employees, sector, being a family business, being part of a business group and having foreign sales) and equation 4 adds both control variables related to the company and the individual. α represents the constant, β the coefficients to estimate and ε is the error term.

$$PERF = \alpha + \beta_1 NPI16 + \varepsilon \quad (1)$$

$$PERF = \alpha + \beta_1 NPI16 + \beta_2 HPOS + \beta_3 EXP + \beta_4 WWH + \beta_5 EXE + \beta_6 SMO + \beta_7 AGE \\ + \beta_8 GEN + \beta_9 EDU + \beta_{10} INC + \varepsilon \quad (2)$$

$$PERF = \alpha + \beta_1 NPI16 + \beta_2 CAGE + \beta_3 NEMPL + \beta_4 SECT + \beta_5 FAM + \beta_6 FMRKT \\ + \beta_7 GROUP + \varepsilon \quad (3)$$

$$\begin{aligned} PERF = & \alpha + \beta_1 NPI16 + \beta_2 HPOS + \beta_3 EXP + \beta_4 WWH + \beta_5 EXE + \beta_6 SMO + \beta_7 AGE \\ & + \beta_8 GEN + \beta_9 EDU + \beta_{10} INC + \beta_{11} CAGE + \beta_{12} NEMPL + \beta_{13} SECT \\ & + \beta_{14} FAM + \beta_{15} FMRKT + \beta_{16} GROUP + \varepsilon \quad (4) \end{aligned}$$

4. Results

4.1. Descriptive Statistics

Table II shows the descriptive statistics regarding company performance, the dependent variable, and narcissism, the main independent variable. For narcissism, each row displays one of the 16 pairs of statements and the final row represents the final NPI-16 score. It is possible to observe that all dimensions of performance display a positive result, with a mean of or above 3, meaning that performance in each field is on average somewhere between similar and better when comparing with competitive companies. The dimension that displays a lower performance score is growth in the number of employees, with a mean of 3, and the dimension with a higher performance score is customer satisfaction, with a mean of 3.87. Overall company performance is on average 34.85. It should be noted that, since data was collected via a self-reporting questionnaire and this is perceived performance, the more narcissistic the respondent, the more likely he will perceive his performance to be better than others, which could explain these very positive results. Regarding narcissism, the pair of sentences with higher score is *I always know what I am doing/Sometimes I am not sure of what I am doing* with a mean of 0.53 and the pair *I am apt to show off if I get the chance/I try not to be a show off* has the lower mean of 0.06. The mean of the total NPI-16 score is 4.12.

Table II – Descriptive statistics of Company Performance and Narcissism

	Min.	Max.	Mean	SD	α
Overall Company Performance	10	50	34.85	5.41	0.87
Sales Growth	1	5	3.35	0.85	
Revenue Growth	1	5	3.33	0.86	
Growth in the number of employees	1	5	3.00	0.91	
Net profit margin	1	5	3.28	0.77	
Product/service innovation	1	5	3.55	0.79	
Process innovation	1	5	3.57	0.78	
Adoption of new technology	1	5	3.51	0.82	
Product/service quality	1	5	3.80	0.72	
Product/service variety	1	5	3.58	0.78	
Customer satisfaction	1	5	3.87	0.71	
NPI-16 score	0	16	4.12	2.97	0.73
1. I know that I am good because everybody keeps telling me so. (n)	0	1	0.30	0.46	
When people compliment me I sometimes get embarrassed.					
2. I like to be the center of attention. (n)	0	1	0.14	0.35	
I prefer to blend in with the crowd.					
3. I think I am a special person. (n)	0	1	0.24	0.43	
I am no better or worse than most people.					
4. I like having authority over people. (n)	0	1	0.44	0.49	
I do not mind following orders.					
5. I find it easy to manipulate people. (n)	0	1	0.20	0.40	
I do not like it when I find myself manipulating people.					
6. I insist upon getting the respect that is due to me. (n)	0	1	0.17	0.38	
I usually get the respect that I deserve.					
7. I am apt to show off if I get the chance. (n)	0	1	0.06	0.24	
I try not to be a show off.					
8. I always know what I am doing. (n)	0	1	0.53	0.49	
Sometimes I am not sure of what I am doing.					
9. Everybody likes to hear my stories. (n)	0	1	0.15	0.36	
Sometimes I tell good stories.					
10. I expect a great deal from other people. (n)	0	1	0.27	0.45	
I like to do things for other people.					
11. I really like to be the center of attention. (n)	0	1	0.24	0.43	
It makes me uncomfortable to be the center of attention.					
12. People always seem to recognize my authority. (n)	0	1	0.43	0.49	
Being an authority does not mean that much to me.					
13. I am going to be a great person. (n)	0	1	0.18	0.38	
I hope I am going to be successful.					
14. I can make anybody believe anything I want them to. (n)	0	1	0.41	0.49	
People sometimes believe what I tell them.					
15. I am more capable than other people. (n)	0	1	0.08	0.27	
There is a lot that I can learn from other people.					
16. I am an extraordinary person. (n)	0	1	0.24	0.43	
I am much like everybody else.					

Note: N = 1105. N is the number of observations; Min. is the minimum; Max. is the maximum; SD is standard deviation; α is the Cronbach's alpha. Responses consistent with narcissism identified with (n).

Performance and narcissism are positively and significantly correlated. The Pearson correlation between the two variables is 0.191, for 1% significance level.

The descriptive statistics of the remaining independent variables are shown in table III.

Table III – Descriptive statistics of independent variables

	Min.	Max.	Mean	SD
Hierarchical Position	1	3	2.51	0.80
Professional Experience	1	9	4.61	1.97
Working Hours	1	5	4.08	1.17
Exercise	0	1	0.58	0.49
Smoker	0	1	0.23	0.42
Age	1	7	3.95	1.04
Gender	0	1	0.68	0.47
Education Level	1	5	2.14	1.07
Income	1	8	2.54	1.66
Company Age	1	4	3.27	0.78
Number of Employees	1	4	1.68	0.90
Sector	1	3	1.24	0.59
Family Business	0	1	0.49	0.50
Sales in the Foreign Market	0	1	0.42	0.49
Belongs to a Business Group	0	1	0.14	0.35

Note: N = 1105; Min. is the minimum; Max. is the maximum; SD is standard deviation

To perform the t-tests and regression, the variables Hierarchical Position, Professional Experience, Weekly Working Hours, Age, Income and Number of Company Employees were recoded to better estimate the models (Table IV shows the recoded variables).

Table IV – Recoded Variables

Variable	Description
Hierarchical Position (HPOS)	1 if lower-level manager; 2 if top-level manager.
Professional Experience (EXP)	1 if up to 20 years; 2 if more than 20 years.
Weekly working Hours (WWH)	1 if up to 40 hours per week; 2 if more than 40 hours.
Age (AGE)	1 if up to 40 years old; 2 if more than 40 years old.
Education level (EDU)	1 if up to undergraduate degree; 2 if above undergraduate degree.
Income (INC)	1 if less than 30,000€; 2 if 30,000€ or more.
Number of Employees (NEMPL)	1 if up to 250 employees; 2 if more than 250 employees.

4.2. T-tests

The t-tests compared means of groups of variables in order to determine if there were significant differences in the level of narcissism. Table V shows the mean and t-value for the different variables. The null hypothesis is the equality of means between the groups of variables.

Table V – t-tests

Hierarchical Position	Top-level managers	Not top-level managers	t-value
NPI16	4.25	3.79	2.389**
Professional Experience	More than 20 years	Up to 20 years	
NPI16	4.04	4.19	-0.866
Weekly Working Hours	More than 40 hours	Up to 40 hours	
NPI16	4.24	3.88	1.876*
Exercise	No	Yes	
NPI16	4.02	4.19	-0.932
Smoking	No	Yes	
NPI16	4.07	4.27	-0.935
Age	More than 40 years old	Up to 40 years old	
NPI16	4.11	4.13	-0.114
Gender	Female	Male	
NPI16	3.96	4.19	-1.196
Education	Above Undergraduate	Until Undergraduate	
NPI16	4.54	3.95	3.048***
Income	30,000€ or more	Less than 30,000€	
NPI16	4.68	3.80	4.749***
Company Age	Start-ups	Young Companies	
NPI16	4.23	4.42	-0.279
	Start-ups	Adult Companies	
NPI16	4.23	4.36	-0.205
	Start-ups	Mature Companies	
NPI16	4.23	3.81	0.664
	Young Companies	Adult Companies	
NPI16	4.42	4.36	0.192
	Young Companies	Mature Companies	
NPI16	4.42	3.81	2.293**
	Adult Companies	Mature Companies	

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NPI16	4.36	3.81	2.830***
Number Employees	Large Companies	SME	
NPI16	4.25	4.11	0.372
Sector	Private	Public	
NPI16	4.23	3.42	2.714*
	Private	Non-profit	
NPI16	4.23	3.53	2.439**
	Public	Non-profit	
NPI16	3.42	3.53	-0.273
Family Business	No	Yes	
NPI16	4.08	4.15	-0.380
Part of Business Group	No	Yes	
NPI16	4.07	4.42	-1.359
Foreign Sales	No	Yes	
NPI16	3.95	4.35	-2.189**
Company Performance	Higher	Lower	
NPI16	4.54	3.61	5.274***

Note: *, ** and *** indicate significance levels of 10%, 5% and 1%, respectively.

The null hypothesis is rejected for the variables hierarchical position, weekly working hours, education level, income level, having sales in the foreign market and company performance. The same happens concerning company age but only when regarding mature companies and company sector regarding only the private sector. For these variables the difference of means is statistically significant, implying differences in the levels of narcissism. The results regarding income support the literature that indicates more narcissistic CEOs receive a higher compensation (Ham et al., 2014). There are some surprising results, for example, there is a significant difference between the level of narcissism and the education level groups. Regarding company performance, there is also a significant difference between narcissism and higher or lower levels of performance.

Additionally, some t-tests were performed on some of the other variables obtained in the questionnaire (Annex III). For sense of control, socio-economic status and authority the null hypothesis is also rejected and the difference in means is statistically significant.

4.3. Linear Regression Models

Table VI shows the results of the linear regressions, with company performance as the only dependent variable. Each column shows the results for the corresponding equation.

Table VI – Linear Regression Model Results

Variables	(1) NPI16	(2) NPI16 + Individual	(3) NPI16 + Company	(4) All
NPI16 score	0.349*** (6.612)	0.294*** (5.624)	0.342*** (6.451)	0.297*** (5.655)
Hierarchical Position		0.906** (2.484)		1.054*** (2.792)
Professional Experience		-0.511 (-1.116)		-0.529 (-1.170)
Working Hours		0.724** (2.066)		0.747** (2.089)
Exercise		0.799** (2.456)		0.755** (2.347)
Smoking		1.079*** (2.875)		1.054*** (2.828)
Age		-0.545 (-1.153)		-0.423 (-0.896)
Gender		0.046 (0.133)		0.033 (0.095)
Education Level		0.206 (0.602)		-0.070 (-0.197)
Income		1.056*** (2.996)		1.054*** (2.983)
Company Age				
Young Company			-0.993	-1.162

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			(-0.908)	(-0.972)
Adult Company			-2.345**	-2.257*
			(-2.215)	(-1.932)
Mature Company			-2.366**	-2.242*
			(-2.252)	(-1.920)
Number of Employees			0.560	0.452
			(0.896)	(0.701)
Sector				
Public Sector			0.442	0.824
			(0.620)	(1.130)
Non-Profit Sector			1.409**	1.915***
			(2.203)	(2.929)
Family Business			-0.432	-0.259
			(-1.247)	(-0.770)
Foreign Sales			0.816**	0.744**
			(2.322)	(2.085)
Business Group			0.137	0.117
			(0.272)	(0.235)
Constant	33.415***	30.091***	34.662***	31.163***
	(122.397)	(28.953)	(28.031)	(19.017)
Observations	1,105	1,105	1,105	1,105
R-squared	0.037	0.074	0.060	0.096
Prob>F	0.000	0.000	0.000	0.000

Note: Columns 1 to 4 show the results of the four equations tested. Performance is the dependent variable in all models. In equation 1, narcissism is the only explanatory variable, in equation 2 the dependent variables are narcissism and all the individual related variables (hierarchical position, professional experience, number of weekly working hours, exercise, smoking, income, education level, age and gender), in equation 3 the dependent variables are narcissism and all the company related variables (company age, number of employees, sector, being a family business, being part of a business group and having foreign sales) and equation 4 considers, besides narcissism, both individual and company related variables as dependent variables. α represents the constant, β the coefficients to estimate and ε is the error term. Robust t-statistics in parenthesis.

*, ** and *** indicate significance levels of 10%, 5% and 1% respectively.

In all estimated regressions, narcissism shows a positive association with company performance. The values of the estimated narcissism coefficient range from 0.294 to 0.349 in the four equations. The highest value is obtained in equation 1, when narcissism is the only independent variable. This is not probably a very reliable value since narcissism is not the only variable that will affect performance. The second highest value for the narcissism

coefficient is given in equation 3, where the control variables are only the company related variables. Besides narcissism, in regression 3, company sector and having foreign sales are also positively associated with performance. Company age, when concerning adult and mature companies, is negatively associated with performance. The lowest value is obtained in equation 2, where narcissism is linked to the individual. Some of the individual related variables, like hierarchical position, weekly working hours, exercise, smoking and income are also positively associated with performance. Equation 4, which joins individual related and company related variables as controls, has the coefficient for narcissism with the second lowest value. Hierarchical position, weekly working hours, exercising, smoking, income, company sector and foreign sales are once again positively related to performance and company age is negatively associated. These results point to the likelihood of CEO characteristics affecting the impact of narcissism on performance more than company characteristics. This would explain the lower values present in equations 2 and 4 that use individual related variables. Still, in all four regressions, the relation between narcissism and company performance is always positive and significant, for a 1% level. The proposed hypothesis is, then, rejected.

The fact that income is positively associated with performance may provide further support to the prospect of more narcissism implying better performance, since previous literature shows that more narcissistic CEOs demand a higher compensation (Ham et al., 2014). However, the results contradict the tendency in literature to label narcissism as a bad personality trait (Hogan & Kaiser, 2005); CEO narcissism appears to make company performance increase. It may be one example of the perks of hiring a narcissistic CEO suggested by some authors (Maccoby, 2003) or just a case of performance volatility that

other authors associate with these CEOs (Chatterjee & Hambrick, 2007) but that might not translate in a continual higher performance. Additionally, it is important to remember that the measure of performance used is a self-perceived one and narcissistic individuals are likely to rate their performance above others' (Campbell et al., 2004). Taking this into account, the obtained positive relation between narcissism and self-reported performance could be anticipated. But these results should be interpreted with some caution. It is possible that if using an objective measure of performance, the results might not be the same.

This study points to a different reality in what concerns the relation between narcissism and company performance and the obtained results confirm the tendency of narcissists to give a high rating to their performance. Other studies about the effect of narcissistic CEOs on the company use signature size or other unobtrusive measures as the measure of narcissism (Chatterjee & Hambrick, 2007; Ham et al., 2014; Ham et al., 2015). This study marks a difference by using the NPI, a self-reporting measure of narcissism, and innovates by introducing this topic into Portuguese companies, constituting a starting point for further research on this matter.

5. Conclusions

5.1. Final Conclusions

CEOs' decisions and actions reflect a great deal of themselves and their personalities. From the composition of the team they work with, to the way they communicate and what kind of information they release within the company and to the outside, to company performance itself, their personality is reflected and influences the way

CEOs act. Despite being an independent personality trait, narcissism is mostly perceived as a disorder and part of the dark side of personality. This bad reputation causes it to be a sensitive and hard to approach topic and so studies about it are not too abundant. Still, it is one of the features that stands out more in a person and is more noticed by others. Also, in the business world, narcissistic CEOs are still being hired to lead and be the face of the company to the world, enjoying a higher compensation than non-narcissistic ones. Thus, the importance and interest in studying these executives and their effect on company performance. More studies concerning narcissism may help fight the preconceived ideas surrounding it and also provide academics and companies with better information regarding its effect.

Following the literature review and using a linear regression model to study the possible relation with company performance, 16 variables were studied: 10 individual related variables (narcissism, hierarchical position, professional experience, weekly working hours, exercising, smoking, education level, income, age and gender) and 6 company related (company age, number of employees, sector of activity, being part of a family business, having sales in the foreign market and being part of a business group). Narcissism was measured using the NPI-16 scale created by Ames et al. (2005) and company performance using the self-reporting scale created by Wiklund & Shepherd (2003). Data for both was collected through a questionnaire held online; the link was sent via an e-mail directed to CEOs to a set of companies whose contact was given by Informa D&B.

Results show that differences in the individual's hierarchical position, working hours, income and education level lead to different levels of narcissism. The same happens,

regarding the company, for age, sector and sales in the foreign market. From these variables only income shows a result which is consistent with the studied literature (Ham et al., 2014) and education level is the most surprising one to relate with higher levels of narcissism. Regarding the relationship between company performance and narcissism, results point to the two variables being positively associated and lead to the rejection of the phrased hypothesis. On one hand, this result could be expected since literature has not reached an agreement yet, regarding the effect of CEO narcissism on performance but, on the other hand, this trait is associated with the dark side of personality (Hogan & Kaiser, 2005) which makes it a rather unexpected result. From the other variables present in the model, hierarchical position, weekly working hours, income, exercising and having sales in the foreign market were also found to be positively associated and company age negatively associated with company performance.

5.2. Limitations and Future Research

Some limitations of this study are connected to the method used for collecting data, the questionnaire. The low response rate of the questionnaire (7.37%) and the fact that, despite having requested it to be answered only by CEOs, it is not possible to ensure that it was not done by people in other positions within the company, are the most noticeable. The performance scale used can also be pointed as a limitation to the study, since it was a self-reporting and self-perception scale. This may be the cause for such high values of performance, since narcissistic individuals are likely to perceive their performance as better than others and fail to admit bad results. So results should be interpreted carefully. Nevertheless, if objective measures of performance were to be used, those would also likely

constitute a limitation, since companies are less willing to provide such detailed information and the confidentiality factor would be lost. These could be interesting points for future research to try to overcome. In this dissertation the industry of the company was not discriminated, it could also be interesting to study the levels of narcissism and performance by industry in the Portuguese case (following the work done by Chatterjee & Hambrick (2007)).

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Annex

Annex I – Sample Description

		Frequency	Percentage
Gender	Female	359	32.5
	Male	746	67.5
	Total	1105	100
Age	20 years old or less	2	0.2
	21 – 30 years old	68	6.2
	31 – 40 years old	326	29.5
	41 – 50 years old	377	34.1
	51 – 60 years old	261	23.6
	61 – 70 years old	65	5.9
	More than 70 years old	6	0.5
	Total	1105	100
Marital Status	Single	144	13
	Married	834	75.5
	Divorced	116	10.5
	Widow	11	1
	Total	1105	100
Smoker	Yes	250	22.6
	No	855	77.4
	Total	1105	100
Exercise	Yes	643	58.2
	No	462	41.8
	Total	1105	100
Education level	Until High School	358	32.4
	Undergraduate Degree	429	38.8
	Post-graduation	150	13.6
	Masters Degree	147	13.3
	PhD	21	1.9
	Total	1105	100
Income level	0 – 14.999€	302	27.3
	15.000€ - 29.999€	403	36.5
	30.000€ - 44.999€	191	17.3
	45.000€ - 59.999€	87	7.9

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	60.000€ - 74.999€	39	3.5
	75.000€ - 89.999€	30	2.7
	90.000€ - 104.999€	19	1.7
	105.000€ or more	34	3.1
	Total	1105	100
Employment Status	Self-employed	665	60.2
	Dependent employment	440	39.8
	Unemployed	0	0
	Total	1105	100
Hierarchical Position in the company	Top-level management	784	71
	Middle-level management	106	9.6
	First-level management	215	19.5
	No management position	0	0
	Total	1105	100
In charge of managing others	Yes	972	88
	No	133	12
	Total	1105	100
Professional Experience	5 years or less	47	4.3
	6 – 10 years	117	10.6
	11 – 15 years	169	15.3
	16 – 20 years	239	21.6
	21 – 25 years	176	15.9
	26 – 30 years	174	15.7
	31 – 35 years	81	7.3
	36 – 40 years	57	5.2
	More than 40 years	45	4.1
Total	1105	100	
Weekly Working Hours	30 hours or less	53	4.8
	31 – 35 hours	37	3.3
	36 – 40 hours	277	25.1
	41 – 45 hours	129	11.7
	46 or more hours	596	53.9
	N/A	13	1.2
	Total	1105	100
Company age	In the first year of activity	22	2
	Between 1 and 5 years of activity	161	14.6
	Between 6 and 19 years of activity	422	38.2
	20 or more years of activity	500	45.2
	Total	1105	100

Number of employees of the company	10 or less employees	616	55.7
	Between 11 – 50 employees	297	26.9
	Between 51 – 250 employees	123	11.1
	251 or more employees	69	6.2
	Total	1105	100
Sector	Private	938	84.9
	Public	73	6.6
	Non-profit	94	8.5
	Total	1105	100
Family business	Family Business	546	49.4
	Not a Family Business	559	50.6
	Total	1105	100
Business group	Part of a Business Group	156	14.1
	Not part of a Business Group	949	85.9
	Total	1105	100
Sales in the foreign market	Yes	461	41.7
	No	644	58.3
	Total	1105	100

Annex II - Additional Descriptive Statistics

The additional descriptive statistics of variables in which the t-tests were also performed but that were not used in the model are shown below.

For Sense of Control, the statements are presented as they were in the questionnaire but the ones that needed reverse coding are marked with an “(r)” and the descriptive shown concerns the new coding. The Authority scale was only applied to respondents that were responsible for managing others (972 individuals).

Variable	Statement	N	Min.	Max.	Mean	SD	α
Sense of Control	I can get others to listen to what I say.	1105	1	7	5.97	0.85	
	My wishes do not carry much weight. (r)	1105	1	7	5.03	1.70	
	I can get others to do what I want.	1105	1	7	5.34	1.16	
	Even if I voice them, my views have little sway. (r)	1105	1	7	5.58	1.39	
	I think I have a great deal of power.	1105	1	7	5.33	1.15	
	My ideas and opinions are often ignored. (r)	1105	1	7	5.55	1.34	

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	Even when I try, I am not able to get my way. (r)	1105	1	7	5.64	1.29	
	If I want to, I get to make the decisions.	1105	1	7	6.07	1.17	
	Sense of Control (Mean)	1105	1	7	5.56	0.79	0.77
Socio-economic Status	Community	1105	1	10	6.68	1.67	
	Job	1105	1	10	6.79	1.88	
	Country	1105	1	10	6.05	1.91	
	SES (Mean)	1105	1	10	6.50	1.59	0.85
Authority *	I can punish or reward subordinates.	972	1	7	5.53	1.49	
	I can promote or demote subordinates.	972	1	7	5.47	1.56	
	I am expected to motivate my subordinates.	972	1	7	5.96	1.18	
	I supervise subordinates and evaluate or correct their work as necessary.	972	1	7	5.91	1.19	
	Authority (Sum)	972	4	28	22.87	4.78	0.89

Note: N is the number of observations; Min. is the minimum; Max. is the maximum; SD is standard deviation; α is the Cronbach's alpha.

Annex III – Additional t-tests

Sense of Control	High	Low	t-value
NPI16	4.75	3.45	7.487***
Socio-economic Status	High	Low	
NPI16	4.61	3.63	5.556***
Authority	High	Low	
NPI16	4.60	3.71	4.683***

Note: *, ** and *** indicate significance levels of 10%, 5% and 1%, respectively.