Grandiose and Vulnerable Narcissists Responses to Threats to Self-Esteem: Psychological Withdrawal and Self-Handicapping

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Grandiose and Vulnerable Narcissists Responses to Threats to Self-Esteem: Psychological Withdrawal and Self-Handicapping

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Abstract

Narcissists are very sensitive to criticism due to their vulnerable self-esteem. Previous studies have provided evidence that grandiose narcissists respond to self-esteem threats either aggressively (Bushman & Baumeister, 1998; Twenge & Campbell, 2003) or constructively by exerting more effort and energy in an attempt to compensate for their previous poor performance (Nevicka, Baas, & Ten Velden, 2016). This thesis argues that grandiose and vulnerable narcissists are not expected to react aggressively in organizational contexts because of its detrimental consequences for their organisational development. Instead, this thesis argues that grandiose and vulnerable narcissists are expected to react either passively by engaging in psychological withdrawal and self-handicapping or constructively by hard working.

Before addressing the main question of this thesis, that is, how grandiose and vulnerable narcissists react to threats to self-esteem, it was vital to examine critiques of the most widely used measure of narcissism: The Narcissistic Personality Inventory (NPI), and to examine its validity in order to determine its suitability to be used for the studies that form this thesis. Thus, study 1 employed Exploratory Structural Equation Modelling (ESEM) on the responses of 1001 working adults to examine the best model fit of the published six models of NPI. Study 1 results showed that almost all of the models reached the cut-off values for statistical goodness of fit, with the exception of Corry, et al.'s (2008) two factor model, and Kubarych et al.'s (Kubarych, Deary, & Austin, 2004) two factor model. Raskin and Terry's (1988) seven factor model proved to have the best model fit. But due to the low internal consistency of most of its factors it was decided not to use this measure in the following thesis studies.

Study 2 aimed to examine how grandiose and vulnerable narcissists react to self-esteem threats using a vignette experiment method with a sample of 762 working adults. Structural equation modelling analysis on the sample data have shown that both grandiose narcissism and vulnerable narcissism prefer to engage in psychological withdrawal rather than to show positive work behaviours when threated.

Study 3 aimed to extend the findings of study 2 by examining whether grandiose and vulnerable narcissists react to self-esteem threats by engaging in behavioural self-handicapping strategies. Using experimental method with a sample of 542 working adults, structural equation modelling results showed that individuals high in grandiose narcissism or vulnerable narcissism tended to engage in self-handicapping behaviour when they were confronted with negative results. One of the explanations of the inconsistent findings of study 2 and 3 with earlier studies can be attributed to the heterogeneity of narcissism. Individuals high in grandiose narcissism experience fluctuations between grandiosity and vulnerability. That is, grandiose narcissists, when threatened, exhibit vulnerable features.

In an attempt to explain studies 2 and 3 results, Study 4 main purpose was to explore the existence of a third sub-type of narcissism that might encompass features of both grandiosity and vulnerability. Applying Latent Profile Analysis LPA techniques, on two different samples (968 and 941), three types of narcissism were found: grandiose narcissists, vulnerable narcissists and absolute narcissists. Absolute narcissists were characterised with high scores on all of the seven factors of the PNI. Absolute narcissists reported low agreeableness and high neuroticism. In respect to adjustment indicators, absolute narcissists reported the lowest self-esteem among the three sub-types of narcissism.

This thesis has three novel and interesting findings: first, it is the first ever study to examine the six factorial models of the NPI using ESEM. Secondly, it is the first study to provide evidence that grandiose and vulnerable narcissists react to self-esteem threats by engaging in psychological withdrawal and behavioural self-handicapping. Thirdly, it is the first study to provide evidence of the existence of a third subtype of narcissism using LPA on responses of two different samples using Pathological Narcissism Inventory PNI. Limitations of the study and suggestions for future research are also provided.

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Chapter 1 Introduction

1.1 Introduction

On 15 September 2008, Lehman Brothers filed for bankruptcy, signalling the end of a 164-year-old firm. This was one of the largest bankruptcies in U.S. history, with the company's debts standing at $613 billion. The bankruptcy of the fourth-largest U.S. investment bank, with 25,000 employees worldwide, contributed to the global financial crisis. In the analysis that followed the collapse of the firm, Richard ("Dick") S. Fuld, Chairman of the Board & Chief Executive Officer CEO, was criticised for leading the bank to this fatal end because of his narcissistic behaviours (Stein, 2013).

During his long tenure as CEO, from 1993 to 2008, Fuld had created a culture within the firm that revolved around his own perceived unique capabilities and power. Fuld presented himself as having incomparable and total knowledge of his field, an expertise that could not be improved to by others (McDonald & Robinson, 2009). As a result, he employed an authoritative managerial style, in which individuals who criticised him or gossiped about him, were punished harshly or even fired (Stein, 2013). Fuld exhibited a high sense of his own uniqueness and entitlement. Fuld's personal compensation during the period from 1993 to 2007 totalled almost half a billion dollars, including US $45 million in 2007. He lived a lavish lifestyle, owning a summer chateau in Switzerland and several mansions in various different states (McDonald & Robinson, 2009).

Fuld embraced a high-risk business model that required raising billions of dollars daily in order to fund its operations. He also started to invest aggressively in real estate-related assets which started to be exposed to housing and subprime mortgages since 2006 (McDonald & Robinson, 2009).

In June 2005 senior officials at Lehman Brothers began to raise their concerns regarding the potentially devastating consequences of high-risk investments in housing mortgages, but Fuld refused to take these warnings seriously. Instead, Fuld treated the senior officials who warned him with disdain, stigmatizing, excluding, and, finally, dismissing them. Fuld fired five of the senior officials who had forecasted the crises as early as 2006 because they opposed his investment strategies (McDonald & Robinson, 2009). Furthermore, Fuld refused to negotiate selling Lehman Brothers when the problems first began to be apparent. He is reported to have said that the bank would not be sold as long as he was alive, and even after his death he would come from the grave to stop the selling of the firm. Fuld had several opportunities to sell the bank, with potential deals offered by the Korea Development Bank, Bank of America, China Investment Company, and Barclays Bank, but he altogether rejected the notion of selling Lehman Brothers. The U.S. Secretary of the Treasury Hank Paulson reported that he had urged Fuld to accept offers to sell the firm (Tibman, 2009). Paulson advised Fuld that he had no other option but to sell and that, given the gravity of the firm's situation, perhaps he might even have to accept a lower price than desirable price. Fuld's reply was terse: he would not accept lectures on how to run his bank (Tibman, 2009).

Lehman Brothers could have survived its crises had Fuld dealt constructively with the feedback he received from his senior officials about the firm's investment strategies, or advice regarding selling the firm. Indeed, aggressive reactions to criticisms have been the typical responses of individuals high in narcissism. In fact, it is one of the characteristics of narcissism according to the Diagnostic and Statistical Manual of Mental Disorders (the DSM-5) (American Psychiatric Association, 2013). The DSM-5 states that individuals with narcissistic personality disorder are extremely sensitive to criticism because of their vulnerable self-esteem. Thus, they react with rage, disdain or counterattack. Narcissists reactions to self-esteem threats have received considerable attention from researchers (Bushman & Baumeister, 2002; Kernis & Sun, 1994; Morf & Rhodewalt, 1993; Nevicka, Baas, & Ten Velden, 2016). However, the findings have not been conclusive yet. Some researchers provided evidence that individuals high in narcissism react aggressively to threats to self-esteem (Barry, Chaplin, & Grafeman, 2006; Bushman et al., 2009; Bushman & Baumeister, 1998; Twenge & Campbell, 2003) while

others have found that narcissists can react constructively to threats by working harder after receiving negative feedback (Nevicka et al., 2016).

Before briefly exploring the available literature on narcissists' reactions to threats to self-esteem, which is the main focus of this thesis, it is crucial to first offer an overview of narcissism, presented in the following sections.

1.2 Overview of Narcissism

Narcissism is an elusive construct within the field of psychology. Despite its long history, there are still active debates regarding the definition of narcissism, with questions raised around its measurements, subtypes and characteristics (Miller, Lynam, Hyatt, & Campbell, 2017). Narcissism was included in the DSM-III as a personality disorder in 1980 (American Psychiatric Association, 1980). This inclusion has stimulated researchers' interest across two domains of psychology: pathological/psychiatric psychology and personality /social psychology. The latter conceive narcissism as a personality trait that is normally distributed in the population. This thesis addresses narcissism as a personality trait within the normal population and not as a personality disorder.

Despite its relative long history, there has yet to be consensus on the definition of narcissism (Miller, Lynam, Hyatt, et al., 2017). There is, however, growing agreement on the existence of two types of narcissism: grandiose and vulnerable (Dickinson & Pincus, 2003; Maxwell, Donnellan, Hopwood & Ackerman, 2011; Pincus et al., 2009; Wink, 1991). That said, there is not yet general agreement on the main features of narcissism (Krizan & Herlache, 2017; Miller et al., 2017). Grandiose and vulnerable narcissism share some common characteristics, namely, one's preoccupation with their own self-importance and a high sense of entitlement (Krizan & Herlache, 2017). Both grandiose and vulnerable narcissism have been found to be associated with arrogance, entitlement, exploitativeness, manipulativeness, lack of empathy, distrust, reactive anger, and thrill seeking behaviour (Miller et al., 2016).

Grandiose narcissism and vulnerable narcissism have divergent associations with various personality and motivational constructs. For example, grandiose narcissists tend to be approach oriented, while vulnerable narcissists associated with avoidance oriented (Krizan & Herlache, 2017). Grandiose narcissists are self-centred, self-focused, and self-

serving (Emmons, 1987; Raskin & Shaw, 1988; Rhodewalt & Morf, 1998). They believe that they are more intelligent than others (Gabriel, Critelli, & Ee, 1994), possess more skills than others, and can accomplish more than their counterparts (John & Robins, 1994). Grandiose narcissism is associated with enhanced self-esteem and well-being (Farwell & Wohlwend-Lloyd, 1998; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004), and a higher sense of one's own agency (Campbell & Foster, 2007; Foster & Brennan, 2011; Luo, Cai, Sedikides, & Song, 2014). They need constant admiration, might exhibit aggression, and might show anxiety and depression when they are challenged (Campbell et al., 2011).

Vulnerable narcissists are shy, somewhat introverted and can appear depressed, anxious, paranoid, and exhibit high psychological entitlement while also having low self-esteem (Miller et al., 2011, 2017). As such, vulnerable narcissists can be defensive and antagonistic and can even appear to be rude, arrogant, and conceited (Wink, 1991). Vulnerable narcissists are more likely to seek psychological help than grandiose narcissists (Back et al., 2013). Relative to grandiose narcissists, vulnerable narcissists are more pathological, (Miller & Campbell, 2010; Pincus et al., 2009). Individuals high in vulnerable narcissism are characterised by an inflated sense of their own self-importance combined with high levels of neuroticism (Miller et al., 2017). In fact, neuroticism explains 65% of the variance predicted in vulnerable narcissism by the five-factor model of personality (Miller et al., 2017). Vulnerable narcissists are sensitive to threats to self-esteem (Besser & Priel, 2010), and can also respond with anger when provoked (Krizan & Johar, 2015).

1.3 Narcissists' Responses to Threats to Self-Esteem

Several models of narcissism have been proposed in an attempt to understand the paradoxical nature narcissism. The most relevant models for this thesis are, first, the dynamic self-regulatory processing model of narcissism (Morf & Rhodewalt, 2001c, 2001a; Morf, Torchetti, & Schurch, 2011), second, the narcissistic admiration and rivalry model (Back et al., 2013), and, third, the narcissism spectrum model (Krizan & Herlache, 2017). The dynamic self-regulatory processing model and the narcissistic admiration and rivalry model conceive of narcissism as a dynamic self-regulation process in which the narcissist's main aim is to enhance and maintain their positive self-view. To do so, then,

the narcissistic individual might employ several intrapersonal and interpersonal strategies that aim to protect their overly inflated positive self-views and to gain admiration from others.

Accordingly, when a grandiose or vulnerable narcissist detects a potential threat to their self-esteem (i.e., events that might call into question their positive self-regard; VanDellen, Campbell, Hoyle & Bradfield, 2011,) such as, negative feedback or social rejection, they react to defuse the threat, employing several interpersonal and intrapersonal strategies. Interpersonal strategies include engaging in self-aggrandizing behaviours, such as self-handicapping prior to performance and demeaning or derogating others or the test. In the intrapersonal domain, several cognitive and affective strategies might be employed. On the cognitive level, they tend to discount the source of the threat or the validity of the test. Affectively, they may explicitly express their anger and hostility. On the implicit level, they may feel anxious and shameful (Morf & Rhodewalt, 2001b, 2001a; Morf et al., 2011).

Previous studies which have used experimental methodologies on samples taken from populations of undergraduate students, have shown that the responses of individuals high in grandiose narcissism to threats to self-esteem can take two forms, either reacting aggressively (Barry, Chaplin, & Grafeman, 2006; Bushman & Baumeister, 1998; Foster, Campbell, & Twenge, 2003; Martinez, Zeichner, Reidy, & Miller, 2008; Reidy, Foster, & Zeichner, 2010; Twenge, 2010) or constructively, by exerting more effort and energy into the given task, in what appears to be an attempt to compensate for their previous poor performance (Nevicka et al., 2016).

Empirical studies on vulnerable narcissists' reactions to self-esteem threats have examined emotional responses rather than behavioural reactions. For example, individuals high in vulnerable narcissism have been shown to report high levels of shame and anger as a response to unsatisfactory feedback when they had previously evaluated their performance as good (Freis, Brown, Carroll, & Arkin, 2015). Furthermore, in an experimental study, Krizan and Johar (2015) found that vulnerable narcissism was associated with retaliation, reactivity and displaced aggression after provocation.

The literature discussed so far, relating to the responses of grandiose and vulnerable narcissists to threats to self-esteem, has shown that both sub-types tend to react aggressively to such threats. However, these findings were obtained in experimental

settings and not in organisational contexts. Grandiose narcissists would not be expected to react aggressively to negative feedback in real work situations, because such a reaction might have a detrimental effect on their career development. Grandiose narcissists are fundamentally concerned with creating and maintaining others' positive impressions of them (Brunell et al., 2008), and tend to be keen to take up leadership positions (Grijalva, Harms, Newman, Gaddis, & Fraley, 2015). Thus, individuals high in grandiose and vulnerable narcissism are more likely to try to impress their supervisors by working harder or to react passively by engaging in self-protection behaviours in order to avoid any threats to their self-esteem. As grandiose narcissists are exceptionally self-protective (Sedikides & Gregg, 2001), they are likely to engage in defensive reactions. Such individuals are hypervigilant in their attempts to detect situations that might entail potential threats to their self-esteem (Horvath & Morf, 2009). They may even engage in behavioural self-handicapping as a precautionary strategy, with the aim of protecting themselves from potential failures (Rhodewalt, Tragakis, & Finnerty, 2006).

This thesis argues that, in an organisational context, grandiose and vulnerable narcissists might respond to threats to self-esteem in two different ways: Individuals high in grandiose narcissism are expected to respond productively (i.e. by working harder), while individuals high in vulnerable narcissism are expected to respond passively. Passive responses could include psychological withdrawal or behavioural self-handicapping, a process in which individuals withdraw effort, create obstacles to success, or make excuses so they can maintain a public or self-image of competence (Berglas & Jones, 1978). Two studies in this thesis addressed this topic. Study 2 examines the responses of grandiose and vulnerable narcissists to threats to self-esteem by assessing whether individuals choose to work harder or to engage in psychological withdrawal behaviours. Study 3 examined grandiose and vulnerable narcissists' reactions to self-esteem threats, assessing whether they will decide to work harder or to engage in behavioural self-handicapping.

1.4 The Three Sub-Types of Narcissism

Pathological narcissism theorists suggest that individuals who score highly on narcissism scales respond to threats to self-esteem according to their sub-type of narcissism. Ronningstam (2005) has identified three types of pathological narcissism, delineated according to their self-esteem dysregulation: arrogant, psychopathic and shy. Arrogant narcissists are characterised by their tendency to react aggressively to ego

threats, and to engage in grandiose fantasies and to exaggerate their sense of superiority and uniqueness. The psychopathic narcissists tend to respond to self-esteem threats by engaging in antisocial behaviours to protect or enhance their inflated self-image. The third sub-type is the shy narcissists, who commonly deals with self-esteem dysregulation by engaging in grandiose fantasies and dwelling on their own feelings of shame. Ronningstam's classification is distinguished from other studies in that it indicates the existence of three types of pathological narcissism, rather than two – as is more widely accepted among personality and social psychologists. Thus, it seems that identifying a third subtype of narcissism within the normal non-pathological samples might be useful in explaining the inconsistent findings of narcissists' reactions to threats to self-esteem.

A number of researchers have identified three sub-types of narcissism within pathological and undergraduate samples. In a pathological sample, Russ et al. (2008) identified three sub-types of narcissism: grandiose/malignant narcissists; fragile narcissists; and high functioning/exhibitionistic narcissists. Whereas Wink (1991) and Houlcroft, Bore and Munro (2012) have provided evidence for the existence of three types of narcissism in normal populations. Similarly, Wetzel, Leckelt, Gerlach, and Back (2016) employed a latent Profile Analysis technique to identify the sub-groups of narcissists in three different non-pathological samples. They identified a new pattern of personality characteristics within narcissism, which they termed high narcissists. This pattern was characterised by high scores in the Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013).

While there is some evidence for the existence of three sub-types of narcissism, this line of research has been neglected, despite its potential contribution to the field of narcissism in general. Study 4 in this thesis explores the existence of a third sub-type of narcissism in two different samples using the PNI (Pincus et al., 2009).

1.5 Measurements of Narcissism

Measurement models are a consistent topic of debate within narcissism studies (Cain, Pincus, & Ansell, 2008; Miller et al., 2017). The main arm of debate focuses on The NPI (Raskin & Hall, 1979; Raskin & Terry, 1988). The NPI is a self-reporting inventory designed to measure narcissism in non-clinical populations. Its conceptualisation of narcissism is based on the behavioural criteria for narcissistic

personality disorder, which appeared in the third version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychiatric Association, 1980). The NPI model has thrived within research in the field among the normal population to the extent that more than 70% of research on narcissism was conducted using the NPI (del Rosario & White, 2005). It has even affected the conceptualisation of narcissism itself (Cain et al., 2008). In fact, normal, non-pathological narcissism is labelled NPI narcissism (Miller, Gaughan, Pryor, Kamen, & Campbell, 2009), and high scores on the NPI have almost become the definition of high levels of trait narcissism (Miller & Campbell, 2011).

Despite its importance in narcissism literature, the NPI has been the subject of a great deal of criticism. Criticisms include its focus on the assessment of grandiose rather than vulnerable narcissism, its internal consistency (del Rosario & White, 2005), response style (Ackerman, Donnellan, Roberts, & Fraley, 2016), and, most importantly perhaps, its factorial structure (Ackerman et al., 2011a; Maxwell et al., 2011; Miller & Campbell, 2011; Pincus et al., 2009b; Raskin & Terry, 1988). One of the main critiques of the NPI is the inconsistency of its structural validity. For example, the NPI was initially published as a unidimensional measurement (Raskin, & Hall, 1979), which presents a figure that indicates the extent to which an individual has scored high or low in narcissism traits. Various researchers have suggested that the NPI is assessing more than one dimension, and that it is imperative to distinguish these dimensions in order to disentangle the paradoxical nature of narcissism. Several researchers have examined the underlying structure of the NPI item pool, finding inconsistent results both in terms of the number of factors and replicability. For example, Emmons (1984) principal component factor structure produced a four factor solution, while Raskin and Terry (1988) found a seven factor solution, Kubarych, Deary and Austin (2004) found a two factor and three factor solution. Meanwhile, Corry, Merritt, Mrug and Pamp (2008) applied exploratory common factor analysis and found two factors, whereas Ackerman et al., (2011) found a three factor to be the best model fit. Moreover, Ackerman et al. (2011) applied confirmatory factor analysis to examine the model fit of the previously mentioned models: the Corry et al. (2008) two-factor solution, Kubarych et al.'s (2004) three-factor solution, the Emmons (1984) four-factor solution, and the Raskin and Terry (1988) seven-factor solution, but none of these models reached the conventional model fit cut-off values. Ackerman and

his colleagues argued that using CFA on personality measurements produce misfit problems as they do not allow cross loadings of items across different factors.

Indeed, applying CFA on personality measurements yields misfit models not simply because of the insufficient strength of the measure, but because of the nature of personality measures, which require their items to cross load on more than one factor (Marsh, Morin, Parker, & Kaur, 2014). Thus, a relatively new analysis technique was proposed to overcome these problems: Exploratory Structural Equation Modelling (ESEM, Marsh et al., 2009). ESEM requires the integration of the characteristics of EFA, CFA, and SEM. It has the potential to overcome CFA limitations, including poor fit to item-level factor structures, poor discriminant validity due to inflated correlations among CFA factors, and biased structural parameter estimates in SEM, based on misfit of the measurement models (Asparouhov, Muthen, & Muthén, 2009; Marsh et al., 2009, 2010). Given the void of studies which applied the ESEM on NPI, Study 1 of this thesis examines the NPI factorial structure using ESEM to assess which of the suggested factorial models of the NPI has the best good-fit values.

1.6 The Potential Contributions of the Thesis

This thesis has several potentially significant methodological and theoretical contributions. Specifically, Study 1 offers the first examination of the underlying structure of the six factorial models of the NPI using both the conventional CFA and a relatively new technique: ESEM. Six factorial models for the NPI were examined: Emmons' (1984) four factors, Raskin and Terry's (1988) seven factors, Kubarych et al.'s (2004) two and three factors, Corry et al.'s (2008) two factors, and Ackerman et al.'s (2011) three factors. The ESEM results are expected to show an improved goodness of model fit in comparison to the conventional CFA models.

Study 2 is expected to contribute to the field in several ways. It offers the first attempt to examine the responses of grandiose and vulnerable narcissists within organisational contexts, using working samples rather than undergraduate samples answering mathematical or writing exercises. Study 2 extends the work of previous studies by examining the preferred responses of grandiose or vulnerable narcissists when threatened. In Study 2, participants were provided with two reactions (working hard or psychological withdrawal), and they were asked to identify the extent to which they would

be likely to choose each reaction. Previous studies have provided participants with only one possible reaction: to work hard or disengage.

Study 3 is the first to use a job simulation exercise (a time management exercise, in this case). This exercise is expected to trigger more authentic responses, which are similar to those in real workplace scenarios. Moreover, Study 3 is the first study to examine whether grandiose and vulnerable narcissists tend to engage in behavioural self-handicapping as a response when threatened. The only previous study to assess the association between self-handicapping and narcissism examined self-handicapping in situations which aimed to provoke feelings of uncertainty and not in a self-esteem threat situation. Moreover, previous study explored grandiose narcissism rather than both sub-types.

Finally, Study 4 is the first ever LPA study to use PNI as a pattern indicator. The PNI has particular advantages over other measures of narcissism. For example, it assesses grandiose and vulnerable narcissism, rather than simply one type, such as the NARQ, which only assesses grandiose narcissism. Thus, the patterns extracted here are expected to reflect different types of narcissism, such as grandiose, vulnerable, and any other existed pattern. Moreover, providing evidence of the existence of three types of narcissism instead of two might have provided a great contribution to the field of study. It might explain some of the inconsistency in findings regarding the association of narcissism with self-esteem, organizational performance, leadership, and reactions to self-esteem threats.

1.7 Thesis Structure

This thesis is divided into seven chapters, including this introduction. This chapter presents an overview of the importance and the significance of the five studies which constitute the thesis, its potential contributions, and it offers the structure of the whole thesis.

Chapter Two presents a review of the literature on narcissism. This chapter starts with a short review of the history of narcissism with an emphasis on presenting the development of the construct and the ongoing debates about the construct as it has evolved. This is followed by a discussion of the sub-types of narcissism and the potential existence of a third sub-type. The chapter also briefly discusses the inconsistency of findings regarding the association of narcissism with organizational performance and leadership. Three of the relevant models of narcissism are discussed here in order to

understand the responses of grandiose and vulnerable narcissists to threats to self-esteem. The final section of the chapter discusses the NPI, which is the common measure for grandiose narcissism. Special concern was paid to criticisms which have been raised regarding the NPI.

Chapter Three presents the results of Study 1, which examines six factorial models of the NPI using CFA and ESEM in order to determine which model has the best goodness of fit values. Chapter Four presents the results of Study 2. This vignette experimental study aimed to explore how grandiose and vulnerable narcissists respond to a negative feedback, assessing whether their impulse was to work harder to compensate for their earlier performance, or to engage in psychological withdrawal behaviours.

Chapter Five is dedicated to present the findings of Study 3. This experimental study aimed to replicate the findings of Study 2 and to extend it by examining whether grandiose and vulnerable narcissists prefer to work hard or to engage in behavioural self-handicapping as a reaction strategy when threatened. Moreover, this study explored whether narcissism can predict the reaction more and above approach avoidance motivation.

Chapter Six presents the findings of Study 4, an LPA study which aims to explore the existence of a third sub-type of narcissism. This study was informed by the results of studies 2 and 3 and attempts to find an explanation for the inconsistent findings regarding narcissists' reactions to self-esteem threats.

Chapter Seven offers the conclusion to this thesis. It brings together the findings of the five studies and attempts to integrate them and to understand them in line with the available literature. Followed by a presentation of the theoretical and methodological contribution of this thesis to the field of study and its implications. This chapter also states the limitations of the study and provides some recommendations for practitioners and venues for future studies.

Chapter 2 Literature Review

2.1 Introduction

This chapter presents a review of the literature on narcissism to clarify the literature gaps which this thesis is attempting to address. The main question of this thesis is how individuals who are in the normal working population, but high in grandiose or vulnerable narcissism, respond to threats of self-esteem such as those posed by negative feedback. The review of literature first briefly discusses the history of narcissism in order to provide an understanding of how different conceptualisations of narcissism have evolved. An overview of the dimensional views of narcissism is then provided, with a focus on the two acknowledged forms of narcissism: grandiose and vulnerable narcissism. (This distinction will be of importance in the current thesis.). This is followed by a discussion on the fluctuations between grandiosity and vulnerability in narcissists. Then, the literature on the potential existence of a third sub-type of narcissism is discussed. To understand the complexity of narcissism, different models of narcissism are discussed, especially, the dynamic self-regulatory processing model of narcissism, which is the most relevant model to this thesis. Finally, the chapter ends with a discussion on the critiques of the NPI—the most used inventory in the personality and social psychology literature.

2.2 Brief History of Narcissism

Narcissism has a rich history in the literature of psychoanalysis. The term was originally used to describe abnormal self-focused sexuality. Specifically, the first use of the term in the psychiatric literature is linked to Havelock Ellis 1898 who used the term "Narcissus-like" to describe a patient with a condition of "auto-eroticism" (i.e., self as own sexual object) (Levy, Ellison, & Reynoso, 2011). Similarly, in his "Three Essays on theory of sexuality" Freud used the terms "ego-libido" (self-love) and "narcissistic libido" interchangeably (Freud, 1905-1953).

Later on, Ernest Jones (1913–1951) refined the term to include personality traits that he labelled the "God-complex". An individual with the God-complex was described

as overconfident, self-admiring, self-important, tending towards exhibitionism, having a high need for uniqueness, and being occupied with fantasies of omnipotence and omniscience (Jones,1913-1951).

In his seminal essay *On Narcissism: An Introduction*, Freud (1914) viewed narcissism as part of a developmental process. To him, narcissism is a normal phase of development for all children. Freud theorised that children go through an adaptive period of primary narcissism in which they are egocentric, then they move their libidinal energy into another person rather than themselves. He further believed in an economic model of love in which each individual has to invest his/her limited libidinal energy in one place at a time. Thus, feelings of self-regard decrease once one has progressed from primary narcissism to object love. In a healthy relationship, both partners are investing their libidinal energy into each other, and neither is experiencing a loss as a result. However, when individuals' love objects are unable or unwilling to return the love, they regress to an unhealthy state of narcissism, called secondary narcissism, in which they love and gratify themselves as a compensatory mechanism (Freud, 1914).

Wälder published the first case study of narcissistic personality disorder in 1925. The patient was a scientist who had an attitude of superiority, a sense of being unique, an obsession with fostering self-respect, a lack of normal feelings of guilt or empathy for others, selfish sexuality, and a noticeable independence from others. He was also overly logical and analytical and valued abstract intellectual thought (Wälder, 1925). Similarly, Freud described a narcissist as someone who was primarily focused on self-protection, who was independent, not easily intimidated, aggressive, extraverted, highly active, and unable to love or commit in relationships. Moreover, he also noted that narcissists often love to be at the centre of attention and to be admired, and eager to take on leadership responsibilities (Freud, 1931) .

A similar description of narcissism was presented by Wilhelm Reich (1933) who introduced a "phallic-narcissistic character" in his book *Character Analysis*. Phallic-narcissists were described as confident, arrogant, provocative, resenting of subordination, mildly sadistic in their relationships and possessing an attitude of superiority. Reich also was the first to note that when narcissists were ego-threatened they would become aggressive and react with cold disdain, or downright aggression. Reich speculated that

men are more narcissistic than women. Interestingly, he thought that the effect of narcissism is not necessarily bad, but it depends on the social context (Reich, 1933).

Karen Horney (1939) further emphasised the idea of narcissism as a trait with many "divergent" portraits of narcissism. She also theorised about its causes and consequences. Horney viewed narcissism as a self-admiration for qualities that has no adequate foundation. She did not consider it narcissistic to self-admire qualities that one actually possesses, and in fact, to her this was the definition of true self-esteem. Horney agreed with Freud's notion that secondary narcissism can be caused by a lack of love from caregivers, which can be expressed by parental styles. Specifically, Horney thought that when children lack parental love they may respond by creating unrealistically inflated versions of themselves through which they seek admiration and attention as a compensation. However, Horney disagreed with Freud's idea that narcissists are unable to love others because they love themselves too much. Instead, Horney perceived the outward display of self-love to be deceptive because narcissists lack the ability to truly love themselves or anyone else.

Horney saw destructive consequences of narcissism. To her, narcissists have a superficial and unproductive working style combined with increasing entitlement which is sought without effort and initiative. In their relationships, narcissists also tend to have shallow relationships that add to their status and prestige, have high expectations of others, poor social skills (e.g., self-centeredness, cruelty, distrust, disinterest in others), and highly unrealistic views of themselves. Thus, they put themselves in the very vulnerable position of needing people to admire and support them, but have difficulty finding people who will continue to do this (Horney, 1939).

Annie Reich (1960) believed that narcissism stems from repeated early childhood traumas that occur before the ego's defence mechanisms are developed and lead the child to retreat inward to a safer, self-protective fantasy world. She also theorised that narcissists lack the ability to regulate their self-esteem, leading them to suffer from repetitive fluctuations of self-esteem, shifting dramatically from the heights of grandiosity to the depths of depression. Accordingly, narcissists view themselves as either perfect or a total failure, with limited gradations in between. Reich also believed that narcissists' opinions of others depend on their own self-esteem fluctuations because they use other people as

tools to build up their egos. In grandiose times, they use others as downward comparison subjects while in depressed times others are used as upward comparison targets.

Kohut (1966, 1968, 1971, 1972, 1977) like Freud, viewed narcissism as a part of a developmental process, but unlike Freud, he believed that primary narcissism was a state of undifferentiated union with the mother rather than a state of total self-absorption. He also believed that unhealthy expressions of narcissism can develop when individuals fail to integrate grandiose ideas of themselves with realistic views of their failures and shortcomings. This leads narcissists to spend their energy seeking affirmation from people and being overly vulnerable to criticism and rejection, and eventually they react with rage when they perceive injuries to their inflated ego.

Otto Kernberg (1975) believed that narcissism is a subtype of borderline personality disorder. He offered specific behaviours to be used to classify someone as having a pathological narcissistic personality as follows.

> *"These patients present an unusual degree of self-reference in their interactions with other people, a great need to be loved and admired by others, and a curious apparent contradiction between a very inflated concept of themselves and an inordinate need for tribute from others. Their emotional life is shallow. They experience little empathy for the feelings of others, they obtain very little enjoyment from life other than from the tributes they receive from others or from their own grandiose fantasies, and they feel restless and bored when external glitter wears off and no new sources feed their self-regard. They envy others, tend to idealize some people from whom they expect narcissistic supplies and to depreciate and treat with contempt those from whom they do not expect anything (often their former idols). In general, their relationships with other people are clearly exploitative and sometimes parasitic. It is as if they feel they have the right to control and possess others and to exploit them without guilt feelings—and, behind a surface which very often is charming and engaging, one senses coldness and ruthlessness. Very often such patients are considered to be dependent because they need so much tribute and adoration from others, but on a deeper level they are completely unable really to depend on anybody because of their deep distrust and depreciation of others". (p. 227-28)*

Many elements of this description of pathological narcissist behaviours were later used to form the diagnostic criteria for narcissistic personality disorder (NPD) in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) (American Psychiatric Association, 1980). Despite the fact that most of the current research define narcissism as a continuous dimension that in the extreme is pathological is influenced by him, Kernberg himself rejected the continuous view of narcissism. Kernberg (1975), instead, conceptualises pathological narcissism as qualitatively different

from normal adult narcissism (a term he used interchangeably with self-esteem) and normal infantile narcissism. For him, normal adult narcissism is the libidinal investment of the self which involves an integration of positive and negative self-images into a realistic self-concept, whereas pathological narcissism involves a highly unrealistic perfect self-image.

Furthermore, Kernberg (1975) viewed narcissism as caused by the inflated self-concept which confuses the relationship between actual self on the one hand, and ideal self and ideal object on the other. That is, the pathological narcissist has a mixed view of his actual self with the desired self and the ideal other. Thus, anyone outside of this real self/ideal self/ideal object blend is seen as unreliable. Pathological narcissists also fear being dependent on other people, because that would potentially subject themselves to being exploited, mistreated, and frustrated. Moreover, they refuse to depend on anybody, have needs that are impossible to fulfil, and are often cold and aloof toward others. Instead Kernberg was not clear about the causes of pathological narcissism but he speculated that there could be genetic tendencies toward aggressiveness or a low tolerance for anxiety. He also thought that it was at least partly environmental, caused by cold parenting with covert but intense aggression.

Research on narcissism has been accelerating since the 1980s when narcissism was included as a personality disorder in the DSM-III in 1980 (American Psychiatric Association, 1980). According to the DSM-5 (American Psychiatric Association, 2013), to be labelled a narcissist, an individual has to exhibit five of the following nine indicators: (a) a grandiose sense of self-importance; (b) preoccupation with fantasies of unlimited success, power, beauty or ideal love; (c) a belief that he or she is special and unique and can only be understood by other individuals or institutions of similar superior status; (d) requiring excessive admiration; (e) having a sense of entitlement; (f) being interpersonally exploitative; (g) lacking empathy towards others, (h) often envious of others and believing that others are envious of him or her; and (i) showing arrogant or haughty attitudes and behaviours. However, showing these indicators is not enough to be diagnosed clinically with narcissism; an individual also has to feel distress or experience impairment to be classified as a narcissist (American Psychiatric Association, 2013).

The DSM-5 also demonstrates that individuals with a narcissistic personality disorder have very vulnerable self-esteem, which makes them quite sensitive to criticism.

Thus, “they may react with disdain, rage, or defiant counterattack. Such experiences often lead to social withdrawal or an appearance of humility that may mask and protect the grandiosity” (American Psychiatric Association, 2013 p 671).

In conclusion, it is clear that the development of narcissism is based on early psychoanalysts. They viewed narcissism as an important developmental stage every child has to go through. The descriptions of narcissists have combined adjectives related to grandiosity, such as feeling unique, special, omnipotent and omniscient. At the same time, narcissists were described as vulnerable. Interestingly, Freud viewed narcissism as a self-protection process. Kohut pointed to the idea of the inability to deal with criticism and rejection while Reich (1960) introduced the concept of fluctuations of self-esteem. Thus, it is clear that many of the still on-going debates about the nature of narcissism have existed since the inception of the construct. This is especially the case regarding the different faces of narcissism and how these various faces differ with respect to dealing with criticism, as well as the role of self-esteem in narcissism. Study 2 and 3 of this thesis is examining the reaction of narcissists to threats to self-esteem while studies 4 and 5 explore the existence of a third sub-type of narcissism and its specifications.

2.3 Empirical Investigations of Narcissism

Clinical theory and research have informed the empirical study of narcissism by personality and social psychologists. The social–personality literature focuses on sub-clinical narcissists, or those individuals with some of the characteristics of Narcissistic Personality Disorder (NPD), but not necessarily enough to be diagnosed with the disorder (Campbell, Hoffman, Campbell, & Marchisio, 2011). According to this literature, narcissism is conceptualised as a trait whose levels are normally distributed in the population (Foster et al., 2003). Unlike the clinical view of narcissism as a categorical construct, narcissism is considered as a continuous personality trait or dimension by personality and social psychology researchers. Empirical interest in narcissism was stimulated by the introduction of NPD into the DSM-III. Yet currently, research on trait narcissism has surpassed empirical studies of NPD to the extent that most of the recent contributions to the conceptual development of narcissism are based on the trait narcissism research (Cain et al., 2008).

Most of the interest in narcissism research was advanced by the development of self-report instruments, some of which were created with reference to the DSM-III NPD diagnostic criteria. The NPI (Raskin, & Hall, 1979) is one of the most widely used measures of narcissism, as articulated in the DSM-III (American Psychiatric Association, 1980). NPI captures a mixture of self-perceived confidence, leadership ability, social potency, feelings of entitlement, and a willingness to exploit others (Raskin & Novacek, 1989). The NPI is strongly correlated with interview ratings of narcissism (Miller & Campbell, 2011), and it has been relied upon almost exclusively to operationalise the construct in personality and social psychology research for more than two decades (Cain et al., 2008). The NPI has shown a positive correlation with features related to narcissism such as entitlement (Brown, Budzek, & Tamborski, 2009), a sense of uniqueness and affect intensity (Emmons, 1984) and a lack of empathy (Lannin, Guyll, Krizan, Madon, & Cornish, 2014). The NPI will be discussed further shortly.

2.4 Dimensions of Narcissism

Wink (1991) was the first researcher to empirically examine the factor structure underlying measures of narcissism. He assessed the associations among six self-report narcissism scales (1) the Raskin and Novacek (1989) Narcissism Scale, which was developed using the NPI as an empirical criterion; (2) Morey, Waugh, and Blashfield's (1985) Narcissism Scale, developed to measure NPD as represented in the DSM-III; (3) Wink and Gough's (1990) Narcissism Scale, developed according to DSM-III criteria and validated against clinically-trained observers; (4) the NPDS (Ashby, Lee, & Duke, 1979), developed by contrasting MMPI responses of diagnosed narcissists with control groups of other patients and individuals not in treatment; (5) the Ego-Sensitivity scale (Pepper & Strong, 1958), which characterised the content areas of the MMPI Masculinity-Femininity scale, and (6) the Narcissism–Hypersensitivity Scale (Serkownek, 1975), which was developed from a factor analysis of the MMPI Masculinity–Femininity items in a sample of inpatients, outpatients and individuals not in treatment. Results of the correlations among the six instruments have shown that the intercorrelations among the narcissism scales of Raskin and Novacek (1989), Morey et al. (1985), and Wink and Gough (1990) ranged from 0.54 to 0.81. These three scales have been shown to be assessing self-aggrandisement, rebelliousness, outgoingness, and impulsivity. The remaining three

narcissism scales were also highly intercorrelated and have been found to assess self-centredness, diminished self-esteem, shyness, and sensitivity to criticism (Wink, 1991).

A principal components analysis of the six MMPI narcissism scales extracted two orthogonal components that shared core features of narcissism such as conceit, self-indulgence and disregard for the needs of others (Wink, 1991). The Narcissism–Hypersensitivity Scale (Serkownek, 1975), Ego-Sensitivity Scale (Pepper & Strong, 1958) and Narcissistic Personality Disorder Scale (Ashby et al., 1979) loaded on the first factor, whereas narcissism scales by Raskin and Novacek (1989); Morey, Waugh, and Blashfield (1985); and Wink and Gough (1990) loaded on the second factor. The first factor was labelled 'Vulnerability–Sensitivity' whilst the second factor was labelled Grandiosity–Exhibitionism (Wink, 1991).

Wink's (1991) study is an important development in the investigation of narcissism as it is the first to provide preliminary empirical support for the distinction between grandiose and vulnerable expressions of narcissism that has been indicated in the theoretical and clinical literature. Moreover, the Vulnerability–Sensitivity and Grandiosity–Exhibitionism narcissism factors exhibited separate patterns of association with other self-reported variables. Specifically, the Vulnerability–Sensitivity factor negatively correlated with dominance, sociability, social presence, self-acceptance, exhibitionism, well-being and personal adjustment. The Grandiosity–Exhibitionism factor, on the contrary, positively correlated with social poise and assurance measures but was unrelated to well-being. Additionally, correlational analysis of spouses' ratings, using an adjective list, suggested that both factors of narcissism are associated negatively with being honest and positively with characteristics such as being bossy, arrogant, demanding, rebellious, temperamental and argumentative. Furthermore, both factors of narcissism had different associations. The Vulnerability–Sensitivity factor was positively associated with being defensive, anxious, moody, and dissatisfied. Grandiosity–Exhibitionism narcissism, on the contrary, was positively associated with being aggressive, hard-headed, outspoken, restless, assertive, self-centred, impulsive and tending to show-off (Wink, 1991).

Rathvon and Holmstorm (1996) replicated the Wink study results by submitting the NPI and five MMPI-2 based narcissism measures to a principal components analysis, in a sample of 283 subjects. Again, two orthogonal factors were extracted. The first factor was labelled Depletion. It had loadings similar to Wink's Vulnerability–Sensitivity factor.

The second factor was labelled Grandiosity. It is also similar to Wink's Grandiosity–Exhibitionism factor, with substantial loadings on the NPI, MMPI Narcissistic Personality Disorder Scale (Morey et al., 1985), and the WG-Narcissism Scale (Wink & Gough, 1990). The Grandiosity factor was positively related to exhibitionism and negatively related to depression, anxiety, bodily concerns, and social discomfort. The Depletion factor was positively related with all MMPI-2 clinical scales and supplemental scales representing anxiety and various forms of maladjustment.

There is a growing literature on the differentiation between these two manifestations of narcissism. For example, grandiose narcissism is characterised by entitlement, an exaggerated sense of superiority and uniqueness, and a tendency for exhibitionism and attention-seeking behaviours. Moreover, grandiose narcissism is often associated with shallow interpersonal relationships due to unreasonable expectations of others, interpersonally exploitative acts, and impaired empathic capacity (Cain et al., 2008; Dickinson & Pincus, 2003; Pincus & Lukowitsky, 2010; Wright, Lukowitsky, Pincus, & Conroy, 2010). Vulnerable narcissism, conversely, is specified by social inhibition, shame, hypersensitivity, and resentfulness. Because of these characteristics, vulnerable narcissism is often associated with interpersonal hiding of the self to avoid challenging situations (Pincus et al., 2009). Vulnerable narcissism is also associated with the sense of entitlement that is evident in grandiose narcissism, but feelings of shame limit the overt manifestation of grandiosity and may lead to unhappiness and a sense of a lack of fulfilment (Cain et al., 2008; Dickinson & Pincus, 2003; Pincus & Lukowitsky, 2010; Wright et al., 2010).

Furthermore, grandiose and vulnerable narcissism have divergent associations with distinct personality profiles and behavioural correlates (Campbell & Miller, 2013; Miller, Dir, et al., 2010; Miller et al., 2011). The Five-Factor model (FFM) of personality has been useful in establishing the nomological networks of grandiose narcissism and vulnerable narcissism by helping to empirically identify areas in which the expressions of narcissism converge and diverge (Campbell & Miller, 2013). On the domain level, grandiose narcissism is strongly and negatively associated with agreeableness, but it is strongly and positively associated with extraversion. Furthermore, grandiose narcissism is negatively and weakly associated with neuroticism, but it is positively and weakly associated with openness. Vulnerable narcissism, on the other hand, is strongly and

positively associated with neuroticism and mildly and negatively associated with agreeableness, extraversion, and conscientiousness. Notably, agreeableness is strongly and negatively associated with both manifestations of narcissism. However, the associations at the facet level with both types of narcissism were largely divergent. Specifically, grandiose narcissism associated negatively with modesty, straightforwardness, and compliance, whereas vulnerable narcissism showed weak negative associations with these facets. Vulnerable narcissism and grandiose narcissism exhibited negative association with trust. These findings suggest that while grandiose narcissists and vulnerable narcissists are disagreeable, the antagonistic behaviours associated with grandiose narcissism are more likely to take the forms of self-enhancement or opposition due to the construct's relationship with immodesty, manipulativeness, and non-compliance. Alternatively, vulnerable narcissism antagonistic behaviours are more likely to take the form of suspiciousness or coldness due to the construct's relationship with distrust (Campbell & Miller, 2013)

Furthermore, the facet level of the FFM has exhibited several convergent associations with both types of narcissism. Specifically, grandiose and vulnerable narcissism share a positive relationship with angry hostility, impulsivity, fantasy, aesthetics, and feelings. Additionally, both forms of narcissism are negatively associated with dutifulness. This suggests that common expressions of narcissism across the two types share a tendency to experience anger and frustration. Narcissists tend to act before thinking and they lack the ability to delay gratification.

Nevertheless, several personality facets instead have shown distinct relationships with the two forms of narcissism. For example, grandiose narcissism is strongly and negatively associated with modesty and straightforwardness, but it is associated positively with assertiveness. This suggests that grandiose narcissism is characterised by a tendency to over-exaggerate achievements and to use deceit in an attempt to gain social dominance and control. On the other hand, vulnerable narcissism is positively associated with depression, self-consciousness, and vulnerability, which suggests that vulnerable narcissism is characterised by a susceptibility to stress and a tendency to experience guilt, hopelessness, and social anxiety (Campbell & Miller, 2013).

Empirical investigations of the nomological networks of narcissism with other relevant constructs have also identified convergent and divergent relationships. For

example, both grandiose narcissism and vulnerable narcissism have been found to be positively associated with entitlement (Miller et al., 2011). Vulnerable narcissism has been found to be negatively associated with self-esteem and positively associated with psychological distress, whereas grandiose narcissism (when assessed with NPI) has been negatively associated with psychological distress (Miller et al., 2011). Finally, while both expressions of narcissism are related to angry hostility, grandiose narcissism has been strongly associated with the expression of anger, whereas vulnerable narcissism is more strongly associated with the experience of anger (Miller et al., 2011).

Moreover, a recent study (Jauk, Weigle, Lehmann, Benedek, & Neubauer, 2017) found that extraversion and introversion traits mask the common features in grandiose and vulnerable narcissism. When introversion and extraversion factors of personality are controlled, the relationship between grandiosity and vulnerability is raised from r = -0.09 to r= 0.53. Furthermore, the top 10% of the grandiose narcissism sample, as measured by NPI, has shown high association with vulnerable self-states. In addition, entitlement and self-importance were found to have a central role in both types of narcissism (Krizan & Herlache, 2017), whereas traits of grandiose fantasies, entitlement rage and contingent self-esteem have a central role in defining pathological narcissism (Di Pierro, Costantini, Benzi, Madeddu, & Preti, 2018).

Despite the consensus that grandiose and vulnerable narcissism are the two distinct manifestations of narcissism, there has been a growing belief that some individuals high in narcissism demonstrate a fluctuation between grandiosity and vulnerability. For example, Ronningstam (2009) conceptualised narcissistic personality disorder as a "pervasive pattern of fluctuating self-esteem ranging from grandiosity and assertiveness to inferiority and insecurity"(p 118). Similarly, Pincus, Cain and Wright (2014) indicated that their clinical experience has almost always shown that narcissistic patients "exhibit both covert and overt grandiosity and covert and overt vulnerability" (p. 440). Similarly, Gore and Widiger (2016) asked 108 clinicians and clinical psychology professors whether they have met individuals who met criteria for being either a grandiose or a vulnerable narcissist. If they reported knowing a grandiose or vulnerable narcissist, they were then asked whether this person expressed traits of the other form of narcissism and, if so, whether it was never, some of the time, or a significant period of the time. Gore and Widiger reported that the clinicians and clinical psychology professors indeed indicated

that they evidenced in the grandiose narcissists, for a significant period of the time, several vulnerable narcissistic traits (e.g., not responding well to criticism or rebuke, reacting with anger or shame when status is threatened, feeling very upset when treated unjustly, and craving admiration from others). However, vulnerable narcissists did not show grandiose traits for significant periods of time. They did evidence some grandiose traits for "some" of the time (Gore & Widiger, 2016). Understanding the fluctuation between grandiosity and vulnerability within narcissists might provide some insights on the relationship between narcissism and self-esteem. Moreover, this fluctuation might mean that there is a third sub-type of narcissism which consists of features of grandiose and vulnerable narcissism, as described in the following section.

2.5 A Third Sub-Type of Narcissism

Although there is a growing consensus that narcissism can take two forms: grandiosity and vulnerability, clinical literature has been advocating for a third sub-type of narcissism. Narcissism theorists have suggested that there are three manifestations of narcissism. For example, Kernberg proposed three types of narcissism ranging from normal to pathological narcissism (Kernberg, 2004).

Furthermore, several researchers have found at least three sub-types of narcissism. For example, applying the Shedler-Westen Assessment Procedure-II (SWAP-II) and a checklist of axis II personality disorders on a sample of 255 patients, Russ et al. (2008) identified three clusters of narcissists using Q-factor analysis: (i) grandiose/malignant narcissists; (ii) fragile narcissists; and (iii) high functioning/exhibitionistic narcissists. Grandiose/malignant narcissism was characterised by exaggerated self-importance, feelings of privilege, interpersonal manipulativeness, seeking interpersonal power and control, lack of remorse, anger, and dominance. Grandiose/malignant narcissists did not report any form of underlying feelings of inferiority or negative affective states other than anger. Fragile narcissism, conversely, was characterised by feelings of inferiority, smallness, anxiety, rage and loneliness. Nevertheless, these negative feelings were masked by grandiosity, which serves as a defensive mechanism. High-functioning/exhibitionistic narcissists were described as having an exaggerated sense of self-importance, outgoing, energetic, and articulate. They tend to show adaptive functioning and use their narcissism as a motivation to succeed.

Similarly, Wink (1992) has identified three patterns of narcissism in a non-pathological sample using the California Q-set. These patterns were labelled wilfulness, hypersensitivity and autonomy. Wilfulness correlated with self- and partner-ratings for self- assuredness, aggressiveness, impulsiveness, rebelliousness and exhibitionism. Hypersensitivity correlated with self- and partner-ratings for depression, introversion, lack of self-confidence, withdrawal, cynicism and depression. Autonomy associated with self- and partner-ratings for creativity, empathy, achievement-orientation, individualism and idealism. Wink validated these patterns in a series of longitudinal studies. These studies showed that hypersensitivity was associated with negative life trajectories, wilfulness was generally associated with flat trajectories, and autonomy was generally associated with positive trajectories, leading him to conclude that the hypersensitive prototype is the most pathological form of narcissism (Wink, 1992b, 1992a; Wink, Dillon, & Fay, 2005). The autonomy pattern seems to be similar to grandiose narcissism, and hypersensitivity to vulnerable narcissism. The wilfulness pattern has not yet been investigated in personality narcissism studies.

Houlcroft, Bore and Munro (2012) also revealed a third subtype of narcissism in a sample of 300 undergraduates. They applied exploratory factor analysis of the responses of 300 undergraduates on two measures of narcissism: the PNI (Pincus et al., 2009) and Narcissism-Aloofness-Confidence-Empathy Scales (NACE; Munro et al., 2005), a self-reported personality inventory of desirable and undesirable traits for medical professions. Exploratory factor analysis EFA extracted two factors for each scale. PNI extracted two factors: grandiosity and vulnerability whereas the NACE extracted two factors labelled grandiose narcissism and aggressive narcissism. Grandiose narcissism of NACE was characterised by self-importance, a need for recognition, and a desire for control. Aggressive narcissism, conversely, has a positive relationship with aggressive self-affirmation, rationalised antisocial behaviour, hypersensitivity, psychological distress, psychopathy, aggression, anger and psychoticism. It was negatively associated with empathy, agreeableness, conscientiousness and extraversion.

Furthermore, researchers have applied empirical clustering or grouping techniques such as cluster analysis and latent profile analysis to explore whether subgroups of narcissism can be identified. For example, DiGuiseppe, Robin, Szeszko, and Primavera (1995) conducted cluster analysis of the Millón Clinical Multiaxial Inventory II (MCMI-

II) subscales for psychotherapy clients who scored above 85 on the Narcissistic Personality Scale of the MCMI-II. They found that the best fit was a three-cluster solution. These clusters were named the true narcissist, the compensating narcissist, and the detached narcissist. These three groups had different relationships with the General Health Questionnaire, the General Psychological Well Being Scale, the Beck Depression Inventory, the Satisfaction with Life Scale, and a measure of irrational beliefs. Although all three clusters were characterised by self-centeredness and a sense of entitlement, two of the clusters experienced no emotional distress, and one was characterised by social detachment.

Similarly, Lapsley and Aalsma (2006) used cluster analysis on a sample of 210 undergraduates who completed the NPI and the Profile of Narcissistic Dispositions (POND) (Taylor, 1995). Results revealed three clusters of narcissists labelled as: covert narcissists, adaptive narcissists, and overt narcissists. Adaptive narcissists had significantly lower mean scores on indices of anxiety, relationship problems, depression, self-esteem, and family problems. The overt and covert clusters showed comparable levels of dysfunction on most indices of adjustment. These clusters had different correlations with the NPI. Overt narcissists reported the highest scores on all NPI factors (authority, exhibitionism, superiority, exploitativeness, entitlement, self-sufficiency, and vanity), whereas covert narcissists reported the lowest score on the seven factors of the NPI, where adaptive narcissists reported moderate scores.

Although the reviewed studies have used different assessment tools on different types of samples (mainly using pathological narcissists), the three extracted clusters shared some characteristics. For example, high functioning/exhibitionist narcissists (Russ et al., 2008), and adaptive narcissists (Lapsley & Aalsma, 2006) are described as healthy, achievement oriented and are less prone to interpersonal problems, whereas grandiose/malignant narcissists (Russ et al., 2008) and overt narcissists (Lapsley & Aalsma, 2006) tend to express their grandiosity overtly, are exhibitionists, manipulative, and pursue power and control. Similarly, fragile narcissists (Russ et al., 2008) and covert narcissists (Lapsley & Aalsma, 2006) can be characterised as introverted, anxious, and having a lack of self-confidence. The most interesting finding of these studies is the identification of a high functioning or autonomous cluster of narcissists among pathological narcissists.

2.6 Latent Profile Analysis studies on Narcissism

Two studies have investigated whether different patterns of narcissism can be identified using Latent Profile Analysis (LPA). The first study was conducted using one factor of narcissism only. Specifically, Stronge, Cichocka, and Sibley (2016) used only one narcissism factor, i.e.,: entitlement, measured by three items from the Psychological Entitlement Scale (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004) to identify five patterns of entitlement that have different associations with self-esteem, assessed by three items from the Rosenberg Self-Esteem Scale. The first pattern described only 2% of the total sample of 6471, it was characterised by low entitlement and low self-esteem and was labelled low self-regard pattern. Pattern 2 described 14% of the sample and was labelled a low-moderate self-regard pattern. pattern 3, a high-moderate self-regard pattern, included 36% of the sample. It consisted of participants with high self-esteem and moderate entitlement. Pattern 4 was a grandiose narcissistic self-esteem pattern (9%) with high entitlement and high self-esteem. Pattern 5, optimal self-esteem, consisted of 38% of the participants with low entitlement but high self-esteem.

Stronge et al. (2016) also investigated whether pattern membership can be predicted by personality factors. They found that the low moderate pattern and the optimal self-esteem pattern were predicted by each of the Big Five personality factors. Specifically, the low moderate pattern was related to low extraversion, low agreeableness, low conscientiousness, high neuroticism, and low openness. The high moderate pattern showed the same pattern, although the effect for neuroticism was weaker. Interestingly, the narcissistic self-esteem pattern relative to the optimal self-esteem pattern was predicted by lower agreeableness, but not lower extraversion. Belonging to the narcissistic self-esteem pattern was also predicted by higher neuroticism, but these pattern did not differ on any other traits.

The second study which applied the LPA technique is the study of Wetzel, Leckelt, Gerlach, and Back (2016). They conducted three studies to examine the existence of sub-groups of narcissists using the Narcissistic Admiration and Rivalry Questionnaire (NARQ) (Back et al., 2013). Across three studies using samples of German-speaking undergraduates (N= 828, 953 and 430). LPA yielded four sub-groups, the first pattern was labelled low narcissists. It consisted of individuals with a low score on the scale. Pattern 2 was labelled moderate narcissists with moderate to high scores on admiration and low

scores on rivalry. Pattern 3 consisted of narcissists with moderate to high scores on both the admiration and rivalry. Pattern 4 consisted of individuals with a high score on the NARQ especially on the admiration items.

Furthermore, Wetzel et al. (2016) examined the association of their four patterns with grandiose and vulnerable narcissism as measured by the PNI (Pincus et al., 2009). Individuals in profile four (high narcissists) scored the highest in grandiose narcissism followed by pattern three: moderate narcissists with high admiration and rivalry scores. Similarly, high narcissism and moderate narcissism with high admiration and rivalry reported high scores in vulnerable narcissism.

Wetzel et al.'s Study 2 also shows that the four patterns of narcissism have a divergent association with the Big Five personality factors: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Specifically, pattern 2 (moderate narcissists with a high score in the admiration scale) reported the lowest score for neuroticism. The low narcissist pattern and moderate pattern with high admiration and rivalry path reported similar neuroticism. Surprisingly, high narcissists reported relatively lower neuroticism. Pattern 2 (moderate narcissists with high scores in the admiration scale) reported the highest score in extraversion followed by pattern 4 (high narcissists and low narcissists. The lowest score in extraversion was reported by individuals in pattern 3 (moderate narcissists with high scores in both the admiration and rivalry scales. Results of the agreeableness factor showed that pattern 4 (high narcissists) reported the lowest score, whereas patterns 1 (low narcissists) and 2 (moderate narcissists with high scores in the admiration scale) reported the highest. Pattern 3 (moderate narcissists with high scores in both admiration and rivalry scales) reported the second highest score for the agreeableness factor. The association of the high narcissist pattern with extraversion and neuroticism is quite surprising. They reported high extraversion and low neuroticism, which does not fit the literature of narcissism.

Both of the two LPA studies have some limitations. Specifically, Stronge et al. (2016) study identified the five patterns of narcissism using one factor of narcissism only and ignored the other factors. Wetzel et al. (2016) used two factors of the NARQ inventory which captures grandiose manifestation of narcissism. Thus, Studies 4 and 5 of the current thesis is applying LPA to a sample of working adults drawn from the general population and using the PNI which capture grandiose and vulnerable narcissism.

2.7 Models of Narcissism

Several models of narcissism have been proposed to disentangle the complexity of narcissism. Campbell, Hoffman, Campbell and Marchisio (2011) have divided models of narcissism into three categories: personality trait models, self-regulation models, and other models. Personality trait approach conceptualises narcissism as a personality trait that can be described within broader personality models such as the Big Five. For example, the most common description of grandiose narcissists in terms of the Big Five traits is "disagreeable extraverts" (Paulhus, 2001). In other words, grandiose narcissism is characterised by high scores on extraversion and low scores on agreeableness. Using this approach, vulnerable narcissists can be identified as disagreeable neurotics (Miller et al., 2010).

In contrast, self-regulation models view narcissism as a dynamic self-regulatory system in which narcissists employ various components such as the narcissistic self, motivations and relationships to drive narcissistic behaviours such as self-enhancement or self-protection. Two self-regulation approach models that have been proposed are the dynamic self-regulatory model of narcissism (Morf & Rhodewalt, 2001) and the agency model (Campbell, Brunell, & Finkel, 2006). These models have been developed primarily for grandiose narcissism. The agency model focuses on agentic self-conceptions, approach orientation and social skills; whereas the dynamic self-regulatory model looks at more cognitive, affective, and protective processes.

The third category of models of narcissism is other models of narcissism. This category includes models that are useful under specific conditions. For example, the contextual reinforcement model (Campbell & Campbell, 2009) focuses on narcissism as a trait that is adaptive in certain contexts. The addiction model (Baumeister & Vohs, 2001) views narcissism as an addiction to attention, status and positive feedback. Third, the chocolate cake model of narcissism (Campbell, 2005) focuses on the experience of starting relationships with narcissistic individuals. While developed for romantic relationships, this model can be applied when selecting leaders, employees or co-workers. This model states that relationships with narcissistic individuals are like eating chocolate cake. At the beginning, they are appealing and exciting but over time narcissists turn out to be dishonest, controlling, and not concerned with others.

Two models were proposed after the classifications of Campbell et al. (2011): the spectrum model of narcissism (Krizan & Herlache, 2017) and the admiration and rivalry model of narcissism (Back et al., 2013). The spectrum model of narcissism can be considered to be in the trait model category as it conceptualises narcissism as a spectrum of personality characteristics that reflects variation in self-importance and entitlement. The admiration and rivalry model is an expansion of the self-regulatory models. It distinguishes between two sets of processes: admiration and rivalry. The following sections discuss in more detail the most relevant models of narcissism for this thesis.

2.7.1 The Dynamic self-regulatory processing model

The dynamic self-regulatory processing model (Morf & Rhodewalt, 2001c) conceptualises grandiose narcissism through the characteristic efforts that a person employs to construct, maintain, defend, and enhance his or her desired self-views. It consists of three broad interacting components: (1) the mental processing or "construal" system, (2) the self-regulation processes, and (3) the social world. The mental construal system refers to the individuals cognitive, affective, and motivational representations and experiences about themselves, relational others, and the broader world around them. For narcissists, the construal system is composed of beliefs about their capabilities. They tend to explicitly express their grandiosity. For example, they exaggerate their positive self-views (Campbell, Rudich, & Sedikides, 2002; Paulhus, 1998a), perceive themselves as special (Emmons, 1984), overestimate their attractiveness and intelligence (Gabriel et al., 1994). They rate themselves as gifted, exemplary, and ingenious, but interestingly, they see no need to simultaneously deny any failings (Horvath & Morf, 2009). They also overrate their actual and future achievements (Campbell, Goodie, & Foster, 2004; Farwell & Wohlwend-Lloyd, 1998).

Moreover, grandiose narcissists are more oriented toward agentic concerns than communal aspects (Campbell, Brunell, & Finkel, 2006). They are also approach oriented. They are more motivated to achieve positive outcomes than to avoid undesired ones (Foster, Misra, & Reidy, 2009; Foster & Trimm, 2008). It is reported that grandiose narcissism is positively associated with psychological health (Sedikides et al., 2004) and happiness (Rose, 2002).

Despite the reported positive self-construal that is expressed explicitly, a growing body of literature reports some vulnerability of grandiose narcissists especially when

faced with failure experiences. For example, Horvath and Morf (2009) showed that when grandiose narcissists are exposed to a failure experience, they exhibit an immediate increase in accessibility of worthlessness-related words. This indicates a hypervigilance at early stages of information processing for threats triggering attention to one's own failings. Moreover, narcissistic vulnerability can be inferred by the presence of narcissist shame, which Tracy, Cheng, Robins, and Trzesniewski (2009) suggest as the affective mechanism lying at the core of narcissistic self-regulation. This means that shame is triggered by deep inner negative self-views. Narcissists use some self-enhancing strategies defensively to maintain their self-view.

In addition to the influences of self-cognitive and affective construal, 'others construal' influences the self-regulatory process. For example, narcissists view others, including their romantic partner, as inferior to themselves (Campbell et al., 2002). Similarly, they overestimate their contributions in group tasks and blame others for failure (Campbell, Reeder, Sedikides, & Elliot, 2000; John & Robins, 1994). At the same time, narcissists overestimate others when they provide them with positive feedback (Kernis & Sun, 1994). In general, narcissists value others according to their importance for them because they use others as instruments for their sake (Morf et al., 2011).

Narcissists apply various strategies to achieve their grandiose goals. They employ intrapersonal and interpersonal self-regulatory tactics to demonstrate their superiority or to protect themselves when facing threats to their self-views. Intrapersonal self-regulation mechanisms involve taking advantage of opportunities for self-enhancement by attributing success to their own innate superior ability, even when the success is not genuine (Rhodewalt & Morf, 1998; Rhodewalt, Tragakis, & Finnerty, 2006; Rhodewalt & Morf, 1995). They also credit better performance to themselves over others even when the performance is interdependent (Campbell, Reeder, Sedikides, & Elliot, 2000; John & Robins, 1994).

Nevertheless, when narcissists perceive any threat to their grandiose self, they employ several self-defence strategies. For example, they attenuate the effect of negative feedback by devaluing the feedback validity or its source (Kernis & Sun, 1994) or by blaming the partner (Campbell et al., 2000). They might distort perceptions or recollections of previous experiences in their favour to buffer rejection (Rhodewalt &

Eddings, 2002). Furthermore, narcissists can even face difficulties to generate reasons to explain why their partners might not be committed to them (Foster & Campbell, 2005).

Narcissists are affected by their own overconfidence. For example, in gambling studies they lost more money than non-narcissists because of their focus on reward. Their attitude did not change after being told of their poor performance, and they still expected to perform better in the future (Brunell & Buelow, 2017; MacLaren & Best, 2013). Alternatively, to cope with stress, they start to fantasise about their personal achievement, heroism, and power (Raskin, Novacek, & Hogan, 1991).

Narcissists also use some affective reactions to self-regulate their inner state. For example, they react with anger after failure instead of showing signs of sadness or depression (Rhodewalt & Morf, 1998) and they demonstrate their hubristic pride (Tracy et al., 2009). Similarly, they react faster to aggression-related but not sadness-related words after being primed with worthlessness (Morf, Horvath, & Zimmermann, 2010). This indicates that aggressive responses are employed to minimise the effect of worthlessness (Morf et al., 2011).

Grandiose narcissists also employ several interpersonal self-regulation strategies to manage the self-images they desire to convey. For example, they take advantage of any opportunity to demonstrate their superiority and get others' attention by showing off; dominating conversations (Buss & Chiodo, 1991; Nevicka, De Hoogh, Van Vianen, Beersma, & McIlwain, 2011; Paulhus, 1998a); and wearing expensive, flashy clothes (Vazire, Naumann, Rentfrow, & Gosling, 2008). To prove their superiority, they perform better in challenging relative to less challenging circumstances and are more motivated and persistent when tasks offer the potential for self-enhancement (Morf, Weir, & Davidov, 2000; Nevicka et al., 2011; Wallace & Baumeister, 2002; Wallace, Ready, & Weitenhagen, 2009). Finally, narcissists take control in leaderless groups (Brunell et al., 2008).

Grandiose narcissists often demonstrate leadership qualities in leaderless group discussions. On minimal acquaintance, they tend to be described as agreeable, entertaining, and competent (Paulhus, 1998b), attractive and likeable (Oltmanns, Friedman, Fiedler, & Turkheimer, 2004), charming, self-confident, and have good sense of humour (Back, Schmukle, & Egloff, 2010). Furthermore, narcissists often are recognised as leaders by their peers (Brunell et al., 2008; Judge, LePine, & Rich, 2006;

Nevicka, Ten Velden, De Hoogh, & Van Vianen, 2011). However, after few encounters, they are judged as arrogant, hostile, and identified as braggarts (Paulhus, 1998b); and their direct supervisors perceive them as poor-quality leaders and describe them as engaging in workplace deviant behaviour (Judge et al., 2006).

Narcissists even use their romantic relationships to serve their grandiose selves. For instance, they choose partners who are highly successful and who admire them (Campbell, 1999). They are not loyal to their partners and pay attention to alternative partners, and their partners describe the narcissist as game-playing, deceptive, and manipulative (Adams, Luevano, & Jonason, 2014; Campbell, Foster, & Finkel, 2002). However, narcissists do not mind maintaining the relationship when the partner is fulfilling their inflated ego (Foster, 2008).

When confronted with threats, narcissists openly criticise an outperforming other even to his face (South, Oltmanns, & Turkheimer, 2003), and respond with hostile, sometimes even aggressive behaviour (Bushman & Baumeister, 1998; Penney & Spector, 2002; Reidy, Zeichner, Foster, & Martinez, 2008; Thomaes, Bushman, Orobio De Castro, Cohen, & Denissen, 2009; Twenge & Campbell, 2003b). Additionally they do not forgive, remain resentful (Brown, 2004; Exline, Bushman, Baumeister, Keith Campbell, & Finkel, 2004) and tend to take revenge (Fatfouta, Gerlach, Schröder-Abé, & Merkl, 2015).

Furthermore, despite their expressed self-confidence, there is empirical evidence for narcissists opting to self-handicap in order to minimise the impact of potential failure by creating plausible excuses (Rhodewalt et al., 2006). Similarly, at a more implicit level, although narcissists showed an initial activation of worthlessness after having been primed with failure, when information processing time was increased that association became reversed (Horvath & Morf, 2009). This indicates the use of an active (albeit automatic) inhibition of worthlessness as a self-protective mechanism. Thus interestingly, narcissists seem to defend potential harms to the self before the actual damage happens (Morf et al., 2011).

Finally, gender-related norms may shape different motives, as well as the strategies male and female narcissists employ for attaining their self-goals. A meta-analysis found that narcissism scores are generally higher in men than women (Grijalva, Newman, et al., 2015). Furthermore, a number of studies have found different behavioural dynamics for male and female narcissists (Buss & Chiodo, 1991; Morf et al., 2000;

Rhodewalt et al., 2006). Aggressive reactions, for example, seem to be fuelled by narcissism in males but not in females (Barry et al., 2006). Taken together, these findings indicate that in accordance with the respective gender-related norms, at least some of the "stereotypic" narcissistic behaviours or attitudes are seen more predominantly in men.

The current thesis addresses the dynamic self-regulatory model of narcissism by examining how grandiose and vulnerable narcissists react to threats to their self-esteem, specifically, studying whether they choose to react in a self-aggrandizing manner or whether they employ self-defence behaviour including self-handicapping. Further, this thesis samples are equally representing males and females to address the gender differences in narcissistic behaviours.

2.7.2 The Narcissistic Admiration and Rivalry Model

The admiration and rivalry model (Back et al., 2013) views narcissists' overarching goal as the creation and maintenance of their grandiose self. To do this, they apply two different social strategies: self-enhancement (or social admiration) and self-protection (or rivalry). The social admiration strategy aims to create an exaggerated grandiose self through feeling special and being admired. It operates in three domains: grandiose fantasies, striving for uniqueness, and charming behaviour. These strategies may result in preferred social outcomes, including social status, success and praise, which may consequently bolster the grandiose self.

The rivalry strategy is a self-protection strategy used by narcissists to defend themselves from attack by others. It is highly antagonistic and is accompanied by a frightening fear of failure, real or imagined. Narcissistic self-protection can take the form of passive intrapersonal reactions to the possibility of failure, such as devaluing others, or it can consist of interpersonal reactions such as revenge. Accordingly, the narcissistic rivalry domains are the devaluation of other people, striving for supremacy and engaging in aggressive behaviour.

Back et al. (2013) demonstrate that separating grandiose narcissism into admiration and rivalry clarifies some of its relationships with sub-factors. For example, they find that self-esteem is positively associated with admiration and negatively with rivalry. Similarly, distinguishing between admiration and rivalry can also be used to explain how narcissists may react to threats to self-esteem (Rogoza, Żemojtel-Piotrowska,

Rogoza, Piotrowski & Wyszyńska, 2016). This model distinguishes between two types of narcissistic behaviours: to self-promote or to self-protect but it does not indicate which action a narcissist might take when he is having both options. Study 2 and Study 3 attempt to investigate grandiose and vulnerable reactions when they have both options.

2.7.3 Narcissism Spectrum Model

In response to the often puzzling characterisation of a single trait—narcissism—in terms and subtypes that may seem to be opposites, Krizan and Herlache (2017) have proposed a new model of narcissism, the narcissism spectrum model (NSM). This model conceptualises narcissism as a spectrum of personality characteristics that reflects variation in self-importance and entitlement as a core shared phenotype common to all types of narcissism. These characteristics are expressed either in grandiosity or vulnerable subtypes of narcissism (or sometimes in mixtures of these subtypes) depending upon whether a particular narcissistic individual has either an approach-dominant (i.e., boldness) or avoidance-dominant (i.e. reactivity) functional orientation. Approach dominance, or boldness, is argued to be the underlying functional orientation for grandiose narcissism whereas avoidance orientation is the underlying functional orientation for vulnerable narcissism. Empirical findings supported these arguments by finding that narcissistic grandiosity correlates positively and significantly with measures of approach orientation such as the Behavioural Activation Sensitivity (BAS) Questionnaire (.31) and the Approach–Avoidance Temperament Questionnaire (.14). Vulnerable narcissism was found to be negatively correlated with these scales and to be positively correlated with a measure of Behavioural Inhibition Sensitivity (BIS; .34), which assesses avoidance orientation.

This study examined the association between grandiose and vulnerable narcissism with approach and avoidance motivation as will be discussed in Study 3.

2.8 Narcissism and leadership

A growing body of literature has associated narcissism with leadership (Campbell et al., 2011; Chatterjee & Hambrick, 2007; Kets de Vries, 1994; Kets de Vries & Miller, 1985; King, 2007; Rosenthal & Pittinsky, 2006). Kets de Vries and Miller (1985) suggested that narcissism is in fact the driving force behind narcissists striving for leadership positions in order to fulfil their need for power. Most of the literature on leadership and narcissism has been devoted to investigating the impact of narcissistic

leaders to determine whether they benefit or impede their organisations (Campbell et al., 2011; Grijalva et al., 2013; Higgs, 2009; Kets de Vries & Miller, 1985; Ong et al., 2015; Rosenthal & Pittinsky, 2006; Stein, 2013).

Several studies have advocated the benefits of narcissistic leaders because of their bold vision (Maccoby, 2000) and charismatic leadership (Galvin, Waldman, & Balthazard, 2010; Maccoby, 2000), although these claims are not supported empirically (Ouimet, 2010). Nevertheless, there is a consensus that narcissistic leaders' positive impact is temporary, and that they usually leave their organisations with damage (Higgs, 2009; Kets de Vries & Miller, 1985; Maccoby, 2000).

As expected, many scholars have argued that narcissism has a more negative than positive impact on organisations (Higgs, 2009; Ouimet, 2010; Rijsenbilt & Commandeur, 2013; Rosenthal & Pittinsky, 2006). Narcissistic leaders are described as being hypersensitive to criticism, lacking empathy, very competitive and poor listeners (Maccoby, 2000). According to various authors, they do not accept responsibility for their mistakes and blame others for poor outcomes, prefer to be surrounded by sycophantic subordinates (Kets de Vries & Miller, 1985), decline negative feedback and cannot perceive reality clearly (Robins & John, 1997; Stein, 2013), are impulsive (Vazire & Funder, 2006) and take risks (Foster, Shenesey, & Goff, 2009).

Narcissistic CEOs take bold actions that can either lead to big wins or big losses with the primary motivation of attracting attention (Chatterjee & Hambrick, 2007). Therefore, they are held responsible for the collapse of their organisations, with examples such as that of Lehman Brothers (Stein, 2013). They may be involved in white collar crimes (Blickle, Schlegel, Fassbender, & Klein, 2006) or unethical leadership (Hoffman et al., 2012), cannot achieve sustainable performance (Higgs, 2009), exercise and encourage bullying (Grijalva, Harms, et al., 2015), and can create a toxic work atmosphere (Goldman , 2006). In general, narcissistic leaders do not achieve better than do low-narcissistic leaders (Chatterjee & Hambrick, 2007).

Furthermore, a meta-analysis found that narcissism is negatively correlated with job performance, and highly and positively correlated with counter-productive work behaviour (O'Boyle, Forsyth, Banks, & McDaniel, 2012). Another meta-analysis did not find a linear relationship between narcissism and leadership effectiveness (Grijalva, Harms, et al., 2015).

Many researchers have investigated the relationship between emergent leadership and personality (Ensari, Riggio, Christian, & Carslaw, 2011; Judge, Bono, Ilies, & Gerhardt, 2002; Nevicka, Ten Velden, et al., 2011; Nevicka et al., 2011; Smith & Foti, 1998). There is an agreement that certain personality characteristics are associated with leader prototypes, and when these characteristics are observed in an individual he or she is more likely to be selected as a leader (Lord, Foti, & De Vader, 1984). Some of the common characteristics of leaders include dominance, high self-esteem, extraversion, confidence and generalised self-efficacy (Hogan, Curphy, & Hogan, 1994; Nevicka et al., 2011). In a meta-analysis of the predictors of leader emergence in leaderless group discussions (a selection method used to assess potential leadership capabilities), Ensari and his colleage (2011) found that authoritarianism, extraversion, creativity, masculinity and intelligence predict leadership emergence. Narcissists are more likely to be seen as possessing leadership skills because they are extraverted, socially skilled, and interpersonally dominant, these attributes are perceived by group members as vital in leadership context according to implicit leadership theories (Grijalva, Harms, et al., 2015).

Furthermore, in three leaderless group discussion studies by Brunell and colleagues (two with undergraduates and the third with business leaders), narcissists were more likely to emerge as leaders even when the group discussions were assessed by expert observers. It was also found that power acquisition, rather than attention seeking, was the centre of the relationship between narcissism and emergent leadership (Brunell et al., 2008). A meta-analytic review has supported these findings. Specifically, Grijalva and his colleagues (2013) found that narcissists are perceived as leaders when they deal with less acquainted colleagues but their perceived leadership qualities decrease with the length of acquaintance (Grijalva, Harms, et al., 2015).

Different explanations are given for narcissists' leader emergence. Back, Schmukle, and Egloff (2010) suggest that narcissists are liked at the initial meeting because of their effective impression management (charming facial expressions, self-assured body movements, and humorous verbal expressions). Similarly, in their meta-analysis, Grijalva and his colleages (2013) attributed leader emergence to extraversion. However, Brunell and colleages (2008) argued that extraversion alone does not seem to explain the relationship between narcissism and leader emergence since they controlled for the effect of extraversion. Alternatively, they suggested that overconfidence may be

the reason for the relationship between narcissism and leadership emergence. Paulhus (1998) found that narcissists were perceived by their colleagues after the first group discussion meeting as more agreeable, well adjusted, and competent but after the seventh meeting they were rated negatively. In a similar study, Ong and colleagues (2015) found that narcissists were rated as having leadership qualities at the initial meetings but they lost this virtue after the twelfth meeting. These findings were replicated in a second study in which acquainted colleagues did not rate narcissists as leaders, presumably due to their longer experience with the narcissists that allowed them to see the negative aspects of this trait.

In conclusion, there is a consensus that narcissists are more likely to take leadership responsibilities and they outperform low-narcissists in job interviews (Paulhus, Westlake, Calvez, & Harms, 2013) and leaderless group discussions, even trained raters tended to select narcissists as leaders (Brunell et al., 2008; Paulhus, 1998). However, narcissistic leaders deal poorly with criticism and negative feedback, which raises questions about their ability to actually perform well as leaders. They might have detrimental effects on their corporations, including playing a role in their collapses as occurred in Lehman Brothers (Stein, 2013).

Sedikides and Campbell (2017) have proposed a model that aims to understand the effects of narcissistic leaders on organizations, the Energy clash model (ECM). According to the ECM, the interaction between narcissistic leaders and organizations occurs across three phases: perturbation, conflict, and resolution. When a narcissistic leader enters an organization, they usually perturb the organizational system by launching a variety of reforms. Such reforms may cause organizational concerns regarding their cost to the system. Consequently, the conflict phase emerges. In this stage, the organization begins to generate its own counterforce or opposition to the narcissistic leader. This conflict is resolved in the resolution stage, in which the narcissistic leaders' vision is either embraced or they leave the organization.

Thus, understanding how narcissists react to ego threats such as negative feedback is of vital importance for organisational and leadership studies. Studies two and three of the current thesis address this issue.

2.9 Self-Esteem and Narcissism

Since the inception of the study of narcissism, the role of self-esteem in narcissism has been an active area of scholarly debate. There are two basic approaches to understanding the relationship between narcissism and self-esteem: the mask model versus an explicit model. Theorists such as Kohut (1977) and Kernberg (2004) have argued that the grandiosity of narcissists is not completely authentic, but rather that it serves as a mask to conceal underlying feelings of inferiority and low self-esteem. These feelings are believed to motivate narcissists to seek feedback from the social environment that affirms their fragile self-worth, and this explains their aggressive reaction once they perceive their self-esteem is being threatened (Morf & Rhodewalt, 2001c). This notion has been supported by experimental studies (Bushman & Baumeister, 1998; Rhodewalt & Morf, 1998; Twenge & Campbell, 2003a; Zeigler-Hill, 2006; Zeigler-Hill & Besser, 2013; Zeigler-Hill, Myers, & Clark, 2010).

Furthermore, according to the mask model, narcissists are expected to score high on explicit (i.e., conscious, deliberate) self-esteem measures, but low on implicit (i.e., automatic, habitual) self-esteem measures (Bosson et al., 2008). However, empirical studies testing implications of the mask model have shown mixed results. Some of these findings have supported the mask model (Campbell, Bosson, Goheen, Lakey, & Kernis, 2007; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003; Klavina, Schröder-Abé, & Schütz, 2012; McGregor, Nail, Kocalar, & Haji, 2013; Myers & Zeigler-Hill, 2012), others provide evidence against this model (Fatfouta & Schröder-Abé, 2018; Gregg & Sedikides, 2010).

Bosson et al. (2008) conducted a meta-analysis to investigate this inconsistency in the findings. They did not find a simple relationship between self-esteem and narcissism when Implicit Association Test (IAT) scores were used to assess implicit self-esteem ($r = 0.06$, $p > 0.27$), and no evidence of an interaction between explicit self-esteem and IAT scores in predicting narcissism ($r = -0.02$, $p > .73$). In contrast, when using a Name Letter Task (NLT) for the assessment of implicit self-esteem, a weak positive relationship was found between implicit self-esteem and narcissism ($r = 0.09$, $p < 0.01$), and a weak but significant interaction between explicit self-esteem and NLT scores in predicting narcissism ($r = -0.06$, $p < 0.04$) (Bosson et al., 2008).

To interpret these findings, Bosson et al. (2008) suggested three possible explanations. The first reason is the unreliability of most of the implicit self-esteem measures. The second possible reason is that implicit self-esteem might capture two different types of self-esteem, that is, self-esteem relating to communal versus agentic characteristics. The third potential reason they suggested is that most of the studies have focused on grandiose narcissism and have neglected vulnerable narcissism.

The explicit model, which posits that individuals high in grandiose narcissism as measured by NPI, has been robustly linked to high explicit self-esteem (e.g., $r = 0.34$ to 0.47; Campbell & Rudich, 2001; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004; Vohs & Baumeister, 2016). However, when grandiose narcissism was measured by PNI the association with self-esteem became negative, as the PNI captures the deep feelings of vulnerable self-esteem (Pincus et al., 2009; Wright et al., 2010). Vulnerable narcissism has been negatively associated with self-esteem. Specifically, the association ranged between ($r = -0.32$ to -0.57) (Barnett & Womack, 2015; Pincus et al., 2009; Zeigler-Hill, Clark, & Pickard, 2008).

Furthermore, self-esteem was found to have divergent associations with narcissism and facets of narcissism. For example, Zeigler-Hill and Besser (2013) investigated the correlations of the factors of NPI and the PNI with state and fragile self-esteem (measured by daily fluctuation on the modified version of the Rosenberg Self-Esteem Scale). Results have shown that self-esteem level was positively correlated with NPI leadership/authority ($r = 0.31$, $p < 0.001$) and NPI grandiose exhibitionism ($r = 0.16$, $p < 0.01$) but negatively correlated with NPI entitlement/exploitativeness ($r = -0.12$, $p < 0.05$) and PNI vulnerability ($r = -0.36$, $p < 0.001$). Furthermore, the findings also revealed that the vulnerable facet of pathological narcissism is the only facet of narcissism that is uniquely associated with day-to-day fluctuations in feelings of self-worth. It was also the only facet of narcissism that increased the reactivity of individuals to positive interpersonal events. That is, narcissists felt better about themselves when they felt liked and accepted by others (Zeigler-Hill & Besser, 2013). Similarly, Clarke et al. (2014) showed that global self-esteem, as measured by the Rosenberg Self-Esteem Scale, has different relationships with the eight factors of the NPI and PNI. Positive and significant relationships were found with: superiority ($r = 0.40$), grandiose/exhibitionism ($r = 0.28$), and leadership/authority ($r = 0.27$). However, self-esteem had a negative and significant

relationship with: contingent self-esteem factor (r = −0.49), grandiose/fantasy (r = −0.26), and devaluing the self (r = −0.52). Finally, the relationship was non-significant with: entitlement (r = −0.10), and manipulativeness (r = 0.07).

Although some scholars view narcissism as an inflated self-esteem, Brummelman, Thomaes, and Sedikides (2016) argue that the conceptualisation of narcissism as an exaggerated type of self-esteem and a defensive form of self-esteem is not correct. They claim that narcissism and self-esteem differ in their phenotype, consequences, development and origin. However, they based their argument on grandiose narcissism and not on vulnerable narcissism.

In conclusion, most of the previous studies that have examined the association of explicit self-esteem and narcissism used the NPI to measure narcissism and found a positive association between the two constructs. However, this positive association could be caused by the nature of the NPI instrument, which is believed to be assessing self-esteem in addition to other aspects of narcissism (Ackerman et al., 2011; Miller & Campbell, 2011). In the current thesis, both grandiose and vulnerable narcissism are measured with the pathological narcissism inventory (PNI), which captures the inner low self-esteem within narcissism. Thus, a divergent association of narcissism and self-esteem is expected to be observed in this thesis. Moreover, Studies 4 and 5 investigate the associations of self-esteem with different patterns of narcissism.

2.10 Grandiose and Vulnerable Narcissists Responses to Threats of Self-Esteem

As mentioned earlier, the narcissism self-regulatory model depicts that the main aim of narcissists is to construct, maintain, defend, and enhance their desired self-views by using various intra- and interpersonal strategies to maintain their grandiose but vulnerable self-views. In the following sections, I discuss the literature on the responses to self-esteem threats of individuals high in grandiose narcissism and individuals high in vulnerable narcissism. While studies on responses of narcissists to threats of self-views are limited in general, most previous studies were done using the NPI, which captures grandiose narcissism. Very few studies however have investigated this issue with respect to vulnerable narcissism.

2.10.1 Grandiose Narcissist Reactions to Threat of Self-Esteem

As mentioned earlier, Reich (1933) was the first theorist to indicate the reactions of narcissists when facing an ego-threat incident. He theorised that narcissists become

aggressive and react with cold disdain, or downright aggression. Moreover, the DSM-5 (American Psychiatric Association, 2013) demonstrates that individuals with narcissistic personality disorder have very vulnerable self-esteem, making them quite sensitive to criticism. Thus, "they may react with disdain, rage, or defiant counterattack. Such experiences often lead to social withdrawal or an appearance of humility that may mask and protect the grandiosity" (American Psychiatric Association, 2013 p 671). Similarly, the dynamic self-regulatory processing model (Morf & Rhodewalt, 2001c; Morf et al., 2011) conceptualises narcissism as a set of intra- and interpersonal processes that are employed to achieve the desired self. It postulates that when grandiose narcissists are threatened, for example by being outperformed by others, their self-knowledge is threatened, and they may react by showing their grandiosity explicitly, but on the implicit level they may feel negative self-worth accompanied with feelings of shamefulness and loathing. Thus, they tend to use several strategies to maintain their grandiosity. Interpersonal strategies include engaging in self-aggrandising behaviours, self-handicapping prior to performance, and demeaning or derogating others or the test. In the intrapersonal domain, they employ several cognitive and affective strategies. On the cognitive level they tend to discount the source of the threat or the test, and they tend to think of their superiority to others. Affectively, they express explicitly their anger and hostility. On the implicit level they may feel anxious and ashamed.

Morf and Rhodewalt (2001) indicated further that the narcissism self-regulatory processing model aims to understand the paradoxical coexistence of grandiose self-aggrandisement and vulnerable fragility. That is, narcissist responses to threats of self-worth can have features of grandiosity and vulnerability. For example, in response to negative interpersonal feedback: "narcissists can display affective and self-esteem volatility, as well as defensive cognitive and behavioural responses such as distorted recall or interpersonal aggression" (p. 245). They may exhibit feelings of worthlessness, self-loathing, ambivalence, and ego fragility. Morf and Rhodewalt (2001) argue that the narcissistic self-concept contains simultaneously two conflicting self-assessments: self-love and self-loathing. Grandiosity is explicitly expressed verbally and behaviourally whereas vulnerability is revealed indirectly and is hidden even from the person themselves. Furthermore, narcissists are chronically vigilant toward detecting situational opportunities and data that allows them to affirm their grandiose self-concepts. At the

same time, however, they are also scanning for, and ready to protect themselves against, threat and "danger", i.e., that which is not self-affirming, allowing their negative self-view to become salient. In other words, both grandiosity and vulnerability are activated simultaneously. This allows one to make predictions regarding possible interactions between the two systems. For example, a narcissist might approach an opportunity for self-enhancement but once he feels that he will not be able to achieve the target he activates his vulnerability and engages in self-handicapping behaviours. This movement from self-affirmation opportunity to self-protection behaviours highlights why narcissists may appear to experience high and low self-esteem in alternation, depending on which self-view is predominant at the time of measurement, even though they probably hold both views simultaneously. Morf and Rhodewalt (2001) also claim that emotion regulation is equally important to understanding narcissist processes. They speculate that shame and the attempt to avoid its activation in self-evaluation have an important role in these affectively driven processes.

Several researchers have examined the responses of grandiose narcissists to threats of self-worth. Most of these studies investigated the association between narcissism and aggressive responses following threats to self-esteem, whereas another group of researchers argued that narcissists can react to negative feedback in a constructive manner to compensate for their previous performance. The following sections will discuss the results of these studies.

2.10.2 Aggression as a Response to Self-Esteem Threats

Several researchers have investigated the association between narcissism and aggressive reactions to negative feedback. For example, Bushman and Baumeister (1998) presented two experiments in which participants received bogus negative feedback about their essay writing. Participants were then given the opportunity to blast loud white noise at the person who had insulted them. Narcissists were found to be more willing than non-narcissists to show aggressive behaviour toward the feedback provider. However, when given the opportunity, narcissists were not willing to harm innocent people (i.e., they did not show displaced aggression). Bushman et al. (2009) re-analysed the data from this study and found that in fact, self-esteem did moderate the relationship between narcissism and aggression.

Furthermore, a recent systematic review of twenty studies on the association between aggression and narcissism found that narcissism is a significant predictor of violence and aggression in both clinical and non-clinical populations (Lambe et al., 2018). Specifically, of six studies examining the relationship between narcissism and aggression in a student population, four found a significant effect of narcissism on aggression (Lobbestael, Baumeister, Fiebig, & Eckel, 2014; Maples et al., 2010; Reidy et al., 2010; Terrell, Hill, & Nagoshi, 2008), one found no effect (Maples et al., 2010), and one did not find a significant relationship when analysis was carried out with a mixed gender sample (73% female) but when carried out only with males the relationship was significant (McIntyre et al., 2007). Moreover, ten studies investigated the effect of an ego threat on the relationship between narcissism and direct aggression. Two studies with student populations found a significant main effect of narcissism (Barry, Chaplin, & Grafeman, 2006a; Bushman & Baumeister, 1998), four found no effect (Jones & Paulhus, 2010; Kirkpatrick, Waugh, Valencia, & Webster, 2002; Vaillancourt, 2013) and four did not report on the main effect of narcissism (Bushman et al., 2009; Bushman & Baumeister, 1998; Foster, Campbell, & Twenge, 2003b; Vaillancourt, 2013). Seven studies found an interaction between narcissism and ego threat in that narcissism was related to increased aggression following negative feedback or insult (Barry et al., 2006a; Bushman et al., 2009; Bushman & Baumeister, 1998; Jones & Paulhus, 2010; Twenge & Campbell, 2003a; Vaillancourt, 2013). Moreover, three studies looked at displaced aggression and narcissism in the presence of an ego threat. Two found a main effect of narcissism (Martinez et al., 2008; Twenge & Campbell, 2003) and one did not report on the main effect of narcissism (Bushman et al., 2009). Ten studies controlled for self-esteem, and eight of them found that self-esteem did not account for the relationship between narcissism and violence. The presence of such mixed results in the literature suggests the usefulness of further study on this issue. However, Study 2 argues that narcissists are not expected to react aggressively in work settings because of its potential detrimental effect on their career development. Alternatively, they may engage in passive aggressive reactions such as psychological withdrawal.

2.10.3 Compensation as a response to negative feedback

Nevicka and colleagues (Nevicka et al., 2016) criticised studies which associated aggression with narcissism because previous studies did not give participants other

options. They further argue that narcissists can react in a constructive way by attempting to compensate their earlier poor achievement. They provided evidence from three experiments that individuals high in narcissism engage in compensating strategies by increasing performance to demonstrate their superior skills. In their Study 1, narcissism predicted allocating more time to finish a task in the negative feedback condition. In Study 2, performance in a creativity test was predicted by the interaction effect of narcissism and feedback for the negative feedback group but not in the positive feedback group. Study 3 revealed a marginal effect of narcissism on a creativity test for the group of the average figural propensity condition but not in the unique figural propensity feedback condition.

These three studies showed that individuals with high scores in grandiose narcissism can react positively to threats of self-esteem either by allocating more time to complete tasks or to perform better in tasks. However, self-esteem was not measured in these experiments so there is no evidence that their self-esteem had been affected by the manipulations. Furthermore, the generalisability of these findings is quite susceptible as it used a specific mental ability. There is however a positive and significant association between grandiose narcissism and creativity (Raskin, 1980).

Although allocating more time to do a task after receiving negative feedback can be interpreted as an attempt to compensate previous performance, this is not the only possible explanation. Asking for more time to complete a task could be an attempt to avoid more negative feedback, making it a defensive action. Similarly, performing better in a creativity test in negative group conditions can be interpreted as paying more attention compared to the positive feedback condition.

Accordingly, the current thesis addresses compensating previous performance as a response option for individuals with high grandiosity or vulnerability. Study 2 in the current thesis presents two options for participants, in order to explore which is preferred by grandiose and vulnerable narcissists: (a) to become involved in positive work behaviours (compensating option) or (b) psychological withdrawal behaviours as a defensive option.

2.10.4 Self-Handicapping as a Response to Self-Esteem Threats.

Although Morf and Rhodewalt (2001) briefly mentioned self-handicapping as a strategy that might be used by narcissists to avoid potentially threatening situations, no

previous study has looked at self-handicapping as a strategy for responding to threats to self-esteem. Self-handicapping is a defensive strategy designed to ward off threatened egotism. For example, in the original studies by Berglas and Jones (1978) and Kolditz and Arkin (1982), participants were given an unsolvable multiple choice test and told that their performance in that test had been exceptionaly high. In the second phase of the experiment, particpants were asked to participate in a similar test. Prior to the start of the second phase, particpants gave excuses for a potential poor performance.

Self-handicappers and narcissists share some similar behaviours (Mitchell & Decker, 2017). Individuals high in self-handicapping are similar to narcissists who are preoccupied with protecting themselves (Sedikides & Gregg, 2001) and keen to self-enhance their abilities and protect their egos when threatened. Self-handicapping is defined as "any action or choice of performance setting that enhances the opportunity to externalise (or excuse) failure and to internalise success" (Jones & Berglas, 1978, p. 406). Self-handicapping is a process in which people withdraw effort, create obstacles to success, or make excuses so they can maintain a public or self-image of competence (Kolditz & Arkin, 1982). Self-handicapping thus represents a strategy for regulating self-esteem (Schwinger, Wirthwein, Lemmer, & Steinmayr, 2014). Self-handicapping serves two purposes: it provides a reason for a potential failure without affecting self-worth and, when it succeeds, provides self-enhancement opportunities to claim success even in difficult contexts.

Self-esteem alerts the person of any potential threat which leads to trigger self-handicapping behaviours such as withdrawal (Rhodewalt, 1990). Nevertheless, the relationship between self-handicapping and self-esteem is uncertain. Some studies found that individuals with high self-esteem are more likely to self-handicap (Tice & Baumeister, 1990), whilst others found that those with low self-esteem are more likely to self-handicap (Coudevylle, Gernigon, & Martin Ginis, 2011; Finez & Sherman, 2012). Moreover, individuals with high self-esteem have been found to handicap more publicly than privately (Tice & Baumeister, 1990), that is, they self-handicap to enhance their successes. Individuals with low-self-esteem, in contrast, appear to self-handicap to protect their self-esteem from failure implications (Tice, 1991). Furthermore, self-handicapping has negative implications. For example, a meta-analysis of the association between self-

handicapping and academic achievement has revealed that a mean effect size between self-handicapping and academic achievement of $r = -0.23$ (Schwinger et al., 2014).

Despite the similarities between behavioural self-handicapping and the defensiveness of narcissism as postulated by the narcissism self-regulation model, only one study—to my best knowledge—has explored the relationship between narcissism and self-handicapping. Rhodewalt et al. (2006) investigated whether narcissists in uncertainty situations would engage in self-handicapping behaviour. In two experimental studies, they asked undergraduates to complete an intelligence test in two sessions. In the first session, participants took the test in a neutral condition, with no distractions, while in the second session they were given a chance to choose the music they could hear while taking the test. The music selection was described as ranging from very distracting to very facilitating. Participants with high narcissism scores self-handicapped more than non-narcissists, and they selected to self-handicap in private more than in public. This possibly indicates that they self-handicap for their self-interest rather than for the sake of appearances to others.

Rhodewalt et al.'s (2006) second experiment replicated the findings of Study 1 and added the result indicating that self-handicapping appeared to be motivated by self-protection rather than self-enhancement. This result suggests that narcissistic self-handicapping occurs to meet defensive and self-deceptive goals rather than self-enhancing and self-presentational goals.

A relevant study investigated the use of behavioural self-handicapping as a pre-emptive defensive strategy among discrepant high self-esteem (i.e. high explicit self-esteem and low implicit self-esteem), similar to narcissism. Participants were told that an upcoming test of an important ability was only diagnostic of either exceptionally high or very low skills (i.e., only success or failure was diagnostic of ability) and were given the opportunity to behaviourally self-handicap by selecting from a range of performance-detracting versus neutral music choices. Results showed that when success was diagnostic, participants with discrepant high self-esteem engaged in significantly greater behavioural self-handicapping than other participants (Lupien, Seery, & Almonte, 2010).

In sum, Rhodewalt et al.'s (2006) two experiments have shown that narcissists adopt self-handicapping behaviours. But note that in these two experiments participants were given an option to self-handicap or not by choosing the type of music they would

listen to while completing the task. In contrast, the current thesis (Study 3) attempts to investigate how narcissists react in neutral situations. In the current study, participants' choice of task difficulty will be used as an indicator of whether or not self-handicapping is occurring. (Avoiding challenging tasks is one of the nine categories of self-handicapping proposed by Mitchell and Decker (2017).

2.11 Vulnerable Narcissist Reactions to Threats to Self-Esteem

Literature on the responses of vulnerable narcissists to threats to self-esteem is very scarce. In fact, no prior study has investigated the behavioural responses of vulnerable narcissism following a threat to self-esteem. However, there are limited studies that have examined the affective responses of vulnerable narcissists when threatened. For example, the level of vulnerable narcissism was found to be positively correlated with negative affect and expected rumination following positive, mixed and negative feedback (Atlas & Them, 2008). Similarly, vulnerable narcissism has been found to be associated with negative affect in an interpersonal threat scenario (rejection) but not in an achievement threat scenario (job loss; Besser & Priel, 2010).

Furthermore, Malkin, Barry, and Zeigler-Hill (2011) examined the responses of vulnerable adolescents in conditions of negative, positive and no feedback on performance on a general knowledge quiz. They revealed an interaction of vulnerable narcissism and feedback on shame. Similarly Freis, Brown, Carroll and Arkin (2015) presented 77 undergraduates with bogus feedback (unsatisfactory, satisfactory) on an essay they wrote. Results found that participants with high vulnerable narcissism showed high shame and anger as a response to unsatisfactory feedback when they evaluated their performance as good, whereas participants with low vulnerable narcissism did not show this interaction effect. This suggests that individuals high in vulnerable narcissism react with inner feelings of shame and anger when threatened.

In general, previous studies presented evidence for vulnerable narcissists reacting with negative affect following negative feedback or even following positive feedback. This leads to the assumption that vulnerable narcissists do not feel safe in an evaluative context and might choose to withdraw from these contexts or to engage in other types of withdrawal behaviours or self-handicapping. Studies 2 and 3 of the current thesis address this idea.

2.12 The Narcissistic Personality Inventory NPI

The NPI is the most commonly used measure of trait narcissism (Ames, Rose, & Anderson, 2006; Campbell & Foster, 2007). High scores on the NPI have almost become the definition of high levels of trait narcissism (Tamborski & Brown, 2011). Its items were developed using the criteria for NPD when it first appeared in the DSM-III in 1980 (American Psychiatric Association, 1980). The original version of the NPI (Raskin & Hall, 1979) consisted of 220 forced-choice items. Each item consists of two statements: a narcissistic alternative and a non-narcissistic alternative. Participants have to select which of the two is most true for them (e.g., "I really like to be the centre of attention" versus "It makes me uncomfortable to be the centre of attention"). The number of items of the inventory has undergone several refinements, reducing from the original 220 items to 80 items, to 54 items, and finally to the 40 items of the inventory that is the current form of the NPI (Raskin, & Hall, 1979; Raskin & Hall, 1981; Raskin & Terry, 1988). Despite the popularity of the NPI among personality and social psychology researchers, several researchers have published papers raising concerns about the validity of this inventory (Ackerman et al., 2011; Brown, Budzek, & Tamborski, 2009; Corry, Merritt, Mrug, & Pamp, 2008; Miller & Campbell, 2011; Pincus & Lukowitsky, 2010b). Concerns regarding the NPI include associations of the instrument with other constructs that should not relate to it. For instance, NPI was found to have a significant positive relationship with self-esteem ($r = 0.30$; Bosson et al., 2008b) and well-being (Sedikides et al., 2004). At the same time, it has a negative relationship with psychological distress and certain forms of impairment such as anxiety, loneliness, depression, and dispositional neuroticism (Bosson et al., 2008b; Miller & Campbell, 2008; Sedikides et al., 2004). Furthermore, other scholars criticise the NPI because it assesses constructs that are irrelevant to narcissism such as leadership (Brown et al., 2009).

The third main critique of the NPI is claims that the instrument does not assess the pathological aspect of narcissism and it assesses the adaptive aspects only (Trull & McCrae, 2002). The final critique concerns the structural validity of the NPI or the inconsistency of the factor structure of the instrument. Specifically, there is an agreement that narcissism as measured by the NPI is a multidimensional construct, but there is inconsistency on the number of factors of the NPI. The original version of the NPI was published as a unidimensional scale without subscales (Raskin & Hall, 1979). Several

researchers have examined the factorial structure of the NPI. Specifically, Emmons (1984) employed the principal components factor analysis and yielded a four-factor solution. These factors were named: leadership/authority, self-absorption/self-admiration, superiority/arrogance, and exploitiveness/entitlement. These four factors had acceptable internal consistencies with 0.69, 0.81, 0.70, and 0.68 respectively; whereas the inter-factor correlations ranged from 0.16 to 0.57 (Emmons, 1987).

Raskin and Terry (1988) conducted principal components factor analysis of the 54-item NPI on a sample of 1008 undergraduate students. They found a seven- factor solution to be the best solution of the NPI. The factors were labelled: authority, self-sufficiency, superiority, exhibitionism, exploitiveness, vanity, and entitlement (Raskin & Terry, 1988). Inter-correlations of the seven factors ranged from 0.11 to 0.42. Furthermore, the test-retest reliability after 14 weeks for the 40-item NPI total and seven factor scores was 0.57–0.80.

Kubarych et al.'s (2004) principal component analysis of the NPI responses of 338 undergraduates produced a two-factor solution in which the factors were labelled power and exhibitionism. The internal consistencies of the factors were 0.82 and 0.72 respectively. A second model with a three-factor solution was also examined. Here factors were labelled power, exhibitionism, and being a special person. The internal consistencies of the factors were 0.80, 0.70, and 0.63, respectively. Similarly, Corry, Merritt, Mrug and Pamp (2008) extracted two factors labelled: leadership/authority and exhibitionism/entitlement. Finally, Ackerman et al. (2011) found a three-factor solution to be the best model for the NPI. The three factors were labelled: leadership/authority, grandiose/exhibitionism, and entitlement/exploitativeness. The internal consistency reliabilities of the three factors of leadership/authority, grandiose/exhibitionism, and entitlement/exploitativeness were .78, .72, and .46, respectively. Here are the inter-correlations between leadership/authority and grandiose /exhibitionism (r =0.43); leadership /authority and entitlement/exploitativeness (r =0.31) and grandiose /exhibitionism and entitlement/exploitativeness (r = 0.21).

Furthermore, Corry, Merritt, Mrug and Pamp (2008) applied confirmatory factor analysis to examine the conventional model fit statistics of the different solutions of the NPI: Emmons' (1984) four factors, Raskin and Terry's (1988) seven factors, Kubarych et al.'s (2004) two and three factors, and Corry's two factor solution (Corry, Merritt, Mrug,

& Pamp, 2008). Confirmatory factor analysis was conducted on the responses of 724 undergraduates. The model fit of the five models were all within the cut-off values for the conventional model fit statistics. Specifically, all the models scored above 0.93 on the comparative fit index (CFI) with the Raskin and Terry (1988) model being the highest at 0.955; root mean square error of approximation (RMSEA) ranged from 0.038 for the Raskin model to 0.062 for the Corry et al. (2008) two-factor model; SRMR ranged from 0.085 for the Raskin and Terry (1988) model and 0.096 for Corry's two-factor model. Thus, the Raskin and Terry seven-factor model had the best model fit (Corry, et al., 2008).

Similarly, Ackerman et al. (2011) examined the model fit of the Corry et al. (2008) two-factor solution, Kubarych et al. (2004) three factor solution, the four-factor Emmons (1984) solution, and the seven-factor Raskin and Terry (1988) solution, but none of these models reached conventional model fit cut-off values. Nevertheless, they attributed the misfit results to the presence of a large number of correlated item residuals and cross-loadings that they described as a common problem in using confirmatory factor analysis on personality measurements.

There is a growing agreement that it is almost impossible for confirmatory factor analysis of personality inventories to reach conventional model fit statistics because of its restrictiveness, as it does not allow cross loadings. Thus, a relatively new method: exploratory structural equation modelling (ESEM) was proposed as an alternative to the confirmatory factor analysis CFA (Asparouhov et al., 2009; Marsh et al., 2009, 2010) to overcome these problems. ESEM is an integration of EFA, CFA, and SEM that has the potential to overcome CFA limitations. Particularly, poor fit to item-level factor structure, poor discriminant validity due to inflated correlations among CFA factors, and biased structural parameter estimates in SEM based on miss-fit of the measurement models. Moreover, ESEM is similar to EFA but factor numbers to be retained are specified earlier as in the CFA. The ESEM identification strategy for mean structure is similar to CFA: item intercepts are freely estimated and latent factor means are constrained to zero (Marsh et al., 2014). Surprisingly, and despite the importance of the NPI in narcissism studies ESEM has never been applied to NPI. Thus, Study 1 of the current thesis addresses this gap.

Chapter 3 Study 1: Exploratory Structural Equation Modelling of the Narcissistic Personality Inventory NPI

3.1 Introduction

The selection of the appropriate measurement of narcissism is not an easy task with the existence of more than fourteen instruments (Furnham, Milner, Akhtar, & DeFruyt, 2014). Given that this thesis population is non-clinical, working adults, the NPI seems the appropriate tool to be used because it has an established history of use. However, previous researchers have raised some construct-validity related concerns with the NPI (Ackerman, Donnellan, & Robins, 2012; Soyer, Rovenpor, Kopelman, Mullins, & Watson, 2001), which will be reviewed in more detail shortly. In particular, the construct of narcissism is unlikely to be uni-dimensional, yet there is considerable disagreement about what the dimensionality of the NPI instrument is. Although multiple attempts to determine the dimensionality have been made, many of them have used non-optimal analytic approaches and/or samples (e.g., samples do not meet requirements of factor analytic approaches for large instrument and using student samples only. The current study addresses these issues.

The issue of the dimensionality of the NPI is particularly concerning as different factor structures imply different conceptual interpretations for related groupings of item responses. Moreover, factor analytic approaches have developed considerably since the initial development of the NPI. Principal factors approaches (i.e., EFA) are preferred over principal components approaches, and it is now expected that once established, an instrument performs well when assessed with a confirmatory or semi-confirmatory analytic approach such as confirmatory factor analysis (CFA) or exploratory structural equation modelling (ESEM). Thus, the aim of this study is to examine the dimensionality factor structure of the NPI and its internal consistency before deciding whether to use the NPI in the later studies in this thesis or for other research studies.

3.2 Overview of Support and Concerns for Using the NPI

Since the introduction of narcissistic personality disorder as a new disorder to be included in the third edition of the Diagnostic and Statistical Manual (American Psychiatric Association, 1980), several self-report measurement instruments have been

developed to assess narcissism. The Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) has frequently been used for this purpose, in both clinical and non-clinical populations. For example, an article published in 2008 noted that the NPI already has been used in more than 75 % of studies in the area of social and personality psychology (Cain, Pincus, & Ansell, 2008). The NPI has been found to adequately measure narcissism, as it captured the variance in expert ratings of grandiose narcissism and was associated with traits generally considered to be related to grandiose narcissism such as extraversion, dominance, impulsiveness, independence, self-esteem, and hostility (Emmons, 1984). Furthermore, NPI had an acceptable split-half reliability of .80 (Raskin & Hall,1979). Even recent authors have found the NPI to be an adequate scale for measuring narcissism (Miller et al., 2017).

A variety of researchers have used the NPI to study normal adult working populations. For example, organizational psychologists have investigated the relationships of sub-clinical narcissism (i.e., 'normal' narcissism) with various work-related constructs such as leadership (Grijalva, Harms, et al., 2015), job performance (Chatterjee & Hambrick, 2007, 2011), job satisfaction (Mathieu, 2013), counterproductive work behaviour (Grijalva & Newman, 2015; O'Boyle et al., 2012), and reactions to feedback (Nevicka et al., 2016). Most of these studies used The Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) as the primary measurement of narcissism. For example, in a meta-analysis of the relationship between narcissism and leadership, Grijalva and her colleagues (2013) found that NPI was used in 14 out of 38 studies and it was used in 27 out of 42 studies which examined the relationships of narcissism with extraversion and introversion personality factors (Grijalva, Harms, et al., 2015).

Nevertheless, various measurement and construct validity aspects of the NPI also have been a subject of many criticisms including its content, internal consistency and factorial structure (Ackerman et al., 2011; Maxwell et al., 2011; Miller & Campbell, 2011; Pincus et al., 2009; Raskin & Terry, 1988; Wetzel, Roberts, Fraley, & Brown, 2016). Moreover, some researchers question the validity of the findings of studies which have used the NPI because the NPI did not reach the acceptable model fit statistics. Thus, it is vital to examine the structural validity of the NPI and whether its measurement model reach the conventional goodness of fit values (Ackerman et al., 2011).

The original version of the NPI was published for use as a unidimensional scale (i.e., by creating a narcissism total score) without subscales (Raskin & Hall, 1979). The NPI uses a forced-choice response format in which participants are asked to choose between a narcissistic alternative and a non-narcissistic alternative for each item (e.g. "I really like to be the centre of attention" vs. "It makes me uncomfortable to be the centre of attention"; Raskin & Hall, 1988, p. 590). Thus, each item response is dichotomous (i.e., there are only two options) in nature. An individual's total score is calculated as the number of narcissistic responses to the full set of items. However, the NPI total score is difficult to interpret because it has shown correlations with different, conflicting personality traits, thus implying that there is an underlying multi-dimensionality of the total score. For instance, individuals with high NPI scores also tend to score high on self-reported leadership ability, social influence and confidence. At the same time, the NPI score was also found to be positively correlated with toxic elements of personality such as the tendency to exploit others, a high sense of entitlement and aggression. Accordingly, it is evident that the dimensionality of the NPI must be clarified to better understand the differential relations of the NPI total score with the criterion variables that are the central focus of much research on narcissism, such as aggression, hostility, self-enhancement, and self-esteem (e.g., Barry, Frick, & Killian, 2003; Brown et al., 2009; Emmons, 1987; John & Robins, 1994; Rhodewalt & Morf, 1998; Ruiz et al., 2001; Trzesniewski et al., 2008).

3.3 Review of Prior Investigations of the Dimensionality of the NPI

Indeed, several researchers have examined the factorial structure of the NPI. Critical aspects of their studies are summarised in Table 3-1 , and each study is described in more detail in the following paragraphs. Specifically, Emmons (1984) administered the 54-item NPI to a sample of 451 undergraduates. The principal components factor analysis yielded a four-factor solution accounting for 72% of the variance. Out of 54 items, only 40 items had loadings greater than .35. The four-factor solution was replicated in a second study with a sample of 388 undergraduates. However in this study only 37 items were retained to produce the four factors (Emmons, 1987). The four factors were: Leadership/authority, self-absorption/self-admiration, superiority/arrogance, and exploitiveness/entitlement. The four factors had acceptable internal consistencies with .69, .81, .70, and .68 respectively; the inter-factor correlations ranged from .16 to .57,

indicating that the factors were weakly to moderately related to each other (and not so strongly related as to be redundant) (Emmons, 1987).

Emmons (1984) four-factor solution was questioned by Raskin and Terry (1988). They described Emmons' (1984) selection criterion as too conservative and claimed that because the NPI items are dichotomous, an analysis of tetrachoric correlations should provide a clearer view of the item structure than inter-item phi coefficients. Thus, they conducted principal components factor analysis of the 54-item NPI on a sample of 1008 undergraduate students. A seven-factor solution was found to be the best model; it explained 52% of the total NPI variance. Twelve items were excluded from the analysis because they did not load on any of the seven factors. The factors were labelled: authority, self-sufficiency, superiority, exhibitionism, exploitiveness, vanity, and entitlement (Raskin & Terry, 1988). Inter-correlation of the seven factors ranged from .11 to .42. Furthermore, the test-retest reliabilities after 14 weeks for the 40-item NPI total and the seven factor scores ranged from .57–.80.

A third study that sought to examine the factor structure of the NPI was done by Kubarych, Deary and Austin (2004). They applied exploratory factor analysis to the NPI responses of 338 undergraduates, producing a two-factor solution that explained 22% of the variance. The factors were labelled power and exhibitionism. The internal consistencies of the factors were .82 and .72, respectively. A three-factor solution was also examined, in which 27% of the variance was explained by dimensions labelled power, exhibitionism, and being a special person. The internal consistencies of the factors were .80, .70, and .63, respectively. CFA was conducted to confirm the EFA factors. However, the model fits for both models were below the acceptable cut-off values. To improve the model fit, several items with nonsignificant loadings or high correlations were deleted, and correlated errors were allowed.

Similarly Corry, Merritt, Mrug and Pamp (2008) applied exploratory common factor analysis with promax oblique (non-orthogonal) rotation on responses of a sample of 724 undergraduates on the 40-item version of the NPI. They argue that common analysis is more suitable for extracting latent variables than principal component analysis. A two-factor solution was extracted, and the dimensions were labelled leadership/authority and exhibitionism/entitlement. 17 items were dropped from the analysis because their loadings were less than .40. In a second study they conducted

confirmatory factor analysis (CFA) to assess Emmons' (1984) four factors, Raskin and Terry's (1988) seven factors, Kubarych et al.'s (2004) two and three factors, and their own two-factor solution as was revealed in their first study. Confirmatory factor analysis was conducted on the responses of a second sample of 724 undergraduates. The fits of the five models were all within the conventional cut-off values for the model fit statistics. Specifically, all the models scored above .93 on the comparative fit index (CFI), with the Raskin and Terry (1988) seven-factor model being the highest at.955; Root mean square error of approximation (RMSEA) ranged from .038 for the Raskin and Terry model and .062 for the Corry et al. (2008) two factors model; SRMR ranged from .085 for the Raskin and Terry model, and .096 for Corry's two-factor model. Thus, they concluded that the Raskin and Terry seven-factor model had the best model fit.

The final model of the NPI is Ackerman et al. (2011) three-factor solution. They conducted exploratory factor analysis of the responses of a large sample of 19,001 undergraduates on the 40-item NPI. Their results revealed a three-factor solution with dimensions labelled leadership/authority, grandiose/exhibitionism, and entitlement/exploitativeness. Confirmatory factor analysis was used with a different sample (N = 353 college students) to examine the fit of the three-factor solution. Results have shown that the three-factor model fit indices were below the acceptable rule of thumb for a conventional model fit. However, model fit improved after specifying six covariances between residuals for six items with similar content such as "I like to display my body" and "I like to look at my body". Thus, the model fit indices for this modified model fell within the acceptable range, specifically, *CFI* = .928, Tucker–Lewis index (*TLI*) = .919, *RMSEA* = .045. These model fit indices were replicated with two additional samples of undergraduates (*N= 332; N= 200*) after adding the six covariances of the residuals of items with similar content. Furthermore, the internal consistency of the three factors leadership/authority, grandiose/exhibitionism, and entitlement/exploitativeness were: 78, 72, and .46 respectively. The inter-correlation between leadership/authority and grandiose/exhibitionism (r = .43); leadership/authority and entitlement/exploitativeness (r = .31) and grandiose/exhibitionism and entitlement/exploitativeness (r = .21).

Moreover, Ackerman et al. (2011) examined the model fit of the Corry et al. (2008) two-factor solution, Kubarych et al. (2004) three-factor solution, the Emmons (1984) four-factor solution, and the Raskin and Terry (1988) seven-factor solution, but none of these

models reached the conventional model fit cut-off values. Ackerman et al. attributed the misfit to the presence of a large number of correlated item residuals and cross-loadings that they described as a common problem in using confirmatory factor analysis on personality measurements.

In sum, the methodologies and results of these studies indicate a number of challenges to the use of the NPI. First, across the studies, sample sizes ranged from 332 to 19,001. Ideally, for a survey of 40 or 54 items, sample sizes should be at least in the 500's, and larger samples than that would be preferred. If appropriate estimators are used to accommodate the dichotomous nature of the item responses, the use of larger samples is especially important. In addition, all of the studies reviewed appear to have used college student (mostly undergraduate) samples. This raises the question of whether the observed factor structures would fully replicate in adult working samples.

Second, the supported factor dimensionalities range from two to seven, although the content of some of the factors is interpreted similarly across studies. In part, the variability in dimensionality might be a reflection of the factor analytic techniques employed. For example, Emmons' (1984) two studies, the study of Raskin and Terry (1988), and the study by Kubarych et al. (Kubarych et al., 2004) all used a factor analytic technique (i.e., principal components analysis) that used to be fairly common but now is acknowledged to be non-optimal for this type of purpose. Principal components analysis is known in some instances to result in the under-extraction (i.e., too few) factors, which might explain the lower dimensionality of the Emmons and Kubarych et al. solutions, although Raskin and Terry's solution had the largest number of factors. In addition, Raskin and Terry are to be commended for their adjustment for the dichotomous nature of the item-level responses (they took account of this by using tetrachoric correlations as input to the principal components analysis) – this consideration does not seem to have been taken into account in the other studies. The CFA studies (Corry et al., 2008, Study 2 and Ackerman et al., 2011, Study 2) allowed for confirmatory tests of a given factor structure, as well as the potential to compare fits across models of different dimensionalities. Corry et al. (2008) found that the Raskin and Terry seven-factor model had the best fit, but as noted by Ackerman et al. (2011), even the best-fitting models tended not to reach conventional fit cut-offs without allowing correlated item residuals and/or cross-loadings. Finally, the starting point for two sets of authors (Emmons; Terry &

Raskin) was the 54-item version of the NPI, whilst for the rest it was the 40-item version of the NPI. And, a number of the studies dropped various items to achieve good factor solutions, and it does not seem that this was done uniformly across studies.

Table 3-1 Summary of Previous Studies Findings about the PNI Dimensionality

Study	Sample & Analytic Approach	Dimensions Identified
Emmons (1984)		
Study 1	54-item version of the NPI N = 451 undergraduates Principal components analysis Only 40 items had loadings > .35	4 Factors: (1) leadership/ authority; (2) self-absorption; (3) superiority/ arrogance; (4) exploitiveness/ entitlement
Study 2 (replication)	54-item version of the NPI N = 388 undergraduates Only 37 items had loadings > .35	Same as Study 1
Raskin & Terry (1988)	54-item version of the NPI N = 1008 undergraduates Principal components analysis using tetrachoric correlations 12 items were excluded from Analysis	7 Factors (1) authority, (2) self-sufficiency, (3) superiority, (4) exhibitionism, (5) exploitativeness, (6) vanity, (7) entitlement
Kubarych et al. (2004)	40- item version of NPI N = 338 undergraduates Exploratory factor analysis And confirmatory factor analysis Dropped five items from analysis	Two different solutions 2 Factors (1) Power; (2) Exhibitionism 3 Factors (1) Power; (2) Exhibitionism; (3) Being a special person
Corry, Merritt, Mrug & Pamp (2008)		
Study 1	40-item version of NPI N1 = 724 undergraduates Exploratory factor analysis (EFA) with promax (oblique) Rotation 17 items were dropped	2 Factors (1) Leadership/ authority; (2) exhibitionism/ entitlement
Study 2	40-item version of NPI N 2 = 724 undergraduates Confirmatory factor analysis (CFA) to compare multiple factor structures based on previous works and their own Study 1	Best fitting model was the 7-Factor model of Raskin & Terry (1988)
Ackerman et al. (2011)		
Study 1	40-item version of NPI N = 19,001 undergraduates	3 Factors

	Exploratory factor analysis	(1) Leadership/ authority; (2) grandiose/ exhibitionism; (3) entitlement/ exploitativeness
Study 2	40-item version of NPI N = 353 college students Confirmatory factor analysis	Same as above; acceptable model fit after 6 residual covariances were added; the residual covariances then replicated in two additional samples CFA was also performed to compare model fits of Corry et al. 2-factor model, Kubarych et al. 3-factor model, Emmons 4-factor model, and Raskin & Terry 7-factor model. None of these reached conventional model fit cut-offs.
Study3	40-item version of NPI N = 332 college students	The three factors were replicated with better model fit indices after adding the covariates to the CFA model.

3.4 Potential for ESEM as a Solution for Modelling the Factor Structure of NPI

The literature indicates that the CFA of personality instruments is almost impossible to replicate the EFA with a good model fit. For example, several researchers failed to confirm the structure of the NEO Personality Inventory (NEO-PI) or Revised NEO Personality Inventory (NEO-PI-R) in separate investigations despite agreement on the theoretical structure of this inventory (Church & Burke, 1994a; Gignac, Bates, & Jang, 2007; McCrae, Zonderman, Costa, Bond, & Paunonen, 1996). These findings have led researchers to question the CFA technique when used with personality inventories (McCrae et al., 1996), while others have suggested using the model fit indices as indicators and not to reject the instrument solely on misfit (Hopwood & Donnellan, 2010). Nevertheless, scholars agree that failing to replicate EFA factor results using the CFA approach can be ascribed to the fact that EFA allows cross loading of items while CFA is more restrictive, and all cross loadings are constrained to zero. Because of this, in many instances item-level CFAs fail to provide clear support for instruments that had apparently been well established in EFA research (Church & Burke, 1994b; Marsh et al., 2010; Raykov, 1998). To illustrate this notion, Marsh et al. (2004) claim that:

It is almost impossible to get an acceptable fit (e.g. CFI, TLI > 0.9; RMSEA < 0.05) for even 'good' multifactor rating instruments when analyses are done at the item level and there are multiple factors (e.g. 5–10), each measured with a reasonable number

of items (e.g. at least 5–10/per scale) so that there are at least 50 items overall (Marsh, Hau, & Wen, 2004, p. 325).

Moreover, Marsh et al, (2010) invited more than 2000 members of the SEMNET (an electronic network devoted to structural equation modelling) to provide published papers that might refute this claim, but no member was able to do so. This means that most of the published papers that include personality measurements do not reach the minimum model fit criteria. They stated that these misfits cannot be explained by the insufficient strength of the instruments but reckoned that the underpinning reason might be ascribed to the special nature of personality inventories that have multiple elements, so zero cross-loadings does not comply with the nature of these items. For example, a clinical symptom of a psychological disorder can be associated with multiple diagnostic categories: either as symptoms or as associated characteristics (Marsh et al., 2014). Furthermore, these small cross-loadings are important to reduce the inflated CFA factor correlations and improve the discriminant validity of the factors (Marsh et al., 2009, 2010; Marsh, Nagengast, et al., 2011; Marsh, Liem, Martin, Morin, & Nagengast, 2011; Schmitt & Sass, 2011). Moreover, researchers usually apply different strategies to improve the model fit such as: item parcelling, *ex post facto* modifications such as the *ad hoc* correlated uniqueness but these strategies tend to be misleading, counterproductive or dubious (Marsh, Lüdtke, Nagengast, Morin, & Von Davier, 2013).

To overcome these problems, exploratory structural equation modelling (ESEM) has been proposed as an alternative to CFA (Asparouhov et al., 2009; Marsh et al., 2009, 2010). ESEM is an integration of the characteristics of EFA, CFA, and SEM that has the potential to overcome CFA limitations including poor fit to item-level factor structures, poor discriminant validity due to inflated correlations among CFA factors, and biased structural parameter estimates in SEM based on misfit of the measurement models. Moreover, ESEM is a similar to EFA but the number of factors to be retained (i.e., factor dimensionality) is specified by the researcher, as done for CFA. The ESEM identification strategy for mean structure is similar to that of the CFA: item intercepts are freely estimated and latent factor means are constrained to zero (Marsh et al., 2014).

ESEM models are much more flexible than traditional EFA models. For example, for longitudinal data the ESEM approach can evaluate the factor structure separately at each wave of data or with all waves combined in the same model and test measurement

invariance over time—using the same rationale as longitudinal CFAs. Similarly, like CFA, ESEM can be used to test full measurement invariance across multiple groups, whereas this is not easily accomplished with EFA (Marsh et al., 2014).

Although several personality studies have applied ESEM fairly recently to overcome some limitations of CFA (Marsh et al., 2009, 2010; Marsh, Nagengast, et al., 2011), the NPI has not been investigated using ESEM despite the poor model fit of different solutions that have been shown clearly in the two studies reviewed earlier, i.e., (Ackerman et al., 2011; Corry et al., 2008). Thus, the current Study 1 will address this void in the literature.

The current study aims to investigate the power and flexibility of ESEM methods that integrate CFA and EFA to address substantively important issues about the NPI factor structure on the basis of responses to the 40-item NPI. The main hypothesis of this study is that ESEM models fit better than corresponding CFA models. Furthermore, the second hypothesis of this study argues that NPI factor correlations in ESEM models are expected to be lower than the correlations in the CFA model that indicate a better discriminant validity.

Moreover, unlike previous studies in which results were gathered from samples of undergraduate students, the present study sample consists of working adults from a normal population with a mean age of 33.75 years, will be described shortly. The specification of this study sample might therefore affect the results, as age correlates negatively with narcissism (Foster et al., 2003).

3.5 Method

3.5.1 Sample and Procedure

The study sample was recruited through the academic prolific platform to participate in this study. The sample consists of 1001 participants (54.5% male, 45.3% female, two subjects did not specify gender). In terms of race/ethnicity, the majority of the sample are white (80.2%), 11.9% are Asian, 4.1% African, and 3.6% are of other races. The mean age of the sample is 33.75 (*SD* = 9.81). The participants also tend to have a relatively high level of educational attainment: 49.7% of the sample have a university degree, 24.1% indicate that they finished high school, 22.2% have a professional qualification and 3.4% have doctorates, and .6% of the sample did not complete high

school. The sample consists of working individuals only, with an average work experience of 11.32 years (*SD* = 10.20).

3.5.2 Measures

The NPI (Raskin & Terry, 1988) is a 40-item forced-choice, self-report questionnaire developed to assess narcissism as a personality characteristic. Each item consists of a pair of narcissistic and non-narcissistic statements such as "Modesty doesn't become me" and "I am essentially a modest person." Respondents are asked to choose which item best describes them. (Appendix A contains the full version of the inventory used in this current Study 1)

3.5.3 Analytical approach

Analyses were conducted with Mplus 7.4 (Muthén & Muthén, 1998-2012), using diagonal weighted least squares estimator (WLSMV). This is the default estimator for categorical and nominal variables such as the item level responses of the NPI. WLSMV was shown in a Monte Carlo simulation to be less biased and more accurate than a robust maximum likelihood estimator in estimating factor loadings for categorical data, and it provides moderate overestimation of the inter-factor correlations when the latent distributions were moderately non-normal (Li, 2016) as in this sample.

Model fit indices are assessed by examining the conventional model fit indices provided in Mplus. The likelihood ratio chi-square is expected to be non-significant for the global test of exact fit of the model. However, this is a very stringent criterion, and indicators of approximate fit are also consulted with criteria of: (a) above .90 on the CFI, (b) a RMSEA of .05 or less, and (c) a weighted Root Mean Square Residual (WRMR) of 1 or less (Kline, 2016).

3.5.4 Preliminary analysis:

The univariate skewness and kurtosis values for the NPI total score did not exceed an absolute value of 1, suggesting total scores were approximately normally distributed. Because of their dichotomous nature, distributions of item-level responses were non-normal, thus the WLSMV estimator was used to accommodate this.

3.6 Results

The data analysis was performed in two phases. The first phase involved confirmatory factor analysis (CFA) to compare fits of the previously discussed six NPI models (i.e., the Emmons, 1984, 4-factor model; the Raskin &Terry, 1988, 7-factor model; the Kubarych et al., 2004, 2- and 3-factor models; the Ackerman et al., 2011, 3-factor model, and the Corry et al., 2004, 2-factor model). The second phase assessed the fit of these six models using ESEM.

3.6.1 Phase 1: Confirmatory Factor Analysis Results:

Confirmatory factor analysis was conducted to examine the fit of the six NPI models. Table 3-2 summarises the goodness of fit statistics for confirmatory factor analysis of different NPI models.

Table 3-2 Summary of Goodness of Fit Statistics for Different Models of NPI.

Author & # Factors	Chi square	Sig	RMSEA	CFI	WRMR
Corry et al., 2004; 2 Factor	1160.407	.001	.064	.875	2.007
Kubarych et al., 2004; 2 Factors	2180.989	.001	.050	.861	1.795
Kubarych et al., 2004; 3 Factors	1964.840	.001	.046	.880	1.687
Emmons ,1984; 4 Factors	1850.708	.001	.058	.861	1.941
Ackerman et al., 2008; 3 Factors	1272.797	.001	.061	.878	1.937
Raskin & Terry, 1988; 7 Factors	1739.895	.001	.038	.920	1.44

As Table 3-2 shows, all of the models have statistically significant chi-square (χ^2), thus leading to the rejection of a null hypothesis of exact fit of the model. This is expected as χ^2 is sensitive to sample size. In particular, as the sample size increases (leading to high power) the χ^2 statistic tends toward statistical significance, increasing the likelihood of model rejection. This is because in a large sample, the χ^2 statistic can detect even the smallest discrepancies between the expected and observed covariance matrices, thus inducing rejection of the model (L. Hu, Bentler, & Kano, 1992; Meade, Johnson, & Braddy, 2008).

The remaining indices can give idea sense of whether the model fits approximately well. The *RMSEA* values of all models are within an acceptable threshold (i.e., below 0.05), except for the Corry et al. (2008) two-factor model and the Ackerman et al. (2011) three-factor model. Values of CFI are below the cut-off scores (> .90) for all models except the Raskin and Terry (1988) seven-factor model. Finally, WRMR values for all models

are above the cut-off score (< = 1.0). Accordingly, the Raskin and Terry seven-factor model has the best conventional model fit statistics. It is also worth mentioning that the output for each model included some model modification indices of 10 or greater indicating minor changes to the model that might have improved the model fit—but these modifications were not implemented.

Table 3-3 presents the factor intercorrelations and internal consistency values for each of the six CFA factor models. All of the inter-factor correlations were significant at the $p < 0.001$ level. However, some inter-factor correlations were high, specifically those of: (a) Kubarych et al. (2004) power and special person factors (r = .80); (b) Emmons (1984) leadership/authority and superiority/arrogance (r = .85); superiority/arrogance and exploitativeness/entitlement (r = .90), and (c) Raskin and Terry (1988) entitlement and self-sufficiency (r = .83). These high correlations raise a question about the uniqueness of the correlated factors.

Moreover, the internal consistencies of the factors ranged between .44 and .83. However, only the dimensions of the Kubarych two-factor model and Corry's two-factor model reached a satisfactory internal consistency alpha value of greater than .70. The remaining models' internal consistencies were below the acceptable values. Specifically, special person (α = .68) of Kubarych, Deary and Austin (2002); superiority/arrogance (α = .59), and exploitativeness/entitlement (α = .61) of Emmons (1984); entitlement/exploitativeness (α = .49) of Ackerman et al. (2011); and self-sufficiency (α = .44), superiority (α = .62), exploitativeness (α = .58), and entitlement (α = .54) of Raskin and Terry (1988). It is very clear that despite having the best model fit indices, the Raskin and Terry seven-factor model sub-scales have internal consistencies that are far below the acceptable alpha score.

A level of .30 is considered as the cut-off point for the magnitude of standardised factor loadings (Kline, 2016). Importantly, in order to be considered an acceptable indicator, the factor loading of the indicator must be statistically significant. Furthermore, the loadings of observed variables on latent variables shows that most loadings were significant at $p = .001$. An exception to this was for item number 22 with a loading on the self-sufficiency factor of the Raskin and Terry (1988) model. Moreover, item numbers 14 and 24 of exhibitionism/entitlement of the Corry et al. (2004) model loadings is below the acceptable value (.29). Item numbers 14 (.28) and 24 (.29) loaded in power factor of

Kubarych two factors model. The detailed item loadings of different CFA models of NPI are in appendix B.

In conclusion, although the Raskin and Terry (1988) seven-factor solution obtained the best fit to the data according to conventional model fit indices, the internal consistencies of four of its seven factors are below the acceptable values.

In the next section, ESEM is used as an alternative to CFA in order to make fewer restrictive assumptions about cross-loadings, and to potentially achieve better model fit for the different models of NPI.

Table 3-3 Confirmatory factor analysis factor inter-correlations and internal consistency values

Model	F1	F2	F3	F4	F5	F6	F7	α
Corry (2008) 2-Factor Model								
F1: leadership/authority	--							.78
F2: exhibitionism/entitlement	.59**	---						.76
Kubarych et al. (2004) 2-Factor Model								
F1: power	---							.83
F2: exhibitionism	.76**	---						.74
Kubarych et al. (2004) 3-Factor Model								
F1: power	---							.79
F2: exhibitionism	.67**	---						.71
F3: special person								.68
	80**	74**	--					
Emmons (1984) 4-Factor Model								
F1: leadership/authority	---							.77
F2: self-absorption/self-admiration	.56**	---						.72
F3: superiority/arrogance	.85**	.76**	---					.59
F4: exploitativeness/entitlement	.63**	.66**	.90**	---				.61
Ackerman et al. (2011) 3-Factor Model								
F1: leadership/authority	---							.77
F2: grandiose/exhibitionism	.61**	---						.78
F3: entitlement/exploitativeness	.55**	.50**	---					.49
Raskin & Terry (1988) 7-Factor Model								
F1: authority	---							.77
F2: self-sufficiency	.76**	---						.44
F3: superiority	.53**	.73**	---					.62
F4: exhibitionism	.58**	.63**	.70**	---				.71
F5: exploitativeness	.65**	.75**	.58**	.66**	---			.58
F6: vanity	.33**	.54**	.56**	.67**	.48**	---		.72
F7: entitlement	.71**	.83**	.66**	.67**	.62**	.45**	---	.54

** p <0.01; * p <0.05.

3.6.2 Exploratory Structural Equation Modelling (ESEM)

After obtaining the CFA for different models of the NPI, the next step is to investigate the main hypothesis of the present study: the ESEM approach provides better fit to the NPI responses than does a traditional CFA model. Table 3-4 shows goodness of fit statistics for the six models that were previously investigated using CFA. As expected, due to the large sample size, χ^2 values are significant for all six models. Examining the

other model fit indices show that the RMSEA of all models is within the cut-off score (below .05), except for the Corry et al. (2008) two-factor model. The CFI shows that all model values are above the cut-off score of .90 except for the Kubarych et al. (2004) two-factor model. Moreover, the WRMR of the models was above the cut-off score of 1.00 except for the Raskin and Terry seven factor model.

In general, the goodness of fit statistics indicates that the Corry et al. (2008) two-factor model and Kubarych et al.'s (2004) two-factor model do not comply with the model fit rule of thumb values for RMSEA and the CFI for the latter solution. Thus, it is clear that Kubarych et al.'s (2004) three-factor solution, Emmons (1984) four-factor solution, Raskin and Terry (1988) seven-factor model, and Ackerman et al.'s (2011) three-factor solution have reached the acceptable goodness of model fit values. The Raskin and Terry (1988) model is the best-fitting model among them especially that it is the only model which complies with the WRMR cut-off value.

Table 3-4 Summary of goodness of fit statistics for ESEM of different models of NPI

Models	chi-square	sig	RMSEA	CFI	WRMR
Corry (2008) 2-Factor	927.335	.001	.059	0.903	1.600
Kubarych et al. (2004) 2-Factor	1808.232	.001	.045	0.891	1.534
Kubarych et al. (2004) 3-Factor	1374.840	.001	.038	0.927	1.260
Ackerman et al. (2011)3-Factor	648.773	.001	.043	0.949	1.156
Emmons (1984) 4-Factor	912.646	.001	.040	0.945	1.128
Raskin and Terry (1988) 7 factors	779.529	.001	.022	0.980	0.759

The second hypothesis of the current study is that the ESEM factor correlations will be moderate compared to the CFA factor correlations. Table 3-5 shows the intercorrelation of ESEM factors of the different NPI models. A detailed evaluation of these factor correlations demonstrates that the correlations ranged between.10 and.64. Specifically, the correlation between the two factors of the Corry et al., (2008) model is 0.31; and between the two factors of the Kubarych et al. (2004) two factor model is .51. Similarly, correlations between the four factors of the Emmons (1984) model range between −.02 to.44 whereas associations between the three factors of the Ackerman et al. (2011) model range between −.12 to.54. The Raskin and Terry (1988) seven-factor model shows that the correlations between its factors range between.04 and.42.

In comparison, the ESEM approach correlations are generally smaller than their CFA approach counterparts. For example, the correlation between the two factors of the Corry et al. (2008) on the basis of the CFA solution is .59, but .31 for the ESEM solution.

Similarly, the correlation between leadership/authority and superiority/arrogance of the Emmons (1984) four factor model is 0.85 for the CFA results but only.44 for the ESEM results. In this respect, the ESEM solution provides better evidence for discriminant validity.

Table 3-5 Exploratory Structural Equation Modelling Factors Inter-Correlations

Model	1	2	3	4	5	6	7
Corry (2008) 2-Factor Model							
Factor 1	---						
Factor 2	.31**	---					
Kubarych et al. (2004) 2-Factor Model							
Factor 1	---						
Factor 2	. 51**	---					
Kubarych et al. (2004) 3-Factor Model							
Factor 1	---						
Factor 2	.64**	---					
Factor 3	.21**	.10**	---				
Emmons (1984) 4-Factor Model							
Factor 1:	---						
Factor 2	.23**	---					
Factor 3:	.44**	.41**	---				
Factor 4:	.24**	-.02	.25**	---			
Ackerman et al. (2011) 3-Factor Model							
Factor 1	---						
Factor 2	.54**	---					
Factor 3	.18*	-.12	---				
Raskin & Terry (1988) 7-Factor Model							
Factor1	---						
Factor 2	.11	---					
Factor 3	.04	.31**	---				
Factor 4	.18	.41**	.36**	---			
Factor 5	.18	.31**	.42**	.21**	---		
Factor 6	.23**	.33**	.38**	.39**	.39**	---	
Factor 7	.13	.24**	.11	.15*	.20**	.17**	---

** significant at <0.01; * significant at <0.05.

The factor loadings of the ESEM approach for the different solutions of the NPI are shown in Appendix B. The ESEM results for the Kubarych, Deary, & Austin (2004) two factors model shows that 20 items loaded on the first factor: 40, 9, 7, 20, 30, 38, 19, 4, 28, 23, 37, 2, 26, 18, 25, 24, 3, 13, 34, and 39. According to the theoretical model, eleven of these items compose the exhibitionism factor: 2, 3, 7, 18, 19, 20, 26, 28, 30, 37 and 38. The remaining nine items: 4, 9, 13, 23, 24, 25, 34, 39 and 40, should have loaded on the power factor. Factor 2 has loadings of 11 items: 33, 10, 12, 32, 1, 36, 11, 27, 8, 6, 5, 35, 16, 17, 21, 14, and 31. Items 14 and 31 loadings did not reach the acceptable value as the loading was .27 and .29 respectively. Moreover, item 27 “I have a strong will to power” cross loaded on both factors; power and exhibitionism.

The ESEM results for the Kubarych et al. (2004) 'three-factor' model shows that the factors are not replicating the theoretical model as well. Specifically, the first factor consists of items 7, 30, 20, 40, 9, 4, 19, 26, 38, 28, 23, 37, 2, 3, and 18. Nine of these items compose the exhibitionism factor while the remaining six items: 40, 9, 4, 19, 23, and 3 are indicators of the third factor. Moreover, items 7 "I like to be the centre of attention" and 30 "I really like to be the centre of attention" cross loaded on the third factor, special person factor. Furthermore, inspecting loadings of the second factor shows that it consists of 17 items: 33, 12, 10, 32, 36, 1, 11, 27, 8, 6, 39, 16, 13, 35, 24, 21 and 5. Two of these items: 35 and 39 should have loaded on the third factor, the special person factor. Two items only loaded on the third factor: item 25 and 14 out of 12 items that compose the third factor in the theoretical model; special person factor.

The Corry et al. (2008) two factors theoretical model is made of 23 items in which only 14 items compose the first factor: exhibitionism/entitlement and 9 items compose the second factor: leadership/authority. The ESEM results show that the first factor is composed of 11 items: 15, 19, 29, 20, 38, 7, 30, 28, 4, 25, and 3. The three remaining items loaded on factor two. Items 1, 10, 33, 11, 12, 36, 24, 8, 32, 27, 39, and 14 comprise factor two. Item 14 loading did not reach the acceptable value of loading in both factors.

The Ackerman et al. (2011) three factor model ESEM loadings indicated that factor one consists of 11 items: 33, 12, 10, 32, 36, 27, 1, 24, 11, 5, and 13. According to the theoretical model items 24 and 13 should have loaded on the entitlement/exploitativeness factor whereas the remaining nine items are among the 11 items that comprise the leadership/authority factor. The ESEM results also show that items 19, 15, 29, 7, 30, 20, 38, 28, 4, 26, 40, and 34 loaded on factor 2. Ten of these items compose the grandiosity/exhibitionism factors except items 34 and 40, which are supposed to have loaded on factor 1 according to the theoretical model. The third factor consisted of two items: 25 and 14. These items are two of the four items that constitute the entitlement/exploitativeness factor the additional two items: 13 and 24 have cross loaded on factor 1. Thus, the ESEM results of the Ackerman et al. (2011) model shows that the factor loadings are not replicating the theoretical model.

ESEM results for the Emmons (1984) four factor solution shows that items 33, 10, 12, 32, 1, 36, 11, 27, 6, and 35 loaded on factor 1. According to the theoretical model five of these items: 33, 10, 12, 32, 1, and 11 are composing the leadership/authority factor and

three items: 36 “I am a born leader”, 6 “I can usually talk my way out of anything”, and 35 “I can make anybody believe anything that I want them to” should have loaded in the superiority/arrogance factor whereas item 27 “I have a strong will to power” should have loaded on exploitative/entitlement factor. Factor two consists of items 19, 15, 30, 7, 29, 20, 26, and 4. According to the theoretical model items 19, 15, 29, 26, and 4 compose the self-absorption/self-admiration factor whereas items 30 and 7 are from the leadership authority factor. Item 20 “I will usually show off if I get the chance” should have loaded on the superiority arrogance factor. The third factor had three items loaded on it: 40, 9, and 39. Two of these items 40 and 9 are among items that compose the self-absorption/self-admiration factor whereas item 39 “I am more capable than other people” is within the exploitative entitlement factor. The last factor is composed of items 25, 14, 24, 38, and 13. All of these items compose the exploitative/ entitlement factor. Thus, this factor is the only clear factor that replicates the theoretical model.

The results of ESEM of the Raskin and Terry seven factors solution show that factor 1 has two items: 4 and 21. These two items belong to two different factors in the theoretical model superiority and self-sufficiency. Moreover, item 4 cross loaded on factor 3. The second factor of the ESEM results indicate that six items significantly loaded on it: 13, 6, 35, 16, 39, and 23. According to the theoretical model five of these items: 13, 6, 35, 16, and 23 compose the Exploitative factor whereas item 39 “I am more capable than other people” should have loaded on the self-sufficiency factor. Thus, the exploitative factor is adequately represented in the ESEM model. The third factor consists of eight items: 7, 30, 2, 26, 38, 37, 20, and 22. Five of these items: 7, 30, 2, 38, and 20 are indicators of the exhibitionism factor in the theoretical model, while items 37 “I wish that somebody would someday write my biography” and 26 “I like to be complemented” are indicators of the superiority factor while item 22 “I rarely depend on anyone else to get things done” is an indicator of the self-sufficiency factor. The fourth factor of the ESEM results show that it consists of 10 items: 10, 33, 32, 12, 1, 8, 11, 36, 27, and 17. According to the theoretical model, eight of these items: 10, 33, 32, 12, 1, 8, 11 and 36 compose the authority factor while item 27 “I have a strong will to power” should have loaded in the entitlement factor while item 17 “I like to take responsibility for making decisions” is supposed to be loading in the self-sufficiency factor. Therefore, factor 4 adequately represents the authority factor. Factor 5 consists of four items: 19, 15, 29 and 28. Three of these items: 19, 15, and

29 are indicators of the vanity factor in the theoretical model whereas item 28 “I like to start new fads and fashions” is supposed to be an indicator of the exhibitionism factor according to the theoretical model. Factor 6 consists of three items: 9, 40, and 18. Items 9 and 40 are indicators of the superiority factor in the theoretical model whereas item 18 “I want to amount to something in the eyes of the world” is an indicator of entitlement in the theoretical model. The seventh factor consists of items 25, 24 and 14. According to the theoretical model these items are among the six items which compose the entitlement factor. Four items did not reach the cut-off score of loading on any of the seven factors. These items are: 3, 31, 34 and 5.

In conclusion, it is clear that despite the improvement of the model fit of all the models of the ESEM compared to the CFA models, almost none of the models replicated the theoretical model through advantage of the ESEM of the seven factors of Raskin and Terry.

3.7 Discussion

Narcissism, as studied in personality and social psychology has been using the NPI as the main instrument to measure and operationalise narcissism. However, there is an on-going debate about the factor structure of the inventory, with the result that different models of the factor structure of the NPI exist. However, none of these solutions were strongly supported either by previous confirmatory factor analysis or the CFA’s conducted in the current study, as most of these models did not reach the cut-off values of the goodness of fit model indices. The present study argues that failing to reach the acceptable rule of thumb of the model fit indices of CFA is common in personality measurement, not only the NPI. Thus, the ESEM approach has been used in this study to explore whether it can yield better model fit indices for the six solutions of the NPI compared to the CFA approach.

The results of the current study have shown that none of the CFA models reached the goodness of fit statistic criteria except for the Raskin and Terry (1988) seven-factor solution, which obtained the best fit to the data according to traditional fit indices. This finding is consistent with the Corry et al. (2008) finding.

The ESEM approach results have indicated that Kubarych et al.’s (2004) three factor solution, Emmons’ (1984) four factors solution, Raskin and Terry’s (1988) seven

factors model, and Ackerman et al.'s (2011) three factors solution have reached the cut-off score of the conventional model fit statistics. Again, the Raskin and Terry (1988) model provided the best data model fit and it is the only solution that complies with the WRMR cut-off value.

The second argument of this study was that the ESEM approach provides a better inter-factor correlation that improves the discriminant validity of the factors under study. The study results supported this hypothesis as the correlations between the factors of different solutions have been reduced compared to the CFA solutions. For instance, the average factor intercorrelation within the Raskin and Terry (1988) model ranged between .04 and .42 compared to .33 and .83 in the CFA approach.

Moreover, CFA factor loadings of the different NPI factor solutions have been significant and within the acceptable values except in three items: items 14 "I insist upon getting the respect that is due me" and item 24 "I expect a great deal from other people" of the leadership factor of the Corry et al. (2008) model and item 22 "I rarely depend on anyone else to get things done" of the self-sufficiency factor among the seven factors of the Raskin and Terry (1988) model.

However, a closer inspection of the parameter estimates from the seven-factor ESEM model shows that the factor loadings are not quite identical to those suggested by the theoretical models based on previous works. These differences in the loadings raise some issues in the NPI items. For example, the Emmons (1984) leadership/ authority factor consists of five items, excluding item 36 "I am a born leader" and item 27 "I have a strong will to power". The former is supposed to load on the superiority/arrogance factor, while the latter is an indicator of the exploitative/ entitlement factor in the theoretical model. However, in this sample both items loaded in the leadership/authority factor.

Similarly, ESEM factor loadings of the Raskin and Terry (1988) did not match the factor loadings of the theoretical model. However, four factors were relatively adequately represented in the ESEM. These are: exploitativeness, exhibitionism, authority, and vanity. Superiority and entitlement are quite clear but to a lesser extent. The self-sufficiency factor was not clear as its items distributed among the other factors.

The advantage of the ESEM over CFA was quite clear with the number of cross loadings of items within the different models of NPI. These cross loadings are the main reasons for misfit of the CFA models.

Besides the model fit problems, the content of the NPI needs to be cleaned by eliminating all but one from a set of almost identical items. For example, items number 7 "I like to be the centre of attention" and 30 "I really like to be the centre of attention" are almost identical and one of them should be omitted from the inventory.

The internal consistency of some of the factors of the NPI is below the acceptable alpha value. For instance, three of the seven factors of the Raskin and Terry model factors are below the cut-off score of alpha (.70). Similarly, two factors of the Emmons four-factor model are below the acceptable value of reliability.

Nevertheless, the findings of this study raise questions surrounding both the meaning and structure of the concept of grandiose narcissism. For instance, theoretically grandiose narcissism has been shown to encompass several traits including entitlement, an exaggerated sense of superiority, attention-seeking behaviours and exploitation of others (Cain et al., 2008; Dickinson & Pincus, 2003; Pincus & Lukowitsky, 2010; Wright, Lukowitsky, Pincus, & Conroy, 2010). However, these traits have not been reflected in most of the seven NPI factorial models. For example, Corry, Merritt, Mrug and Pamp (2008) used a two factor model, while Kubarych, Deary and Austin's (2004) two and three factor model emphasises two factors, authority and exhibitionism, while ignoring other characteristics, such as entitlement and exploitation – key features of narcissism. Thus, the Raskin and Terry (1988) seven factor model is the only model that captures the main features of grandiose narcissism and it has proven to be the only model that reaches an acceptable fit according to typical rules of thumb regarding model fit indices.

3.8 Limitations

This study had many advantages over previous studies, including a large sample size that consisted of working adults, and the use of an appropriately sensitive and flexible analytic approach (i.e., ESEM). However, it still had several limitations. First the sample consists of a majority of white people, it therefore lacked ethnic diversity and was based only on an English language version of the NPI. Unfortunately, although the sample size was fairly large, it did not have a large enough representation of non-white respondents to assess differences in factor or total scores between ethnic groups. The second limitation is that the sample is composed of adults above 30 years of age, so it was not possible to determine how its results would directly compare to those from college students (the

population on which most previous studies have been conducted). Moreover, the literature indicates that age is negatively associated with narcissism (Foster et al., 2003). Thus, this study sample might be less narcissistic than previous studies.

Chapter 4 : Study 2: Grandiose and Vulnerable Narcissists' Responses to Ego Threats: Work Hard or Withdraw?

The purpose of the vignette experimental study described in the current chapter was to determine whether individuals high in grandiose or vulnerable narcissism respond to threats to their self-esteem by showing either the intention to engage in psychological withdrawal or to engage in positive work behaviours, and, also, whether self-esteem mediate this relationship. Further, this study examined whether narcissism moderated the effect of feedback on the intention to engage in positive work behaviours or the intention to engage in psychological withdrawal behaviours.

4.1 Introduction:

As discussed in the literature review presented in chapter 2, rage as a reaction to self-esteem threats has been considered one of the key characteristics of narcissism since the early writings of psychoanalysts through to the latest version of the diagnostic and statistical manual of mental disorders, the DSM-5 (American Psychiatric Association, 2013). The DSM-5 specifies that narcissists are highly sensitive to criticism or perceived defeats due to the vulnerable nature of their sense of self-esteem. Criticism may cause narcissistic individuals to feel humiliated and degraded. Even if they attempt to hide these feelings, they "may react with disdain, rage, or defiant counterattack. These responses often lead to "social withdrawal or an appearance of humility that may mask and protect the grandiosity" (American Psychiatric Association, 2013, p. 671). Furthermore, narcissists might underperform at a given task because of their " unwillingness to take a risk in competitive or other situations in which defeat is possible" (American Psychiatric Association, 2013, p. 671).

Personality and social psychology researchers have provided experimental evidence that grandiose narcissists tend to respond aggressively to ego threats such as negative feedback or rejection (Leary, Terry, Allen, & Tate, 2009). This can be manifested both physically (Bushman & Baumeister, 1998; Twenge & Campbell, 2003) and more subtly, via derogating the evaluator (Barry et al., 2006; Kernis & Sun, 1994). However, Nevicka and her colleagues (2016) have provided evidence for an alternative, potentially more adaptive reaction to ego threats. Specifically, Nevicka et al. (2016) have shown that

grandiose narcissists, when threatened, will improve their performance in an attempt to compensate for an earlier poor performance. Thus, the literature suggests at least two potential responses of grandiose narcissists to ego threats: to react with aggression or to work harder.

However, these findings were obtained in experimental settings and not in organisational contexts, raising the possibility that there are yet other alternative responses to ego threats. Indeed, responding with rage might not be acceptable in real work situations, given that narcissists are often keen to both take leadership positions (Grijalva, Harms, et al., 2015) and to try and maintain others' positive reputation of them (Brunell et al., 2008). Instead of engaging in aggressive behaviours at work, narcissistic individuals might react to negative feedback in a more passive-aggressive manner, such as engaging in psychological withdrawal. A withdrawal response fits with the observations that grandiose narcissists have been shown to be extremely self-protective (Sedikides & Gregg, 2001), are hypervigilant and can readily detect situations that may lead to some form of potential threat (Horvath & Morf, 2009), and have shown a tendency to engage in behavioural self-handicapping in order to pre-emptively protect themselves from potential failure (Rhodewalt, Tragakis, & Finnerty, 2006).

Moreover, vulnerable narcissists are expected to respond passively given that they engage in negative affect rumination following negative feedback (Atlas & Them, 2008) and they reported feeling angry or ashamed as a response to an ego threat (Freis et al., 2015). Thus, in an organizational context, grandiose and vulnerable narcissists might avoid responding with rage due to its negative implications for their image, and instead respond to potential self-esteem threats either by working hard or by engaging in psychological withdrawal. This raises an interesting question (Nevicka, Baas, & Ten Velden, 2016b, p. 12): "how do grandiose narcissist react to self-esteem threats when both of these options are possible", and will they prioritise the option to work hard or to self-protect by engaging in psychological withdrawal?

My Study 2, described in this chapter, examined how individuals react to positive versus negative feedback, treating the levels of grandiose and vulnerable narcissism as a moderator variable. In this vignette study, participants were presented with a scenario in which they learned their work supervisor's opinion (positive or negative) about their job performance. Then, they were asked to rate the extent to which they would be willing to

engage in positive work behaviours and to rate the extent to which they would engage in psychological withdrawal tactics. Participants' levels of self-esteem were proposed to mediate between narcissism and the intention to engage in positive work behaviours and to engage in psychological withdrawal. Figure 4-1 illustrates the research model to be examined in study 2.

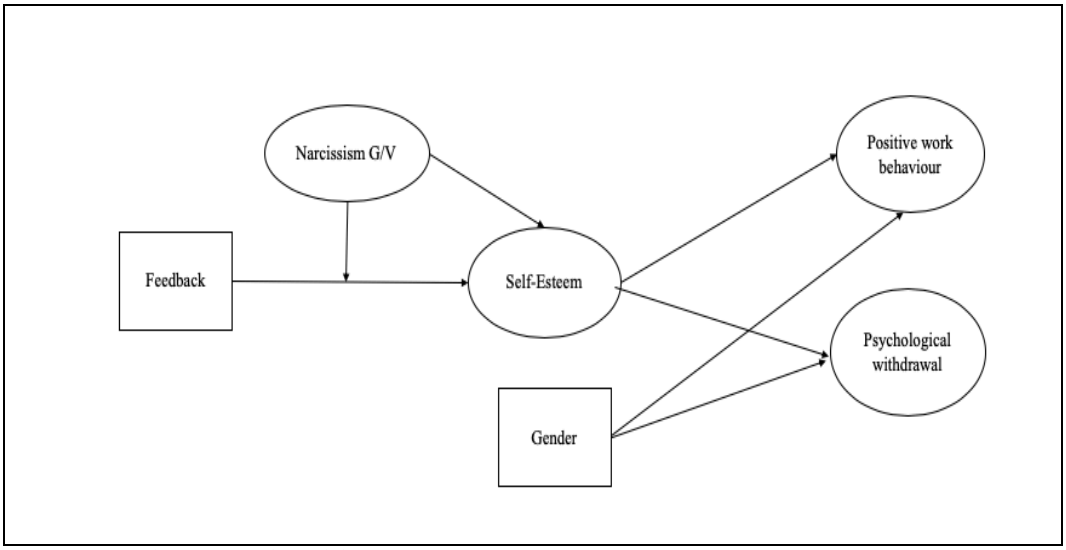

Figure 4-1 Study 2 Research model

This study makes several potential contributions to the literature on narcissism and its effects on people's behaviours. It is the first study to examine the responses of grandiose and vulnerable narcissists in a simulated organizational setting (i.e., vignette) using a sample composed of working adults. In this study, participants rated their intentions with respect to two different options made in response to the feedback: to work harder or to psychologically withdraw from the work. Previous studies have employed the Narcissistic Personality Inventory (NPI) to assess and operationalise narcissism. Due to its limitations, as discussed in chapter three, especially in terms of its factorial structure and internal consistency, this study uses the pathological narcissism inventory (PNI) to assess both types of narcissism.

4.2 Grandiose Narcissists' Responses to Self-Esteem Threats

As discussed in chapter two, Morf and Rhodewalt (2001) have proposed the dynamic self-regulatory processing model of narcissism. This model aims to

accommodate the complexity of narcissism, including the seemingly paradoxical coexistence of grandiose self-aggrandizement and vulnerable fragility. It conceptualises narcissism as a set of intra- and inter-personal processes employed by the narcissist in order to protect their overly inflated positive self-view, and to gain admiration from others. The model postulates that when narcissists conceive of experiences as threats to self-esteem – i.e., any events that question their positive self-regard (VanDellen, Campbell, Hoyle & Bradfield, 2011) such as negative feedback or social rejection – they may react by explicitly showing their grandiosity. However, subconsciously, they may feel increased negative self-worth accompanied with feelings of shamefulness and self-loathing. Thus, they tend to employ several strategies to maintain their grandiosity, as described in more detail in the following paragraphs.

Interpersonal strategies employed by narcissistic individuals include active management of the impression they leave on others in order to promote their desired self-view. For example, narcissists have been shown to perform better in challenging circumstances rather than in non-challenging circumstances, and have been shown to be more highly motivated and more persistent in their tackling of tasks that offer the potential for self-enhancement (Morf, Weir, & Davidov, 2000; Nevicka, De Hoogh, Van Vianen, Beersma, & McIlwain, 2011; Wallace & Baumeister, 2002; Wallace, Ready, & Weitenhagen, 2009). Grandiose narcissists have also been seen to assert their perceived superiority by controlling leaderless groups (Brunell et al., 2008).

Narcissists also employ several *intrapersonal* mechanisms when they are faced with a threat to their self-esteem. They tend to distort the importance or the meaning of the failure by devaluing the feedback source or the validity of the feedback (Kernis & Sun, 1994). They may also blame their partners for perceived failures (Campbell, Reeder, Sedikides, & Elliot, 2000). When coping with stress, narcissists tend to fantasize about personal achievements and power (Raskin, Novacek, & Hogan, 1991b). On a cognitive level, they tend to discount the source of the threat or test, and they tend to focus on their superiority to others. Affectively, they explicitly express their anger and hostility (Garcia, Watson, Cunningham, O'Leary, & Chen, 2015; Niemann, Wisse, Rus, Van Yperen, & Sassenberg, 2014; Rhodewalt & Morf, 1998). In addition, they may feel anxious and shameful (Morf & Rhodewalt, 2001b, 2001a; Morf et al., 2011).

Moreover, Wallace (2011) argues that narcissists' responses to ego-threats can take the form of self-enhancing behaviours (Alicke & Sedikides, 2009), in which narcissists attempt to exaggerate their grandiose selves in order to shift others' attention to their virtues, and away from their failure to preserve their sense of self-importance (Morf et al., 2011). Empirical evidence supports the association between self-enhancement and narcissism. It has been shown, for example, that narcissistic individuals are attracted to competitive tasks (Morf et al., 2000b), presumably because it allows them to demonstrate what they believe to be their superior abilities (Nevicka, De Hoogh, Van Vianen, Beersma, & McIlwain, 2011). Narcissistic individuals also tend to perform better in high reward interdependence contexts (Nevicka et al., 2011), and often engage in self-aggrandizing behaviours even in situations without perceived threats (Horvath & Morf, 2009). Grandiose narcissists employ self-enhancement strategies even in the event of failure. For example, in a study by Campbell, Goodi and Foster in a betting task, narcissists expected good results even after seeing that they were losing points. They even expected to have better results in the future, despite their failure (Campbell, Goodie, & Foster, 2004).

VanDellen and his colleagues (2011) provide a framework comprised of three categories that describe people's reactions to threats to self-esteem: (1) *breaking responses*, in which the individual accepts the feedback as valid and so exhibits negative emotions and less aggression; (2) *resisting responses*, which involve the individual undermining the feedback and shifting attention to their positive attributes to restore their self-esteem; and (3) *compensating strategies*, in which individuals put more effort and energy into reducing the discrepancy between their current self-worth and their desired self-worth. Accordingly, aggressive reactions to self-esteem threats can be interpreted as resistance responses, while reacting by improving performance can be interpreted as a compensatory strategy.

However, although previous studies that investigated responses to self-esteem threats have shown that individuals who exhibit high levels of grandiose narcissism tend to react to such threats with rage (Barry, Chaplin & Grafeman, 2006; Bushman & Baumeister, 1998), Nevicka, Bass, and Ten Velden (2016) have noted that, if it works to their benefit, the narcissistic individual can react constructively to negative feedback.

Consequently, Nevicka et al. (2016) critique previous studies, suggesting that their design may not have given participants any other option than to react aggressively to the stimuli.

Nevicka and her colleagues (2016) provide evidence from three experimental studies that show that narcissists are capable of reacting in a productive manner to threats to their self-esteem, whereby the participants compensate for their former low performance by improving their performance in the second task. Specifically, in study one, 175 undergraduates were told that they were about to participate in a task that required them to count backwards from 1500 by subtracting six each time, while skipping any number ending in 4 or 5. But, before beginning the task, the participants were asked to recall an event in which they received either positive or negative feedback (the manipulation). After writing down the details of the incident, they were asked to indicate how long they would need to complete the previously described exercise (a time ranging from 1 to 15 minutes). Results showed that in the negative feedback condition, narcissism predicted the participant's allocating more minutes for the task (B=.16, p =.002), but not for the positive feedback condition. In study 2, 142 undergraduates were asked to complete a short verbal association test, and a task in which they were required to generate new names for pasta. Then, they were presented with bogus feedback, followed by a creativity test that involved generating "unusual uses" for a cord. Regression analysis showed that the interaction between level of narcissism and feedback sign predicted performance in the creativity test for the negative feedback group, but not for the positive feedback group. This showed that narcissistic participants in the negative feedback group performed better than the narcissistic participants in the positive feedback group.

In study 3, Nevicka et al. (2016) asked participants to complete a questionnaire which was presented as a measure of their figural propensity. This was, in fact, a bogus construct that participants believed was a measure of personality, and for which they did not know whether it was more desirable to score high or low. Participants were then given bogus feedback on their performance, i.e., they were told that they had either 'average figural propensity' or 'unique figural propensity'. Following this, participants completed an "unusual uses of bricks" creativity test for four minutes. Results revealed that narcissists performed better in the creativity test when they were told that they were in the average propensity group, rather than the unique propensity group. In this study, then,

narcissists performed better when they were told that they had average propensity for a task, rather than unique propensity.

As discussed so far, the literature contains a number of studies in which grandiose narcissists appear to respond to self-esteem threats by trying to work hard and to perform better in tasks following negative feedback. That is, they use the negative feedback as a motivation to enhance their ability and to show indirectly that the feedback is not reflective of their actual performance or capabilities.

4.3 Withdrawal as a Response to Threats to Self-Esteem

In addition to self-enhancement as a reaction to threats to self-esteem, grandiose narcissists can react in a passive manner when threatened. Precisely, Morf et al. (2010) argue that narcissists employ both forms of self-regulation in response to ego threats: self-enhancement and self-protection. They emphasise that these two forms are virtually impossible to disentangle because both entail striving to preserve one's level of psychological functioning. Self-enhancement aims to maintain the grandiose self and to manoeuvre the person to their ideal self, whereas self-protection aims to avoid any potential damage. Accordingly, and as discussed earlier, grandiose narcissists might react passively, by engaging in psychological withdrawal behaviours in order to protect their self-esteem. Psychological withdrawal behaviour encompasses of attitudes towards negligence behaviour in the work place such as dedicating less effort at work (Lehman & Simpson, 1992).

There are some indicators that narcissists might prefer to engage in psychological withdrawal when threatened. For example, grandiose narcissists are often described as highly concerned with protecting their self-image (Sedikides & Gregg, 2001). Moreover, empirical evidence suggests that narcissists tend to become defensive when faced with self-esteem threats (Hepper, Gramzow, & Sedikides, 2010; Morf et al., 2011), particularly when they cannot employ self-aggrandizing behaviours to counter these perceived attacks.

Moreover, grandiose narcissists found to be hypervigilant in their scanning of their social environment for potential threats and attempt to maintain their positive self-views (Horvath & Morf, 2009). Specifically, in two studies, Horvath and Morf (2009) examined the vigilance and avoidance of worthlessness after ego-threats. They employed a sequential subconscious priming paradigm in combination with a lexical decision task

(LDT). In this task, participants are presented with a subliminal ego-threatening or neutral prime word, followed by a string of letters and participants have to decide whether the combinations of letters are words or not. Results showed that individuals high in narcissism when confronted with ego threatening information were shown to be hypervigilant for worthlessness. This then allows them to promptly and successfully avoid worthlessness and thereby protect their sense of grandiosity.

Furthermore, grandiose narcissists can deal with potential failures by altering their meanings or implications. For instance, narcissists might self-handicap by choosing to listen to distracting music while completing an intelligence test (Rhodewalt et al., 2006). This allows them to attribute the subsequent failure to distraction rather than low ability. Moreover, narcissists tend to distort the causes of perceived failures, once they have occurred, to others. For example, they might fail to give reasons why their partners might have terminated a romantic relationship (Foster & Campbell, 2005). Furthermore, when asked to assess other over-performing individuals (potential threats), grandiose narcissists will judge them more negatively than non-narcissists did (Morf & Rhodewalt, 1993; South et al., 2003). This means that by degrading others, grandiose narcissists might reduce the threat they are expecting from the other over-performer. Indeed, Wallace (2011) argues that the aggressiveness that narcissists display in response to such perceived threats can be interpreted as "frustration stemming from self-enhancement denial or as an effort to assert dominance rather than as evidence of damaged self-esteem" (Wallace, 2011, p. 312).

4.4 Vulnerable Narcissist Response to Self-Esteem Threats

As previously highlighted, the majority of the literature in the field has focused on grandiose narcissism, rather than vulnerable narcissism. Few studies have investigated the reactions of vulnerable narcissists to threats to their self-esteem. Among the findings of existing studies on this sub-type, it has been shown that vulnerable narcissists often engage in negative affect rumination following negative feedback (Atlas & Them, 2008). Furthermore, such individuals have been found to be more sensitive compared to non-narcissists to interpersonal threats, but not to achievement-threat scenarios (Besser & Priel, 2010).

Three studies have dealt with the reactions of vulnerable narcissists to self-esteem threats. Additionally, these past studies have not examined the behavioural responses of individuals with high vulnerable narcissism to threats of self-esteem, and these studies examined the emotional reactions of the participants, with a focus on shame and anger.

Malkin, Barry, and Zeigler-Hill (2011) examined the responses of vulnerable adolescents to negative, positive, and no feedback scenarios in the context of a general knowledge quiz. Their study revealed an interaction effect of vulnerable narcissism and feedback type on shame. However, counter-intuitively, a simple slope analysis showed that the strongest positive correlation between vulnerable narcissism and shame occurred in the positive feedback condition. This unexpected result was attributed to the idea that positive performance may convey an implicit demand for continued positive performance which increases the pressure to keep improving.

Freis, Brown, Carroll, and Arkin (2015) presented 77 undergraduates with spurious essay feedback (i.e., unsatisfactory versus satisfactory), who were then asked to rate their own essay performance. Results found that participants with high vulnerable narcissism showed high levels of shame and anger in response to unsatisfactory feedback when they had evaluated their own performance as good, while participants with low vulnerable narcissism did not show this interaction effect. Furthermore, this study found that feedback alone did not explain the emotional reactions of vulnerable narcissists. Instead, it was the mismatch between their self-assessment of the essay and the given feedback that predicted anger. Shame arose only when a participant negatively evaluated his or her performance, but the feedback was positive. Furthermore, vulnerable narcissists who rated their essay positively but received unsatisfactory feedback reported having limited concern for the judge's opinion of their performance. This was interpreted as a form of motivated reasoning or defence mechanism.

Surprisingly, across four studies Krizan and Johar (2015) found that vulnerable narcissism, and not grandiose narcissism, predicts narcissistic rage in non-threatening situations. Study 1 showed that vulnerable (but not grandiose) narcissism predicts higher levels of internalised and externalised anger. Study 2, found that vulnerable narcissism is a strong indicator of shame and aggressiveness, often manifested as hostility and anger. Study 3 found that vulnerable narcissists tend to be reactive, with displaced anger often caused by distrust of others and angry rumination. Study 4 provides experimental evidence

that vulnerable (but not grandiose) narcissism amplifies reactive and displaced aggression in the face of provocation. In study 4, participants were given a disgusting bitter melon juice to taste (provocation condition), which they are told has been made by a co-participant. Then, they were instructed to give hot, spicy food back to their co-participant (or a future participant, i.e., the displaced-target condition). Results showed that vulnerable (but not grandiose) narcissism was associated with retaliation, with reactivity and displaced aggression which is amplified in the face of provocation. This study did not, however, include explicit self-esteem threats, but, yet shows that vulnerable narcissists tend to be more aggressive than grandiose narcissists when provoked.

Accordingly, vulnerable narcissists are more likely to engage in psychological withdrawal behaviours rather than to work harder because they tend to be hypersensitive, anxious, and insecure (Wink, 1991) they are motivated by avoiding negative experiences rather than by seeking out positive experiences (Krizan & Herlache, 2017). Vulnerable narcissists can also be more highly sensitive to criticism and more likely to experience negative emotional reactivity (Atlas and Them, 2008), and can have an increased defensive tendencies (Pincus et al., 2014).

As mentioned earlier, the aim of the current study is to examine whether grandiose and vulnerable narcissists respond to threats of self-esteem by working hard or by engaging in psychological withdrawal behaviours. Feedback valence (coded 1 for positive feedback and 2 for negative feedback) is expected to negatively affect self-esteem. Thus, the following hypothesis was proposed:

Hypothesis 1: Feedback valence is negatively related to an individual's level of self-esteem.

4.5 Narcissism and Self-Esteem

The relation of self-esteem with narcissism is a key issue of debate in narcissism studies. Some scholars argue that narcissism is by definition a state of exaggerated self-esteem, supporting this view by pointing to the positive association between grandiose narcissism and explicit self-esteem. In contrast, others conceptualise narcissism as a mask used to veil hidden feelings of inferiority and worthlessness (Morf & Rhodewalt, 2001a). Other scholars argue that narcissism and self-esteem are distinct constructs with no relationship (Brummelman, Thomaes, & Sedikides, 2016).

In previous studies, the relationship between narcissism and self-esteem has been conceptualised and examined according to two models: the mask model and the explicit model. The mask model argues that, for narcissists, grandiosity is not genuine; it is a mask to conceal feelings of inferiority. These deep-seated feelings of inferiority drive narcissists to seek constant positive feedback (Bosson et al., 2008; Morf & Rhodewalt, 2001c). In order to examine the mask model, researchers have distinguished between two types of self-esteem: explicit self-esteem and implicit self-esteem. Explicit self-esteem refers to the deliberate, controllable feelings one might have about the self, whereas implicit self-esteem refers to automatic, uncontrollable feelings about the self (Bosson et al., 2008). Empirical studies have been inconsistent in their findings regarding the association between implicit self-esteem and narcissism. Some studies have supported a negative association between self-esteem and narcissism, while other studies have not found an association between the two constructs (Bosson et al., 2008; Miller, Lynam, Hyatt, & Campbell, 2017).

The explicit model argues that narcissists have positive high self-esteem. This model is, however, more applicable to grandiose narcissism than vulnerable narcissism (Miller et al., 2017). Grandiose narcissism would naturally be expected to predict positive self-esteem, given its association with characteristics such as grandiosity, superiority, and self-enhancement (Miller & Campbell, 2011). However, empirical investigations into the association between explicit self-esteem and grandiose narcissism have had mixed results, depending on the measure used to assess grandiose narcissism. For example, the NPI associates positively with explicit measures of self-esteem, such as the Rosenberg Self-esteem Scale (Campbell et al., 2002; Campbell & Rudich, 2001; Sedikides, Rudich, Gregg, Kumashiro & Rusbult, 2004; Vohs & Baumeister, 2016). Some scholars explain the positive association between NPI and self-esteem by indicating that the NPI itself measures some form of self-esteem (Ackerman et al., 2011; Miller, Price, & Campbell, 2012). However, when grandiose narcissism is measured using the Pathological Narcissism Inventory (PNI), as in the present study, the relationship becomes negative. This is because PNI is built to assess contingent self-esteem, which reflects the manifestations of pathological narcissism in grandiose narcissism (Maxwell, Donnellan, Hopwood & Ackerman, 2011a; Pincus et al., 2009).

The association between self-esteem and vulnerable narcissism has also been found to be negative: observed *r*'s have varied from -.32 to -.57 (Maxwell et al., 2011b; Miller, Lynam, Hyatt & Campbell, 2017; Myers & Zeigler-Hill, 2012; Pincus et al., 2009; Zeigler-Hill, Clark & Pickard, 2008; Zeigler-Hill, Myers & Clark, 2010b). This leads to the following two hypotheses:

Hypothesis 2a: An individual's level of grandiose narcissism is negatively related to his/her level of explicit self-esteem.

Hypothesis 2b: An individual's level of vulnerable narcissism is negatively related to his/her level of explicit self-esteem.

4.6 Self-Esteem as a Mediator

The majority of past research on narcissism and reactions to threats has focused on the direct association between narcissism and performance following ego-threats (Nevicka et al., 2016b), or with aggression following ego-threats (Kirkpatrick et al., 2002). As such, these studies either have not included self-esteem in their causal models, or the effects of self-esteem were treated as a control variable. In their systematic review of studies that have investigated the relationship between narcissism and aggression following threats, Lambe, Hamilton-Giachritsis, Garner and Walker (2018) found ten studies that controlled for self-esteem, of which eight found that self-esteem did not account for the relationship between narcissism and violence (Bushman et al., 2009; Bushman & Baumeister, 1998; Foster et al., 2003; Jones & Paulhus, 2010; Martinez, Zeichner, Reidy, & Miller, 2008; McIntyre et al., 2007). In their second study, Bushman and Baumeister (1998) examined the threat of negative feedback as a mediator. However, in relation to the ego-threat model, Baumeister, Smart and Boden (1996) proposed that violent reactions are not caused by low self-esteem (as is more commonly believed), but violence is, rather, a result of positive self-esteem that is threatened by others. Accordingly, the outcomes of threatened self-esteem (i.e., violence or better performance) do not stem directly from narcissism, but might, instead, be linked through self-esteem in an indirect relationship. In other words, self-esteem mediates the effect of the source of

the threat and the reaction. In this study, self-esteem is treated as a mediator in the relationship between narcissism and reactions to ego-threats.

As discussed, the present study examines the effect of feedback on job performance using job-related behaviours that can directly affect productivity and organizational performance (Lehman & Simpson, 1992). These behaviours include the time and effort employees spend on job tasks, in addition to activities that are irrelevant to job tasks such as chatting, gossiping, or performing personal tasks. These positive and negative job behaviours were determined by observing employee behaviours in response to job dissatisfaction. For the purpose of this study, two dimensions of job-related behaviours were selected: positive work behaviours and psychological withdrawal behaviours. Positive work behaviours include constructive behaviours that aim to improve the organization, such as making an effort to improve working conditions and volunteering to work overtime. Psychological withdrawal behaviours include exerting less effort into job performance than is required, and thinking of leaving the job (Lehman & Simpson, 1992).

In summary, existing literature on the reactions of grandiose narcissists and vulnerable narcissists to ego-threats suggests that, within a workplace environment, grandiose narcissists will react either by working hard to compensate for their earlier performance or might choose to protect themselves from further threats by engaging in psychological withdrawal. The available literature indicates that both reactions are possible for grandiose narcissists, but it is, perhaps, more likely that they will choose to work harder. This option would fulfil their need to perform well in front of their peers (Nevicka et al., 2011)

The literature on vulnerable narcissists' reactions to self-esteem threats is confined to an examination of the emotions that they exhibit following ego-threats. The behavioural reaction of vulnerable narcissists has not yet been examined (thus is a contribution of the current study). Nevertheless, it is predicted that vulnerable narcissists are more willing to engage in psychological withdrawal than grandiose narcissists or non-narcissists because they tend to be more defensive, hypervigilant and feel ashamed when threatened.

Moreover, as discussed, the path linking narcissism and the choice of behavioural reaction (i.e., engaging in positive work behaviours or in psychological withdrawal) is expected to be mediated by self-esteem. According to the threatened self-esteem model

(Baumeister, Smart, & Boden, 1996), narcissists' reactions are triggered by how their self-esteem is affected. Therefore, the following hypotheses are proposed:

Hypothesis 3a: Self-esteem mediates the relationship between an individual's level of grandiose narcissism and his/her intention to show positive work behaviour.

Hypothesis 3b: Self-esteem mediates the relationship between an individual's level of grandiose narcissism and his/her intention to engage in psychological withdrawal behaviour.

Hypothesis 4a: Self-esteem mediates the relationship between an individual's level of vulnerable narcissism and his/her intention to show positive work behaviour.

Hypothesis 4b: Self-esteem mediates the relationship between an individual's level of vulnerable narcissism and his/her intention to engage in psychological withdrawal behaviour.

This study will examine the interaction between narcissism and feedback in eliciting the dependent variable. In other words, whether grandiose and vulnerable narcissism moderate the relationships between the feedback valence (positive vs. negative feedback) and the intention to show positive work behaviour, and the intention to psychologically withdraw. Therefore, the following hypotheses are proposed:

Hypothesis 5a: An individual's level of grandiose narcissism will positively moderate the relationship between the feedback valence and his/her intention to show positive work behaviour.

Hypothesis 5b: An individual's level of grandiose narcissism will negatively moderate the relationship between the feedback valence and his/her intention to involve in psychological withdrawal.

Hypothesis 5c: An individual's level of vulnerable narcissism will negatively moderate the relationship between the feedback valence and his/her intention to show positive work behaviour.

Hypothesis 5d: An individual's level of vulnerable narcissism will positively moderate the relationship between the feedback valence and his/her intention to engage in psychological withdrawal behaviour.

4.7 Gender as a Control Variable

Gender has been found to be an important factor in narcissism studies. Studies have shown that males tend to score higher in grandiose narcissism scales than women. In a meta-analytic study by Grijalva et al. (Grijalva, Newman, et al., 2015) which examined 355 studies with a sample of 470,846, it was found that men are more likely to be narcissistic than women, and that this tendency remained stable in samples of U.S. college students across the period from 1990 to 2013, and across different age groups. Grijalva et al. (2015) also examined gender differences within vulnerable narcissism in a sample of 42 studies consisting of 46,735 participants. Results showed no differences between men and women exhibiting vulnerable narcissism. In the current study, gender is examined as a control variable because this study is examining both sub-types of narcissism.

4.8 Method

This section will present the methodology of the study. It includes sample specifications, study procedures, and the measurements used in this study.

4.8.1 Sample

This study's sample consists of 762 participants who completed both Time 1 and Time 2 questionnaires, and who passed checks for manipulation, outliers and consistent responding, which will be described later. 53% of the subjects reported being male, and 47% female. The majority of the sample stated that their ethnic origin was white (80%), and 11.5% as Asian, 3% as African, and 4% as other races. The mean age of the sample is 34.07 years (SD = 10.03). The participants also tended to have a relatively high level of

educational attainment: 51.4% reported holding a university degree, 22% reported holding a professional qualification, and 4% reported holding a doctorate. The remaining 23% indicated that they had finished high school. The sample only consists of working individuals, and the participants have an average work experience of 11.32 years (*SD* = 10.20). 49% of the sample self-reported that they are engaged in supervisory responsibilities.

4.8.2 Procedure

The Prolific Academic on-line platform was used to find participants for the study. The study consisted of two measurement sessions, separated by approximately one week. At time 1, the participants completed the Pathological Narcissism Inventory (PNI, Pincus et al., 2009) and the Rosenberg Self-esteem Scale (Rosenberg, 1979).

One week later, at Time 2, participants were randomly assigned to one of two groups and were presented with one of two written vignettes describing a short scenario in which they received bogus performance feedback at work (described below). After receiving the feedback, they were then asked to respond to a set of measures, including: the Rosenberg self-esteem scale, and their intention to show positive work behaviour or to psychologically withdraw.

Participants were randomly assigned to one of two groups created by the manipulation of the valence of the feedback (i.e., positive feedback (n = 360) or negative feedback (n = 402) assigned to them in the performance scenario vignettes. The vignettes used in the scenario portion of the study were adapted from Belschak and Den Hartog (2009). After a series of revisions recommended by leadership scholars at Durham University Business School, the final versions of the vignettes are as follows.

In the *positive feedback* condition, the participants were asked to imagine the following scene:

"Imagine that you are in a meeting with your direct supervisor to discuss your performance. After greeting you as usual, your supervisor tells you that he thinks that your performance is exceeding the standard of the company; you have displayed strong dedication and commitment to excellence. Your tasks are always completed ahead of schedule and under budget. He also tells you that you are effective at identifying problems and potential resolutions and you work exceptionally well with no direct supervision. He

notes that your ability to acquire and apply new knowledge and skills is outstanding. Overall, in his view, you are now one of the top performers in the department".

In the *negative feedback* condition, participants were asked to imagine the following scene:

"Imagine that you are in a meeting with your direct supervisor to discuss your performance. After greeting you as usual, he tells you that he thinks that your performance has been below the company standard; you have displayed a lack of dedication and commitment to excellence. Your tasks are never completed on schedule and are often over budget. He also tells you that you are very ineffective at identifying problems and potential resolutions and that you are not working well without direct supervision. He notes that you are very slow at acquiring and applying new knowledge and skills. Overall, in his view, you are now one of the worst performers in the department".

The participants' level of attention to the vignettes was checked with multiple choice questions which were asked afterwards. These were 'Who presented the feedback?' and 'Overall, how was the feedback?'

4.8.3 Measures

4.8.3.1 The Pathological Narcissism Inventory

The PNI consists of 52 items in which participants must indicate on a five-point response scale the extent to which each item describes them, with response options ranging from 1, 'completely false,' to 5, 'completely true.' The inventory captures seven basic dimensions of pathological narcissism: (a) contingent self-esteem (e.g. "It's hard to feel good about myself unless I know other people like me"), (b) exploitativeness (e.g. "I find it easy to manipulate people"), (c) self-sacrifice/self-enhancement (e.g. "I try to show what a good person I am through my sacrifices"), (d) hiding the self (e.g. "When others get a glimpse of my needs, I feel anxious and ashamed"), (e) grandiose fantasy (e.g. "I often fantasize about performing heroic deeds"), (f) devaluing others (e.g. "Sometimes it is easier to be alone than to face not getting everything I want from other people"), and (g) entitlement rage (e.g. "I get annoyed by people who are not interested in what I say or do"). These factors can be aggregated into composite scores reflecting narcissistic

grandiosity (the average of the exploitativeness, self-sacrifice/self-enhancement and grandiose fantasy scales) and narcissistic vulnerability (the average of the contingent self-esteem, hiding the self, devaluing others and entitlement rage scales) (Wright, Lukowitsky, Pincus & Conroy, 2010). Although the inventory was initially developed to capture the pathological manifestation of narcissism, it has been validated for use in normal (non-pathological) samples (Krizan & Herlache, 2017). The PNI has been shown to be reliable and valid in numerous studies (e.g. Miller et al., 2011; Wright et al., 2010).

In this study, using the final sample, the full-scale reliability was α = .95, with subscale reliabilities as follows: contingent self-esteem, α = .92; exploitativeness, α = .82; self-sacrifice/self-enhancement, α = .75; hiding the self, α = .77; grandiose fantasy, α = .90; devaluing others, α = .85; and entitlement rage, α = .85. The internal consistencies of the PNI grandiosity and vulnerability subscales were α = .87 and α = .94, respectively.

4.8.3.2 *The Rosenberg self-esteem scale*

The Rosenberg self-esteem scale (Rosenberg, 1979) measures global self-esteem. Responding to a set of 10 statements (e.g., "On the whole, I am satisfied with myself"), participants are asked to indicate how they typically feel about themselves on a response scale with options ranging from 1 to 4. At Time 1, the participants were asked to rate how they usually feel in order to get a baseline value, while at Time 2, they were asked to indicate how they were feeling at that exact moment after reading the vignettes. Using the final sample, the scale reliability was α = .90 at time 1, and α = .92 at time 2.

4.8.3.3 Intention to engage in positive work behaviour

A five-item scale from Lehman and Simpson (1992) was used to assess participants' intentions to engage in positive work behaviours following the feedback. The response options ranged from 1 ("very slightly or not at all") to 5 ("extremely"). The participants indicated how likely it was that they would perform each of the following five actions: do more work than required, volunteer to work overtime, make an attempt to change their work situation, negotiate with their supervisor to improve their job, and try to think of ways to do a better job. The internal consistency for this scale was α = .79.

4.8.3.4 Intention to engage in psychological withdrawal behaviours

Seven items from Lehman and Simpson (1992) were used to assess the participants' intentions to psychologically withdraw following the feedback. The participants indicated the extent to which they would perform each of the following seven actions: think of being absent, chat with co-workers about non-work topics, leave their work-place for unnecessary reasons, spend work time on personal matters, put less effort into their job than they should, think of leaving their current job, and let others do their job. Responses were made on a five-point response scale with options ranging from 1, "very slightly or not at all" to 5, "extremely." The internal consistency for this scale was $\alpha = .83$.

4.9 Results

The data analysis was conducted in two phases. The first phase examined the overall quality of the data to ensure its usability, and to determine whether the data met necessary assumptions for multivariate analysis and structural equation modelling, including those regarding outliers, normality and multicollinearity. The second phase examined the measurement model and the structural model, including testing the hypotheses.

4.9.1 Preliminary analysis

4.9.1.1 Identification of Outliers

Multivariate outliers were identified in this study by determining the Mahalanobis distance for each observation, based on a linear regression analysis including all study variables. The Mahalanobis distance for a set of variables is calculated as X^2 with degrees of freedom equal to the number of variables and evaluated using $p < .001$. There were seven variables in this study: self-esteem, grandiose narcissism, vulnerable narcissism, intention to show positive work behaviour, intention to engage in psychological withdrawal behaviour, and feedback valence and gender. The critical value of X^2 with 7 degrees of freedom at $p < .001$ was 24.32 (Tabachnick & Fidell, 2013). Accordingly, four observations (case numbers 108, 487, 599, 462, and 578) were deleted because they exceeded the critical score.

In addition, to assess whether participants were responding carefully when completing the survey, the variance going across the set of item-level responses for each respondent was calculated for the PNI and Rosenberg self-esteem scales. Two observations had zero variance in their PNI measure (case numbers 174 and 539) and one (case number 27) in its Rosenberg self-esteem measure; these three cases were dropped from the analysis, leaving a final sample of 762 participants. The internal consistency of the measurements, which was described earlier, was calculated only after omitting the outliers and the participants who failed the variance tests.

4.9.1.2 Manipulation check

For the manipulation check, participants were asked two questions to check whether they had correctly perceived and remembered the feedback valence ("Overall, how was the meeting?") and the feedback context ("Who attended the meeting?"). 123 participants out of 1061 indicated incorrect answers and have been, therefore, dropped from further analysis. The final sample dropped to 762 after the data cleaning. This final sample was used for data analysis and was tested for internal consistency.

4.9.1.3 Normality

The default maximum likelihood estimator used in CFA and structural equation modelling analyses assumes multivariate normality. Univariate normality, which is a precondition for multivariate normality, can be assessed by calculating skewness and kurtosis values for each of the study variables. Based on computer simulation studies of the estimation methods used in structural equation modelling (SEM), Kline (2011) recommends that variables with absolute values of skewness at > 3.0 be described as 'extremely' skewed, while absolute values of kurtosis standing at > 10.0 suggest a minor problem with the data, and absolute values of KI > 20.0 indicate significant issues with the data (Kline, 2016). Therefore, the data sample was shown to have non-normal distribution. Furthermore, using Mplus' robust maximum likelihood estimator (MLR) is appropriate for samples like the current one in which there is a low-to-moderate level of non-normality. The MLR estimator corrects for the biasing effects of non-normality on the chi-square goodness-of-fit statistic and the standard errors of parameter estimates (Kline, 2016).

4.9.1.4 Homoscedasticity

Homoscedasticity entails that dependent variables have equal levels of variance across the range of predictor variables, and variance is not concentrated in a limited range of independent variables (Hair, 2014). Homoscedasticity can be tested statistically using regression analysis to generate un-standardised residuals, which are examined using Spearman's Rho correlation with all the independent variables. In this data sample, the correlation coefficients are non-significant ($p > 0.05$), which means that heteroscedasticity is not present, and variance on the dependent variables is equal across all of the independent variables.

4.9.1.5 Multicollinearity Assessment

Multicollinearity of the indicators in an input matrix to a structural equation model can cause estimation problems, thus was tested for prior to CFA and SEM analyses. The correlation matrix (see Table 4-1) for all of the variables reveals an absence of any correlation coefficient exceeding 0.9, which is recommended as a critical value that indicates serious multi-collinearity issues (Hair, Black, Babin, & Anderson, 2014; Tabachnick & Fidell, 2013). In fact, all of the correlation coefficients within the data set are below 0.7. Moreover, variance inflation factor (VIF) values and tolerance values were calculated and inspected to further assess the potential for any issues of multi-collinearity. VIF values that are greater than 10, accompanied by a tolerance value that is less than 0.10, indicate potentially problematic levels of multi-collinearity (Hair et al., 2014). Using a multiple regression analysis to compute VIF, all the values are less than 10 (ranging between 1.01 and 3.60), and all of the tolerance values are above .27, which is higher than the cut-off score of 0.1. Therefore, based on the correlation matrix and VIF, multi-collinearity should not be considered a problem for this study. This means that all of the variables are distinct.

Table 4-1: Correlations Amongst Study 2 Variables

	1	2	3	4	5	6
1.Grandiose Narcissism						
2.Vulnerable Narcissism	.54**					
3. Self-esteem	.07	-.50**				
4. Positive behaviour	.18**	.00	.17**			
5. Withdrawal behaviour	.12**	.25**	-.20**	-.21**		
6. Feedback valence	-.00	.06	-.11**	.05	.34**	
Mean	54.49	92.51	31.80	16.51	12.92	.53
Standard deviation	11.91	23.37	5.71	4.38	5.48	.50

** significant at the .01 level * significant at the .05 level.

4.10 Data Analysis Strategy

This study follows the two-step SEM procedure, employing both a measurement and structural model (Kline, 2016). The measurement model was assessed using a confirmatory factor analysis that included latent constructs relevant to each measured variable in the study, i.e., self-esteem, narcissism, intention to show positive behaviour at work, and intention to engage in psychological withdrawal. A measurement model enables researchers to confirm or reject a pre-conceived theory about how indicators relate to their relevant latent constructs. This needs to be assessed before moving on to the structural model. Confirmatory factor analysis CFA has been used to assess construct validity in "a series of relationships that suggest how the measured variables represent a latent construct that is not measured directly" (Hair et al., 2014, p. 693).

This study employed a development strategy approach to modelling the structural relations amongst the variables. More specifically, according to Hair et al. (2014), there are three types of model strategies for the SEM: development modelling, confirmatory modelling and competing modelling. The development strategy allows the researcher to confirm causal relationships based on a theoretical framework and to modify both the measurement and structural models in order to improve the model's fit based on a sound theoretical background (Hair et al., 2014). This strategy is a better fit for this study's purposes than the two other possible strategies, confirmatory modelling or competing modelling. (The objective of the confirmatory model strategy is to accept or reject a hypothesised model and it does not allow for any model modifications. A competing model strategy, however, allows the researcher to utilise more than one model and to choose that which represents the data most accurately (Hair et al., 2014).)

In this study, the structural model specification was arrived at on the basis of a thorough review of literature on narcissism, responses to threats to self-esteem and possible theoretical explanations for these responses. The model specification also includes describing the model's latent variables, thus providing a substantive background as to how they are measured (Hair et al., 2014).

The tests of the measurement and SEM models were performed using the robust maximum likelihood estimator (MLR) in Mplus v7.4 (Muthén & Muthén, 1998-2012). Overall model fit was assessed using a chi-squared difference test. Three additional indices of model fit were also examined: the comparative fit index (CFI), the root-mean-square error of approximation (RMSEA), and the standardized root-mean-square residual (SRMR). CFI values of .90 or more, a RMSEA value of .06 or less, and a SRMR value of .08 or less are indicative of good model fit (Kline, 2016).

4.11 Measurement model

The initial CFA results reported here are from a standard model that specified five latent constructs: grandiose narcissism, vulnerable narcissism, self-esteem, intention to show positive work behaviour, and intention to engage in psychological withdrawal. Item-level responses from the surveys were used as indicators of the latent constructs, and item-level indicator was allowed to load on only one latent construct. These five constructs were allowed to correlate freely. In addition, error terms of all the indicators were specified to be completely independent (i.e., no covariances among the residual terms were allowed).

The model fit indices for this first model indicate that the chi-squared goodness-of-fit statistic was 6416.099, with 2496 degrees of freedom, and $p < .001$. The values of the alternative fit indices were: *RMSEA* = .045 [C.I, .044-.047]; *CFI* =.848 and SRMR = .060. Although the RMSEA has an acceptable value, suggesting that the model might be close to fitting adequately, the chi-squared goodness-of-fit statistic is significant, which means that the model should be rejected, and that the CFI are below the desirable levels.

As discussed in Study1, a number of the issues around model fit that were discovered in the first measurement model centre around the strong restriction of only allowing each indicator variable to load onto one latent construct. It is very common for the items employed in psychological instruments – especially those measuring personality

traits – to show a pattern whereby there is relatively strong loading on one primary latent construct, while also showing substantially weaker, but still significant, loadings onto other latent constructs. When such a pattern occurs, standard CFA models typically show a somewhat poor fit. This poor fit is not due to substantive aspects of the model being incorrect (such as the number of factors and the primary assignment of items to factors), but, rather, is the result of many small instances of misfit that occur when minor cross-loadings of items are not allowed. The technique of exploratory structural equation modelling (ESEM), however, is able to accommodate more factorially complex structures (Asparouhov, Muthen & Muthén, 2009; Marsh et al., 2010). This technique integrates aspects of exploratory and confirmatory factor analysis and allows researchers to define the factorial structure of a measure and, at the same time, to implement the advanced methodology of CFA and SEM (Kelloway, 2015; Kline, 2016; Marsh et al., 2010, 2014).

Accordingly, an ESEM version of the measurement model was estimated. In this model, the conventional CFA specification was kept for the constructs corresponding to self-esteem, intention to show positive work behaviour, and intention to engage in psychological withdrawal behaviour. However, the PNI items were allowed to load across a set of seven additional latent factors (the number was chosen to correspond to the number of PNI subscales), thus did not restrict each item to load only on a single PNI factor. The ESEM measurement model had a better fit than the previous model: chi-squared goodness-of-fit statistic was 28496.60 with 2628 degrees of freedom ($p < .001$), *RMSEA* = .040 [*95% CI* .039, .042], *CFI* =.894 and *SRMR* = .039.

The model modification indices have been investigated thoroughly, and a new modified model has, then, been estimated, which includes seven covarying residuals. This resulted in an improvement in the model fit. The chi-squared goodness-of-fit statistic is 4314.391, with 2218 degrees of freedom ($p <.001$), *RMSEA* = .035 [*95% CI* .034, .037], *CFI* =.919, and *SRMR* = .036. Table 4-2 shows the pairs of covarying residuals that are included in this measurement model.

Table 4-2 Pairs of Covarying Residuals Included in the Modified Measurement Model

Intention to show positive work behaviour items	
2. Volunteer to work overtime.	1. Do more work than required.
4. Negotiate with my supervisor to improve my job.	3. Make an attempt to change working conditions.
5. Try to think of ways to do the job better.	3. Make an attempt to change working conditions.
PNI items	
16. When others don't notice me, I start to feel worthless.	8. When people don't notice me, I start to feel bad about myself.
21. When others don't meet my expectations, I often feel ashamed about what I wanted.	3. I sometimes feel ashamed about my expectations of others when they disappoint me
43. I help others in order to prove that I am a good person.	39. I try to show what a good person I am through my sacrifices.
52. I can get pretty angry when others disagree with me.	29. I get angry when criticized.

The final modified measurement model is shown in Table 4-3 and Table 4-4. Table 4-3 shows the conventional CFA model while Table 4-4 shows the ESEM model. It is worth noting that the whole model was run simultaneously, but for the purpose of clarity the tables were separated.

Table 4-3 Measurement Model

	Constructs and items	Standardized loadings
Self-esteem		
1	On the whole, I am satisfied with myself.	.75
2	At times, I think I am no good at all.	.70
3	I feel that I have a number of good qualities.	.73
4	I am able to do things as well as most other people.	.73
5	I feel I do not have much to be proud of.	.72
6	I certainly feel useless at times.	.72
7	I feel that I'm a person of worth, at least on an equal plane with others.	.75
8	I wish I could have more respect for myself.	.56
9	All in all, I am inclined to feel that I am a failure.	.76
10	I take a positive attitude toward myself.	.83
	Self-esteem - negative items	
2	At times, I think I am no good at all.	.49
5	I feel I do not have much to be proud of.	.35
6	I certainly feel useless at times.	.54
8	I wish I could have more respect for myself.	.21
9	All in all, I am inclined to feel that I am a failure.	.43
Intention to show positive work behaviour		
1	Do more work than required.	.64
2	Volunteer to work overtime.	.55
3	Make an attempt to change working conditions.	.43
4	Negotiate with my supervisor to improve my job.	.52
5	Try to think of ways to do the job better.	.86
Intention to engage in psychological withdrawal		
1	Think of being absent.	.65
2	Chat with co-workers about non-work topics.	.47
3	Leave the workstation for unnecessary reasons.	.82

4	Spend work time on personal matters.	.81
5	Put less effort into the job than I should.	.81
6	Think of leaving my current job.	.50
7	Let others do my job.	.71

Table 4-4 Exploratory Structural Equation Modelling of PNI

	Items	F1	F2	F3	F4	F5	F6	F7
6	I can make myself feel good by caring for others.	.63	.03	.02	-.03	-.28	-.00	.01
25	Sacrificing for others makes me a better person.	.47	.06	.00	.10	-.17	.03	.05
39	I try to show what a good person I am through my sacrifices.	.44	.03	.02	.07	.02	.11	.06
33	I like to have friends who rely on me because it makes me feel important.	.36	.19	.04	.11	.05	.18	-.10
22	I feel important when others rely on me.	.33	.06	-.02	.25	.10	-.07	.07
43	I help others in order to prove that I am a good person.	.33	.09	-.02	.14	.06	.18	-.00
5	It is hard to feel good about myself when I am alone.	-.14	.68	.03	-.06	-.07	.09	.02
36	It's hard for me to feel good about myself unless I know other people like me.	.06	.69	-.03	-.03	.15	-.01	-.00
2	My self-esteem fluctuates a lot.	.17	.57	-.00	.13	-.02	-.04	.19
30	It's hard to feel good about myself unless I know other people admire me.	.01	.54	-.01	.06	.21	.11	.00
16	When others don't notice me, I start to feel worthless.	.00	.54	.01	.00	.30	.07	-.05
8	When people don't notice me, I start to feel bad about myself.	.01	.50	.07	.07	.24	.01	.02
32	I am preoccupied with thoughts and concerns that most people are not interested in me.	.02	.47	-.01	.10	-.08	.35	-.02
48	I need others to acknowledge me.	.11	.49	.01	.08	.35	-.06	-.07
19	I sometimes need important others in my life to reassure me of my self-worth.	.21	.44	-.04	.01	.12	.09	-.00
47	When others don't respond to me the way that I would like them to, it's hard for me to still feel ok with myself.	.01	.43	.00	.01	.12	.28	.08
40	I am disappointed when people don't notice me.	.07	.37	-.04	.06	.44	.08	-.03
41	I often find myself envying others' accomplishments.	-.14	.27	-.18	.28	.27	.03	.14
10	I can make anyone believe anything I want them to.	.01	.04	.87	-.01	-.00	.03	.00
4	I can usually talk my way out of anything.	-.02	.05	.79	-.04	.08	-.07	.01
15	I find it easy to manipulate people.	-.11	-.01	.75	.07	.07	.09	-.00
35	Everybody likes to hear my stories.	.17	-.10	.51	.04	-.04	-.03	-.10
23	I can read people like a book.	.06	-.01	.44	.15	-.10	-.05	.08
45	I often fantasize about being recognized for my accomplishments.	.00	.07	-.03	.83	.08	-.02	.00
42	I often fantasize about performing heroic deeds.	-.02	-.02	.03	.75	-.06	.12	-.00
14	I often fantasize about having a huge impact on the world around me.	.09	-.06	.05	.74	-.10	.10	-.05
31	I often fantasize about being rewarded for my efforts.	.04	.10	.00	.71	.10	-.06	.00
26	I often fantasize about accomplishing things that are probably beyond my means.	.00	.03	-.01	.69	-.02	.02	.08
1	I often fantasize about being admired and respected.	.03	.11	.05	.65	.06	.01	-.04
49	I want to amount to something in the eyes of the world.	.23	-.00	.06	.47	.05	-.01	.06
20	When I do things for other people, I expect them to do things for me.	.09	-.05	-.00	-.01	.62	.13	-.11
29	I get angry when criticized.	-.10	.09	-.04	.02	.52	-.01	.19
52	I can get pretty angry when others disagree with me.	-.12	.04	.10	-.03	.51	.17	.10

37	It irritates me when people don't notice all that I do for them.	.12	.19	-.00	.00	.56	-.02	.12
18	I typically get very angry when I'm unable to get what I want from others.	-.06	-.01	.12	.01	.48	.32	-.03
12	I get annoyed by people who are not interested in what I say or do.	.10	.22	.09	-.03	.54	.00	-.00
11	I get mad when people don't notice all that I do for them.	.08	.20	.03	.04	.51	-.00	.08
38	I will never be satisfied until I get all that I deserve.	.07	-.09	.15	.22	.37	.13	.03
27	Sometimes I avoid people because I'm afraid they won't do what I want them to.	-.06	-.02	-.03	.06	.13	.72	.02
34	Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.	.09	.11	-.02	-.01	.11	.62	-.01
17	Sometimes I avoid people because I'm concerned that they'll disappoint me.	.02	.08	.02	.00	-.06	.62	.13
21	When others don't meet my expectations, I often feel ashamed about what I wanted.	.10	.19	-.04	-.04	.05	.51	.01
51	Sometimes it is easier to be alone than to face not getting everything I want from other people.	-.06	.09	-.02	.07	.00	.45	.24
24	When others disappoint me, I often get angry at myself.	.02	.22	.03	-.05	.11	.44	.12
3	I sometimes feel ashamed about my expectations of others when they disappoint me.	.10	.24	.05	-.04	-.02	.35	.13
46	I can't stand relying on other people because it makes me feel weak.	.03	-.09	.04	.06	.03	.08	.69
7	I hate asking for help.	-.03	-.00	.03	-.05	-.06	-.02	.65
28	It's hard to show others the weaknesses I feel inside.	.02	.20	-.00	-.03	-.00	.07	.51
9	I often hide my needs for fear that others will see me as needy and dependent.	.04	.37	-.01	-.04	-.01	.02	.48
50	When others get a glimpse of my needs, I feel anxious and ashamed.	-.02	.31	-.04	.10	.03	.13	.43
44	It's important to show people I can do it on my own, even if I have some doubts inside.	.36	-.15	-.01	.16	.05	.00	.43
13	I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.	.07	.04	.01	-.03	.00	-.11	.31

The parameter estimates for the latent constructs that have used a standard CFA specification show that the loadings of most of the items on their intended constructs are above 0.50, except for item 3 in the intentions to show positive work behaviour. Thus most of the item loading values are within the acceptable range for CFA (Kline, 2016).

The parameter estimates for the ESEM of the PNI show that the first factor is defined by high loadings from item numbers 6, 25, 39, 33, 22, and 43. According to the theoretical model, these items compose the self-sacrifice/self-enhancement factor. Therefore, the first factor in the ESEM perfectly represents the intended factor. Inspecting the second factor reveals that items 5, 36, 2, 30, 16, 32, 8, 48,19, 47, and 40 load most strongly onto this factor. In the theoretical model these items form the contingent self-esteem factor. Therefore, factor 2 represents the theoretical factor adequately.

Furthermore, four items have cross loadings on other factors: items 16, 40, and 48 cross-load on factor 5, and item 32 on factor 6.

The third factor consists of items 10, 4, 15, 35, and 23. According to the theoretical model, these items compose the exploitative factor. Factor 3, therefore, perfectly represents the intended factor, as none of the items cross-load onto any other factor. The factor 4 loadings consist of items 45, 42, 14, 31, 26, 1, and 49. These items indicate the grandiose fantasy factor in the theoretical model, and so, factor 4 perfectly represents the intended factor. Factor 5 consists of items 20, 29, 52, 37, 18, 12, 11, and 38. These loadings match the items in the theoretical model for the entitlement rage factor. Therefore, factor 5 adequately represents the entitlement rage factor.

Items 27, 34, 17, 21, 51, 24, and 3 are loaded on factor six. These items compose the "devaluing others" factor in the PNI theoretical model. The seventh factor consists of items 46, 7, 28, 9, 50, 44, and 13, which compose the "hiding the self "factor, according to the theoretical model. However, three items cross load onto other factors. Specifically, items 9 and 50 cross-load on factor 2, and item 44 cross-loads on factor 1.

A second model has been estimated to examine the measurement model which included the two higher-order factors corresponding grandiose and vulnerable narcissism. Because ESEM does not produce a high order factors, conventional CFA model was estimated. As discussed earlier the goodness of the model fit for CFA is lower than the ESEM model. The chi-squared goodness-of-fit statistic for the CFA model was 28496.60 , with 2628 degrees of freedom (p <.001), *RMSEA* = .043 [*95% CI* .042, .045], *CFI* =.860, and *SRMR* = .066. All the items loaded satisfactorily on its intended factors as shown in Table 4-5. Surprisingly, exploitativness factor loading on the grandiosity was below the acceptable value .50 (Kline, 2016). Table 4-6 shows the correlations among the latent constructs of the study variables.

Table 4-5 Measurement Model with the Higher Order Factors

	Constructs and items	Standardized loadings
	Self-esteem	
1	On the whole, I am satisfied with myself.	.75
2	At times, I think I am no good at all.	.70
3	I feel that I have a number of good qualities.	.73
4	I am able to do things as well as most other people.	.73
5	I feel I do not have much to be proud of.	.73
6	I certainly feel useless at times.	.71
7	I feel that I'm a person of worth, at least on an equal plane with others.	.76

8	I wish I could have more respect for myself.	.56
9	All in all, I am inclined to feel that I am a failure.	.76
10	I take a positive attitude toward myself.	.83
Self-esteem - negative items		
2	At times, I think I am no good at all.	.49
5	I feel I do not have much to be proud of.	.35
6	I certainly feel useless at times.	.54
8	I wish I could have more respect for myself.	.21
9	All in all, I am inclined to feel that I am a failure.	.43
Intention to show positive work behaviour		
1	Do more work than required.	.60
2	Volunteer to work overtime.	.53
3	Make an attempt to change working conditions.	.52
4	Negotiate with my supervisor to improve my job.	.51
5	Try to think of ways to do the job better.	.91
Intention to engage in psychological withdrawal		
1	Think of being absent.	.66
2	Chat with co-workers about non-work topics.	.47
3	Leave the workstation for unnecessary reasons.	.81
4	Spend work time on personal matters.	.80
5	Put less effort into the job than I should.	.80
6	Think of leaving my current job.	.50
7	Let others do my job.	.70
PNI: Contingent self-esteem		
8	When people don't notice me, I start to feel bad about myself.	.70
16	When others don't notice me, I start to feel worthless.	.76
36	It's hard for me to feel good about myself unless I know other people like me.	.75
40	I am disappointed when people don't notice me.	.75
48	I need others to acknowledge me.	.72
30	It's hard to feel good about myself unless I know other people admire me.	.80
5	It is hard to feel good about myself when I am alone.	.58
2	My self-esteem fluctuates a lot.	.58
32	I am preoccupied with thoughts and concerns that most people are not interested in me.	.69
19	I sometimes need important others in my life to reassure me of my self-worth.	.66
47	When others don't respond to me the way that I would like them to, it's hard for me to still feel ok with myself.	.74
41	I often find myself envying others' accomplishments.	.62
PNI: Exploitativeness		
10	I can make anyone believe anything I want them to.	.88
4	I can usually talk my way out of anything.	.78
15	I find it easy to manipulate people.	.76
35	Everybody likes to hear my stories.	.54
23	I can read people like a book.	.47
PNI: Devalue others		
27	Sometimes I avoid people because I'm afraid they won't do what I want them to.	.73
21	When others don't meet my expectations, I often feel ashamed about what I wanted.	.68
17	Sometimes I avoid people because I'm concerned that they'll disappoint me.	.69
34	Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.	.75
24	When others disappoint me, I often get angry at myself.	.66
3	I sometimes feel ashamed about my expectations of others when they disappoint me.	.59
51	Sometimes it is easier to be alone than to face not getting everything I want from other people.	.59
PNI: Grandiose fantasy		
45	I often fantasize about being recognized for my accomplishments.	.88
14	I often fantasize about having a huge impact on the world around me.	.73
42	I often fantasize about performing heroic deeds.	.75
31	I often fantasize about being rewarded for my efforts.	.80
26	I often fantasize about accomplishing things that are probably beyond my means.	.71
1	I often fantasize about being admired and respected	.75
49	I want to amount to something in the eyes of the world.	.61
PNI: Hiding the self		
46	I can't stand relying on other people because it makes me feel weak.	.62
7	I hate asking for help.	.45

28	It's hard to show others the weaknesses I feel inside.	.65
9	I often hide my needs for fear that others will see me as a needy and dependent.	.72
50	When others get a glimpse of my needs, I feel anxious and ashamed.	.78
44	It's important to show people I can do it on my own, even if I have some doubts inside.	.45
13	I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.	.23
PNI: Entitlement rage		
52	I can get pretty angry when others disagree with me.	.61
29	I get angry when criticized.	.56
37	It irritates me when people don't notice all that I do for them.	.77
20	When I do things for other people, I expect them to do things for me.	.59
11	I get mad when people don't notice all that I do for them.	.75
38	I will never be satisfied until I get all that I deserve.	.54
18	I typically get very angry when I'm unable to get what I want from others.	.63
12	I got annoyed by people who are not interested in what I say or do.	.71
PNI: Self-sacrifice/ self-enhancement		
25	Sacrificing for others makes me the better person.	.49
6	I can make myself feel good by caring for others.	.33
39	I try to show what a good person I am through my sacrifices.	.64
43	I help others in order to prove that I am a good person.	.69
33	I like to have friends who rely on me because it makes me feel important.	.68
22	I feel important when others rely on me.	.56
PNI: Grandiosity		
	Grandiose fantasy	.79
	Exploitativeness	.27
	Self-sacrifice/ self-enhancement	.86
PNI: Vulnerability		
	Contingent self-esteem	.97
	Devaluing others	.84
	Hiding the self	.70
	Entitlement rage	.81

Table 4-6: Correlations among the latent constructs

		1	2	3	4
1	PNI: Grandiosity				
2	PNI: Vulnerability	.77**			
3	Self-esteem	-.12*	-.51**		
4	Positive work behaviour	.16**	-.02	.26**	
5	Psychological withdrawal	.16**	.27**	-.19**	-.31**

** significant at the .01 level * significant at the .05 level

In conclusion, CFA and ESEM provide evidence of the adequacy of the final modified ESEM measurement model. The next section will present the findings for the structural model.

4.12 Assessment of the Structural Model

The structural models were specified to obtain estimates of the path coefficients among the latent variables that address the research hypotheses. Separate models were estimated for grandiose and vulnerable narcissism. The models specify the effects of the exogenous grandiose narcissism or vulnerable narcissism variables on intention to show positive work behaviour and intention to engage in psychological withdrawal (the

outcome variables), as influenced through self-esteem as a mediator. The model also includes an observed variable coded to capture the feedback valence manipulation (i.e. positive vs negative feedback), and controls for the effects of gender on the two outcome variables. The model is shown in Figure 4-2.

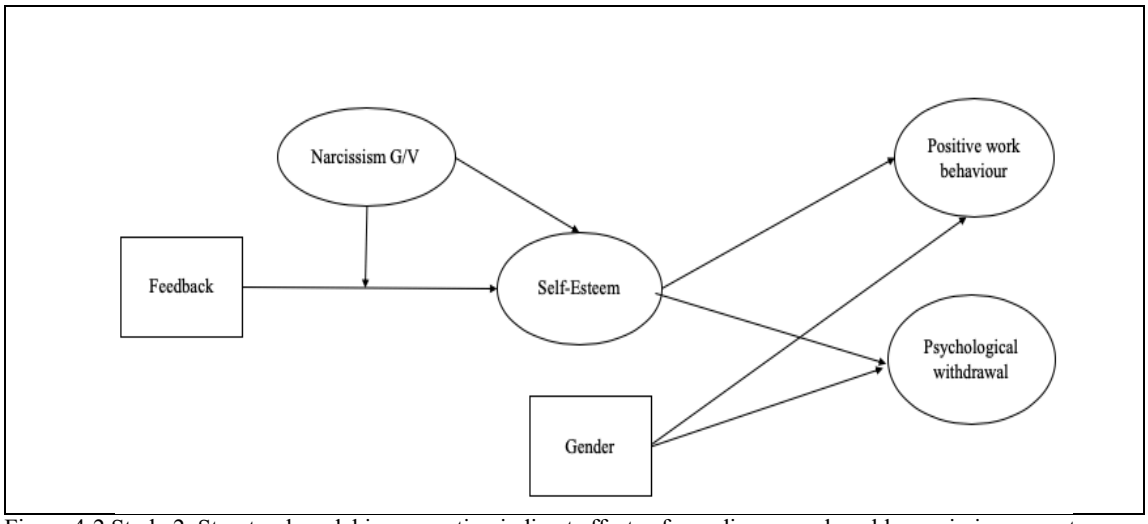

Figure 4-2 Study 2: Structural model incorporating indirect effects of grandiose or vulnerable narcissism on outcomes.

4.13 Grandiose narcissism model

The first model estimated for grandiose narcissism did not reach the cut-off for model goodness of fit: $\chi^2 = 135.737$ ($p < 0.001$), $df = 15$, $RMSEA = .103$, $CFI = .810$, $SRMR = .068$. A few model modification indices were included, but the model's improvement was not substantial. To explore the reasons for this misfit, the residuals from the model were inspected. The residuals from the relationships of self-esteem (*resid*ual = 1.04), positive work behaviour (*resid*ual =.47), and psychological withdrawal (.211) with exploitativeness (one of the three factors that compose the grandiose sub-type of narcissism) were quite large. These high residuals suggest that there were additional relationships of this specific aspect of grandiose narcissism that was not captured by the higher level grandiose narcissism factor. Therefore, a new path was added to the model directly from exploitativeness to self-esteem. This improved the model fit substantially producing final model fit indices as follows: $\chi^2 = 69.144$ ($p < 0.001$), $df = 12$, $RMSEA = .079$ [*95% CI* .062, .098], $CFI = .910$, $SRMR = .055$.

4.14 Hypothesis Testing Results for Grandiose Narcissism model

After obtaining acceptable model fits, the evidence for the research hypotheses was assessed. Each path between the variables in the structural model represents a

hypothesis (except for the relationships of the control variable, gender, with the two outcomes). These hypotheses are supported if the path coefficients reach the significance level p<.05. Table 4-7 shows the standardised path coefficients from the hypothesised structural model for grandiose narcissism, together with the unstandardized estimates, significance levels and the results of the hypothesis testing. The table also includes paths which are not hypothesised such as the direct paths from feedback valence, narcissism, and self-esteem to the outcomes to explore the partial mediation.

Table 4-7 Path coefficients for the grandiose narcissism model

Hypothesised Parameter	*B*	*SE*	*P-value*	*Std. β*	H	Result
Feedback Valence → Self-Esteem	-1.40	.40	.001	-.12	1	Supported
Grandiose Narcissism → Self-Esteem	-5.93	1.32	.001	-.25	2a	Supported
Exploitativeness → Self-Esteem	1.74	.27	.001	.26		
Self-Esteem → Positive Work Behaviour	.14	.03	.001	.18	-	-
Self-Esteem → Psychological Withdrawal	-.15	.04	.001	-.15	-	-
Gender → Positive Work Behaviour	.24	.32	.44	.03	-	-
Gender → Psychological Withdrawal	-.41	.37	.27	-.27	-	-

Table 4-8: Indirect Coefficients for the Grandiose Narcissism Model

Hypothesised Parameter	*B*	*SE*	*P-value*	*Std. β*	H	Result
Grandiose narcissism → intention to show positive work behaviour						
Total effect	-.57	.21	.006	-.03		
Total indirect effect	-.57	.21	.006	-.03		
Grandiose narcissism → self-esteem → positive Work behaviour	-.81	.24	.001	-.04	3a	Not supported
Grandiose narcissism → exploitativeness → self-esteem →positive Work behaviour	.24	.06	.001	.01	--	--
Grandiose narcissism → intention to engage in psychological withdrawal						
Total effect	3.67	1.04	.001	.16		
Total indirect effect	3.67	1.04	.001	.16		Not supported
Grandiose narcissism → self-esteem → psychological withdrawal	.87	.29	.003	.04	3b	Not supported
Grandiose narcissism → exploitativeness → self-esteem → psychological withdrawal	-.25	.07	.001	-.01	--	-

4.14.1 Direct effect

Table 4-7 and Table 4-8 show that all of the direct effects that were hypothesised, then tested using the structural model appear to be statistically significant, and in line with the literature.

Moreover, grandiose narcissism can be seen here to negatively predict self-esteem. The statistical significance and negative path coefficients between grandiose narcissism and self-esteem provide support for hypothesis 2a (p = .001).

The effect of gender (coded 1 = male; 2 = female) did not reach the significance level on the intention to engage in psychological withdrawal or the intentions to engage in positive work behaviour. In other words, females and males react in a similar manner when threatened.

4.14.2 Mediation Effects

A mediation effect, or indirect effect, means that the effect of the independent (exogenous) variable X_1 on the dependent (endogenous) variable Y goes through a mediator X_2 (another endogenous variable). The current study's structural model examines four possible indirect (mediated) effects: (a) the relationship between grandiose narcissism and intention to show positive work behaviour is mediated by self-esteem; (b) the relationship between grandiose narcissism and intention to engage in psychological withdrawal is mediated by self-esteem; (c) the relationship between vulnerable narcissism and intention to show positive work behaviour is mediated by self-esteem; and (d) the relationship between vulnerable narcissism and intention to engage in psychological withdrawal is mediated by self-esteem. Table 4-8 provides the results of the mediation analysis for grandiose narcissism model.

The results show that the effect of grandiose narcissism on the intention to show positive work behaviour was significantly and negatively mediated by self-esteem (β= -.03 p< .01). A one standard deviation increase in grandiose narcissism predicts a reduction in intention to show positive work behaviour of .03 of a standard deviation. This indicates that individuals with high grandiose narcissism are less likely to show positive work behaviour, and this appears, at least in part, to be due to such individuals experiencing a drop in self-esteem after receiving the feedback following the vignette. Thus, hypothesis 3a is not supported.

Similarly, the relationship between grandiose narcissism and intention to engage in psychological withdrawal was found to be significantly and positively mediated by self-esteem (β=.16 p< .01). In other words, a one standard deviation increase in grandiose narcissism predicts an increase in intention to engage in psychological withdrawal of .16 of a standard deviation. This means that individuals with high grandiose narcissism are highly likely to engage in psychological withdrawal behaviours. This is partially due to

such individuals experiencing lower self-esteem at time 2 (i.e. after the feedback). Therefore, hypothesis 3b is not supported.

Moreover, Table 4-9 shows the R^2 of the endogenous variables. The table indicates that the model indicators explain 11 % of the variance of self-esteem (r^2 =.11; p= .001); 4% of the intentions to show positive work behaviour (r^2 =.04; p = .01); and 17% of the variance of the intention to engage in psychological withdrawal (r^2 =.17, p = .001).

Table 4-9 Standardized R^2 values for the endogenous variable for Grandiose Narcissism Model

Variable	Estimate	*S.E.*	*P.* value
Self-esteem	.11	.025	.001
Positive work behaviour	.04	.014	.01
Psychological withdrawal	.17	.023	.001

4.14.3 Moderation effect

Two interaction effect hypotheses were proposed earlier in this study for the grandiose narcissism: (H5a) grandiose narcissism will positively moderate the relationship between feedback valence and intention to show positive work behaviour; (H5b) grandiose narcissism will negatively moderate the relationship between feedback valence and intention to engage in psychological withdrawal. A new interaction model was estimated for grandiose narcissism. While Mplus does not provide the conventional model fit statistics for interaction models, it does provide other model fit statistics: Akaike's Information Criterion (AIC), the Bayesian Information Criterion (BIC), and the sample size adjusted Bayesian Information Criterion (ABIC). The grandiose narcissism interaction model results were as follows: AIC: 30596.717; BIC: 30749.703; and ABIC: 30644.914. The results indicated that the effect of the interaction variable between grandiose narcissism and valence feedback on the intention to engage in psychological withdrawal was significant (β= .06; p <.01), whereas the effect on intention to show positive work behaviour did not reach the significance level (β= -.01; p = .61).

4.15 Hypothesis Testing Results for Vulnerable Narcissism model

The vulnerable narcissism model was estimated with the basic paths, but the model did not fit the data well. The model fit indices were χ^2 = 170.144 (p < 0.001); df = 22; *RMSEA* =.094; *CFI* =.916; *SRMR* = .054. After inspecting the residuals, high residuals

were found between two sub-factors of vulnerable narcissism, i.e., entitlement rage and contingent self-esteem, and so a covariance between their disturbance terms was added to the model. This made a substantial improvement in model fit: $\chi 2 = 117.781$ ($p < 0.001$); $df = 20$, $RMSEA = .080$, 90%CI = [.067 - .094]; $CFI = .944$; $SRMR = .052$. The unstandardized and standardized path coefficients for the hypothesised vulnerable narcissism model are shown in Table 4-10.

Table 4-10 Path coefficients for the vulnerable narcissism model

Hypothesised Parameter	B	SE	P-value	Std. β	H	Result
Feedback Valence → Self-Esteem	-.75	.35	.030	-.06	1	Supported
Vulnerable Narcissism → Self-Esteem	-4.63	.27	.001	-.60	2b	Supported
Self-Esteem → Positive Work Behaviour	.14	.03	.001	.18	-	-
Self-Esteem → Psychological Withdrawal	-.16	.04	.001	-.17	-	-
Gender → Positive Work Behaviour	.24	.32	.44	.03	-	-
Gender → Psychological Withdrawal	-.72	.37	.05	-.06	-	-

Table 4-11: Indirect coefficients for the vulnerable narcissism model

Hypothesised Parameter	B	SE	P-value	Std. β	H	Result
Vulnerable narcissism → intention to show positive work behaviour						
Total effect	-.63	.13	.001	-.11	-	-
Total indirect effect	-.63	.13	.001	-.11	-	-
Vulnerable narcissism → self-esteem → positive work behaviour	-.63	.13	.001	-.10	4a	Supported
Vulnerable narcissism → intention to engage in psychological withdrawal						
Total effect	.74	.18	.001	.10		
Total indirect effect	.74	.18	.001	.10		
Vulnerable narcissism → self-esteem → psychological withdrawal	.74	.18	.001	.08	4b	

4.15.1 Direct Effects

Table 4-10 shows that vulnerable narcissism negatively predict self-esteem. The statistical significance and negative path coefficients between vulnerable narcissism and self-esteem provide support for hypothesis 2b ($p = .001$).

Gender (coded 1 = male; 2 = female) predicted significantly and negatively intention to engage in psychological withdrawal, but its effect on intentions to engage in positive work behaviour did not reach the significance level.

4.15.2 Mediation effects

Table 4-11 shows the results from the vulnerable narcissism model. These results are in line with the predictions. The effect of vulnerable narcissism on intention to show positive work behaviour is significantly and negatively mediated by self-esteem ($\beta = -.11$

p< .001). That is, a one standard deviation increase in vulnerable narcissism predicts a reduction in intention to show positive work behaviour of .11 of a standard deviation. This indicates that individuals high in vulnerable narcissism are less likely to show positive work behaviours, and this can partially attributed to their experiencing a drop-in self-esteem after receiving feedback. This evidence is in line with existing literature on vulnerable narcissists' reactions to threats to their self-esteem. Therefore, hypothesis 4a is supported.

The relationship between vulnerable narcissism and intention to engage in psychological withdrawal was found to be significantly and positively mediated by self-esteem (β=.10 p < .01). That is, a one standard deviation increase in vulnerable narcissism predicts an increase in intention to engage in psychological withdrawal at .10 of a standard deviation. This means that individuals with high vulnerable narcissism are highly likely to engage in psychological withdrawal. Therefore, hypothesis 4b is supported.

Moreover, Table 4-12 shows the R^2 of the endogenous variables in vulnerable narcissism model. In vulnerable narcissism model, 36% of the variance in self-esteem (r^2 = .36; p= .001) is explained by the model indicators compared to 11 % in the grandiose narcissism model. The proportion of the variances explained by the model indicators are relatively as the same as in the grandiose narcissism model. Specifically, 4% of the intentions to show positive work behaviour (r^2 =.04; p= .001); and 15% of the variance of the intention to engage in psychological withdrawal (r^2 =.15, p= .001) are explained by the model indicators.

Table 4-12 Standardized R^2 values of the endogenous variable for Vulnerable Narcissism Model

Variable	Estimate	*S.E.*	*P.* value
Self-esteem	.36	.033	.001
Positive work behaviour	.04	.014	.01
Psychological withdrawal	.15	.021	.001

4.15.3 Moderators

As with the grandiose model, two interaction effect hypotheses were proposed; (H5c) vulnerable narcissism will moderate the relationship between feedback valence and intention to show positive work behaviour; and (H5d) vulnerable narcissism will moderate the relationship between feedback valence and intention to engage in psychological withdrawal. An interaction model was estimated for vulnerable narcissism model. The model fit statistics for the vulnerable narcissism interactions model were as follows: AIC, 29958.385; BIC, 30171.579; and ABIC, 30025.509. The results indicate that the effect of feedback valence on intention to engage in psychological withdrawal was moderated by vulnerable narcissism (β= .09; p < .05), while the effect of the interaction between vulnerable narcissism and feedback valence on intention to show positive work behaviour did not reach the significance level (β= -.03; p = .32). Thus, hypothesis 5c was not supported while hypothesis 5d regarding moderator effects of vulnerable narcissism on intention to engage in psychological withdrawal was supported.

4.16 Discussion

The aim of this vignette experimental study, with a large sample of 762 working adults, was to examine how grandiose and vulnerable narcissists respond to negative feedback when they are presented with two options: to show positive work behaviour and to engage in psychological withdrawal after receiving negative feedback. Self-esteem was examined as mediators of the effect of narcissism on the intention to show positive work behaviours and the intention to engage in psychological withdrawal. Furthermore, grandiose and vulnerable narcissism were examined as moderators in the relationship between feedback and the two endogenous variables of the study.

As predicted, the study provides evidence that vulnerable narcissism is significantly and positively associated with the intention to engage in psychological withdrawal, and significantly and negatively associated with the intention to show positive work behaviours. These findings are in line with the literature.

However, the effects of grandiose narcissism were surprising: individuals high in grandiose narcissism were shown by this study to be more likely to show a tendency to engage in psychological withdrawal in response to a self-esteem threat. Moreover, they were found to be less likely to show positive work behaviours following a self-esteem

threat. These findings are intriguing as they contradict those of Nevicka et al. (2016), wherein grandiose narcissists were found to tend to work harder after receiving negative feedback. To my best knowledge this is the first study to show this result.

Narcissists' reactions to ego-threats have been a key subject of debate since the inception of the construct of narcissism. Theorists of narcissism have argued that grandiose narcissists tend to respond to self-esteem threats aggressively, due to their feelings of inferiority and their need for constant admiration from others. For example, Wallace (2011) argues that narcissists respond to ego-threats by using self-enhancing and self-protective behaviours to make their grandiose selves known to others, as they believe that focusing attention on their perceived virtues will diminish threats to their egos (Wallace, 2011). Thus, narcissistic individuals tend to engage in self-enhancement behaviours in order to manipulate how others perceive them (Morf, Horvath & Torchetti, 2011). Wallace further emphasises that narcissists employ self-aggrandizement strategies not simply to exhibit their superiority, but because self-aggrandizement is a mean of self-protection against ego-threats. Personality and social psychologists have provided empirical evidence that grandiose narcissists respond aggressively to self-esteem threats. Most of the previous studies have determined that aggression is the most common reaction displayed by grandiose narcissists when threatened (Barry, Chaplin & Grafeman, 2006; Bushman & Baumeister, 1998; Foster, Campbell & Twenge, 2003; Twenge, 2010). Thus far, a single paper has provided an alternative perspective of the responses of grandiose narcissists. Nevicka and her colleagues (2016) have shown across three studies that grandiose narcissists can react in a constructive manner to criticism or perceived failures by improving their performance following negative feedback in order to compensate for their former performance.

This current study argues that grandiose narcissists might not respond aggressively in work settings because it may affect their career development, especially if they are keen to take up leadership positions. They might, as an alternative, respond passively by engaging in psychological withdrawal, given that they are extremely protective, and hypervigilant to perceived threats. Accordingly, grandiose narcissists might react to self-esteem threats by either showing positive work behaviours or by engaging in psychological withdrawal in order to protect themselves from any further threats. However, because grandiose narcissists are approach-oriented and competitive by nature,

I hypothesise that they will respond to self-esteem threats by showing positive work behaviours.

This study also examined the reactions of the other sub-type of narcissism, vulnerable narcissism to self-esteem threats. Earlier studies on the reactions of vulnerable narcissists evaluated the emotional reactions of vulnerable narcissists, particularly shame and anger, but these studies did not analyse their behavioural reactions. Because vulnerable narcissists tend to be avoidance oriented and self-protective, it was hypothesised that individuals high in vulnerable narcissism are likely to react to self-esteem threats by engaging in psychological withdrawal behaviours.

This study has some theoretical and practical implications. Withdrawal as a potential reaction of grandiose narcissists is not a new idea within the field as self-protection is a defining feature of narcissism. In fact, narcissism has been seen as a form of defensive maintenance of self-esteem (Raskin, Novacek, & Hogan, 1991c; Raskin et al., 1991a). Moreover, Rhodewalt, Tragakis, and Finnerty (2006) have provided evidence about grandiose narcissists employing self-protection strategies. Specifically, they found that grandiose narcissists choose to self-handicap by choosing to listen to distracting music while doing intelligence test to protect themselves of potential failure.

Furthermore, the narcissism self-regulatory processing model (Morf & Rhodewalt, 2001a) shows that individuals high in grandiose narcissism engage in defensive interpersonal behaviours in order to preserve their inflated but vulnerable senses of self-worth. Nevertheless, narcissistic defensive behavioural reactions have received insufficient attention from researchers. For example, Back et al. (2013) argue that narcissistic individuals tend to pursue two dominant strategies: namely, self-promotion and charm when they perceive an opportunity to enhance their ego, versus aggression and self-defence in response to threats. However, they emphasise that the narcissistic individual's underlying motivational dynamics for self-protection are not yet completely understood. This can perhaps be attributed to the difficulty in assessing narcissistic defensiveness and avoidance responses through explicit measurements as narcissists have a tendency to self-deceive (Horvath & Morf, 2009). Moreover, narcissists' responses on self-report questionnaires can be blurred by social desirability which is composed of: impression management and self-deception – an unconscious evaluative bias used to defend the self against psychological threat (Paulhus, 1984).

Accordingly, it is plausible to argue that self-reporting measurements are not capable of examining self-protection processes. Rather, these processes have to be interpreted from observing behaviours. For instance, the results of Nevicka et al. (2016) can also be explained as a self-protection strategy. In their first study, participants in the negative feedback condition asked for more time to complete a mathematical problem that they were about to take, relative to the participants in positive feedback condition. Thus, allocating more time can be seen as a defensive strategy in order to avoid a new threat, not only as a way to compensate for prior performance as Nevicka and her colleagues suggest.

The main practical implications of this study are for feedback provision. Because of their sensitivity in processing feedback, narcissists should be given feedback with an eye to future performance. Combining the feedback with an action plan in order to improve performance proved to attenuate the effect of feedback in a study by X. Hu, Chen, & Tian (2016). As such, instead of exposing issues in their previous performance, they might be given an outline of how to perform better in future.

4.17 Limitation and future studies

This study is not without limitations. Firstly, this study used an experimental vignette format. These hypothetical scenarios might not reflect real experiences. So, the findings should perhaps be taken with caution.

There are many other variables needed to determine the reactions of a narcissistic employee to negative feedback, including the authority of the feedback provider and similarities between the feedback provider and receiver. Prior research has found that similarities between the person who provides the negative feedback (e.g., sharing birthday dates) can attenuate the narcissist's aggression (Konrath, Bushman, & Campbell, 2006). Thus, familiarity with the feedback provider could be one contextual variable that determines how narcissistic individuals might react.

Positive work behaviour and behaviours indicating psychological withdrawal were measured using Lehman and Simpson's measurement (1992). It should be noted that although this scale was able to adequately assess the two factors considered by this study, it is, perhaps, somewhat outmoded. It might be beneficial to use a more contemporary measure to assess these two constructs in future studies.

4.18 Conclusion

The current study provides evidence that, when threatened, grandiose and vulnerable narcissists choose to engage in psychological withdrawal behaviours rather than to show positive work behaviours. These findings demonstrate that grandiose and vulnerable narcissists prioritise defensive strategies over self-enhancement strategies, when threatened.

Chapter 5 Self-Handicapping; A Self-Regulatory Strategy Following Threats to Self-Esteem

5.1 Introduction:

The results from Study 2 suggested that individuals whose grandiose or vulnerable narcissism scores on the PNI measure were high tended to respond to threats to self-esteem by engaging in psychological withdrawal instead of exhibiting positive work behaviours. Study 3 attempted to extend these findings by examining whether narcissists react to self-esteem threats by self-handicapping or by working harder. An experimental method was used in Study 3, rather than a vignette experiment like that used in Study 2. The same measures for narcissism and self-esteem were used in Study 3 as in Study 2. Study 3 also added measures of behavioural activation and behavioural inhibition, and it used choice of difficulty level for a future task as the outcome variable.

In Study 3, participants were asked to complete a time management task, which was followed by bogus positive or negative feedback. Then, participants were asked to choose the difficulty level for a second task they believed that they were about to attempt. Individuals who are high in grandiose or vulnerable narcissism were predicted to choose an easy task in order to avoid a threat to their self-esteem, as Study 2 suggested. Furthermore, the current study examined whether grandiose or vulnerable narcissism can predict task choice over and above the variance explained by approach and avoidance motivation. Figure 5-1 illustrates the model to be investigated in Study3.

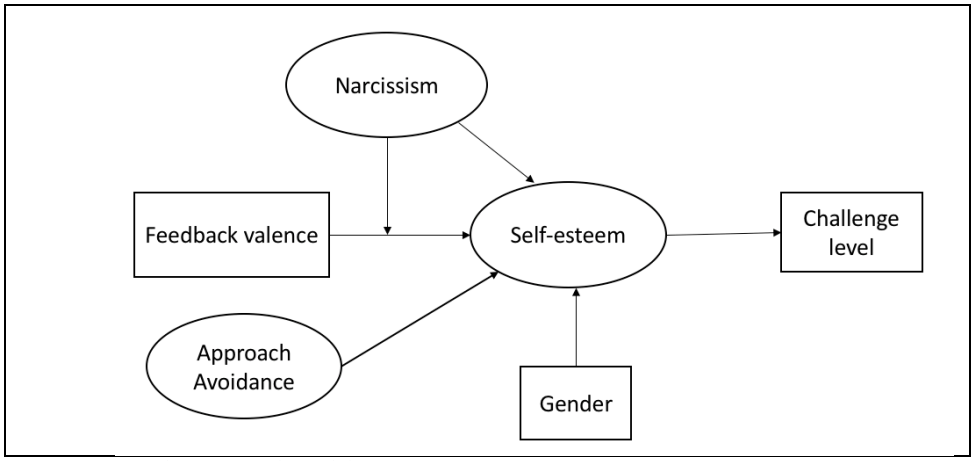

Figure 5-1:Study 3 research model

Study 3 makes several potential contributions to the field of research. This is the first self-esteem threat study to use a job simulation exercise (i.e., a time management exercise) as the study context. This exercise was expected to activate responses that are similar to those in real workplaces. Furthermore, this study adds to current literature on the association between grandiose narcissism and self-handicapping behaviour. In the only existing study which examines self-handicapping and grandiose narcissism (Rhodewalt et al., 2006), choosing distracting music was considered to be a self-handicapping behaviour, whereas, in this study, choosing an easy task rather than a moderate or difficult task is considered to be an indication of self-handicapping behaviour. Furthermore, this study is the first to examine the potential association between self-handicapping and vulnerable narcissism.

Previous studies have provided evidence that grandiose narcissists are motivated by positive outcomes, rather than the need to avoid negative outcomes (Foster & Trimm, 2008; Krizan & Herlache, 2017). Yet, the results of the previous Study 2 suggest that grandiose narcissists prioritise self-protection over self-enhancement. Thus, Study 3 examined whether narcissism can predict a choice between self-handicapping (a form of self-protection) and potential self-enhancement (i.e., by choosing a more difficult task at which one might do well and demonstrate competence), even when accounting for the effects of differences in approach and avoidance motivation.

In the following sections, I first present the hypotheses that are to be replicated from Study 2, then, through a discussion of the literature, the new hypotheses are generated.

5.2 Research Hypotheses

Study 2 tested the relationship of feedback (coded as 1=positive; 2=negative) with self-esteem. The generated results suggested that the relationship is significantly negative. That is, negative feedback is associated with lower self-esteem. Based on the previous finding, the following replication hypothesis is proposed:

Hypothesis 1: Feedback valence is negatively related to an individual's level of self-esteem.

In Study 2, self-esteem associated negatively with both grandiose and vulnerable narcissism. Based on these results, and to replicate these findings, the current study is re-testing these relationships. Thus, the following hypotheses were proposed:

Hypothesis 2a: An individual's level of grandiose narcissism is negatively related to his/her level of self-esteem.

Hypothesis 2b: An individual's level of vulnerable narcissism is negatively related to his/her level of self-esteem.

5.3 Narcissism and Self-Handicapping:

The narcissism self-regulatory processing model (Morf & Rhodewalt, 2001a) indicates that self-handicapping can be one of the strategies used by narcissists to protect themselves from self-esteem threats. Furthermore, the self-regulation strategies employed by narcissists are similar in nature to behaviours used by self-handicappers (Mitchell & Decker, 2017). Thus, it is imperative to take a more in-depth look at existing literature relating to self-handicapping.

Self-handicapping is defined as "any action or choice of performance setting that enhances the opportunity to externalise (or excuse) failure and to internalise success" (Berglas & Jones 1978, p. 406). Self-handicapping is a process in which individuals withdraw effort, create obstacles to success, or make excuses so they can maintain a public or self-image of competence (Berglas & Jones, 1978). Self-handicapping thus represents a strategy for regulating one's self-esteem (Schwinger et al., 2014) as it allows individuals to produce an excuse for a potential failure and it furthers self-enhancement by enabling the individual to exaggerate their competence by allowing them to claim that they perform well in a difficult situation.

Self-handicapping has particular characteristics: it is proactive, it occurs before the event which could potentially result in failure, and it is triggered by events which affect self-worth. Self-handicapping is more likely to happen in evaluative situations with people who are uncertain about their abilities (Berglas & Jones, 1978; Jones & Berglas, 1978; Snyder, Smith, Augelli, & Ingram, 1985). Self-handicappers manage the impressions of others using two tactics: (1) before the task, they lower their expectations for performance (Burns, 2005) and (2) after the task, they change the attributions about their abilities (Park

& Brown, 2014). Self-handicappers may also externalise the blame for their failure and attempt to minimise the appearance of the importance of the failure (Bateman & Crant, 1993).

Existing literature distinguishes between two types of self-handicapping: claimed self-handicapping and behavioural self-handicapping. Claimed handicapping includes using excuses to explain potential failures. Such excuses include claiming that good performance will be challenging or impossible due to lack of time, lack of resources, lack of authority, and task difficulty. In contrast, behavioural handicapping includes reducing one's effort or creating obstacles as an explanation for failure (Leary & Shepperd, 1986). Mitchell and Decker (2017) have summarised nine categories of self-handicapping. Included among these categories was not actively pursuing results by avoiding challenging tasks and risk-taking.

In relation to the big five factors of personality, dispositional self-handicapping associated positively with neuroticism, and all of its six lower-level facets, i.e., anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability. Moreover, self-handicapping associated negatively with conscientiousness, and its six facets of competence, order, dutifulness, achievement-striving, self-discipline and deliberation. However, the relationships between self-handicapping and the remaining three of the big five personality factors of extraversion, openness, and agreeableness were not statistically significant (Ross, Canada, & Rausch, 2002).

According to Rhodewalt (1990), ones level of self-esteem acts as an indicator of the feelings of threat being experienced, which, in turn, triggers self-handicapping behaviours. In other words, once self-esteem is threatened, self-handicappers withdraw. Nevertheless, the relationship between self-handicapping and self-esteem is uncertain. Some studies have found that individuals with high self-esteem are more likely to self-handicap (Tice & Baumeister, 1990), while others have found that individuals with low self-esteem are more likely to self-handicap (Coudevylle et al., 2011; Finez & Sherman, 2012). Moreover, individuals with high self-esteem have been found to handicap publicly to a greater extent than they do privately (Tice & Baumeister, 1990), implying that they are self-handicapping to enhance the appearance of their successes to others. Individuals with low self-esteem, by contrast, appear to self-handicap in order to protect their own self- esteem from the implications of failure (Tice, 1991).

Despite the similarities between behavioural self-handicapping and the defensiveness of narcissism as postulated by the narcissism self-regulation model, only one experimental study (to the best of my knowledge) has explored the relationship between narcissism and self-handicapping. Rhodewalt et al. (2006) investigated the effect of self-handicapping on uncertainty about one's capability to display a desired competency. The study attempted to ascertain whether individuals high in grandiose narcissism would engage in self-handicapping behaviours to a greater extent than individuals with low grandiose narcissism in a situation in which they were not sure of their own abilities. In the first experimental study, undergraduates were asked to complete an intelligence test in two sessions. Participants were divided into two manipulation groups: contingent success and non-contingent success. All participants received positive feedback conveying that they had answered 9 out of the 12 test problems correctly and that their performance was among the best. But in fact, the non-contingent success group participants were given items that were impossible to solve. Furthermore, participants were allowed to choose accompanying music while they take the test. Choosing the accompanying music was manipulated to be either private or public. In the public condition, participants informed the experimenter about their choice whereas in the private condition, the experimenter did not know the participants' music choice. This is to examine whether self-handicapping was employed to serve self-protection (private self-handicapping) or self-aggrandizement (public self-handicapping).

In the first session of the experiment, participants took the intelligence test in neutral conditions, free of any distractions, then they were given positive feedback regardless of their experimental group. In the second session, participants were given the chance to choose the music they could hear while taking the test. The music selection was described as ranging from very distracting to very facilitating. Participants with high grandiose narcissism were found to self-handicap more than non-narcissists in both experimental conditions, and, further, were seen to self-handicap more frequently in private than in public. This might indicate that grandiose narcissists self-handicap for their own self-interests rather than for the sake of their appearance to others.

Rhodewalt et al.'s (2006) second experiment had two objectives. The first was to replicate the findings of Study 1. The second was to determine the motives for self-handicapping among individuals with high and low narcissism (as measured by the NPI),

and to ascertain whether such individuals were primarily motivated by self-protection or by self-enhancement. Study 2 was conducted in two phases. The first was a replication of study1. The second phase included only participants who had received noncontingent success feedback in Phase 1. In the second phase of the experiment, participants completed a similar intelligence test while listening to the same music they have selected in phase one. Participants then received a randomly assigned feedback (positive vs negative). Results showed that participants who received positive feedback attributed their assumed success to ability regardless of whether or not they had self-handicapped. Participants who received negative feedback ascribed the failure to lack of ability if they had not previously self-handicapped but claimed on average that ability was not a factor. That is, they discounted their ability if they failed while self-handicapping. However, there was no evidence that participants inferred greater ability when they succeeded in the presence of a self-handicap than when they succeeded without self-handicapping. In other words, there is no evidence for a self-aggrandizing motive for narcissists (or non-narcissists) in these findings.

Rhodewalt et al.'s (2006) two experiments show that grandiose narcissists tend to employ self-handicapping behaviours as a self-protection strategy. This finding is in line with that of my Study 2, which provides evidence that grandiose narcissists often opt to engage in psychological withdrawal over showing positive work behaviours. Avoiding challenging tasks is included in Mitchell and Decker's (2017) nine categories of self-handicapping behaviours. As such, in this current study, the participant's choice of task difficulty was used as an indicator of whether or not the participant was self-handicapping.

Further, Study 2 found that self-esteem appears to mediate the relationship between narcissism and self-protective responses – here manifested as choosing a task that will preserve the individual's sense of their own capabilities by choosing an easy task. Thus, the following hypotheses were proposed:

Hypothesis 3: An individual's level of self-esteem is positively related to his/her choice of the challenge level of a task.

Hypothesis 4a: An individual's level of self-esteem mediates the relationship between his/her level of grandiose narcissism and his choice of the challenge level of a task.

Hypothesis 4b: An individual's level of self-esteem mediates the relationship between his/her level of vulnerable narcissism and his/her choice of the challenge level of a task.

Moreover, Study 2 found that grandiose and vulnerable narcissism moderated the effect of feedback on the likelihood of participants to engage in a psychological withdrawal response. Study 3 attempts to replicate the interactions of feedback with grandiose and vulnerable narcissism as follows:

Hypothesis 5a: An individual's level of grandiose narcissism will negatively moderate the relationship between feedback valence and his/her choice of a challenge level of task.

Hypothesis 5b: An individual's level of vulnerable narcissism will negatively moderate the relationship between feedback valence and his/her choice of a challenging level of task.

5.4 Approach and Avoidance Motivation

Study 2 suggested that grandiose narcissists prefer to avoid negative outcomes rather than to work towards positive outcomes. This result can be interpreted as an indirect indication that grandiose narcissists tend to be avoidance oriented rather than approach oriented. This assumption contradicts previous studies (Foster & Trimm, 2008; Krizan & Herlache, 2017). Accordingly, Study 3 examine whether approach-avoidance motivation is a better predictor of the choice of challenge level than are grandiose and vulnerable narcissism.

The distinction between approach and avoidance motivation is one of the oldest in the history of psychology. Approach motivation is defined as "energising behaviour toward positive stimuli [while] avoidance motivation as energising behaviour away from negative stimuli" (Elliot, 2008, p. 3). Approach and avoidance systems reflect specific structures of the brain. These systems are labelled the Behavioural Activation (or Approach) System (BAS) and the Behaviour Inhibition System (BIS). BAS is sensitive

to, and energises movement towards, positive stimuli, while BIS is sensitive to, and energises movement away from, negative stimuli (both actual and imagined).

To date, there have been very few studies that have examined the association of approach and avoidance motivation with narcissism. The first was conducted by Foster and Trimm (2008), who found that grandiose narcissism predicted high levels of approach motivation and low levels of avoidance motivation. They also found that approach/avoidance motivation can differentiate between grandiose and vulnerable narcissism, specifically, that grandiose narcissists are more likely to be motivated by pursuing positive outcomes than by avoiding negative outcomes. However, their expected association between vulnerable narcissism and avoidance motivation did not reach the significance level.

Furthermore, in their third study, Foster and Trimm (2008) examined whether approach/avoidance motivation might mediate the relationship of self-esteem with grandiose and vulnerable narcissism. Results suggested that approach motivation positively and significantly mediated the link between grandiose narcissism and self-esteem. Avoidance motivation was found to negatively and partially mediate the relationship between vulnerable narcissism and self-esteem.

Similarly, Krizan and Herlache (2017) contend that approach and avoidance motivation can be the main factor for distinguishing between grandiose and vulnerable narcissism and, thus, proposed a new model, the narcissism spectrum model (NSM). Krizan and Herlache (2017) found a positive association between grandiose narcissism and measures of approach orientation such as the Behavioural Activation Sensitivity (BAS) Questionnaire (.31) and the Approach–Avoidance Temperament Questionnaire (.14). Vulnerable narcissism, on the contrary, found to be negatively correlated with these scales and positively correlated with a measure of Behavioural Inhibition Sensitivity (BIS; .34), which assesses avoidance orientation.

Moreover, several researchers have examined the associations of approach and avoidance motivation with self-esteem. Social and personality psychologists conceptualise self-esteem in two different ways. The first framework emphasises individual differences in levels of self-esteem, arguing that these different levels are associated with different kinds of social strategies. Accordingly, high self-esteem is associated with approach strategies, whereas low self-esteem is associated with avoidance

strategies. The second conceptualisation considers self-esteem as a form of motivation rather than a trait. The self-esteem motive can be divided into two impulses: self-enhancement and self-protection which, respectively, reflect an approach motivated by the potential for positive outcomes, and an approach that prioritises the avoidance of failure. More specifically, individuals with low self-esteem are characterised as avoiding possible threats in order to protect the self. In contrast, individuals with high self-esteem are motivated to enhance self-esteem (Erdle & Rushton, 2010; Heimpel, Elliot, & Wood, 2006; Masselink, Van Roekel, & Oldehinkel, 2018).

It is clear from a review of literature in the field of narcissism research that the influence of approach and avoidance motivation on what have been considered to be outcomes of narcissism has been understudied. Given that two previous studies have found a positive association between approach motivation and grandiose narcissism, and one study has found a significant and negative association between vulnerable narcissism and avoidance motivation, it is important to try to differentiate what are the effects of narcissism versus the effects of approach and avoidance motivation. Since my own Study 2 found that individuals high in both grandiose and vulnerable narcissism preferred to avoid negative outcomes over pursuing positive outcomes, it is important to examine whether both sub-types of narcissism can predict the choice of task challenge level above and beyond the prediction from approach and avoidance motivation. Thus, the following hypotheses related to approach and avoidance motivation effects were proposed, in order that earlier hypotheses regarding narcissism effects can be tested with motivation effects also included in the model:

Hypothesis 6a: An individual's level of approach motivation is positively related to his/her level of self-esteem.

Hypothesis 6b: An individual's level of avoidance motivation is negatively related to his/her level of self-esteem.

Hypothesis 7a: An individual's level of self-esteem positively mediates the relationship between his/her level of approach motivation and his/her choice of the challenge level of a task.

Hypothesis 7b: An individual's level of self-esteem negatively mediates the relationship between his/her level of avoidance motivation and his/her choice of the challenge level of a task.

5.5 Gender as a control variable

Gender is considered a control variable because previous studies have suggested that males reported high scores in grandiose narcissism scales more than females but this difference did not exist in vulnerable narcissism scales (Grijalva, Newman, et al., 2015). My own Study 2 suggested that females are more likely to engage in psychological withdrawal than males. Thus, gender is included in the research model as a control variable.

5.6 Methods

The following sections present the method of the study including sample specifications, research design, research procedure and the measurements used to assess the research constructs.

5.6.1 Sample

Initially, 700 individuals were recruited through the academic prolific platform to participate in Study 3 by completing the survey at Time 1. However, the final sample consists of 542 participants who completed both Time 1 and Time 2 questionnaires, and who also met the checks for manipulation, outliers, and consistent responding – as described in more detail later. The gender balance of respondents was roughly equal, with 51% of the subjects reporting being female and 49% male. In terms of race/ethnicity, the majority of the sample was white (91%), with 4.8% of respondents reporting as Asian, 2% African, and 2.2% other races. The mean age of the sample was 35.25 (*SD* = 9.35). Participants also tended to have a relatively high level of educational accomplishment: 45.6 % of the sample held a university degree, 23% had a professional degree and 4% held doctorates. The remaining 26% indicated that they had finished high school. The sample consists of working individuals only, with an average work experience of 13.59 years (*SD* = 9.76). 48.7% of the sample had self-reported supervisory responsibilities.

5.6.2 Procedure

Through the Prolific Academic on-line platform, participants were found for the study's two measurement sessions, which were separated by approximately a week. Participants were paid 1.80 Pounds Sterling for their participation. At Time 1, participants were asked to complete the Pathological Narcissism Inventory (PNI, Pincus et al., 2009), the Behavioural Inhibition System/Behavioural Activation System (BIS/BAS) scales (Carver & White, 1994) and the Rosenberg self-esteem scale (Rosenberg, 1979). A week later, participants were sent an invitation to take part in the second phase of the study. The alleged purpose of the study was to examine the effects of a job simulation exercise in selecting potential leaders.

At Time 2, participants were randomly assigned to one of two groups. The two groups differed with respect to the experimentally manipulated valence of the feedback (positive or negative) that was given to the participants after they completed the time management exercise. 272 participants received positive feedback, while 270 received negative feedback. To encourage the participants to compete the exercise, they were told that an extra five Pounds Sterling would go to those with the highest five scores.

The time management in-basket exercise used was adapted from Pearson, Barnes, and Onken (2006). The original exercise consisted of a list of 20 tasks that a fictitious company manager has to deal with that day, and participants were asked to indicate the best order in which to perform the tasks. Each task is described in a short sentence, e.g., Telephone message on answering machine: Tom Thompson (your boss at corporate headquarters) "Please call first thing when you get into the office." For the purpose of this study, the number of tasks was reduced from twenty to seven of a relatively moderate difficulty level.

Following this exercise, participants received randomly assigned feedback. In the positive feedback condition, participants were informed, "Your score is within the highest 15% of persons who have completed this exercise". Whereas in the negative feedback condition, participants were informed, "Your score is within the lowest 15% of persons who have completed this exercise". Following the feedback, participants again completed the Rosenberg Self-Esteem Scale. Participants were then told that they will be presented with a second in-basket exercise, but they were given the chance to choose the difficulty

level of the exercise that they were about to take, according to one of the three following options:

a. Easy for an average person.
b. Within the level of an average person.
c. Difficult for an average person.

Once participants had made their choice of difficulty level for the second task, they were thanked for taking part in the study (they were not actually required to complete a second exercise). The challenge level chosen for the expected second exercise is the outcome variable of this study.

5.7 Measures

As in Study 2, narcissism and self-esteem were measured using the Pathological Narcissism Inventory (PNI, *Pincus et al., 2009) and the* Rosenberg Self-Esteem Scale (Rosenberg, 1979) respectively. (More detailed descriptions of these measures are available in the Method section for Study 2.) A new measure was added in Study 3 in order to assess approach and avoidance motivation: the Behavioural Inhibition System/Behavioural Activation System (BIS/BAS) (Carver & White, 1994).

For Study 3, the internal consistency estimates for the PNI were similar to those found for Study 2. Specifically, in Study 3, the full-scale reliability was $\alpha = .95$, with subscale reliabilities as follows: contingent self-esteem, $\alpha = .93$; exploitativeness, $\alpha = .77$; self-sacrificing/self-enhancement, $\alpha = .75$; hiding the self, $\alpha = .77$; grandiose fantasy, $\alpha = .88$; devaluing others, $\alpha = .86$; and entitlement rage, $\alpha = .88$. The internal consistencies of the PNI grandiosity and vulnerability subscales were $\alpha = .88$ and $\alpha = .95$, respectively. The Rosenberg self-esteem scale internal consistency was $\alpha = .91$ at both Time 1 and Time 2.

5.7.1 Behavioural Inhibition System/Behavioural Activation System (BIS/BAS).

The Carver and White (1994) BIS/BAS scales are a 20-item five-point Likert-type measure of BIS/BAS motives composed of the following four subscales: BIS (7 items: e.g., Criticisms or scolding hurt me quite a bit), BAS-Reward Responsiveness (5 items, BAS-RR: e.g., “When I get something I want, I feel excited and energized”), BAS-Drive (4 items, BAS-DR: e.g., “When I want something, I usually go all out to get it”), and BAS-Fun Seeking (4 items, BAS-FS: e.g., “I will often do things for no other reason than that

they might be fun"). To minimize the number of variables, the three sub-types of behavioural activation were aggregated into a single BAS factor. The behavioural activation subscale reliability was .81 and the behavioural inhibition reliability was .69.

5.7.2 Task evaluation

A time management task evaluation was created with two items to be responded to on a five-point scale. These two items assessed the perception of the feedback: "The feedback which I have received was accurate", and "My result in this exercise reflects my real competencies".

5.8 Results

As in Study2, the data analysis was conducted in two phases. Phase one examined the quality of the data to ensure that it meet the necessary assumptions for structural equation modelling. This included identifying outliers, normality and multicollinearity. Phase two of the data analysis examined the measurement model and the structural model.

5.8.1 Preliminary analysis

5.8.1.1 Identifying outliers:

The same procedures as used in Study 2 were employed to clean the data. Multivariate outliers were identified using the Mahalanobis distance for each observation. Linear regression analysis was used to examine the Mahalanobis distance. The participant's identification number was entered as a dependent variable, whereas all the eight study variables, grandiose narcissism, vulnerable narcissism, behavioural inhibition system (BIS), behavioural activation system (BAS), self-esteem, feedback, and challenge level, were input as independent variable in SPSS. The critical value of χ^2 with 8 degrees of freedom at $p < .001$ was 26.125 (Tabachnick & Fidell, 2013). Accordingly, two observations were deleted because they exceeded the critical score.

In addition, to assess whether participants were responding carefully when completing the survey, an item was embedded within the Pathological Narcissism Inventory, in which the participants were simply asked to respond to the item with the 'completely false' option (Oppenheimer, Meyvis, & Davidenko, 2009). 180 participants who failed to respond to this item correctly were excluded from further analysis.

5.8.1.2 Missing Data

Most of the missing data in this sample occurred because participants did not participate in the Time 2 data collection; only the data from participants who completed both sessions of the study was used in the study sample. I used the forced answers option in the Qualtrics platform to minimise the number of missing item responses. Thus, the remaining sample has a fully completed set of item responses.

5.8.1.3 Normality

The same procedures to assess the normality of the sample described in Study2 were applied for Study3. Skewness and kurtosis of the univariates showed that all of the variables are within the recommended cut-off scores for skewness (absolute > 3.0) and kurtosis (> 10.0) (Kline, 2016), which means that the distribution of the sample data is close to normal. Nevertheless, measurement model estimation was conducted using the robust maximum likelihood (MLR) estimator to minimize any minor biasing effects of skew and kurtosis on standard errors and significance tests (Hair et al., 2014; Kline, 2016). Structural model estimation was conducted using the weighted least squares estimator (WLSMV) which is a robust estimator for categorical outcomes.

5.8.1.4 Multicollinearity Assessment

As discussed in Study 2, the correlation between study variables should not exceed .9 (Hair et al., 2014; Tabachnick & Fidell, 2013). Table 5-1 shows the study's matrix of correlations. The highest correlation coefficient in the correlation matrix is .61, occurring between grandiose and vulnerable narcissism. Furthermore, the Variance Inflation Factor (VIF) values and tolerance values were also calculated and inspected to assess multicollinearity statistically. Multiple regression analysis was used to compute VIF, with all values found to be less than 10 (values ranged between 1.02 and 2.45), and all tolerance values were above .42, which is higher than the cut-off score of .1 (Hair et al., 2014). Therefore, based on the correlation matrix and VIF, multi-collinearity is not an issue in this study.

Table 5-1: Relationships between Study 3 Variables

	1	2	3	4	5	6
1. Grandiose Narcissism						

2. Vulnerable Narcissism	.61**					
3. Avoidance Motivation	.35**	.55**				
4. Approach Motivation	.44**	.10*	.23**			
5. Self-esteem	-.11*	-.42**	-.26**	.25**		
6. Feedback	.02	-.00	-.01	.07	-.05	
Mean	55.01	92.57	18.86	37.89	31.70	1.49
Standard deviation	11.71	24.77	3.01	5.60	5.73	.500

** significant at the .01 level * significant at the .05 level.

5.9 Test of the Manipulation Check

The manipulation check was tested using two items: “My result in this exercise reflects my real competencies” and “The feedback which I have received was accurate”. The mean of the first item for subjects in the positive condition was 3.38 (SD= .987), while the mean of subjects in the negative condition was 2.07 (SD= 1.17). The second item mean for subjects in the positive condition was 3.61 (SD= .83), while the mean of subjects in the negative stood at 2.37 (SD= 1.20). There was a significant difference in means between the two groups. The T-test results revealed that individuals within the positive feedback condition scored significantly higher in both items, with T-test values of = 14.11 and 13.97, respectively ($p < .05$).

5.10 Measurement Model

The tests of the measurement model were performed using the robust maximum likelihood estimator (MLR) in Mplus v7.4 (Muthén & Muthén, 1998-2012). The measurement model for Study 3 included responses to the items from the Pathological Narcissism Inventory, the Rosenberg self-esteem scale at Time 2, Behavioural Inhibition System (BIS), and Behavioural Activation System (BAS). Model fit was assessed based on a chi-square difference test. Three additional indices of model fit were also examined, specifically, the comparative fit index (CFI), the root-mean-square error of approximation (RMSEA), and standardized root-mean-square residual (SRMR). CFI values of .90 or higher, a RMSEA value of .06 or lower, and a SRMR value of .08 or lower are indicative of good model fit (Kline, 2016).

The initial standard CFA model specified five latent constructs: grandiose narcissism and vulnerable narcissism as measured by the PNI, self-esteem, approach motivation (BAS), and avoidance motivation (BIS). These five constructs were allowed to correlate freely. Item-level responses from the surveys were used as indicators for the latent constructs.

All constructs in the standard CFA models were identified as the model had more than two latent factors, and none of the factors had fewer than two indicators (Kline, 2016). In addition, in the first model estimated, the error terms of all indicators were specified in order to ensure that they were completely independent (i.e., no covariances amongst the residual terms were allowed). Model fit indices for this first model indicated that the chi-square goodness-of-fit statistic was 6953.295, with 3157 degrees of freedom ($p < .001$). The values for the alternative fit indices were *RMSEA* = .047, *CFI* =.832, and *SRMR* = .066. Although RMSEA and SRMR had acceptable values, which suggested that the model might be close to fitting adequately, the chi-square goodness-of-fit statistic was significant, and the CFI was lower than desirable.

As an initial attempt to determine what changes to the model specification would be required to improve the model fit, model modification indices (MI) were consulted. Many of the MI suggested adding co-variances between the residuals of the item-level indicators. These were inspected to see if there was a substantive, as well as statistical, rationale for freeing the relevant co-variances. As a result of this inspection, 7 of the model modification indices with values higher than 30 were included in the model, which improved the model fit slightly. The fit indices for this modified model were χ^2 = 6543.823, *df* =3150, $p < .01$. Values of the additional fit indices were *RMSEA*=.045 [*95% CI* .043,.046]; *CFI* =.850; *SRMR* = .065. Again, the chi-square value was statistically significant, *CFI,* did not reach the acceptable value.

As in Study 2, the Exploratory Structural Equation model ESEM (Asparouhov et al., 2009; Marsh et al., 2014) was estimated. The new model consisted of the conventional CFA specification for self-esteem, approach motivation (BAS), and avoidance motivation (BIS) (i.e., each indicator loads only on one latent construct) and an ESEM for the PNI (i.e., all PNI indicators are allowed to load on each of the seven PNI latent constructs. This ESEM measurement model proved a better fit than the previous models: chi-square was 5021.681 with 2887 degrees of freedom ($p < .001$), *RMSEA* = .037, *CFI* =.892, and *SRMR*=.050. Model modification indices were investigated thoroughly, then a new modified model was estimated, which included six covarying residuals for the PNI, resulting in an improved model fit. Table 5-2 shows the pairs of covarying residuals included in the measurement model. The chi-square was 4629.883, with 2879 degrees of freedom ($p <.001$), *RMSEA* = .033, *CFI* =.912, and *SRMR* = .049. Although the model

was estimated in one process, the findings are shown in two tables to ensure clarity. Table 5-2 shows the conventional CFA factor loadings while Table 5-4 shows the ESEM loadings.

Table 5-2: Pairs of Covarying Residuals Included in the Measurement Model

Item A	Item B
PNI Items	
16. When others don't notice me, I start to feel worthless.	8. When people don't notice me, I start to feel bad about myself.
37. It irritates me when people don't notice all that I do for them.	11. I get mad when people don't notice all that I do for them.
33. I like to have friends who rely on me because it makes me feel important.	22. I feel important when others rely on me.
Self-esteem Items	
4. I am able to do things as well as most other people.	3. I feel that I have a number of good qualities.
BIS/BAS Items	
4. When I'm doing well at something I love to keep at it.	5. I'm always willing to try something new if I think it will be fun.
22. I have very few fears compared to my friends.	2. Even if something bad is about to happen to me, I rarely experience fear or nervousness.
7. When I get something I want, I feel excited and energized.	4. When I'm doing well at something I love to keep at it.

Table 5-3:CFA Measurement Model

	Constructs and items	Standardised loadings
	Self-esteem	
1	On the whole, I am satisfied with myself.	.74
2	At times, I think I am no good at all.	.67
3	I feel that I have a number of good qualities.	.68
4	I am able to do things as well as most other people.	.57
5	I feel I do not have much to be proud of.	.65
6	I certainly feel useless at times.	.71
7	I feel that I'm a person of worth, at least on an equal plane with others.	.70
8	I wish I could have more respect for myself.	.56
9	All in all, I am inclined to feel that I am a failure.	.72
10	I take a positive attitude toward myself.	.83
Negative self-esteem		
2	At times, I think I am no good at all.	.45
5	I feel I do not have much to be proud of.	.49

6	I certainly feel useless at times.	.50
8	I wish I could have more respect for myself.	.33
9	All in all, I am inclined to feel that I am a failure.	.47
Bas Drive		
3	I go out of my way to get things I want.	.64
9	When I want something I usually go all-out to get it.	.75
12	If I see a chance to get something I want, I move on it right away.	.68
21	When I go after something I use a "no holds barred" approach.	.64
Bas Fun seeking		
5	I'm always willing to try something new if I think it will be fun.	.58
10	I will often do things for no other reason than that they might be fun.	.57
15	I often act on the spur of the moment.	.53
20	I crave excitement and new sensations.	.72
	Bas reward responsiveness	
4	When I'm doing well at something I love to keep at it.	.56
7	When I get something I want, I feel excited and energized.	.64
14	When I see an opportunity for something I like I get excited right away.	.67
18	When good things happen to me, it affects me strongly.	.60
23	It would excite me to win a contest.	.48
	Behavioural Inhibition System	
2	Even if something bad is about to happen to me, I rarely experience fear or nervousness.	.47
8	Criticism or scolding hurts me quite a bit.	-.65
13	I feel pretty worried or upset when I think or know somebody is angry at me.	-.77
16	If I think something unpleasant is going to happen I usually get pretty "worked up".	-.71
19	I feel worried when I think I have done poorly at something important.	-.71
22	I have very few fears compared to my friends.	.41
24	I worry about making mistakes.	-.73

Table 5-4 Exploratory Structural Equation Modelling of PNI

N	Items	F1	F2	F3	F4	F5	F6	F7
5	It is hard to feel good about myself when I am alone.	.75	-.05	-.19	.07	-.09	.19	-.02
36	It's hard for me to feel good about myself unless I know other people like me.	.70	.00	.20	-.01	.01	-.05	.07
16	When others don't notice me, I start to feel worthless.	.69	-.01	.14	.05	.02	-.00	-.03
8	When people don't notice me, I start to feel bad about myself.	.59	.00	.15	.02	.07	.03	-.01
30	It's hard to feel good about myself unless I know other people admire me.	.59	.02	.28	.12	-.05	-.07	.09
48	I need others to acknowledge me.	.57	-.00	.27	-.03	.09	-.13	.10
2	My self-esteem fluctuates a lot.	.56	-.20	-.05	.03	.13	.24	-.09
19	I sometimes need important others in my life to reassure me of my self-worth.	.49	.01	.21	.11	-.02	.00	.12
32	I am preoccupied with thoughts and concerns that most people are not interested in me.	.50	-.00	.03	.33	.09	-.02	-.11
47	When others don't respond to me the way that I would like them to, it's hard for me to still feel ok with myself.	.44	.01	.26	.29	-.09	.08	.02
40	I am disappointed when people don't notice me.	.42	-.05	.39	.17	.04	-.10	.05
41	I often find myself envying others' accomplishments.	.37	-.11	.19	-.01	.35	.14	-.05
50	When others get a glimpse of my needs, I feel anxious and ashamed.	.39	.00	.00	.23	.09	.28	.00
10	I can make anyone believe anything I want them to.	-.01	.78	.00	.07	.02	.01	.01
15	I find it easy to manipulate people.	.01	.72	.14	.06	.04	-.02	-.20
4	I can usually talk my way out of anything	.01	.69	-.06	-.03	.03	-.01	.05
23	I can read people like a book.	-.03	.43	-.02	.02	-.03	.08	.24

35	Everybody likes to hear my stories.	-.00	.42	.06	-.04	.05	-.21	.20
37	It irritates me when people don't notice all that I do for them.	.05	-.06	.69	.14	.01	.10	.12
12	I got annoyed by people who are not interested in what I say or do.	.17	.08	.52	.03	.08	.03	-.10
11	I get mad when people don't notice all that I do for them.	.24	.11	.49	-.03	-.00	.23	-.02
52	I can get pretty angry when others disagree with me.	.01	.09	.54	.22	-.00	.09	-.03
18	I typically get very angry when I'm unable to get what I want from others.	.00	.18	.49	.30	.00	.04	-.06
29	I get angry when criticized.	.09	-.06	.53	-.07	.15	.19	.03
20	When I do things for other people, I expect them to do things for me.	-.04	.05	.42	.24	.02	-.02	-.00
38	I will never be satisfied until I get all that I deserve.	-.05	.14	.33	.27	.24	-.02	-.01
34	Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.	.14	-.00	.16	.55	-.01	-.01	.01
21	When others don't meet my expectations, I often feel ashamed about what I wanted.	.20	.06	-.00	.57	-.02	.02	-.01
27	Sometimes I avoid people because I'm afraid they won't do what I want them to.	.09	-.02	.20	.56	.00	-.09	-.10
17	Sometimes I avoid people because I'm concerned that they'll disappoint me.	.04	.04	.04	.55	.03	.19	-.01
24	When others disappoint me, I often get angry at myself.	.14	.04	-.00	.53	-.04	.19	.06
3	I sometimes feel ashamed about my expectations of others when they disappoint me.	.28	.09	-.12	.42	.02	.16	-.10
51	Sometimes it is easier to be alone than to face not getting everything I want from other people.	.10	-.09	.04	.43	.05	.22	.06
39	I try to show what a good person I am through my sacrifices.	-.08	-.05	.01	.42	-.00	-.00	.57
33	I like to have friends who rely on me because it makes me feel important.	.21	.07	.02	.30	.15	-.17	.24
45	I often fantasize about being recognized for my accomplishments.	-.01	-.16	.03	.12	.86	-.03	.03
14	I often fantasize about having a huge impact on the world around me.	-.03	.08	-.02	-.03	.74	.01	-.08
42	I often fantasize about performing heroic deeds.	-.02	.03	-.02	.12	.66	-.05	.02
26	I often fantasize about accomplishing things that are probably beyond my means.	.09	.04	-.02	-.00	.62	.16	.04
31	I often fantasize about being rewarded for my efforts.	.01	-.03	.17	.11	.64	.02	.10
1	I often fantasize about being admired and respected	.15	.09	-.02	.08	.53	.02	.01
49	I want to amount to something in the eyes of the world.	.18	.09	.06	-.10	.45	.02	.20
7	I hate asking for help.	.05	-.03	.05	-.03	-.01	.59	-.05
46	I can't stand relying on other people because it makes me feel weak.	-.12	.01	.04	.22	.07	.54	.09
28	It's hard to show others the weaknesses I feel inside.	.27	-.02	.05	-.01	.12	.43	.00
9	I often hide my needs for fear that others will see me as a needy and dependent.	.49	.06	-.00	.05	-.03	.39	.00
44	It's important to show people I can do it on my own, even if I have some doubts inside.	-.04	.02	.04	-.02	.14	.43	.33
13	I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.	-.12	.00	.17	.01	-.06	.40	.24
25	Sacrificing for others makes me the better person.	.07	.01	-.11	.15	.05	.07	.47
6	I can make myself feel good by caring for others.	.27	.04	-.20	-.09	.02	-.04	.47
43	I help others in order to prove that I am a good person.	.04	-.05	-.01	.35	.08	.00	.45
22	I feel important when others rely on me.	.17	.08	.08	-.01	.25	.04	.36

Table 5-3 reports the factor loadings from the CFA measurement model. These results show that almost all the item loadings were within the acceptable values. Inspecting the ESEM for the PNI revealed that almost all items loaded on to their hypothesized factors, although some items also cross-loaded on other factors. For instance, 13 items

loaded most strongly on the first factor. Twelve of these compose the contingent self-esteem subscale, except for item 50 "*When others get a glimpse of my needs, I feel anxious and ashamed"*, which was expected to load most strongly on the 'hiding the self' factor. Five items loaded on the second factor, which perfectly represents the exploitativness subscale. Similarly, eight items loaded on factor 3, which represents the entitlement subscale. Seven items loaded on factor five, which perfectly represents grandiose fantasy. Factors 4, 6, and 7 had few items with cross-loadings, or loaded on to different factors. For example, factor 4 contained nine items, seven of which represent devaluing others, while two items (33 and 39) would have been expected to load more strongly on a factor representing the self-sacrificing/self-enhancement subscale (factor 7 in the ESEM solution). Factor 6, which seems to correspond to the 'hiding the self' subscale, had six items with their strongest loadings on it instead of seven, as the theoretical model proposes. (This is because item 50 loaded most strongly on the contingent self-esteem factor.) Except for some minor deviations on factor loadings as noted directly above, the measurement model was shown to be adequate as it reached the acceptable model fit indices and the vast majority of the items loaded on their theoretically designated factors.

A second model has been estimated to examine the measurement model which included the two higher-order factors corresponding grandiose and vulnerable narcissism. Because ESEM does not produce higher-order factors, a conventional CFA model was estimated. The chi-squared goodness-of-fit statistic for the CFA model was 6347.653, with 3205 degrees of freedom (p <.001), *RMSEA* = .043 [*95% CI* .041, .044], *CFI* =.841, and *SRMR* = .074. All the items loaded satisfactorily on its intended factors as shown in Table 5-5 . Table 5-6 shows the correlations among the latent constructs of the study variables.

Table 5-5 Measurement model with the higher order factors

	Constructs and items	Standardized loadings
	Self-esteem	
1	On the whole, I am satisfied with myself.	.74
2	At times, I think I am no good at all.	.67
3	I feel that I have a number of good qualities.	.69
4	I am able to do things as well as most other people.	.57
5	I feel I do not have much to be proud of.	.65
6	I certainly feel useless at times.	.71
7	I feel that I'm a person of worth, at least on an equal plane with others.	.70
8	I wish I could have more respect for myself.	.56
9	All in all, I am inclined to feel that I am a failure.	.71
10	I take a positive attitude toward myself.	.82
Self-esteem - negative items		
6	I certainly feel useless at times.	.49
9	All in all, I am inclined to feel that I am a failure.	.49
5	I feel I do not have much to be proud of.	.47
2	At times, I think I am no good at all.	.45
8	I wish I could have more respect for myself.	.32
	Bas drive	
9	When I want something I usually go all-out to get it.	.76
12	If I see a chance to get something I want, I move on it right away.	.69
3	I go out of my way to get things I want.	.63
21	When I go after something I use a "no holds barred" approach.	.63
	Bas Fun seeking	
20	I crave excitement and new sensations.	.69
5	I'm always willing to try something new if I think it will be fun.	.59
10	I will often do things for no other reason than that they might be fun.	.58
15	I often act on the spur of the moment.	.51
	Behavioural inhibition	
13.	I feel pretty worried or upset when I think or know somebody is angry at me.	.76
24.	I worry about making mistakes.	.75
16.	If I think something unpleasant is going to happen I usually get pretty "worked up".	.73
19.	I feel worried when I think I have done poorly at something important.	.72
8.	Criticism or scolding hurts me quite a bit.	.66
2.	Even if something bad is about to happen to me, I rarely experience fear or nervousness.	.45
22.	I have very few fears compared to my friends.	.39
PNI: Contingent self-esteem		
30	It's hard to feel good about myself unless I know other people admire me.	.80
36	It's hard for me to feel good about myself unless I know other people like me.	.79
16	When others don't notice me, I start to feel worthless.	.78
40	I am disappointed when people don't notice me.	.78
47	When others don't respond to me the way that I would like them to, it's hard for me to still feel ok with myself.	.78
8	When people don't notice me, I start to feel bad about myself.	.73
32	I am preoccupied with thoughts and concerns that most people are not interested in me.	.73
48	I need others to acknowledge me.	.72
19	I sometimes need important others in my life to reassure me of my self-worth.	.71
41	I often find myself envying others' accomplishments.	.67
5	It is hard to feel good about myself when I am alone.	.61
2	My self-esteem fluctuates a lot.	.59
PNI: Exploitativeness		
10	I can make anyone believe anything I want them to.	.83
15	I find it easy to manipulate people.	.75
4	I can usually talk my way out of anything.	.68
23	I can read people like a book.	.46
35	Everybody likes to hear my stories.	.44

PNI: Devalue others		
34	Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.	.74
21	When others don't meet my expectations, I often feel ashamed about what I wanted.	.72
27	Sometimes I avoid people because I'm afraid they won't do what I want them to.	.71
17	Sometimes I avoid people because I'm concerned that they'll disappoint me.	.69
24	When others disappoint me, I often get angry at myself.	.68
3	I sometimes feel ashamed about my expectations of others when they disappoint me.	.65
51	Sometimes it is easier to be alone than to face not getting everything I want from other people.	.62
PNI: Grandiose fantasy		
45	I often fantasize about being recognized for my accomplishments.	.82
31	I often fantasize about being rewarded for my efforts.	.77
26	I often fantasize about accomplishing things that are probably beyond my means.	.73
42	I often fantasize about performing heroic deeds.	.72
14	I often fantasize about having a huge impact on the world around me.	.70
1	I often fantasize about being admired and respected	.67
49	I want to amount to something in the eyes of the world.	.64
PNI: Hiding the self		
50	When others get a glimpse of my needs, I feel anxious and ashamed.	.73
9	I often hide my needs for fear that others will see me as a needy and dependent.	.72
28	It's hard to show others the weaknesses I feel inside.	.63
46	I can't stand relying on other people because it makes me feel weak.	.54
7	I hate asking for help.	.46
44	It's important to show people I can do it on my own, even if I have some doubts inside.	.41
13	I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.	.32
PNI: Entitlement rage		
37	It irritates me when people don't notice all that I do for them.	.78
11	I get mad when people don't notice all that I do for them.	.77
18	I typically get very angry when I'm unable to get what I want from others.	.73
12	I got annoyed by people who are not interested in what I say or do.	.70
52	I can get pretty angry when others disagree with me.	.68
29	I get angry when criticized.	.64
38	I will never be satisfied until I get all that I deserve.	.62
20	When I do things for other people, I expect them to do things for me.	.55
PNI: Self-sacrifice/ self-enhancement		
33	I like to have friends who rely on me because it makes me feel important.	.68
22	I feel important when others rely on me.	.67
43	I help others in order to prove that I am a good person.	.63
39	I try to show what a good person I am through my sacrifices.	.59
25	Sacrificing for others makes me the better person.	.47
6	I can make myself feel good by caring for others.	.34
PNI: Grandiosity		
	Grandiose fantasy	.82
	Exploitativeness	.48
	Self-sacrifice/ self-enhancement	.83
PNI: Vulnerability		
	Contingent self-esteem	.95
	Devaluing others	.88
	Hiding the self	.81
	Entitlement rage	.83
BAS		
	BAS Drive	.83
	BAS Fun seeking	.81
	BAS Reward responsiveness	.83

Table 5-6: Correlations among the latent constructs

		1	2	3	4
1	PNI: Grandiosity				
2	PNI: Vulnerability	.79**			
3	Self-esteem	-.10	-.39**		
4	BIS	-.40**	-.64**	.40**	
5	BAS	.52**	.09	.42**	.05

** significant at the .01 level * significant at the .05 level.

In conclusion, CFA and ESEM provide evidence of the adequacy of the final modified ESEM measurement model. The next section will present the findings for the structural model.

5.11 Assessment of the Structural Model

The structural model estimated path coefficients among the latent variables that addressed the research hypotheses. This model specified the covariance relationships among the latent constructs that function as exogenous variables (i.e., grandiose narcissism, vulnerable narcissism, approach motivation, and avoidance motivation), and their effects on the choice of challenge level (the outcome variable), as mediated by self-esteem (measured at Time 2, after the feedback). The model also includes an observed variable that was coded to capture the feedback condition (i.e., positive vs negative feedback). Furthermore, the model includes a moderator, an interaction variable between feedback and grandiose or vulnerable narcissism. As in Study 2, gender was included as a control variable. The structural model for Study 3 is shown in Figure 5-2

Due to the high correlation between grandiose narcissism and vulnerable narcissism (r = .79) two separate models were estimated. The weighted least squares estimator (WLSMV) was used. This estimator is the default estimator in *Mplus* for models with categorical outcomes, such as the challenge level variable in the current study.

5.11.1 The grandiose narcissism structural model

The initial structural model for grandiose narcissism did not have an acceptable level of fit, χ^2 = 91.435, df = 22, p < 0.001, *RMSEA* =.076, *CFI* =.878, *WRMR* = 1. 364. To ascertain the potential causes of this misfit, the residuals resulting from the comparison of the values in the input covariance matrix with the values of the covariance matrix implied by the model were inspected. The relationships of avoidance motivation and

approach motivation with Exploitativness (one of the three sub-components of grandiose narcissism) were associated with large residuals, indicating that those relationships were not well-recovered by the model. So, two new covariances were added to the model (i.e., between the disturbance term for exploitativeness and the two motivations). This modified model yielded a better model fit, $\chi 2 = 49.701$, $df = 20$, $p < 0.001$, *RMSEA* =.052 [*95% CI* .034, .071], *CFI* =.948, *WRMR* = .991. Thus, this model has reached the acceptable cut-off values.

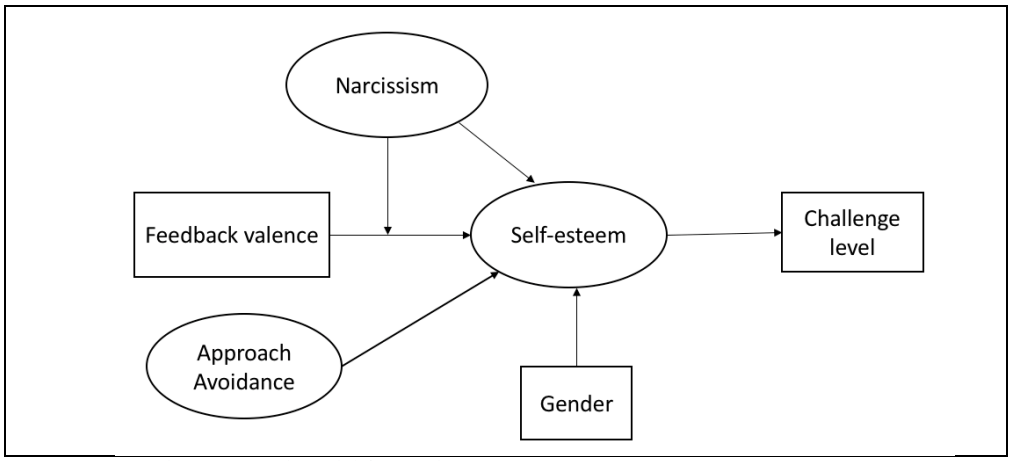

Figure 5-2: The Structural Model for Study 3

5.11.1.1 Hypotheses Testing

After obtaining acceptable model fit for grandiose narcissism, the research hypotheses were tested. Each path in the structural model between the variables represents a hypothesis. These hypotheses are supported, provided the standardized coefficient relationships reached the significance level (p<.05).

5.11.1.2 Direct Effects

Table 5-7 shows the results of the path coefficients for the direct hypothesised structural model, unstandardized and standardized estimates, significance level and the results of the hypothesis testing. Almost all of the direct effects hypothesised and tested by the structural model of grandiose narcissism appear to be statistically significant and closely in line with the literature, with the exception of the effect of feedback on self-esteem. Specifically, the effect of feedback (coded 1= positive; 2= negative) on self-esteem was not statistically significant, although the relationship was in the expected

direction (β= -.05, p >.05). And so, hypothesis 1 was not supported. As hypothesised, grandiose narcissism did negatively predict self-esteem. The statistically significant and negative path coefficients of grandiose narcissism on self-esteem (β= -.27, p < .001) supports hypothesis 2a. Table 5-7 also shows that the effect of self-esteem on an individual's selection of the challenge level was found to be significantly positive (β=.22; p < .001). This result supports hypothesis 3.

Moreover, as hypothesised, approach motivation positively and significantly predicted self-esteem. Thus, hypothesis 6a is supported. The effect of avoidance motivation on self-esteem was statistically significant and negative, thus Hypothesis 6b was supported.

The gender, control variable, (coded 1= male; 2= female) was negatively associated with self-esteem, indicating that females in the study on average had lower self-esteem.

Table 5-7: Path coefficients for direct relationships in grandiose narcissism model

Hypothesised Path	B	SE	Sig.	Std. β	H	Result
Feedback → Self-Esteem	-.57	.49	.24	-.05	1	Not supported
Grandiose Narcissism → Self-Esteem	-5.12	1.17	.001	-.27	2 a	Supported
Self-esteem → Challenge Level	.04	.008	.001	.22	3	Supported
Approach Motivation → Self-Esteem	.46	.04	.001	.44	6a	Supported
Avoidance Motivation → Self-Esteem	-.40	.083	.001	.21	6b	Supported
Gender → Self-Esteem	-1.49	.50	.003	-.13	-	-

5.11.1.3 Mediation Effect

The structural model for grandiose narcissism suggests that there are three possible indirect (mediated) effects, namely that: (a) the relationship between grandiose narcissism and the challenge level is mediated by self-esteem, (b) the effect of approach motivation on the challenge level is mediated by self-esteem, and (c) the effect of avoidance motivation on the challenge level is mediated by self-esteem. Table 5-8 provides results for tests of mediation for the grandiose narcissism model. Self-esteem negatively and significantly mediated the effect of grandiose narcissism on the challenge level (β= -.06, p< .01). Here, an increase in grandiose narcissism by one standard deviation predicts a reduction of the challenge level by .06 standard deviation, indicating that individuals with high grandiose narcissism tend to choose easier tasks. This appeared at least in part due to grandiose narcissists experiencing lower levels of self-esteem at Time 2 (i.e., post-

feedback). This evidence supports the idea that individuals high in grandiose narcissism employ behavioural self-handicapping when threatened.

Moreover, the effect of approach motivation on choice of challenge level was found to be significantly and positively mediated by self-esteem (β=.10; $p < .001$). Self-esteem was found to significantly and negatively (β=-.05; $p < .001$) mediate the effect of avoidance motivation on an individual's choice of challenge level. These results support hypotheses 6a and 6b, respectively. It is clear that approach motivation predicts the challenge level more strongly than do grandiose narcissism and avoidance motivation.

The R^2 results indicate that 24% of the variance of self-esteem is explained by the model indicators ($r^2 = .240$; $p < .001$) whereas the indicators explain only 8 % of the variance of challenge level ($r^2 = 08$ $p < .001$).

Table 5-8 Direct and Indirect Coefficients of the Grandiose Narcissism Model Mediators

Hypothesised Parameter	B	SE	Sig.	Std. β	H	Result
Grandiose narcissism to challenging level						
Total effect	-.20	.06	.001	-.06**		
Total indirect effect	-.20	.06	.001	-.06**	4a	Supported
Specific indirect:				-.06**		
Grandiose → self-esteem → level	-.20	.06	.001			
Approach motivation to challenging level						
Total effect	.02	.004	.001	.10**		
Total indirect effect	.02	.004	.001	.10**	6a	Supported
Specific indirect:						
Approach → self-esteem → level	.02	.004	.001	.10**		
Avoidance motivation to challenging level						
Total effect	-.02	.004	.001	-.05**		
Total indirect effect	-.02	.004	.001	-.05**	6b	Supported
Specific indirect:				-.05**		
Avoidance → self-esteem → level	-.02	.004	.001			

5.11.1.4 Moderation Effect

The moderation effect of grandiose narcissism on the relationship between feedback and the challenge level was examined. A new model was estimated in order to test the interaction effect. The interaction model criteria were as follows: AIC = 13994.765; BIC = 14110.738; ABIC = 14025.030. However, the effect of feedback on the challenge level was not moderated by grandiose narcissism (β= .02, *n.s*).

5.11.2 Vulnerable narcissism model

The initial model for vulnerable narcissism did not have an acceptable level of fit, $\chi 2 = 494.242$, $df = 28$, $p < 0.001$, $RMSEA = .175$, $CFI = .543$, $WRMR = 3.368$. To ascertain the causes of this misfit, the residuals resulting from the comparison of the values in the input covariance matrix with the values of the covariance matrix implied by the model

were inspected. So, two new covariances were added to the model between BIS and vulnerable narcissism, and BAS with vulnerable narcissism (i.e., between the disturbance term for vulnerable narcissism and the two motivations). This modified model yielded better model fit indices: χ^2 = 79.107 (ρ < 0.001), *df* = 30, *RMSEA* =.055 [*95% CI* .040, .070], *CFI* = .941; *WRMR* = 1.092.

5.11.2.1 Hypothesis Testing

Table 5-9 reports the path coefficients for the vulnerable narcissism hypothesised structural model, standardized and unstandardized estimates, significance level and the results of the hypothesis testing. The results are discussed in the following sections.

5.11.2.2 Direct Effects

Almost all of the direct effects hypothesised and tested by the structural model of vulnerable narcissism, as shown in Table 5-9 , appear to be statistically significant and closely in line with the literature, with the exception of the association between feedback and self-esteem. The effect of feedback (coded 1= positive; 2= negative) on self-esteem was not statistically significant (*β*=-.05, *p* = .236). (A similar result was found for the grandiose narcissism model in this study.) Thus, hypothesis 1 was not supported.

As hypothesised, vulnerable narcissism negatively predicted self-esteem (*β*=-.40; *p* < .001). This result supports hypothesis 2b. The effect of self-esteem on the challenge level is significant and positive (*β*=.21; *p* < .001). Thus, hypothesis 3 is supported.

Moreover, approach motivation positively and significantly predicted self-esteem. Thus, hypothesis 6a is supported. The effect of avoidance motivation on self-esteem did not reach the significance level (*β*=-.07; *p* < .107), contradicting the findings of the grandiose narcissism model. This might be due to high correlation between vulnerable narcissism and avoidance motivation.

Finally, gender (coded 1= male; 2= female) associated negatively with self-esteem, indicating that, on average, females in the study had lower self-esteem. The following section presents the results of the hypothesised mediation effects.

Table 5-9 Path Coefficients for the Vulnerable Narcissism Model

Hypothesised Parameter	B	SE	Sig.	β	H	Result
Feedback → Self-Esteem	-.58	.488	.238	-.05	1	Not supported
Vulnerable Narcissism → Self-Esteem	-2.89	.337	.001	-.40	2B	Supported
Self-esteem → Challenge Level	.04	.009	.001	.21	3	Supported
Approach Motivation → Self-Esteem	.326	.036	.001	.32	6a	Supported
Avoidance Motivation → Self-Esteem	-.143	.089	.107	-.07	6b	Not supported
Sex→ Self-Esteem	-1.49	.503	.003	-.13	-	---

5.11.2.3 Mediation Effect

The vulnerable narcissism model suggests that there are three possible indirect (mediated) effects captured in the model, namely that: (a) the relationship between vulnerable narcissism and the challenge level is mediated by self-esteem, (b) the effect of approach motivation on the challenging level is mediated by self-esteem, and (c) the effect of avoidance motivation on the challenging level is mediated by self-esteem. Table 5-10 provides the results of the mediation analysis for the vulnerable narcissism model. As predicted, the effect of vulnerable narcissism on the challenging level was also significant and negative via self-esteem (β= -.08, $p < .01$). In other words, an increase in vulnerable narcissism by one standard deviation predicts a reduction of the challenging level by .08 standard deviations. Thus, hypothesis 4b is supported. This study, then, provides evidence that individuals with high vulnerable narcissism tend to engage in self-handicapping behaviours when they are faced with self-esteem threats, such as negative feedback.

Approach motivation was also found to have an indirect, positive and significant effect on the challenge level via self-esteem. Thus, hypothesis 7a was supported. Conversely, the effect of avoidance motivation on the challenging level via self-esteem did not reach the significance level, mostly likely as a result of the high correlation between vulnerable narcissism and avoidance motivation. In the vulnerable model, narcissism was found to be a higher predictor of a participant's choice of challenge level than approach or avoidance motivation.

Moreover, R^2 results for the vulnerable model shows that 29 % of the variance of the self-esteem is explained by the exogenous variables ($r^2 = .29$; $p < .001$) whereas the model indicators explain only 7 % of the variance of the challenge level ($r^2 = .07$; $p < .001$).

Table 5-10 Direct and Indirect Coefficients of the Vulnerable Narcissism Model mediators

Hypothesised Parameter	*B*	*SE*	*Sig.*	*Std. β*	H	Result
Vulnerable narcissism to challenge level						
Total effect	-.10	.031	.001	-.08	4b	Supported
Total indirect effect	-.10	.031	.001	-.08		
Specific indirect:				-.08		
Vulnerable → self-esteem → level	-.10	.031	.001			
Approach motivation to challenging level					7a	Supported
Total effect	.01	.003	.001	.06		
Total indirect effect	.01	.003	.001	.06		
Specific indirect:	.01	.003	.001	.06		
Approach → self-esteem → level						
Avoidance motivation to challenging level					7b	Not supported
Total effect	-.00	.003	.130	-.01		
Total indirect effect	-.00	.003	.130	.01		

Specific indirect:				
Avoidance → self-esteem → level	-.00	.003	.130	.01

5.11.2.4 Moderations

The moderation effect of vulnerable narcissism on the relationship between feedback and the challenging level was estimated. The interaction model criteria were as follows: AIC = 14508.848; BIC = 14637.706; ABIC = 14542.475. The effect of feedback on the challenge level was not significantly moderated by vulnerable narcissism (β= .01; n.s).

In summary, the aim of this study was to replicate the findings of Study 2, which found that individuals high in grandiose and vulnerable narcissism are more likely to respond to self-esteem threats by showing the intention to engage in psychological withdrawal. Study 3 reached similar results. Specifically, individuals high in grandiose or vulnerable narcissism were found to be highly likely to engage in behavioural self-handicapping by choosing easy tasks, rather than selecting a difficult task in an attempt to compensate for previous poor performance by demonstrating more effort. Study 3 further examined whether approach/avoidance motivation can predict behavioural self-handicapping beyond narcissism. The results were quite unclear. The effect of approach motivation on the challenge level was found to be higher than the effect of grandiose narcissism on the challenge level. The effect of vulnerable narcissism, by contrast, on selecting the challenge level was found to be higher than the effect of approach motivation and avoidance motivation. The effect of avoidance motivation on the challenge level did not reach the significance level, which is probably due to the high correlation between vulnerable narcissism and vulnerable narcissism.

5.12 Discussion:

Narcissists' reactions to threats of self-esteem have long been a subject of debate in the field. Earlier studies have provided evidence that grandiose narcissists tend to react aggressively towards the feedback provider (Bushman & Baumeister, 2002), by derogating them (Kernis & Sun, 1994), or by questioning the validity of the feedback. Other researchers have shown that grandiose narcissists can use feedback as a mean to motivate them to perform better (Nevicka, Baas, & Ten Velden, 2016). Both study 2 and

the current study have argued that it is not plausible for grandiose narcissists to react aggressively in organisational settings because of the detrimental consequences of such a reaction to their career and wider development. In the light of these studies, it seems plausible to suggest that grandiose and vulnerable narcissists might react in a self-protective manner in order to maintain their inflated but vulnerable self-esteem in the work environment.

The results of Study 2 provided evidence that grandiose and vulnerable narcissists are, indeed self-protective. In Study 2, both types of narcissism were positively related to psychological withdrawal whilst they were negatively related to positive working behaviours. Furthermore, grandiose and vulnerable narcissism were found to moderate the effect of feedback on the intention to engage in psychological withdrawal. These results indicate that grandiose narcissists might be avoidance oriented. That is, such individuals are motivated by the need to avoid negative outcomes rather than by the desire to achieve positive outcomes, as previous studies have claimed (Foster & Trimm, 2008; Krizan & Herlache, 2017). Thus, Study 3 aimed to replicate the findings of Study 2 by examining whether grandiose and vulnerable narcissists tend to self-handicap when threatened. Furthermore, Study 3 extended Study 2 by examining whether narcissism can predict self-handicapping more and above the variance of approach and avoidance motivation.

As predicted, the results from Study 3 indicate that grandiose and vulnerable narcissists prefer to self-handicap when threatened, rather than to put additional effort into the task in order to compensate for their earlier performance. The only study, hitherto, to examine the association between narcissism and self-handicapping aimed to explore the effect of uncertainty of capabilities of narcissists on self-handicapping (Rhodewalt et al., 2006) and does not assess narcissists' reactions to self-esteem threats. This is, then, the first study to show that grandiose and vulnerable narcissists respond to threats of self-esteem by engaging in self-handicapping behaviours.

Moreover, this study has provided additional evidence that grandiose and vulnerable narcissists self-handicap as a self-protection strategy rather than to impress others; this experiment was undertaken online, not in a laboratory environment, in which an individual might wish to impress others. This finding is important, given that Rhodewalt et al. (2006) did not find conclusive evidence for narcissist's motivations for self-handicapping: is to impress others or to protect the self.

The findings of this current study are in line with existing literature within the field. Earlier theorists have advocated that grandiose narcissists are extremely self-protective (Sedikides & Gregg, 2001), and highly vigilant in their awareness of any potential threats (Horvath & Morf, 2009). Furthermore, empirical evidence has found that grandiose narcissists tend to become defensive when faced with self-esteem threats (Hepper et al., 2010; Morf et al., 2011).

Furthermore, this study can be considered to be in line with previous studies which have found that grandiose narcissists react aggressively to threats to self-esteem. Specifically, Wallace (2011) has interpreted grandiose narcissists' rage reactions as "frustration stemming from self-enhancement denial or as an effort to assert dominance rather than as evidence of damaged self-esteem" (Wallace, 2011, p. 312).

This current work is, however, the only study that has examined the response of vulnerable narcissists to threats of self-esteem. Previous studies have explored the association of vulnerable narcissism with emotions such as anger and shame. Furthermore, this is the only study to document the effect of feedback on self-handicapping for individuals with vulnerable narcissism.

Interestingly, Morf, Horvath and Torchetti (2011) have argued that narcissists do not tend to engage in self-protection in isolation of attempting self-promotion, rather, these two behaviours are linked. Morf, Horvath and Torchetti argue that even in incidents in which narcissists show inhibition or withdrawal behaviours, these behaviours must occur in tandem with self-enhancement. Accordingly, the results of the current study can be interpreted similarly, showing the attempt at self-promotion: grandiose and vulnerable narcissists selected the easy task because it would give them the opportunity to achieve high results.

Nevertheless, studies 2 and 3 contradict earlier studies. Specifically, that of Nevicka et al. (2016), which provides evidence from three experiments that grandiose narcissists tend to respond to negative feedback by working harder. Moreover, several studies (Onley, Veselka, Schermer, & Vernon, 2013; Papageorgiou, Wong, & Clough, 2017; Sabouri et al., 2016) have found a positive association between grandiose narcissism and mental toughness, a personality trait that comprises several positive characteristics, such as perceiving a challenge as an opportunity rather than a threat, and able to handle life's eventualities (Clough, Earle, & Sewell, 2002).

One possible explanation for the results of studies 2 and 3, which show that grandiose and vulnerable narcissists react in a similar manner to threats of self-esteem, can be attributed to the measurement used in this study, the PNI. As will be described in detail in the following paragraphs, there are multiple perspectives on the validity of the PNI as a comprehensive measure of narcissism in the research literature. Some scholars have argued that the PNI is an adequate measure for vulnerable narcissism but not for grandiose narcissism (Miller et al., 2014; 2016). Specifically, Miller et al. (2014, 2016) suggest that because the PNI was developed to capture the maladaptive presentations of narcissism, its two facets of grandiosity and vulnerability covary highly and thus the PNI lacks discriminant validity. Moreover, Miller et al. suggest that the PNI-Grandiosity scale does not reflect the prototypical manifestations of grandiose narcissism because it over-emphasises fragility and underrepresents antagonism. Miller et al. (2014) have compared the observed patterns of correlations of the PNI-Grandiosity scale and several measures of personality and its pathology and expert ratings of narcissistic grandiosity's association with those measures. Miller et al. found that PNI-Grandiosity moderately correlates with the big five personality factors (-.03-.28 on the BFI). Furthermore, Miller et al. have suggested that the PNI-Grandiosity scale does not reflect narcissism *per se*, but, rather, a mixture of prototypical grandiosity and vulnerability that is more evident in other personality disorders (PDs), such as borderline personality disorder (BPD).

Edershile, Simms and Wright (2018) note that Miller et al. (2014) assessed PNI using zero-order correlations to understand the associations of the PNI-Grandiosity. They argue that the univariate analysis is not adequate to assess the associations of such a complex construct such as narcissism. Instead, Edershile, Simms and Wright suggest using a multivariate analysis approach to capture the unique associations of the PNI-Grandiosity. Multivariate analysis would, they argue, be capable of capturing both prototypical grandiosity, and its accompanying dysfunctions, including distress. Thus, Edershile, Simms and Wright have applied univariate and multivariate regressions (hierarchical regression) in order to assess the nomological associations of the PNI across two different samples, a clinical sample of 288 participants and an undergraduate sample of 1653 participants. Their results show that PNI-Grandiosity is associated significantly and positively with each of the Personality Disorders' (PD) dimensions, with the exceptions of avoidant PD and schizoid PD when entered into the regressions as the only

predictor. However, when PNI-Vulnerability was added to the models during the multivariate analysis, PNI-Grandiosity showed positive and significant associations with narcissistic, histrionic, and antisocial PD dimensions alone. The sign of the association of PNI-Grandiosity with avoidant, paranoid, and schizoid PD changed from non-significant or positive associations in the univariate analysis to significant negative associations.

Similarly, the associations of PNI-Grandiosity with the five factors of personality diverged according to the analytic approach used. Using the univariate approach, PNI-Grandiosity associated positively and significantly with extraversion, neuroticism, and openness, and significantly and negatively with conscientiousness and agreeableness. However, the multivariate model yielded a significant negative association with neuroticism and stronger association with extraversion. Additionally, applying the multivariate approach model revealed strong positive correlation between the PNI-Grandiose and the expert-generated profile of narcissistic PD according to the PID-5 traits. Based on these results, Edershile, Simms and Wright (2018) have concluded that using the multivariate approach to investigate the nomological network of PNI-grandiosity yielded results that match the contemporary-expert conceptualisation of narcissistic grandiosity based on expected associations with other personality variables. Thus, in contrast to Miller et al. (2014), their results suggest the PNI can validly measure grandiose narcissism.

Further support for the idea of the existence of an association between grandiosity and vulnerability comes from a study by Jauk and Kaufman (2018). They examined the non-linear association between grandiose and vulnerable narcissism. In their study they applied segmented regression analysis using a sample of 891 adults to detect a possible breakpoint in the correlational structure of the bivariate distribution. Narcissism was measured by the short version of the Five-Factor Narcissism Inventory FFNI-SF (Sherman et al., 2015). Results showed that the association between narcissistic grandiosity and vulnerability changed substantially below and above the breakpoint (grandiosity >2.93). It moved from a correlation of .02 to a correlation of .45 ($p < 0.001$, $n = 226$) above the breakpoint. Moreover, results show that individuals in the higher grandiose narcissism subsample had a stronger tendency to experience fear of failure, fear of rejection, fear of losing control, fear of losing emotional contact, and fear of losing reputation. Grandiosity was associated with self-esteem only in the lower, but not in the higher, subsample.

Grandiosity was related to experiencing negative affect and depression in the higher subsample, but not in samples with low grandiosity. Thus, the association between grandiosity and vulnerability is more complex than suggested by Miller et al., (2014; 2016) and this relationship is a common feature in narcissism which can be detected by other measures, not only by the PNI.

Another crucial explanation for the discrepancy between studies 2 and 3 and results from previous studies, is the sheer complexity of the construct of narcissism itself. Although social-personality psychology literature suggests that grandiose and vulnerable narcissism are two distinct types, the clinical literature, by contrast, suggests that features of vulnerable narcissism frequently occur within grandiose individuals. Pincus and Lukowitsky (2010) have, for instance, suggested that narcissistic patients are best differentiated based on relative levels of grandiosity and vulnerability rather than by clear distinctions into categorical subtypes. In their model, these two dimensions are interrelated dimensions of pathological narcissism rather than attributes that form separate diagnoses. Pincus and Lukowitsky note that "Many contemporary clinical experts on narcissism now recognize that grandiose self-states oscillate with vulnerable self-states and affective dysregulation within the same person" (Pincus & Lukowitsky, 2010, p. 428). Similarly, Pincus, Cain, and Wright (2014) write that "Our clinical experience with narcissistic patients indicates they virtually always exhibit both covert and overt grandiosity and covert and overt vulnerability" (p. 440). Similarly, Horowitz (1989) has described a "sudden state transition from self-righteous rage to the mixed state of shame, rage, and anxiety... this is exactly what happens in the state cycling patterns of some persons with the narcissistic personality disorder" (p. 536).

In their 2016 study, Gore and Widiger surveyed clinicians and clinical psychology professors, asking respondents to declare whether they could identify patients who met the criteria for either grandiose or a vulnerable narcissism and, additionally, whether these identified individuals expressed traits of the other variant of narcissism (grandiosity or vulnerability). Participants were asked to rate the frequency of fluctuation between the two types, with a response scale of "never," "some of the time," or "a significant period of the time." Respondents reported that individuals identified by clinicians and clinical psychology professors as grandiose narcissists exhibited several vulnerable narcissistic traits for a significant period of the time. Such traits included not responding well to

criticism or rebuke, reacting with anger or shame when their status is threatened, feeling very upset when treated unjustly, and craving admiration from others. However, individuals identified as vulnerable narcissists did not, according to the professional respondents, exhibit grandiose traits for significant periods of time but, rather, were reported as exhibiting grandiose traits for "some" of the time.

Hyatt et al. (2017) have replicated the Gore and Widiger's results (2016) within the normal population. Their study indicates that participants who were ordinary people (i.e., "lay persons") reported that grandiose narcissists regularly display vulnerable traits, but primarily in response to ego threat. Unfortunately, however, Hyatt et al. (2017) concluded that their study design did not allow them to understand "whether grandiose narcissistic individuals are fluctuating between these states or whether they are often manifesting some of these traits/reactions simultaneously" (p. 432).

This study has several theoretical implications. First, it contributes to the literature of narcissistic self-protection strategies, which have, hitherto, received relatively less critical attention. For example, in their study of narcissists' feelings of worthlessness following failure, Horvath and Morf (2009) contend that the difficulty in studying narcissists' self-protection strategies results from the narcissist's unwillingness to report their worthlessness, especially after an ego-threatening event. This is because individuals with narcissism tend to employ several strategies to overcome negative feelings, including self-deception. Horvath and Morf have concluded that explicit measures might not be sufficient to capture an individual's sense of inner worthlessness and have suggested using indirect measurements.

Back et al. (2013) have attempted to acknowledge self-protection strategies in their Narcissistic admiration and rivalry model. This 2013 study differentiated between three self-protection strategies: devaluating others, aggressiveness, and feeling superior to others. Back et al. have also developed an instrument to assess the model, including the three self-protection strategies. Thus, it might be fruitful to include additional self-protection strategies such as withdrawal and self-handicapping in their model and its inventory.

Another theoretical implication of this study is that it provides further support for the existence of fluctuations between grandiosity and vulnerability within normal- not pathological narcissists. As mentioned earlier, clinicians and clinical psychology

researchers have reported that grandiose narcissists tend to suffer, for significant periods of the time, from several vulnerable narcissistic traits, including not responding well to criticism (Gore & Widiger, 2016). Thus, studies 2 and 3 provide further evidence within normal population that grandiose narcissists, when threatened, employ traits associated with vulnerable narcissism, such as withdrawal and self-handicapping. This clarification is important because this is the only study to specify the contexts in which such fluctuations occur.

The findings of this study might explain the hitherto inconsistent results on the association between narcissism and performance. A meta-analytic study concluded that there is a negative relation between narcissism and performance, especially when narcissists occupy positions of authority (O'Boyle et al., 2012). As this study suggests, narcissists prefer to protect themselves from negative feedback. Thus, their failure to accommodate feedback and advice might lead narcissists to withhold their effort in order to avoid further negative feedback, which, in turn, will ultimately affect organizational performance.

This study has practical implications. It is widely accepted that feedback can augment performance positively or negatively (Ilgen & Davis, 2000). The current study shows that grandiose and vulnerable narcissists tend to respond to negative feedback in a self-protective manner. Thus, it might not be beneficial to present negative feedback for narcissists. Alternatively, such individuals should attempt to perceive such feedback as a means of their own development. For example, Sedikides, Luke and Hepper (2016) differentiated between two types of feedback: enhancing feedback and improving feedback. Enhancing feedback is consistently positive information related to task performance, whereas improving feedback means feedback that reflects the constant improvement of a participant, starting low and ending as high in its assessment of an individual's performance of a task. Across three studies they found that participants perceived enhancing feedback as more satisfying and useful relative to improving feedback, but participants reported that they considered enhancing feedback to be less useful relative to improving feedback. These results were contingent on when the participant had received the feedback at the beginning of the task or in later stages. Thus, it is plausible that giving feedback to a narcissistic individual might benefit from a

particular structure: beginning with enhancing feedback and then integrate it with improving feedback.

5.13 Limitation and future studies:

This study has several limitations. First, it was conducted online, where there is no direct contact with the experimenter or other participants. Given narcissists' craving for attention and admiration (Morf & Rhodewalt, 2001; Sedikides et al., 2002) narcissists' reaction to such feedback might have been different in the presence of others. Furthermore, previous studies have shown that a narcissist's level of performance is often dependent on the opportunity for personal glory afforded by the task. For a task to be interesting for a narcissist it must be both challenging and performed in the presence of others (Nevicka, De Hoogh, Van Vianen, Beersma, & McIlwain, 2011; Wallace & Baumeister, 2002). Thus, it would be fruitful to examine the reactions of narcissists online and in laboratory settings. Furthermore, it would be useful to include participants' real motivation for engaging in behavioural self-handicapping.

As mentioned earlier, research in the field has, hitherto, distinguished between claimed self-handicapping and behavioural self-handicapping, two types of self-handicapping. Examining how different types of narcissism diverge in their preference for the two types of self-handicapping might be a further useful contribution to the literature.

Narcissists' reactions to feedback has remained a frequent topic of debate within the field. However, there are few studies that attempt to assess the best way to present feedback to narcissists. This topic could be a very useful field of research in narcissism studies, given the number of narcissists in business organisations, and their high potential to take up leadership positions.

5.14 Conclusion:

The current study aimed to examine grandiose and vulnerable narcissists' reactions to threats of self-esteem. Results suggested that both types of narcissism respond in a similar manner and that they prefer to self-handicap rather than to work harder. This is the first ever study to show that self-handicapping is one of the ways in which narcissists reacts to ego threats.

Chapter 6 Absolute Narcissism: A Third Sub-Type of Narcissism – a Latent Profile Analysis Studies: Studies 4 and 5

This chapter presents two studies (Studies 4 and 5) that were conducted to explore whether a third sub-type of narcissism – that is, in addition to grandiose and vulnerable narcissism - can be identified using latent profile analysis (LPA) techniques, and if so, how this third type of narcissism is associated with self-esteem and with the big five personality factors. Study 5 aimed to replicate the findings in Study 4, and to examine the association of the patterns of narcissism with approach-avoidance motivation and self-esteem.

6.1 Introduction

The results from Studies 2 and 3 suggest that grandiose and vulnerable narcissists respond to ego threats by engaging in psychological withdrawal and self-handicapping. Earlier studies have provided evidence indicating that grandiose narcissists react to self-esteem threats either aggressively or by working harder in order to compensate for earlier performance. One possible explanation for these inconsistent findings is the fluctuation between grandiosity and vulnerability experienced by individuals high in grandiose narcissism. For example, Gore and Widiger (2016) have reported that clinical psychologists and professors indicated that they had encountered individuals who are high in grandiose narcissism who exhibited, for a significant period of time, several vulnerable narcissistic traits, especially in response to self-esteem threats.

The fluctuation between grandiosity and vulnerability identified by Gore and Widiger was replicated in a later study by Hyatt et al. (2017) using a sample of lay person respondents, rather than clinicians and professors, as in the earlier study. Hyatt et al. (2017) have indicated that vulnerable traits might simply be a characteristic of grandiose narcissism, rather than the result of occasional fluctuation between grandiosity and vulnerability. However, their study did not assess if there is a third distinct sub-type of narcissism or not. Thus, it is essential to take this notion a step further by examining whether there is a third type of narcissism that includes both grandiose and vulnerable features.

Some studies suggest the existence of three types of narcissism rather than two in clinical populations. For instance, Ronningstam (2005) identified three types of pathological narcissism according to self-esteem dysregulation, affect dysregulation, and difficulties in interpersonal relationships. These types are arrogant, psychopathic and shy narcissists. Each of these types reacts to ego threats differently. Arrogant narcissist reactions are characterised by amplifying their superiority, psychopathic narcissists by engaging in antisocial behaviours, while shy narcissists engage in negative emotions such as shame. Similarly, Russ et al. (2008) identified three types of pathological narcissism. And, in the personality and social psychology domain there are some indicators of the existence of three types of narcissism within normal, non-pathological samples (Houlcroft et al., 2012; Miller et al., 2016; Wetzel, Leckelt, et al., 2016). Thus, this chapter reports results of further investigation of the existence of a third, non-clinical sub-type of narcissism using LPA.

The current studies 4 and 5 have several potential contributions to add to the literature on narcissism. Finding a third sub-type of narcissism in a general population sample (i.e., a non-pathological sample) can be considered a substantial contribution to the literature of narcissism. It might help to explain something about the paradoxical nature of narcissism with respect to mixed findings on the associations of narcissism with self-esteem, leadership, performance, and most relevant to this thesis, reactions to self-esteem threats.

Two previous studies have employed LPA techniques to investigate narcissism, but both have some important limitations. The first study, by Stronge, Cichocka, and Sibley (2016) used only three items from the entitlement factor as pattern indicators, while the second study, by Wetzel et al. (2016) only used pattern indicators derived from a measure of grandiose narcissism. Unlike these two studies, the current study used the seven PNI subscale scores as pattern indicators, thus capturing aspects of both grandiose and vulnerable narcissism and more broadly capturing the construct of narcissism.

6.2 A Third Sub-Type of Narcissism

Although there is a growing consensus that narcissism can take two forms: grandiosity and vulnerability, the clinical literature has been advocating for a third sub-type of narcissism. For example, Kernberg proposed three types of narcissism ranging

from normal to pathological narcissism (Kernberg, 2004). The first type is the mildest type of narcissism, involving fixation at the level of normal infantile narcissism (regulating self-esteem in a manner not appropriate for an adult). The second type is more severe. In this rare type, the patient's self creates a libidinal relation with an object that reflects the patient's infantile self, thus interchanging the functions of self and object. The third type is the most severe type and is the main narcissistic personality disorder.

Similarly, Ronningstam (2005) conceptualises narcissism as a dimension ranging from healthy to pathological, and finally towards the long-term narcissistic personality disorder. She described narcissism as a complex construct that is context-dependent. Reactive types of narcissism are associated with fluctuations between healthy and pathological narcissistic functioning. Pathological narcissism also involves different levels of functioning or degrees of severity, ranging from extraordinarily high levels of functioning combined with exceptional capabilities, to a personality disorder with mild to severe limitations and disabled functioning in interpersonal and vocational areas, to malignant forms of narcissism and antisocial or psychopathic behaviour found in severe criminals (Ronningstam, 2005).

Ronningstam (2005) identifies five subtypes of narcissism based on similarities and differences in self-esteem dysregulation, affect dysregulation, and difficulties in interpersonal relationships. These subtypes are: healthy narcissists, extraordinary narcissists, arrogant narcissists, shy narcissists and psychopathic narcissists. The first two sub-types: healthy and extraordinary narcissism, are not pathological while the remaining three sub-types: arrogant, psychopathic and shy narcissists are pathological. Healthy narcissists are characterised by realistic self-appraisal of both their abilities and limitations, they can tolerate criticism constrictively, and their grandiose fantasies function as motivators for achievements. They have the ability to control and regulate their feelings of inferiority in a healthy manner. Interpersonally, they possess the ability to feel empathy and commitment and mutual relationship. Extraordinary narcissists are characterised by a high sense of self-confidence and self-worth, and a sense of invulnerability. They have high capacity for unusual risk taking and decision making, and thus have a high potential for leadership positions. Arrogant narcissists are characterised by high sense of grandiosity, entitlement, exploitativeness, lack of empathy, and experience intense envy and aggression as a result of their affect dysregulation. They cope

with self-esteem dysregulation by exaggerating their sense of superiority and uniqueness as well as by engaging in grandiose fantasies. The psychopathic narcissist copes with self-esteem dysregulation by engaging in antisocial behaviours to protect or enhance their inflated self-image. They may commit violent criminal acts to gain admiration from others, display extreme rage reactions to criticism, and are interpersonally sadistic without experiencing remorse or empathy. The third sub-type is the shy narcissist, who deals with self-esteem dysregulation by engaging in grandiose fantasy whilst also feeling intense shame regarding their needs and ambition. The main affect problem for shy narcissists is shame rather than envy or aggression. They avoid investing in relationships because of their hypersensitivity to rejection and criticism.

It is clear that shy narcissists are similar to vulnerable narcissists while some features of arrogant narcissists are similar to grandiose narcissists. Psychopathic narcissism however is a sub-type with no equivalent in personality and social psychology.

Empirical studies in the clinical and psychiatric literature have identified a third sub-type of narcissism. For instance, Russ et al. (2008) identified three types of narcissists: (a) grandiose/malignant narcissists; (b) fragile narcissists; and (c) high functioning/exhibitionistic narcissists. These three types were identified using Q-factor analysis of the responses of 255 patients diagnosed by the Shedler-Westen Assessment Procedure-II (SWAP-II) and a checklist of axis II personality disorders. Grandiose/malignant narcissism was characterised by seething anger, interpersonal manipulativeness, the pursuit of interpersonal power and control, lack of remorse, dominance, exaggerated self-importance and feelings of privilege. Grandiose/malignant narcissists do not appear to suffer from underlying feelings of inadequacy or demonstrate any inclination towards negative affective states other than anger. Fragile narcissists on the contrary, were characterised by grandiosity, which serves a defensive function, warding off painful feelings of inadequacy, smallness, anxiety and loneliness. These feelings were often found to be accompanied by rage. High-functioning/exhibitionistic narcissists have an exaggerated sense of self-importance but are also articulate, energetic and outgoing. They tend to show adaptive functioning and use their narcissism as a motivation to succeed. Thus, the high-functioning/exhibitionistic narcissism sub-type is similar to the grandiose narcissism trait, whereas fragile narcissism is similar to vulnerable narcissism.

Furthermore, Wink (1992) provided evidence of the existence of a third sub-type of narcissism in a non-pathological sample. He identified three patterns of narcissism using the California Q-set inventory. These patterns were labelled wilfulness, hypersensitivity and autonomy. Wilfulness narcissists have a positive association with self- and partner-ratings for self-assuredness, aggressiveness, impulsiveness, rebelliousness and exhibitionism. Hypersensitivity narcissists correlated with self- and partner-ratings for depression, introversion, lack of self-confidence, withdrawal, cynicism and depression. Autonomy narcissists associate with self- and partner-ratings for creativity, empathy, achievement-orientation, individualism and idealism. Wink validates these patterns in a series of longitudinal studies predicting a variety of life outcomes that show hypersensitivity to be associated with negative life trajectories, wilfulness to be generally associated with flat trajectories, and autonomy to be generally associated with positive trajectories. Wink concludes from the longitudinal studies that the hypersensitive prototype is the most pathological form of narcissism (Wink, 1992b, 1992a; Wink, Dillon, & Fay, 2005). The autonomy pattern seems to be similar to grandiose narcissism, and hypersensitivity to vulnerable narcissism. The wilful pattern has not yet been replicated in personality narcissism studies.

Similarly, a third sub-type has been revealed in the trait narcissism literature with the use of the narcissism-aloofness-confidence-empathy (NACE) scales, a self-reported personality inventory of desirable and undesirable traits, especially in the medical professions. Specifically, Houlcroft, Bore and Munro (2012) used 24 items from the above scales in addition to the 52 items of the PNI to measure narcissism in a sample of 300 undergraduates. Exploratory factor analysis extracted two factors from the PNI: grandiosity and vulnerability. Similarly, EFA of the 24 items of the NACE narcissism subscale also extracted two factors. The first factor, grandiose narcissism, was characterised by a need for recognition by others, self-importance and a desire for control. The second factor was associated with aggressive self-affirmation, rationalised antisocial behaviour, hypersensitivity, psychological distress, psychopathy, aggression, anger and psychoticism. This factor was labelled aggression narcissism.

Aggressive narcissism was found to be associated negatively and significantly with empathy, agreeableness, and conscientiousness. It also associates significantly and positively with hypersensitivity, psychological distress, primary psychopathy, secondary

psychopathy, psychoticism, verbal aggression, physical aggression, anger, hostility and overall aggression.

In the same way, Miller et al. (2016) conducted factor analysis of the Five Factors Narcissism Inventory (FFNI), a measure of narcissism consisting of 15 sub-scales related to vulnerable and grandiose narcissism that was created to be consistent with the five factors of personality perspective. Across two separate samples, three factors were extracted. The first factor was labelled interpersonal antagonism, it includes items from the following subscales: exploitativeness, lack of empathy, entitlement, arrogance, manipulativeness, reactive anger, distrust, and thrill-seeking. The second factor was labelled neuroticism, it consisted of items of the following sub-factors: shame, low indifference, high self-consciousness, and a need for admiration. The third factor was labelled agentic extraversion, it included the subscales of acclaim-seeking, authoritativeness, grandiose fantasies, and exhibitionism. These factors were correlated with seven measures of grandiose narcissism and four measures of vulnerable narcissism. Specifically, measures of grandiose and vulnerable narcissism were strongly correlated with the FFNI interpersonal antagonism factor (mean $r = 0.55$ and $r = 0.56$, respectively for grandiose and vulnerable scales). However, the other two factors had a divergent association with grandiose and vulnerable narcissism. The neuroticism factor was strongly associated with vulnerable narcissism (mean $r = 0.57$), but not with grandiose narcissism (mean $r = 0.04$). The agentic extraversion factor was strongly associated with grandiose narcissism (mean $r = 0.53$), and moderately associated with vulnerable narcissism scales (mean $r = 0.12$). Miller et al., (2017) interpreted these three factors in relation to different types of narcissism. Specifically, they indicated that interpersonal antagonism and neuroticism represent vulnerable narcissism, whereas interpersonal antagonism and agentic extraversion represent grandiose narcissism. A high score on all three components indicates a greater degree of narcissistic personality disorder in an individual.

6.3 Clusters of Narcissism

The idea of heterogeneity of narcissists in any sample has been studied using cluster analysis. For example, DiGuiseppe, Robin, Szeszko, and Primavera (1995) conducted cluster analysis of the Millón Clinical Multiaxial Inventory II (MCMI-II) subscales for psychotherapy clients who scored above 85 on the Narcissistic Personality

Scale (NPI) of the MCMI-II. They found that the best fit was a three-cluster solution. These clusters were named the true narcissist, the compensating narcissist, and the detached narcissist. These three groups had different relationships with the General Health Questionnaire, the General Psychological Well Being Scale, the Beck Depression Inventory, the Satisfaction with Life Scale, and a measure of irrational beliefs. Although all three clusters were characterised by self-centeredness and a sense of entitlement, true narcissists and compensating narcissists experienced no emotional distress, while the detached narcissist was characterised by social detachment.

Similarly, Lapsley and Aalsma (2006) used cluster analysis on a sample of 210 undergraduates who completed the NPI and the Profile of Narcissistic Dispositions (POND; Taylor, 1995). Results revealed three clusters of narcissists labelled: covert narcissists, adaptive narcissists, and overt narcissists. Adaptive narcissists had significantly lower mean scores on indices of anxiety, relationship problems, depression, self-esteem, and family problems. The overt and covert clusters showed comparable levels of dysfunction on most indices of adjustment. These clusters had different correlations with the NPI. Overt narcissists reported the highest scores on all of the NPI factors (authority, exhibitionism, superiority, exploitativeness, self-sufficiency and vanity), whereas adaptive narcissists reported moderate, and covert narcissists reported the lowest scores.

6.4 Latent Profile Analysis of Narcissism

Further support for the existence of more than two sub-types of narcissism comes from two studies using LPA techniques. The first study is the Stronge, Cichocka and Sibley (2016) study. Their analysis used three item-level indicators from the psychological entitlement scale (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). Their aim was to identify patterns of entitlement demonstrating different associations with self-esteem, assessed using three items from the Rosenberg self-esteem scale. The first pattern consists of 2% of the total sample of 6471. It was characterised by low entitlement and low self-esteem and was labelled the low self-regard profile. Pattern 2 consisted of 14% of the sample and was labelled the low–moderate self-regard pattern. Pattern 3, the high-moderate self-regard pattern, consisted of 36% of the sample. It included participants with high self-esteem and moderate entitlement. Pattern 4 was the grandiose narcissistic self-

esteem pattern (9%), which described subjects with high entitlement and high self-esteem. Pattern 5, optimal self-esteem, was composed of 38% of the participants. It indicated low entitlement but high self-esteem. Stronge et al., (2016) also investigated whether the narcissistic pattern can be predicted from personality factors. They found that the low–moderate pattern and the optimal self-esteem pattern were predicted by all of the Big Five personality factors. Specifically, the low-moderate pattern was found to have an explicit association with low extraversion, low agreeableness, low conscientiousness, high neuroticism and low openness. The high–moderate pattern showed exactly the same associations but with weaker neuroticism. Interestingly, the narcissistic self-esteem pattern was distinguished from the optimal self-esteem pattern by lower agreeableness but not lower extraversion. Belonging to the narcissistic self-esteem pattern was also predicted by higher neuroticism, but these patterns did not differ in any of the other traits.

Despite the importance of Stronge et al.'s (2016) study, it has some methodological limitations. In particular, it uses only three items to assess entitlement and three items to assess self-esteem. It also only assesses the entitlement dimension of narcissism and ignores the remaining dimensions of narcissism. Furthermore, the entropy value of the five-pattern solution is found to be 0.672, which is below the cut-off value (0.7–0.8). Therefore, it is plausible to expect the extraction of broader patterns of narcissism when the seven factors of narcissism are used as profile indicators.

The second study which applied the LPA technique is the study of Wetzel, Leckelt, Gerlach, and Back (2016). They conducted three studies to examine the existence of sub-groups of narcissists using the Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., (2013). The first study sample consisted of 828 German-speaking undergraduates. LPA yielded four sub-groups, the first pattern consisted of individuals with a low score on the scale. This pattern was labelled low narcissists (21% of the sample). Conversely, the fourth pattern consisted of individuals with a high score on the scale especially on the admiration items. This pattern was labelled high narcissism (29% of the sample). Patterns 2 and 3 consisted of individuals with moderate scores on the scale but reflect different expressions of the admiration and rivalry paths. Specifically, the second pattern consisted of individuals with overall moderate narcissism with relatively high scores on the admiration scale (21% of the sample), whereas pattern 3 consisted of

individuals with overall moderate narcissism with relatively high scores on both scales of admiration and rivalry (29% of the sample).

Study 2 aimed to replicate these patterns using two samples of 953 and 430 German-speaking undergraduates. The four patterns were replicated in sample 2 while sample 3 found three patterns only: low narcissists with low scores on all items (M = 2.19, SD = 0.68), moderate narcissists with moderate to high scores on admiration (M = 3.76, SD = 0.70) and low scores on rivalry (M = 1.99, SD = 0.46). Pattern 3 consisted of narcissists with moderate to high scores on both the admiration (M = 3.64, SD = 0.52) and rivalry (M = 2.85, SD= 0.74) scales.

Furthermore, Wetzel et al.'s Study 2 investigated the association of the four patterns with other personality traits including: Machiavellianism, Big Five personality traits, grandiose narcissism as measured by the PNI, vulnerable narcissism as measured by the PNI, psychopathy, impulsivity, and self-esteem. Results revealed that the patterns for low narcissists and moderate narcissists with admiration had almost identical mean scores on Machiavellianism (2.95 and 2.96, respectively). The mean scores for Machiavellianism for the patterns of high narcissists, and moderate narcissists with admiration and rivalry were higher and very similar (3.27 and 3.29, respectively). Similarly, the pattern for high narcissists showed the highest score on the psychopath scale (assessed using the Self-Report Psychopathy Scale-III). Mean differences between pattern 2: the moderate narcissism (admiration) and pattern 3: moderate narcissism (admiration and rivalry) did not reach the level of statistical significance. This means that individuals low in narcissism are low in psychopathy.

Interestingly, Wetzel, et al.(2016) examined the association of their four patterns with grandiose and vulnerable narcissism as measured by the PNI (Pincus et al., 2009). Individuals in pattern four (high narcissists) scored the highest in grandiose narcissism followed by pattern three: moderate narcissists with high admiration and rivalry scores. Mean differences between patterns 1 and 2, and patterns 2 and 4 were statistically significant whereas the mean differences between patterns 2 and 3 were not significant. Similarly, high narcissism and moderate narcissism with high admiration and rivalry reported high scores in vulnerable narcissism. Mean differences between patterns two and three, and patterns two and four however were significant but not between patterns one and two. This means that the higher a person's vulnerability score, the higher the

probability that he/she fits the high narcissist pattern, or moderate narcissist with high admiration and rivalry pattern.

Wetzel et al.'s Study 2 also shows that the four patterns of narcissism have a divergent association with the Big Five personality factors: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Specifically, pattern 2 (moderate narcissists with a high score in the admiration scale) reported the lowest score for neuroticism (3.94). The low narcissist pattern and moderate pattern with high admiration and rivalry path reported similar neuroticism (4.47). Surprisingly, high narcissists reported relatively lower neuroticism (4.25). Pattern 2 (moderate narcissists with high scores in the admiration scale) reported the highest score in extraversion (5.02), followed by pattern 4 (high narcissists; 4.94) and low narcissists (4.28). The lowest score in extraversion was reported by individuals in pattern 3 (moderate narcissists with high scores in both the admiration and rivalry scales; 4.18). Results of the agreeableness factor showed that pattern 4 (high narcissists) reported the lowest score (4.59), whereas patterns 1 (low narcissists) and 2 (moderate narcissists with high scores in the admiration scale) reported the highest (5.30). Pattern 3 (moderate narcissists with high scores in both admiration and rivalry scales) reported the second highest score for the agreeableness factor.

Moreover, the study examined the association of impulsivity (assessed by the Barratt Impulsiveness Scale) revealing that pattern 3 (moderate narcissists with high scores in both admiration and rivalry scales) reported the highest score for impulsivity (2.20), followed by high narcissists (2.17), and low narcissists (2.10). Pattern 2 (moderate narcissists with high scores in admiration scale) reported the lowest score for impulsivity.

Study 2 also examined the relationships of the four patterns with some adjustment indicators including self-esteem. Pattern 2 (moderate narcissists with high scores on the admiration scale) reported the highest score for self-esteem (3.44) followed by pattern 4 (high narcissists; 3.27), pattern 1 (low narcissists; 3.07) and finally pattern 3 (moderate narcissists with high scores in both admiration and rivalry scales; 3.00).

To validate the existence of these four patterns in cultures other than the German speaking, Wetzel, et al. (2016) conducted study 3 on a sample of 971 participants from Western, English speaking countries. The four patterns were again extracted from the sample: low narcissists (39% of the sample), pattern 2 (moderate narcissists with high scores in admiration scale; 28% of the sample), pattern 3 (moderate narcissists with high

scores in both admiration and rivalry scales; 24% of the sample) and pattern 4 (high narcissists; 10% of the sample).

In addition to these empirical findings, a recent theoretical model of narcissism indicates the possibility of a variety of narcissistic types. In their narcissism spectrum model (NSM), Krizan and Herlache (2017) conceptualised narcissism as a spectrum of personality characteristics that reflect variation in self-importance and entitlement as a core shared phenotype that is common to different types of narcissism. These characteristics are expressed either as the grandiose or vulnerable subtypes of narcissism (or sometimes mixtures of both) depending upon the dominant functional orientation: either approach-dominant (i.e. bold), or avoidance-dominant (i.e. reactive). Boldness is argued to be the underlying functional orientation of grandiose narcissism, whereas reactive is the underlying functional orientation of vulnerable narcissism.

The literature reviewed so far suggests that there is some evidence within both the pathological psychiatric domain and the trait narcissism domain regarding the existence of at least three types of narcissism. These three types were labelled differently but two of them are relatively similar to the known types: grandiose and vulnerable. The third subtype is not yet clear, however the common specifications of the third type are that it represents the extreme features of narcissism and it is associated with aggression. For example, the psychopathic narcissists of Ronningstam (2005), the wilful narcissists of Wink (1992), the grandiose/malignant narcissists of Russ et al. (2008) and the aggressive narcissists of Houlcroft et al. (2012). All of these types are associated with aggression.

Additional support for the existence of a third sub-type of narcissism can be derived from the findings of the latent profile analysis study of Wetzel et al. (2016). Nevertheless, Wetzel et al.'s (2016) LPA results are not expected to reflect the whole spectrum of narcissism because they used the NARQ questionnaire which assesses two manifestations of only one type of narcissism: grandiose. Thus, the present study will use the PNI (Pincus et al., 2009) to capture both grandiose and vulnerable narcissism. The PNI was developed to capture 'pathological' manifestations of narcissism but it has been validated for implementation on the general population. Unlike the NARQ which assesses only two factors: admiration and rivalry, the PNI assesses seven factors: contingent self-esteem, exploitativeness, self-sacrifice/self- enhancement, hiding the self, grandiose fantasy, devaluing others, entitlement rage. Using these factors as indicators in a latent

profile analysis is expected to capture more features of narcissism than the two factors of NARQ and might yield a more valid result with regards to the existence of a third type of narcissism.

Furthermore, once the new patterns are identified the relationships of these patterns to the Big Five personality factors and self-esteem will be examined to interpret the patterns.

6.5 Study 4

6.6 Methods

6.6.1 Sample

A sample of 1100 participants was recruited through Prolific Academic platforms to participate in this study. Of these, 968 completed all items and passed data cleaning procedures (54.5% male, 45.2 % female, two subjects did not report their gender). In terms of race/ethnicity, the majority of the sample are white (79.9%), 12.2% are Asian, 4.2 % African, 3.6% are of other races and two do not identify their ethnicity. The mean age of the sample is 33.75 (*SD* = 9.81). The participants also tend to have a relatively high level of educational attainment: 50% of the sample have a university degree, 22.3% have a professional qualification and 3.5% have doctorates. Of the remainder, 23.6% indicate that they finished high school and 0.5% that they did not complete high school. The sample consists of working individuals only, having an average work experience of 11.32 years (*SD* = 10.20), with 50.5% of the sample reporting that they have supervisory responsibility.

6.6.2 Measures

As in Studies 2 and 3 of the current thesis, narcissism and self-esteem were measured by the PNI **(**Pincus et al., 2009) and the Rosenberg Self-Esteem Scale (Rosenberg, 1979) respectively. A new measure was added in Study 4 to assess the Big Five personality factors**.**

The estimates of internal consistency of the PNI for this sample were relatively high. Specifically, full scale reliability was $\alpha = 0.95$, with subscale reliabilities as follows: contingent self-esteem $\alpha = 0.92$, exploitativeness $\alpha = 0.82$, self-sacrifice/self-enhancement $\alpha = 0.75$, hiding the self $\alpha = 0.77$, grandiose fantasy $\alpha = 0.90$, devaluing others $\alpha = 0.85$, and entitlement rage $\alpha = 0.85$. The internal consistencies of the PNI grandiosity and

vulnerability subscales were $\alpha = 0.87$ and $\alpha = 0.94$ respectively. The scale reliability for the Rosenberg Self-Esteem Scale in this study sample was $\alpha = 0.90$.

Personality was measured using the 44-item Big Five Inventory (BFI: John & Srivastava, 1999) which assesses the personality factors of extraversion (eight items), agreeableness (nine items), conscientiousness (nine items), neuroticism (eight items) and openness to experience (10 items). Respondents are asked to rate the degree to which they agree with each statement on a 5-point Likert scale with response anchors ranging from strongly disagree to strongly agree (e.g. "I see myself as someone who is talkative"). The internal consistency coefficients for each of the subscales are: extraversion $\alpha = 0.61$, agreeableness $\alpha = 0.72$, conscientiousness $\alpha = 0.76$, neuroticism $\alpha = 0.61$, and openness to experience $\alpha = 0.81$.

6.7 Results

6.7.1 Preliminary analysis

Data cleaning followed the same procedures used for Study 3. To detect careless respondents, an item was embedded within the PNI in which the participants were simply asked to respond to the item with the 'completely false' option (Oppenheimer et al., 2009). There were 130 participants who failed to respond to this correctly and were therefore excluded from the final sample.

To detect outliers, linear regression analysis was used to examine Mahalanobis distance. Participant identification number was entered as a dependent variable whereas the thirteen variables of this study were entered as independent variables. These variables are: global self-esteem, contingent self-esteem, hiding the self, devaluing others, entitlement rage, exploitativeness, grandiose fantasy, self-sacrifice/self-enhancement, extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. The critical score for x^2 with 13 degrees of freedom is 34.528 (Tabachnick & Fidell, 2013). Linear regression analysis is used to examine the Mahalanobis distance and two observations (108 and 243) were deleted because they exceed the cut-off score.

6.7.2 Normality

Normality of the measurement scales was assessed by calculating standardised skewness and kurtosis statistics. Most of the variables in this study's data exceed the cut-off scores of absolute 3 for skewness and absolute 10 for kurtosis. Therefore, the data

sample is non-normal. However, non-normality is not an issue in LPA as samples are assumed to be heterogeneous.

6.7.3 Multicollinearity Assessment

Multi-collinearity is examined using a correlation matrix of all variables. The highest correlation is 0.70 between contingent self-esteem and devaluing others. This figure is below the cut-off for evidence of multicollinearity in the sample (Hair et al., 2014; Tabachnick & Fidell, 2013). Moreover, the variance inflation factor (VIF) values and tolerance values are below the cut-offs of 10 and 0.10 respectively. There is therefore no multicollinearity problem in the data set.

6.8 Data Analysis Strategy

To determine whether meaningful latent profiles of the participants can be identified from their scores on the seven PNI factors, LPA (von Eye, 2010) was used. LPA postulates that correlations between indicators (in this instance, between the PNI factors) may be explained by the presence of a categorical latent variable representing distinct latent profiles of participants in the population. LPAs are typically exploratory analyses, which means that no prior assumptions are made about the structure or distribution of classes. This is similar to an exploratory factor analysis in which often no specific assumptions are made about the number of factors or how items relate to underlying factors. LPA models are used in a series of modelling steps, starting with the specification of a one-class model (a model of the observed means in the data). Subsequently, the number of classes is increased until there is no substantial further improvement of the model. The models in this study are run in *Mplus* Version 7.4 (Muthén and Muthén, 1998-2012) using MLR to estimate the mixture model parameters.

One of the problems in mixture modelling is avoiding convergence on a local solution (i.e., convergence to a false maximum). This problem often stems from inadequate start values (a default start setting of 20:4). Asparouhov and Muthén (2012) suggest three steps to overcome this problem and to decrease the computation time. The first step is to replicate the best log-likelihood for *k*-1 and *k* profiles. The second is to use the OPTSEED command, which means including the start value that generates the best log-likelihood and adding TECH11. The third is to use OPTSEED and add TECH14.

Following these suggestions, if the reported models converge on a replicated solution, they can confidently be assumed to reflect the optimal solution.

The other important challenge in mixture modelling is determining the 'correct' number of latent profiles in the sample. Although a preferred profile solution has to be substantively interpretable (Nylund, Asparouhov & Muthén, 2007), the profile characteristics for different solutions also can be inspected statistically and compared. *Mplus* provides statistical tests and indices to help decide the number of profiles to be extracted. First, various distribution-free information criteria based on the model log-likelihood may be examined: the Akaike information criterion (AIC; Akaike, 1987), the Bayesian information criterion (BIC) (Schwarz, 1978) and the sample-size adjusted BIC (ABIC; Sclove, 1987). Lower values on these indices suggest a better fitting model. Additional indices include entropy, which means the accuracy with which cases are classified into the various latent profiles extracted (Wang & Wang, 2012). The closer the entropy value to 1, the fewer classification errors are in the model. Finally, while classical likelihood ratio tests are not applicable in the context of mixture models due to regularity conditions not being met, two approximations of these tests are used: the likelihood ratio test (LRT) by Lo, Mendel and Rubin (2001) and LMR, which compares the improvement in fit between neighbouring class models (i.e. it compares the improvement of fit in going from a *k*-1 to a *k* class model, where *k* is referring to the number of profiles in the solution), and the Bootstrap Likelihood Ratio Test (BLRT), which is a parametric LRT test applied using resampling methods. Significant *p* values for both LMR and BLRT indicate that the k-1 profile model should be rejected in favour of the k profile model.

Simulation studies have shown that the ABIC, BIC and BLRT are effective in LPA to determine the model that best recovers the sample's true parameters, especially when smaller samples are relied on to estimate complex models. However, when the indicators fail to find the optimal model, AIC, ABIC, LMR and BLRT tend to overestimate the number of classes, whereas BIC and ABIC tend to underestimate it (Nylund et al., 2007).

With the optimal number of classes having been identified, the research hypotheses are tested by investigating whether there are significant mean differences across the latent patterns in the Big Five Personality factors and self-esteem.

It is worth noting that these covariates are not entered directly into the model because doing so would involve including them as mixture indicators and would therefore

allow them to influence the nature of the profiles observed (Wang & Wang, 2012). Since the objective is to use these covariates to validate the patterns rather than to define them, an alternative method is preferred. The Mplus AUXILIARY (e) function allows probability-based profiles of covariates to be compared without including them in the model. The AUXILIARY function relies on a Wald chi-square test of statistical significance based on pseudo-class draws and tests the equality of outcome means across the various profiles (Nylund et al., 2007).

6.9 Results

An LPA was conducted using MLR estimation to investigate the existence of a third pattern of narcissism. To extract the patterns, the seven sub-factors of the PNI (contingent self-esteem, hiding the self, devaluing others, entitlement rage, exploitativeness, self-sacrifice/self-enhancement and grandiose fantasy) were used as pattern indicators. Eight separate LPA estimations were conducted, specifying from 2 to 9 patterns. The fit statistics for the 2–9- pattern solutions are reported in Table 6-1. Table 6-2 shows pattern membership based on the most likely latent class membership of the two- to nine-patterns models

As illustrated in Table 6-1, the AIC, BIC and ABIC values decrease steadily up to the 5- pattern solution but the rate of decrease then slows. This suggests a superiority of fit for the 5- pattern solution. The ALMR results are statistically significant until the 5-pattern solution but then are non-significant all the way to the 9- pattern solution. The 5-pattern solution is thus the best fit. The BLRT is not particularly helpful in determining the best fitting pattern solution as the value remains significant up to the 9- pattern solution, suggesting that even more patterns might produce a better fit. However, Morin, Morizot, Boudrias, and Madore (2011) emphasise that when sample sizes are large the BLRT often favours a larger number of profiles, even if the additional profiles extracted are highly similar. The posterior probabilities for the 5-pattern solution indicate a high likelihood that the participants are accurately assigned to the correct profiles. Finally, the distinctiveness of the profiles from the 4-, 5-, 6-, and 7-profile solutions is examined. For the 5-patterns solution, all the patterns are distinct in terms of shape (i.e., the pattern of high and low mean scores for each narcissism sub-factor differs). Furthermore, apart from the two-pattern model, the five-class model has the highest entropy value, indicating good

separation between latent class distributions compared to the other solutions. Thus, the five-pattern model is selected as the best fit model.

Table 6-1 :Latent Profile Analysis Model Fit Indices for Study 4

Model	AIC	BIC	ABIC	Entropy	ALMR-L (*p*-value)	BLRT (*p*-value)
2	15235.004	15342.259	15272.387	.829	1680.932 (.001)	1711.493 (.001)
3	14707.890	14854.147	14758.868	.812	533.416 (.008)	543.114(.001)
4	14490.401	14675.659	14554.972	.812	229.320 (.001)	233.490 (.001)
5	14318.551	14542.812	14396.716	.821	184.495 (.001)	187.850 (.001)
6	14268.440	14531.702	14360.199	.784	64.931 (.435)	66.111(.001)
7	14224.257	14526.521	14329.610	.778	59.108(.130)	60.183(.001)
8	14200.789	14542.056	14319.736	.779	38.763(.381)	39.468 (.001)
9	14178.388	14558.656	14310.929	.782	51.639(.538)	52.578(.001)

AIC = Akaike information criterion; BIC= Bayesian information criterion; ABIC= Adjusted BIC (BIC); ALMR= Adjusted Lo, Mendel and Rubin; BLRT= Bootstrap Likelihood Ratio Test.

Table 6-2: Profile membership Based on the Most Likely Latent Class Membership of the 2-9 pattern models

Patterns	1	2	3	4	5	6	7	8	9
2	41.52%	58.47%							
3	18.90%	50.93%	30.16%						
4	10.95%	41.32%	28.82%	18.90%					
5	11.26%	5.99%	24.07%	39.87%	18.80%				
6	10.84%	5.37%	24.17%	29.75%	19.62%	10.22%			
7	3.30%	5.26%	11.15%	26.55%	23.55%	10.84%	19.31%		
8	3.20%	11.26%	11.26%	22.41%	5.26%	26.24%	18.28%	2.07%	
9	3.30%	20.86%	26.44%	10.85%	2.48%	4.03%	17.76%	4.85%	9.40%

The overall sample means and the five pattern means that are used to interpret each class are shown in Table 6-3 and illustrated in Figure 6-1.The first pattern (Pattern 1) includes 11% of the sample (n = 109). It is characterised by below-average scores for all seven factors of narcissism (contingent self-esteem, hiding the self, devaluing others, entitlement rage, exploitativeness, grandiose fantasy and self-sacrifice/self-enhancement), and is therefore labelled ‘non-narcissism’. Pattern 2 includes 6% of the sample (n = 58). It is characterised most clearly by above-average scores for three PNI factors: exploitativeness, grandiose fantasy, and self-sacrifice/self-enhancement. However, the individuals with this pattern score below average for contingent self-esteem, hiding the self and entitlement rage. This pattern represents the ideal manifestation of grandiose narcissism. Therefore, it can be labelled ‘grandiose narcissism’. Pattern 3 consisted of

24% of the sample (n = 233) and is characterised by scores slightly lower than the mean for all seven factors. This pattern is labelled 'ordinary people'. Pattern 4 consists of 39% of the sample (n = 386) and represents individuals with scores that are above average for the seven factors of the PNI but that are relatively lower than those in the grandiose narcissist pattern for exploitativeness, grandiose fantasy and self-sacrifice/self-enhancement. Therefore, this pattern is labelled 'vulnerable narcissism.' Finally, Pattern 5 consists of 19% of the sample (n = 182) and is defined by above-average scores for all seven factors of the PNI. However, the individuals in this profile score lower than those in the grandiose narcissism profile for the exploitativeness factor. This pattern is labelled 'absolute narcissism' because it reflects the extreme features of narcissism.

Table 6-3 Five profile means of the seven indicators of narcissism

	Sample mean	Non-narcissists *n* = 109 (11%)	Grandiose narcissists *n* = 58 (6%)	Ordinary people *N* =233 (24%)	Vulnerable narcissists *n* = 386 (39%)	Absolute narcissists *n* = 182 (19%)
C. Self-esteem	2.58	1.32	1.71	2.11	2.84	3.72
Hiding the self	3.27	2.37	2.75	3.12	3.38	3.95
Devaluing others	2.49	1.36	1.66	2.18	2.71	3.45
Entitlement rage	2.68	1.53	2.06	2.28	2.94	3.58
Exploitativeness	2.83	2.48	3.41	2.55	2.92	3.01
Grandiose fantasy	3.07	1.62	3.85	2.34	3.35	4.04
Self-sacrifice	3.19	2.22	3.45	2.83	3.41	3.73

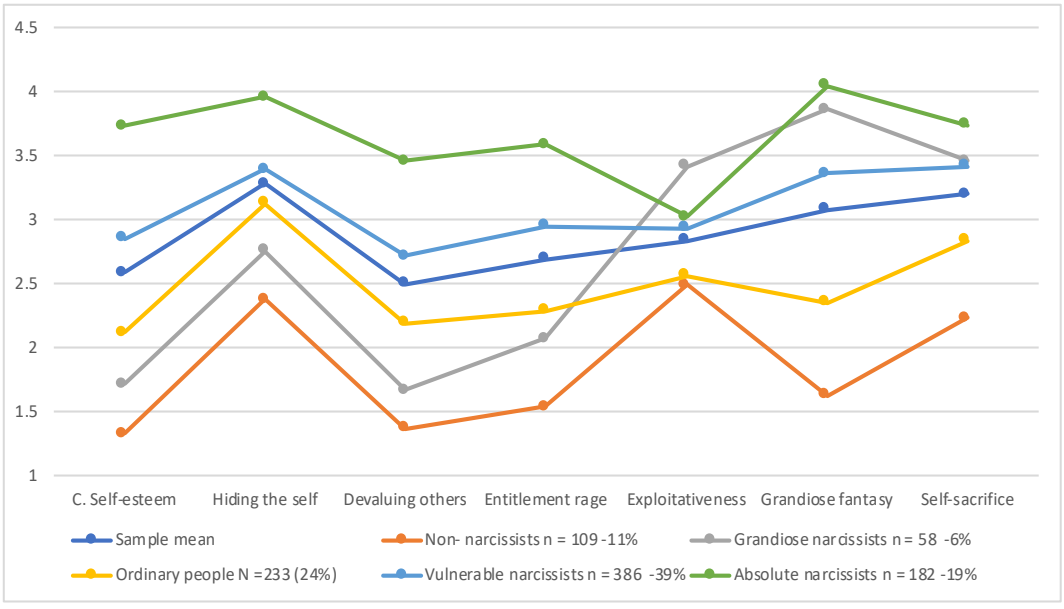

Figure 6-1 Five profile means of the seven indicators of narcissism

After identifying the five patterns of narcissism, the AUXILIARY (e) function in M*plus* was implemented to investigate the relationships between the five patterns, self-esteem and the Big Five personality factors. The model fit using AIC is 14250.172, the BIC is 14474.433, and the ABIC is 14328.337. The pattern means are shown in *Table 6-4* and illustrated in Figure 6-2. Table 6-5 shows the results of equality tests of the means across the five profiles using posterior probability-based multiple imputations.

Table 6-4: Means of the self-esteem and Big Five personality factors across the patterns of narcissism

	Sample mean	Non-narcissists *n* = 111 (11%)	Ordinary people *n* = 233 (24%)	Grandiose narcissists n= 57 (6%)	Vulnerable narcissists *n* = 383 (39%)	Absolute narcissists *n* = 184 (19%)
Extraversion	28.60	31.49	27.06	34.34	27.76	28.43
Agreeableness	36.67	40.70	36.48	41.30	35.82	34.60
Conscientiousness	38.70	44.42	38.88	43.07	36.93	37.24
Neuroticism	27.95	25.55	26.27	26.23	27.74	32.61
Openness	38.08	40.35	36.55	46.13	36.57	38.81
Self-esteem	29.65	33.68	30.45	33.76	29.05	26.06

Table 6-5:Chi-square differences between the patterns for the Big Five personality factors and self-esteem

	Self-esteem	E	A	C	N	O
Overall test	89.33**	54.75**	41.31**	58.69**	53.19**	61.81**
Non-narcissists vs. ordinary people	24.33**	19.79**	18.64**	29.71**	0.80	8.43**
Non-narcissists vs. grandiose narcissists	0.01	3.49	0.19	1.03	0.36	10.01**
Non- Narcissists vs. vulnerable narcissists	62.50**	16.69**	30.55**	66.47**	9.31**	10.04**
Non- Narcissists vs. absolute narcissists	129.47**	8.95**	41.07**	46.39**	70.64**	1.39
Ordinary people vs. grandiose narcissists	17.99**	29.11**	14.65**	12.50**	0.00	35.26**
Ordinary people vs. vulnerable narcissists	8.94**	1.29	0.93	7.96**	5.17*	0.00
Ordinary people vs. absolute narcissists	65.21**	3.32	6.15**	3.51	70.88**	5.07*
Grandiose vs. vulnerable narcissists	41.79**	24.98**	21.28**	29.51**	2.29	38.38**
Grandiose vs. absolute narcissists	96.34**	18.55**	28.49**	22.63**	34.86**	20.33**
Vulnerable vs. absolute narcissists	36.94**	0.87	2.79	0.14	46.91**	5.79**

E = extraversion, A = agreeableness, C = consciousness, N = neuroticism, O = openness.

** $p < 0.01$; * $p < 0.05$

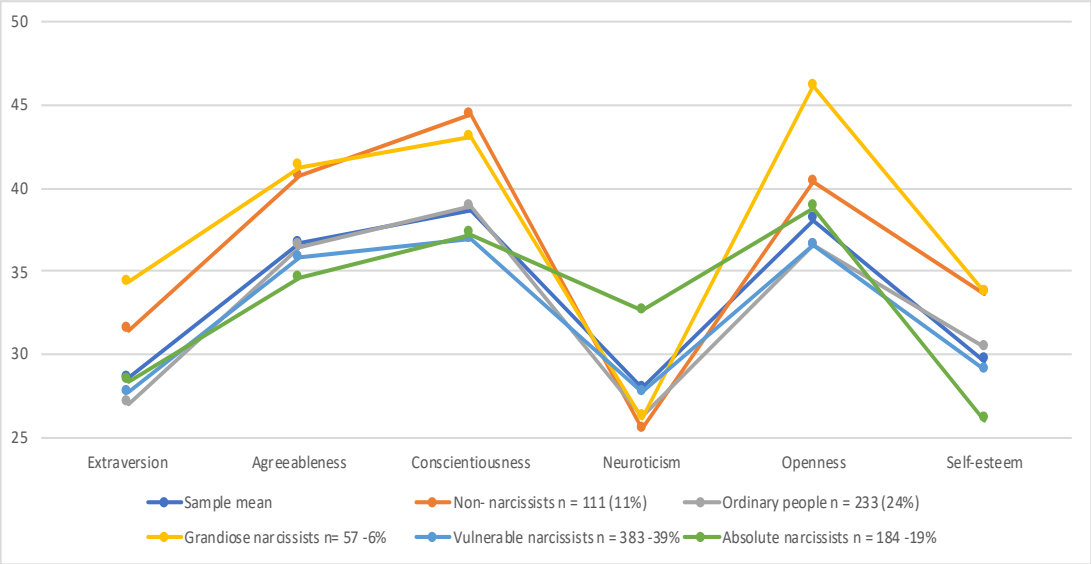

Figure 6-2 Five Patterns Means of the Big Five Factors of Personality

The results show that the Big Five personality factors (BFI) have different associations with the five patterns of narcissism. Specifically, grandiose narcissists reported significantly higher extraversion than ordinary people ($\chi^2 = 19.79$; $p < 0.001$), vulnerable narcissists ($\chi^2 = 24.98$; $p < 0.001$) and absolute narcissists ($\chi^2 = 18.55$; $p < 0.001$), whereas the difference between vulnerable narcissists and absolute narcissists did not reach the significance level ($\chi^2 = 0.87$; n.s.).

Surprisingly, grandiose narcissists reported the highest score for agreeableness. The differences between the patterns reveal that grandiose narcissists have significantly higher levels of agreeableness than vulnerable narcissists ($\chi^2 = 21.28$; $p < 0.001$), absolute narcissists ($\chi^2 = 28.49$; $p < 0.001$) and ordinary people ($\chi^2 = 14.65$; $p < 0.001$), but the differences to non-narcissists ($\chi^2 = 0.19$; n.s.) did not reach the significance level.

Non-narcissists reported the highest score and grandiose narcissists the second highest score for conscientiousness, whereas absolute narcissists and vulnerable narcissists reported the lowest and second lowest scores respectively. The differences between the various patterns were significant except those between the patterns for non-narcissists and grandiose narcissists, and those between vulnerable narcissists and absolute narcissists.

Absolute narcissists reported significantly higher neuroticism than non-narcissists ($\chi^2 = 70.64$; $p < 0.001$), ordinary people ($\chi^2 = 70.88$; $p < 0.001$), grandiose narcissists (χ^2

=34.86; $p < 0.001$) and vulnerable narcissists ($\chi^2 = 46.91$; $p < 0.001$). Similarly, vulnerable narcissists reported significantly higher levels of neuroticism than non-narcissists ($\chi^2 = 9.31$; $p < 0.001$) and ordinary people ($\chi^2 = 5.17$; $p < 0.05$). However, the difference between grandiose narcissists and vulnerable narcissists did not reach the significance level ($\chi^2 = 2.29$; n.s.).

Grandiose narcissists scored significantly higher openness to experience than the other patterns: non-narcissists ($\chi^2 = 10.01$, $p < 0.001$), ordinary people ($\chi^2 = 35.26$, $p < 0.001$), vulnerable narcissists ($\chi^2 = 38.38$, $p < 0.001$), and absolute narcissists ($\chi^2 < 20.33$, $p = 0.001$). Conversely, vulnerable narcissists reported significantly lower levels of openness to experience than non-narcissists ($\chi^2 = 10.04$; $p < 0.001$) and absolute narcissists ($\chi^2 = 5.79$; $p < 0.001$).

The individuals in the grandiose narcissism profile report significantly higher levels of self-esteem than ordinary people ($\chi^2 = 17.99$; $p < 0.01$), vulnerable narcissists ($\chi^2 = 41.79$; $p < 0.01$) and absolute narcissists ($\chi^2 = 96.34$; $p < 0.01$). Absolute narcissists, on the other hand, reported significantly lower self-esteem than non-narcissists ($\chi^2 = 129.47$; $p < 0.01$), ordinary people ($\chi^2 = 65.21$; $p < 0.01$) and vulnerable narcissists ($\chi^2 = 36.94$; $p < 0.01$).

6.10 Discussion

The aim of Study 4 has been to investigate the existence of a third sub-type of narcissism beside the acknowledged grandiose and vulnerable types. Using LPA techniques on a sample of 968 working adults, three patterns of narcissism in fact do appear to exist in the sample: grandiose narcissists, vulnerable narcissists and absolute narcissists. Absolute narcissism is characterised by a significant fluctuation in self-esteem, demonstration of altruistic deeds to support their inflated self-image, unwillingness to show others their faults and needs, engaging in fantasies of gaining success and admiration, disinterest in others who do not show admiration, and exhibit angry affect when their expectations are not met.

In terms of the Big Five factors of personality, absolute narcissists can be distinguished from grandiose and vulnerable narcissists by their high levels of neuroticism and very low levels of agreeableness. Absolute narcissists also show very low self-esteem

in comparison to other patterns. These findings will be replicated in a Study 5 to ensure the existence of absolute narcissism in a separate sample.

6.11 Study 5

As mentioned, the purpose of Study 5 is to replicate the findings presented in Study 4 by conducting another LPA of the PNI narcissism subscale scores. In addition, in this study, the relationships of approach and avoidance motivation with the extracted patterns of narcissism will be investigated.

According to the narcissism spectrum model (Krizan & Herlache, 2017), approach and avoidance motivation differentiate between the two acknowledged types of narcissism: grandiose and vulnerable narcissism. Study 5 examines the association of approach and avoidance motivation with the new type of narcissism: absolute narcissism, should it be found in this sample.

6.12 Methods

6.12.1 Sample

As in Study 4 above, Prolific Academic was used to find 1063 subjects, which after deleting careless subjects and outliers (described below) provided the final sample of $N = 941$ participants. Gender balance in the sample is roughly equal: 54% female and 46% male. In terms of race/ethnicity, the majority of the sample are white (89%), with 6.4% Asian, 2.1% African, and 2.8% other races. Mean age of the sample is 34.67 (SD = 9.97). Participants tend to have a relatively high level of educational accomplishment: 43.8% have a university degree, 23% have a professional qualification and 4% have doctorates, 29% indicate that they finished high school and just 1.1% of the sample did not complete high school. The sample consists of working individuals with an average work experience of 13.59 years (SD = 9.76), and 44.8% of the sample self-report supervisory responsibility.

6.12.2 Measures

This study used the same measures for narcissism (PNI) and self-esteem (Rosenberg scale) as were used in Study 4, in addition to a new measure to assess approach and avoidance motivation. The PNI (Pincus et al., 2009) internal consistency for this sample was relatively similar to the reliability of Study 4. Specifically, the full-scale

reliability was α = 0.95, and sub-scale reliabilities: contingent self-esteem α = 0.92, exploitativeness α = 0.75, self-sacrifice/self-enhancement α = 0.74, hiding the self α = 0.76, grandiose fantasy α = 0.88, devaluing others α = 0.85, and entitlement rage α = 0.86. The internal consistencies of the PNI grandiosity and vulnerability subscales are α = 0.87 and α = 0.95 respectively. The Rosenberg Self-Esteem Scale (Rosenberg, 1979) reliability for this study was α = .91.

The Behavioural Inhibition System/Behavioural Activation System (BIS/BAS; Carver & White, 1994) is described in Study 3. In this study, the internal consistency was α = 0.81 for the behavioural activation subscale and α = 0.69 for the behavioural inhibition.

6.13 Preliminary analysis

Similar data cleaning procedures as in Study 4 were applied for this study; 118 participants were deleted because they did not answer the item embedded in the PNI correctly (Oppenheimer, Meyvis & Davidenko, 2009).

Mahalanobis distance was used to detect multivariate outliers. Four observations were deleted because they exceed the cut-off score for χ^2 with degrees of freedom equal to the number of variables at $p < 0.001$ (Tabachnick & Fidell, 2013).

6.13.1 Normality

Skewness and kurtosis *z* scores of the sample show that most of the variables are within the cut-off scores for skewness (3) and kurtosis (20), the exceptions being self-sacrifice and self-esteem. Nevertheless, non-normality has no effect in latent profile analysis.

6.13.2 Multicollinearity Assessment

Multi-collinearity was examined using a correlation matrix of all the variables. The highest correlation is .71 between contingent self-esteem and devaluing others. This figure is below the cut-off level .9 (Hair et al., 2014; Tabachnick & Fidell, 2013). Moreover, the variance inflation factor (VIF) values and tolerance values are below the cut-off levels of 10 and 0.10 respectively. Therefore, the data set has no multicollinearity problem. Table 6-6 shows the relationships, means and standard deviations of the study variables.

Table 6-6 Relationships, means and standard deviations of the study 5 variables

	1	2	3	4	5	6	7	8	9	10
1.Contingent S.E.										
2. Self-sacrifice	.47**									
3. Hiding the self	.58**	.33**								
4. Grandiosity	.55**	.53**	.45**							
5.Devaluing others	.71**	.39**	.55**	.46**						
6. Entitlement	.69**	.40**	.54**	.55**	.65**					
7.Exploitativeness	.09**	.25**	.10**	.30**	.19**	.27**				
8. Approach	.06	.28**	.03	.31**	.03	.18**	.37**			
9.Avoidance	.55**	.29**	.42**	.34**	.39**	.45**	-.09**	.09**		
10. Self-esteem	-.58**	-.10*	-.43**	-.23**	-.45**	-.30**	.18**	.33**	-.35**	
Mean	31.68	19.08	22.27	21.79	17.15	21.61	13.85	37.79	19.47	29.27
SD	10.28	4.27	5.16	6.64	5.84	6.60	3.74	5.42	3.49	5.98

6.14 LPA: Results

The analysis followed the same procedure as described for Study 4. An LPA was conducted using an MLR estimator to investigate the existence of a third pattern of narcissism. To extract the profiles, the seven sub-factors of the PNI (contingent self-esteem, hiding the self, devaluing others, entitlement rage, exploitativeness, self-sacrifice/self-enhancement and grandiose fantasy) were used as profile indicators. Eight separate LPA estimations were conducted to specify 2–9 patterns. The fit statistics for the 2–9-profile solutions are reported in Table 6-7.

As illustrated in Table 6-7, the AIC, BIC and ABIC values decrease steadily up to the 5-profile solution, but the rate of decrease then slows, which points to a superior fit for the 5-profile solution. The levels of the ALMR are significant up to the 5-profile solution and are then non-significant up to the 9-profile solution, which points to the 5-profile solution being the best fit. The BLRT is not particularly helpful in determining the best-fitting profile solution as the value remains significant up to the 9-pattern solution, suggesting that even more profiles might produce a better fit. Furthermore, the five-class model has the highest entropy value, i.e. good separation between latent class distributions, compared to the other solutions. Thus, the 5-pattern model is selected as the best-fit model. Finally, the distinctiveness of the profiles in the 4-, 5-, 6-, and 7-profile solutions is examined. For the 5-pattern solution, all the profiles are distinct in terms of shape (i.e. the pattern of high and low mean scores for each narcissism sub-factor differs).

Table 6-7: Latent profile analysis model fit indices

P	AIC	BIC	ABIC	Entropy	ALMR-LR *p*-value	BLRT *p*-value
2	14103.788	14210.421	14140.550	.839	1753.084 (.00)	1785.089 (.00)
3	13602.030	13747.438	13652.160	.806	508.476 (.006)	517.759 (.00)
4	13365.921	13550.105	13429.420	.828	247.588 (.001)	252.109 (.00)
5	13265.614	13488.574	13342.481	.832	114.222 (.001)	116.307 (.00)
6	13199.011	13460.746	13289.246	.782	81.122 (.28)	82.603(.00)
7	13131.146	13431.657	13234.749	.769	82.362 (.14)	83.865(.00)
8	13090.162	13429.448	13207.133	.766	55.962(.67)	56.984(.00)
9	13046.104	13424.165	13176.443	.767	58.982(.02)	60.059 (.00)

AIC = Akaike information criterion; BIC= Bayesian information criterion; ABIC= Adjusted BIC (BIC); ALMR= Adjusted Lo, Mendel and Rubin; BLRT= Bootstrap Likelihood Ratio Test.

The overall sample mean, and the five profile means that are used to interpret each class are shown in *Table 6-8* and illustrated in Figure 6-3. The first pattern (Pattern 1) includes 15% of the sample (n = 145) and is characterised by below-average scores for the seven factors of narcissism (contingent self-esteem, hiding the self, devaluing others, entitlement rage, exploitativeness, grandiose fantasy, and self-sacrifice/self-enhancement). Therefore, it is labelled 'non-narcissist'. Pattern 2 includes 4.2% of the sample (n = 40) and is characterised most clearly by above-average scores for three PNI factors: exploitativeness, grandiose fantasy, and self-sacrifice/self-enhancement. However, individuals with this pattern score below average for contingent self-esteem, hiding the self and entitlement rage. This pattern represents the ideal manifestation of grandiose narcissism, so it is labelled 'grandiose narcissism'. Pattern 3 consists of 40% of the sample (n = 374) and represents individuals with scores above the average for the seven PNI factors but ones which are relatively lower than those for the grandiose narcissist profile for exploitativeness, grandiose fantasy, and self-sacrifice/self-enhancement. Therefore, this pattern is labelled 'vulnerable narcissism'. Pattern 4 consists of 34% of the sample (n = 324) and is characterised by scores slightly lower than the mean for the seven factors. This pattern is labelled 'ordinary people'. Finally, Pattern 5 consists of 6% of the sample (n = 58) and is characterised by above average-scores for all seven of the PNI factors, labelled 'absolute narcissism'.

Table 6-8 Sample mean and means of each of the five patterns on the seven factors

	Sample mean	Non-narcissists *n* =145 (15%)	Grandiose narcissists *n* = 40 (4.2%)	Vulnerable narcissists *n* = 374 (40%)	Ordinary people *n* = 324 (34%)	Absolute narcissists *n* = 58 (6%)
C. Self-esteem	2.64	1.5	1.62	3.16	2.41	4.14
Hiding the self	3.18	2.42	2.32	3.53	3.09	4.05
Devaluing others	2.45	1.46	1.51	2.94	2.20	3.86
Entitlement rage	2.70	1.66	1.82	3.22	2.46	3.97
Exploitativeness	2.77	2.41	3.23	2.85	2.67	3.36
Grandiose fantasy	3.11	1.84	3.55	3.59	2.87	4.26
Self-sacrifice	3.18	2.39	3.50	3.42	3.05	4.01

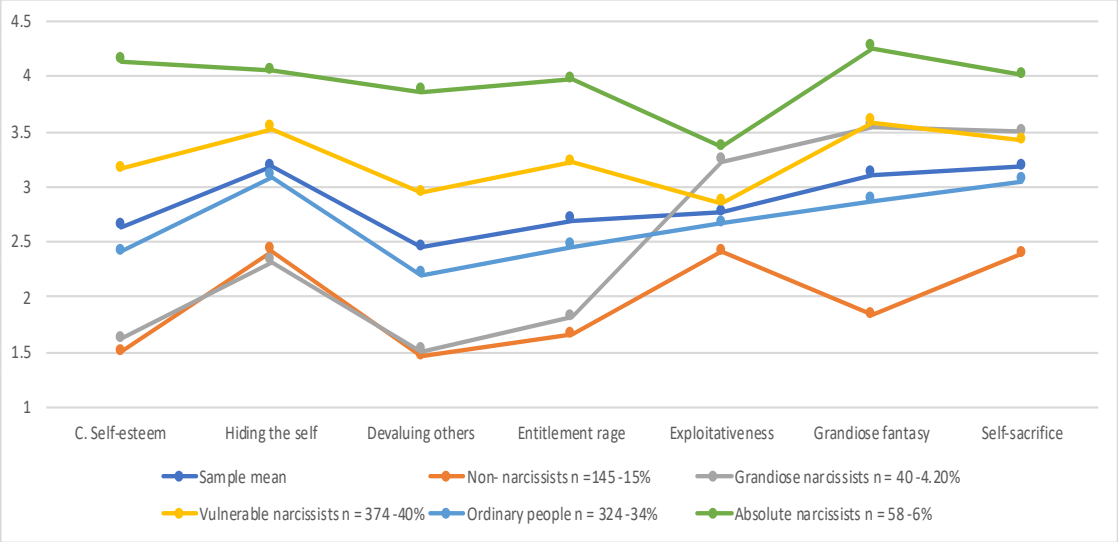

Figure 6-3 Five Patterns of Narcissism of Study 5

After identifying the five patterns of narcissism, the AUXILIARY (e) function in M*plus* is implemented to investigate the relationships between the five latent profiles and self-esteem, approach motivation, and avoidance motivation. The model fit using AIC is 13265.614, the BIC is 13488.574 and the sample size adjusted BIC is 13342.481. The means for the patterns are shown in *Table 6-9*, and Table 6-10 shows the results of equality tests of the means across the five profiles using posterior probability-based multiple imputations.

Table 6-9: Means for the five patterns for self-esteem, approach motivation and avoidance motivation

	Sample mean	Non-narcissists	Grandiose narcissists	Vulnerable narcissists	Ordinary people	Absolute narcissists
Self-esteem	29.22	33.48	35.99	27.31	29.58	25.23
Approach motivation	37.79	36.19	41.59	38.00	37.10	41.22
Avoidance motivation	19.48	16.52	17.42	20.60	19.18	22.97

Table 6-10: Testing the equality of the means for the five patterns

	Self-esteem	Approach motivation	Avoidance motivation
Overall test	121.36**	65.77**	73.94**
Non-narcissists vs grandiose narcissists	4.97**	28.90**	1.75
Non-narcissists vs vulnerable narcissists	71.03**	9.89**	137.11**
Non-narcissists vs ordinary people	24.35**	.21	52.38**
Non-narcissists vs absolute narcissists	41.59**	31.78**	57.34**
Grandiose narcissists vs vulnerable narcissists	81.30**	16.16**	26.68**
Grandiose narcissists vs ordinary people	41.48**	23.71**	7.55**
Grandiose narcissists vs absolute narcissists	58.38**	0.11	58.84**
Vulnerable narcissists vs ordinary people	16.35**	4.31*	32.42**
Vulnerable narcissists vs absolute narcissists	3.20	15.95**	28.15**
Ordinary people vs absolute narcissists	14.11**	25.62**	69.12**

** $p < 0.01$; * $p < 0.05$

As shown in Table 6-10, the five patterns have divergent association with explicit self-esteem as measured by the Rosenberg Self-Esteem Scale. Grandiose narcissists reported the highest score for self-esteem with 35.99; they were followed by the non-narcissists with 33.48, ordinary people with 29.58, vulnerable narcissists with 27.31 and finally absolute narcissists with 25.23. Specifically, individuals with the grandiose narcissism pattern reported significantly higher self-esteem than non-narcissists (χ^2 = 4.79; $p < 0.01$), ordinary people ($\chi^2 = 41.48$; $p < 0.01$), vulnerable narcissists ($\chi^2 = 81.30$; $p < 0.01$) and absolute narcissists ($\chi^2 = 58.38$; $p < 0.01$). Conversely, absolute narcissists reported significantly lower self-esteem than non-narcissists ($\chi^2 = 41.59$; $p < 0.01$) and ordinary people ($\chi^2 = 14.11$; $p < 0.01$) but the mean differences to vulnerable narcissism did not reach the significance level ($\chi^2 = 3.20$; n.s.). Vulnerable narcissists reported lower self-esteem than non-narcissists ($\chi^2 = 71.03$; $p < 0.01$) and ordinary people ($\chi^2 = 16.35$; $p < 0.01$).

As expected, grandiose narcissists have the highest score for approach motivation (41.59), followed by the absolute narcissists (41.22) and the vulnerable narcissists (38.00). Ordinary people and non-narcissists scored below the mean. Furthermore, persons in the grandiose narcissism pattern reported significantly higher approach motivation than non-narcissists ($\chi^2 = 28.90$; $p < 0.01$), vulnerable narcissists ($\chi^2 = 16.16$; $p < 0.01$) and ordinary people ($\chi^2 = 23.17$; $p < 0.01$). Similarly, absolute narcissists reported higher approach motivation than non-narcissists ($\chi^2 = 31.78$; $p < 0.01$), vulnerable narcissists ($\chi^2 = 15.95$; $p < 0.01$) and ordinary people ($\chi^2 = 25.62$; $p < 0.01$). However, the difference between

grandiose narcissism and absolute narcissism did not reach the significance level (χ^2= 0.11; *n.s.*).

Interestingly, individuals with the absolute narcissist pattern report the highest score for avoidance motivation (22.97), followed by vulnerable narcissists (20.60), whereas grandiose narcissists report lower avoidance motivation than the average (17.42). Specifically, absolute narcissists report significantly higher avoidance motivation than grandiose narcissists (χ^2= 58.84; $p < 0.01$), vulnerable narcissists (χ^2= 28.15; $p < 0.01$), ordinary people ($\chi^2 = 69.12$; $p < 0.01$) and non-narcissists ($\chi^2 = 57.34$; $p < 0.01$). Similarly, vulnerable narcissists report higher avoidance motivation than grandiose narcissists ($\chi^2 = 26.68$; $p < 0.01$), non-narcissists ($\chi^2 = 137.11$; $p < 0.01$) and ordinary people ($\chi^2 = 32.42$; $p < 0.01$).

6.15 Discussion of Study 5

This study aimed to replicate the findings of the Study 4, which provided evidence for the existence of a third sub-type of narcissism: absolute narcissism. The finding has indeed been replicated as a third type of narcissism has been found in the second sample. Persons in the absolute narcissism pattern reported high contingent self-esteem, high entitlement rage, high exploitativeness, high devaluing of others, high grandiose fantasy, high self-sacrifice and high self-enhancement. However, this pattern's mean is slightly higher than the means of the sample 1 pattern as shown in Table 6-11. Moreover, the size of the absolute narcissist patterns varies substantially in both samples. Specifically, in sample 1 the absolute narcissist pattern consists of 182 subjects (19%), whereas in the second sample it consists of 58 subjects (6%).

Table 6-11 Samples Means and Means of Absolute Narcissism on the Seven Factors of PNI

	Sample 1		Sample 2	
	Sample mean	Absolute narcissists *n* = 182 (19%)	Sample mean	Absolute narcissists *n* = 58 (6%)
Contingent self-esteem	2.58	3.72	2.64	4.14
Hiding the self	3.27	3.95	3.18	4.05
Devaluing others	2.49	3.45	2.45	3.86
Entitlement rage	2.68	3.58	2.70	3.97
Exploitativeness	2.83	3.01	2.77	3.36
Grandiose fantasy	3.07	4.04	3.11	4.26
Self-sacrifice	3.19	3.73	3.18	4.01

In relation to self-esteem, absolute narcissists report significantly lower explicit self-esteem than vulnerable narcissists and grandiose narcissists. In terms of approach

avoidance motivation, individuals in the absolute narcissist pattern reported high approach motivation—as high as grandiose narcissists. Surprisingly, they report significantly higher avoidance motivation than grandiose narcissists and vulnerable narcissists. In other words, absolute narcissists are approach-oriented like grandiose narcissists, but at the same time they are avoidance oriented like vulnerable narcissists.

Absolute narcissists being approach and avoidance oriented at the same time is not an unexpected finding. Elliot and Thrash (2001) argue that much of the paradoxical nature of narcissism is attributable to the fact that narcissists are energised by both approach and avoidance motivations at the underlying level and narcissist behaviours represent an active avoidance of failure motive. Absolute narcissism clearly reflects the view of Elliot and Thrash on narcissists' motivation.

6.16 General Discussion

The results of studies 2 and 3 suggest that grandiose and vulnerable narcissists respond to self-esteem threats by engaging in psychological withdrawal or behavioural self-handicapping. These findings are not consistent with earlier studies that provided empirical evidence of grandiose narcissists reacting to ego threats either aggressively or by working harder to compensate for earlier performance. A potential explanation for this inconsistency can be found by looking at the construct of narcissism. Specifically, the existence of a third sub-type of narcissism with features of grandiosity and vulnerability.

The present study employed LPA techniques on two samples. In Study 4, 968 working adults' responses on the PNI were used to explore the sub-groups of the sample. Five patterns were identified. These patterns were labelled: non-narcissists, ordinary people, grandiose narcissists, vulnerable narcissists and absolute narcissists. Absolute narcissists were characterised by high scores in six of the seven factors of the PNI: contingent self-esteem, self-sacrifice/self- enhancement, hiding the self, grandiose fantasy, devaluing others, entitlement rage. Individuals in the absolute narcissism pattern reported lower exploitativeness than grandiose narcissists.

Moreover, absolute narcissists reported divergent associations with the five factors of personality. Specifically, absolute narcissists reported high neuroticism and openness to experiences. They also reported below average in agreeableness, extraversion, and

conscientiousness. In relation to self-esteem, absolute narcissists reported the lowest score in self-esteem.

Study 5 replicated the five patterns in a new sample of 941 working adults. The mean values were slightly higher than the sample in Study 4. Moreover, Study 5 examined the association of the five patterns with approach avoidance motivation and self-esteem. As for explicit self-esteem, absolute narcissists score significantly lower than grandiose and vulnerable narcissists. The motivational orientation of absolute narcissists appears to be quite interesting. They appear to be approach oriented like grandiose narcissists, and avoidance oriented like vulnerable narcissists.

These findings are in line with earlier studies that documented three dimensions of narcissism similar to the pattern found in this study. The idea of narcissism consisting of three sub-types has been documented in clinical (Ronningstam, 2005; Russ et al., 2008) and non-clinical literature (Wink, 1992). Despite using different measurements or sample types (pathological or normal non-pathological samples), the findings differentiated between grandiose narcissism (or high functioning, autonomy, or arrogant narcissism), vulnerable narcissism (or shy narcissism, hypersensitive, fragile narcissism) and grandiose malignant or aggressive narcissism or psychopathic narcissism. However, earlier studies associated the third type of narcissism with aggression. The association of absolute narcissism with aggression was not assessed in the current study but there are some indications about this association. For instance, Tremblay and Ewart (2005) found physical aggression to be negatively associated with extraversion, agreeableness and conscientiousness. Similarly, Barlett and Anderson (2012) found openness, agreeableness and neuroticism to be related to physical aggression. Thus, it can be postulated that the third sub-type of narcissism: absolute narcissism, and aggressive narcissists share some common features.

Furthermore, the absolute narcissist pattern and high narcissist pattern (Wetzel, et al., 2016) share some common characteristics. High narcissists reported high scores in grandiose and vulnerable narcissism, measured by PNI. Absolute narcissists reported high scores in all factors that comprise grandiose and vulnerable narcissism except exploitativness, one of the three factors of grandiose narcissism. Similarly, high narcissists and absolute narcissists reported low agreeableness. The two patterns diverge in their association with neuroticism, extraversion and self-esteem. High narcissists reported high

extraversion, low neuroticism and high self-esteem whereas absolute narcissists' association with these factors were in the opposite direction.

This study has various theoretical and practical implications. Theoretically, this study does not support the NSM model (Krizan & Herlache, 2017). The model argues that approach/avoidance motivation differentiates the various types of narcissism. However, absolute narcissism is correlated with both approach and avoidance motivation though the association with approach motivation was higher than that of avoidance motivation. Additionally, the current study findings can be represented in a continuum from non-narcissists to absolute narcissists and not in a spectrum as Krizan and Herlahe (2017) suggested.

Moreover, this study identified three types of narcissism in a normal sample, which means that vulnerable narcissists and absolute narcissists can be found in a normal population and not necessarily in a pathological sample as suggested by Pincus and Lukowitsky (2010). Thus, it is clear that different types of narcissism can be considered normal or pathological. Labelling any type of narcissism as pathological depends on the distress it causes and the degree of functional impairment (Miller et al., 2017). Yet, the high proportion (40%) of vulnerable narcissists in a normal sample, as suggested in these two studies, can be explained by the measurement type (PNI) which works to capture the pathological manifestation of narcissism and the sample specification (online samples).

Identifying a third subtype of narcissism; absolute narcissism might help to further clarify narcissism as a construct that has quite competing characteristics. For example, the intricate fluctuations between grandiosity and vulnerability can be better understood in relation to absolute narcissists, as such individuals exhibit almost all of the features of grandiosity and vulnerability.

Absolute narcissists reported high scores in all of the seven factors of the PNI except the exploitativness factor (Study 4). This might be attributed to the nature of the exploitativeness factor as it is concerned with narcissists interactions with others.

Differentiating between three types of narcissism can also help to clarify the inconsistent relationships reported between different measures of narcissism and explicit self-esteem. This study shows that grandiose narcissists reported the highest score of explicit self-esteem, while absolute narcissists reported the lowest levels of self-esteem. This means that grandiose narcissists have more positive views about themselves and

more likely to be psychological healthy in this regard (Sedikides et al., 2004). By contrast, absolute narcissists' low self-esteem indicates that they may be troubled by feelings of inferiority. These findings are important to further clarify the mask model of narcissism, for which findings have not yet been conclusive (Bosson et al., 2008). It is possible to argue that absolute narcissism is the only type of narcissism which supports the mask model.

Due to the variation in levels of self-esteem among the three types of narcissism, it is plausible to expect the different types of narcissists to react to threats to self-esteem differently. Specifically, absolute narcissists might be expected to react more aggressively to negative feedback than grandiose and vulnerable narcissists. This aggressive reaction is the result of low self-esteem, low agreeableness and high neuroticism. Future studies might explore the association between different types of narcissism and the aggression reaction.

This study is not without limitations. One limitation of this study was that narcissism was measured by only one measurement: PNI. This inventory is mainly made to assess pathological narcissism, thus if other measures have been used the findings might have varied. Future studies could replicate this study using other measures such as the five-factor narcissism inventory (Glover, Miller, Lynam, Crego, & Widiger, 2012).

Another limitation of this study is its dependency on self-report measurements only. Close friends, peers, and other informants can provide a considerable amount of useful information with respect to maladaptive personality functioning such as narcissism (Oltmanns & Carlson, 2013). Yet, there is some support for accurate self-description among persons with elevated levels of narcissism (Carlson, Vazire, & Oltmanns, 2011).

Although there is evidence that online data is as reliable as conventional methods of data gathering (Behrend, Sharek, Meade, & Wiebe, 2011; Landers & Behrend, 2015), including samples with psychopathology (Shapiro, Chandler, & Mueller, 2013), it is valid to assume that the results might have changed if the data collection was done in by different method.

Chapter 7 Conclusion

7.1 Introduction

The main aim of this thesis has been to investigate how individuals with high grandiose or vulnerable narcissism respond to threats to self-esteem. However, before addressing the main question of this thesis, it was vital to examine critiques of the most widely used measure of narcissism: The Narcissistic Personality Inventory (NPI), and to examine its validity in order to determine its suitability for the studies that form this thesis. Thus, the first study of this thesis addressed the structural validity of the NPI. The second and third studies examined the responses of individuals with high grandiose or vulnerable narcissism to threats to self-esteem, such as negative feedback. Informed by the second and third study, Studies 4 and 5 examined the potential existence of a third sub-type of narcissism using LPA.

This chapter draws together the findings of these five studies, offering interpretations and conclusions stemming from the research. It also highlights the theoretical, methodological, and practical contributions made by these studies and, finally, addresses the limitations and possible avenues for future research suggested by the findings of this thesis.

7.2 The Factorial Structure of the NPI

The original version of the NPI was published as a unidimensional scale without subscales (Raskin & Hall, 1979). The structure of this construct was then further investigated by several researchers who proposed different factorial structures for the NPI, based on principal component factor analysis. For example, Emmons (1984) extracted four factors from the NPI, Raskin and Terry (1988) seven factors, while Kubarych et al. (2004) suggested a two- and three-factor solution. Corry, Merritt, Mrug and Pamp (2008) found the two-factor solution to be the most appropriate. Finally, Ackerman et al. (2011) found the three-factor solution to be superior. Moreover, Ackerman et al. (2011) tried to replicate the previously mentioned six factorial models of NPI using confirmatory factor analysis (CFA), but none of these models were able to reach conventional model fit cut-

off values. This finding has been found to be a common problem when using CFA to model the underlying latent structure of personality measurements due to the restrictiveness of standard CFA models, whereby items cannot cross-load onto any other factors beside the main factor—which it is intended to load on (Marsh et al., 2014). Thus, a newly developed technique: exploratory structural equation modelling (ESEM) was proposed to overcome the drawbacks of the CFA.

Study 1 employed CFA and ESEM techniques to factor analyse the responses of 1001 working adults to the NPI in order to examine which factorial solutions would have the best model fit. Alternative models were derived from those proposed in Emmons' (1987) four-factor solution, Raskin and Terry's (1988) seven factors, Kubarych et al.'s (2004) two and three factors, Corry et al.'s (2008) two factors and Ackerman et al.'s (2011) three factors. Initially, CFA was replicated, but only Raskin and Terry's seven-factor solution reached the acceptable statistical goodness of fit values. The second phase of analysis included applying the ESEM to the six factorial models. The results showed that almost all of the models reached the cut-off score for statistical goodness of fit, with the exception of Corry et al.'s (2008) two-factor model, and Kubarych et al.'s (2004) two-factor model. Raskin and Terry's seven-factor model proved to have the best model fit.

Furthermore, employing the ESEM reduced the intercorrelation between factors, in comparison to the CFA intercorrelation. For example, the correlation between leadership/authority and superiority/arrogance using the Emmons (1987) four-factor model stands at .85 for the CFA results, but only at .44 for the ESEM results. In this respect, the ESEM solution provides better evidence for discriminant validity.

Despite the improvements to the conventional model fit statistics when using the ESEM instead of the CFA, item loadings on the intended factors did not match the theoretical models. This was particularly the case for Raskin and Terry's seven-factor model, and Emmons's four-factor model. These results have raised many concerns regarding the content of the inventory. For instance, having two items that are almost identical: item number 7 states "I like to be the centre of attention", and item 30 states "I really like to be the centre of attention". Furthermore, some items are intended to load onto their theoretical factors but when thoroughly examining the item, it became clear that some item contents do not match the theoretical model. For example, item no 36: "I am a born leader", is supposed to load onto the superiority/arrogance factor and not leadership,

while item 27: “I have a strong will to power”, is intended to load onto the exploitative/entitlement factor in the theoretical model.

Moreover, the reliability of the factors of the NPI were often lower than the acceptable >0.70 statistic. For instance, five factors of Raskin and Terry’s seven-factor model had an internal coefficient below 0.70. These results suggest that findings of studies of normal working populations that use the NPI factors are problematic. At the same time, studies that use the NPI as a unifactorial instrument are also questionable because the NPI consists of items with conflicting associations. For example, narcissism subscales tend to have positive associations with self-esteem, but the entitlement/exploitative subscale often associates negatively with self-esteem (Brown, Budzek, & Tamborski, 2009).

Accordingly, Study 1 concluded that NPI has many limitations for use with a non-clinical population. Because it utilised a large sample size, and carefully investigated many alternative factor structures, there are grounds for confidence in these findings. In addition, these conclusions are in line with many calls for a better measurement model for grandiose narcissism (Ackerman et al., 2011; Miller & Campbell, 2011; Rosenthal, Matthew Montoya, Ridings, Rieck, & Hooley, 2011). Thus, on the basis of Study 1, a decision was made not to use the NPI as a measure for narcissism in the subsequent Studies 2-5.

7.3 Study 2: Psychological Withdrawal as the Main Response Strategy for Narcissists Following a Self-esteem Threat

The purpose of Study 2 was to examine the reaction strategies employed by grandiose and vulnerable narcissists when threatened. Previous studies have shown that grandiose narcissists respond with rage or even violence when their ego is threatened. Indeed, the consensus that the rage-response is intrinsic to narcissistic behaviour is such that this strategy is mentioned in the DSM-5 (American Psychiatric Association, 2013) , which notes that narcissists tend to be sensitive to criticism and often react to criticism with rage or counter-attack. However, narcissists are not expected to react aggressively in an organisational context because it might hamper their career development. It was however suggested that they might opt to react passively by engaging in psychological withdrawal behaviours.

Nevertheless, a group of researchers provided evidence that grandiose narcissists can react positively to threats to self-esteem by exerting more effort and energy into their performance of a task after receiving negative feedback in an attempt to compensate for their previous poor performance (Nevicka et al., 2016). Using three experiments, Nevicka et al. (2016) reported that grandiose narcissists improved their performance following negative feedback. They also suggest that previous studies claiming that narcissists tend to react with rage or violence did not give their participants the opportunity to react in any other manner.

Thus, Study 2 pushed this intriguing idea further by presenting participants with two options following negative feedback: choose to show positive work behaviours such as working harder or suggesting ways to improve the work; or to engage in psychological withdrawal behaviours such as putting less effort into the job than they should, or to consider absenting themselves from work.

Using a vignette experiment method, 762 working adults were divided into two experimental groups (positive vs. negative feedback). Structural equation modelling results have shown that both grandiose and vulnerable narcissism are negatively related to the intention to show positive work behaviour. Specifically, self-esteem negatively mediates the relationship between grandiose narcissism and the intention to show positive work behaviours. Similarly, vulnerable narcissism associated negatively—indirectly, through self-esteem—with the intention to show positive work behaviour. That is, individuals high in grandiose or vulnerable narcissism prefer not to engage in positive work behaviours.

As expected, individuals high in vulnerable narcissism were found to be significantly and positively associated with the intention to engage in psychological withdrawal behaviours. Surprisingly, grandiose narcissists were shown to have a positive relationship with the intention to engage in psychological withdrawal. Moreover, moderation analysis indicated that grandiose narcissism positively moderated the relationship between feedback and the intention to engage in withdrawal behaviours. Similarly, vulnerable narcissism moderated the relationship between vulnerable narcissism and the intention to engage in withdrawal behaviours. The moderation effect of both grandiose and vulnerable narcissism on the relationship between feedback and the intention to show positive behaviours did not reach the significance level. That is, when

threatened, grandiose and vulnerable narcissists prefer to engage in psychological withdrawal behaviours.

These results are in line with the dynamic self-regulatory processing model of narcissism. However, most previous studies have concentrated on self-enhancement strategies rather than self-protection strategies. In this study however, both options (self-enhancement and self-protection) were present, and individuals high in grandiose and vulnerable narcissism were shown to choose the self-protection strategy over the self-aggrandisement strategy. Several researchers have suggested that narcissists become extremely defensive when threated (Hepper et al., 2010; Morf et al., 2011; Wallace, 2011). However, in previous studies, the self-protection strategies of narcissists tended to take the form of blaming others for failures, derogating the feedback provider or the test, or even responding with aggression (Wallace, 2011).

The results of Study 2 indicate that grandiose narcissists are highly sensitive to criticism and try to pre-emptively avoid it. These findings contradict those of Nevicka and her colleagues (2016), which provided evidence that the performance of grandiose narcissists improves after receiving negative feedback. In light of the findings of this study, it appears that Nevicka et al.'s findings suggest a pure self-protection strategy. That is, participants asked for more time to solve the arithmetic test probably in an attempt to avoid another ego threat situation by employing their full effort in the tests and not because they were trying to compensate for earlier performance.

7.4 Study 3: Self-Handicapping as a Strategy for Responding to Self-Esteem Threats

After obtaining evidence that grandiose and vulnerable narcissists are more likely to engage in withdrawal behaviours in response to self-esteem threats, Study 3 aimed to replicate these findings using an experimental method rather than a vignette experiment. In this study, 542 working adults completed a time management task followed by random bogus feedback (positive or negative). They were then asked to complete another task but were given the option of choosing the level of difficulty for the task that they were about to take. Three levels of task difficulty were presented (1) easy for an average person, (2) within the level of an average person (3) difficult for an average person. Building on Study 2 results, it was predicted that individuals high in grandiose narcissism or vulnerable

narcissism will choose an easy task to avoid a threat to their self-esteem. Choosing an easy task is a form of self-handicapping behaviour (Mitchell & Decker, 2017b). Self-handicapping is a process in which people withdraw effort, create obstacles to success, or make excuses so they can maintain a public or self-image of competence (Berglas & Jones, 1978). Furthermore, Study 3 examined whether narcissism can predict self-handicapping more and above approach/avoidance motivation.

As predicted, structural equation modelling results showed that individuals high in grandiose or vulnerable narcissism tended to choose the easy task. This means that they are more likely to engage in self-handicapping behaviour when they are confronted with negative results. Nevertheless, neither grandiose nor vulnerable narcissism moderated the effect of feedback on self-handicapping as the effect did not reach the significance level.

The results of Study 3 also show that approach motivation has an indirect positive significant effect on the choice of difficulty level via self-esteem. Avoidance motivation conversely, has a negative indirect effect on the difficulty level via self-esteem. This means that although grandiose narcissists are approach motivated by nature, self-protection is activated when they feel threatened, and as such becomes a better predictor than approach motivation. This finding can be explained by the trait activation theory. It suggests that any trait to be expressed behaviourally it has to be provoked by trait-relevant situational cues (Tett & Guterman, 2000).

Self-protection among narcissists is not new in the literature of narcissism. Several researchers have hitherto addressed this concept (Horvath & Morf, 2009; Raskin, Novacek, & Hogan, 1991). Earlier theorists advocated that grandiose narcissists are extremely self-protective (Sedikides & Gregg, 2001) and empirical evidence found that grandiose narcissists tend to become defensive when confronted with self-esteem threats (Hepper et al., 2010; Morf et al., 2011). For instance, in two experiments, Horvath and Morf (2009) employed a subliminal priming experiment in participants who were presented with subliminal presentation of an ego-threatening or neutral prime word. A string of letters was presented, and participants had to decide whether it was a word or non-word. Faster recognition of worthlessness words following an ego-threatening prime relative to a neutral prime indicated a connection between threat and worthlessness. Results showed that grandiose narcissists were vigilant for worthlessness and they were quick and successful at avoiding it (Horvath & Morf, 2009).

Similarly, grandiose narcissists reported a preference for engaging in defensive strategies among the strategies of self-enhancement and self-protection. Defensive strategies include behaviours such as self-handicapping and outgroup derogation (Hepper et al., 2010). Moreover, Wallace (2011) interpreted grandiose narcissists' aggressive reactions as a self-protection strategy to gain control over the situation.

Interestingly, Morf, Horvath and Torchetti (2011) argue that even when narcissists exhibit a self-protection strategy, self-promotion is imbedded in that strategy. In other words, defensive behaviours occur in combination with self-enhancement. Accordingly, self-handicapping can be interpreted as an attempt at self-promotion. That is, grandiose and vulnerable narcissists preferred the easy task because it allows them to get better results.

Studies 2 and 3 suggest that individuals high in grandiose narcissism respond to self-esteem threats in a similar manner to vulnerable narcissists. This finding supports the idea that grandiose narcissists experience a fluctuation between grandiosity and vulnerability. This notion is supported by previous studies used clinical and non-clinical samples (Gore & Widiger, 2016; Hyatt et al. 2017). However, Studies 2 and 3 design did not capture these fluctuations or dynamics over time.

7.5 Studies 4 and 5: The Existence of a Third Sub-Type of Narcissism

The main aim of Studies 4 and 5 was to examine whether the inconsistencies between the findings of Studies 2 and 3 and those of earlier studies can be attributed to the heterogeneity of narcissism. Specifically, is there a third sub-type of narcissism that combines grandiosity and vulnerable features in addition to the other two sub-types? Some scholars argued that there are at least three types of narcissism and they vary in the way they regulate threats to self-esteem. A number of these arguments are made for clinical populations. Ronningstam (2005), for example, specified three types of narcissism: arrogant, psychopathic and shy narcissists. She claimed that arrogance narcissists respond to ego threats by exaggerating their sense of superiority and uniqueness or by grandiose fantasies. Furthermore, several empirical studies found a third type of narcissism in addition to the other two types quite similar to grandiose and vulnerable narcissism. The third type was given various names such as grandiose malignant (Russ et al., 2008), wilful (Wink, 1992), and aggressive narcissism (Houlcroft et al., 2012).

Studies 4 and 5 employed latent profile analysis (LPA) techniques to identify distinct profiles or patterns based on the seven subscale scores of the PNI. Unlike variable-oriented approaches that consider only the "average person", the LPA pattern approach views the individual as a holistic entity and focuses on a multidimensional, interactive pattern across traits within individuals. Thus, by using a pattern-oriented approach like LPA we can identify subgroups of individuals who differ in the expression of narcissism, while the association between memberships of these subgroups with correlates or outcome variables can also be examined (Bergman & Wangby, 2014).

Studies 4 and 5 used separate samples of 968 and 941 working adults, respectively. In both studies, a pattern labelled 'absolute narcissism' was extracted. Absolute narcissists comprised 19% (182) of participants from the first sample, and (6%) (58) of participants from the second sample. Absolute narcissists were characterised with high scores across six of the seven factors of the PNI: contingent self-esteem, hiding the self, devaluing others, entitlement, grandiose fantasies, self-sacrificing/self-enhancement. In the exploitativeness factor, absolute narcissists scored lower than the grandiose narcissist pattern. Study 4 examined the associations between grandiose, vulnerable and absolute narcissism and the Big five factors of personality. Grandiose narcissists scored significantly higher than vulnerable and absolute narcissists in the extraversion factor. The mean differences between vulnerable narcissism and absolute narcissism did not reach the significance level. Both means for absolute and vulnerable narcissists were below the sample mean.

Grandiose narcissists scored significantly higher for agreeableness than vulnerable and absolute narcissists. Surprisingly, grandiose narcissists scored above the average, which is not consistent with previous studies (Campbell & Miller, 2013; Paulhus, 2001). Absolute narcissists reported significantly higher neuroticism than grandiose narcissists and vulnerable narcissists. The mean differences between grandiose narcissists and vulnerable narcissists did not reach the significance level. In summary, absolute narcissists reported low agreeableness, low extraversion, low conscientiousness, and high neuroticism.

With respect to self-esteem, grandiose narcissists reported significantly higher levels of self-esteem than vulnerable narcissists, while absolute narcissists reported significantly lower self-esteem than grandiose and vulnerable narcissists.

Study 5 replicated the existence of the absolute narcissism pattern and its association with self-esteem. Study 5 also found that absolute narcissists reported high approach motivation, similar to grandiose narcissists, whilst at the same time reporting the highest avoidance motivation—higher than the other two types of narcissism.

The findings of Studies 4 and 5 suggest that there is indeed a third type of narcissism: absolute narcissism. This type is characterised by unstable self-esteem, being overwhelmed with fantasies of achievements and admiration, exhibiting altruistic deeds to support their inflated self-image, hiding their faults and needs, indifference to others who do not show admiration, and explicitly exhibiting angry affect when their expectations are not met. This type shares some common features with the grandiose/malignant narcissists of Russ et al. (2008), who are characterised as showing furious reactions, exaggerated self-importance and feelings of privilege, illustration of a high need of power, control and dominance, interpersonal manipulativeness, and lack of remorse.

Moreover, absolute narcissists share some characteristics with the high narcissist pattern of Wetzel, et al. (2016) pattern analysis study. Among three samples, high narcissists reported high scores in the two factors of the NARQ. High narcissists reported high scores in grandiose and vulnerable narcissism as measured by the PNI. Similarly, high narcissists and absolute narcissists reported low agreeableness. Nevertheless, the two patterns diverge in their association with neuroticism, extraversion and self-esteem. High narcissists reported high extraversion, low neuroticism and high self-esteem whereas absolute narcissist associations with these factors were in the opposite direction. These opposing relationships can be ascribed to the differences in measurement, as the NARQ questionnaire assesses grandiose narcissists only, whilst PNI assess both grandiose and vulnerable narcissism.

7.6 The contribution of this dissertation to the field

The findings of the five studies of this thesis have several implications for researchers investigating narcissism. The contributions of these studies can be divided into theoretical, methodological and practical contributions, as discussed in the following sections.

7.6.1.1 Theoretical contributions:

Previous studies have shown that grandiose narcissists respond destructively to self-esteem threats such as negative feedback or social rejection. They do this by exhibiting aggressive responses, derogating feedback providers or the task they were assessed on, or by employing a self-aggrandising strategy by becoming more fully engaged on the required task after receiving feedback in order to compensate for previous performance. Studies 2 and 3 provided the first ever evidence that grandiose and vulnerable narcissists react to self-esteem threats by engaging in self-protection behaviours such as psychological withdrawal or self-handicapping. Furthermore, this study is the first to show that self-handicapping is used by grandiose and vulnerable narcissists as a strategy to respond to self-esteem threats. The only study that has hitherto associated grandiose narcissism with self-handicapping did not include an ego threat situation. It explored the effect of uncertainty of capabilities of narcissists on self-handicapping (Rhodewalt et al., 2006), but did not assess the reaction of narcissists to self-esteem threats.

Moreover, this is the only study in which two competing options, to withdraw or to work harder, were given to participants simultaneously in order to examine their preferred reaction, rather than providing them with only one option as in previous studies. Additionally, this is the only study to show that grandiose and vulnerable narcissists react in the same manner to negative feedback.

Studies 2 and 3 are the first studies to examine how narcissists react to negative self-esteem in organisational settings using a performance review vignette in Study 2, and a time management exercise (a job simulation exercise) in Study 3. These exercises are expected to activate responses similar to real job reactions rather than using mental ability exercises such as intelligence or creativity tests. Furthermore, the findings are more generalisable to organisational settings than previous studies because the exercises reflect the real work environment.

This is also the first study to examine responses of vulnerable narcissists to threats of self-esteem. Previous studies explored the association of vulnerable narcissism to emotions such as anger and shame, but this is the only study to document the effect of feedback on self-handicapping for vulnerable narcissism.

Study 3 provided an additional indication of grandiose and vulnerable narcissists self-handicapping as a self-protection strategy and not as a self-enhancement strategy because they have chosen to do so in the presence of no one else. This finding is important because Rhodewalt et al. (2006) did not find conclusive evidence to elucidate whether the actual purpose of narcissist self-handicapping was to impress others or to protect the self.

Narcissists' sensitivity to criticism and preference to engage in self-protection behaviours, such as self-handicapping and psychological withdrawal, might partially explain previous studies that found negative associations between narcissism and job performance. For example a meta analytic study on the relationship between narcissism and job performance (O'Boyle et al., 2012) found that the association between performance and narcissism depends on the narcissist's position in the hierarchy of the organisation. That is, the relationship is more strongly negative for narcissists in positions of authority than for individuals in low-position jobs. This means that narcissists in positions of authority tend to avoid new challenges or engage in behavioural self-handicapping. This is also partially in congruence with the findings of Kausel et al. (2015), which provided evidence to suggest that grandiose narcissists do not take others' advice not because of their confidence but because they do not trust others (Kausel, Culbertson, Leiva, Slaughter, & Jackson, 2015).

Despite the belief that self-protection strategies cannot be exhibited in isolation of self-promotion (Morf et al., 2011), most previous studies emphasised self-enhancement more than self-protection strategies. This can be ascribed to the difficulties of assessing self-protection strategies such as defensiveness or psychological withdrawal because narcissists tend to mask their real feelings. For instance, Horvath and Morf (2009) argue "we are anything but sure, that narcissists actually experience worthlessness after a failure event; and if they do, they would not be expected to report feeling worthless". They added that narcissists "may be preventing worthlessness to surface within their own self-system and thus may successfully be deceiving even themselves" (Horvath & Morf, 2009, p. 1252). Accordingly, they concluded that explicit measures might not be adequate to capture inner feelings such as worthlessness. Thus, it is plausible to argue that the scarcity of studies examining narcissistic self-protection strategies is attributable to the difficulty of assessing this motivation, rather than the absence of its implementation by grandiose narcissists, as this study has revealed.

This study also highlights the importance of examining the effect of self-handicapping in organisational contexts. Self-handicapping for example has detrimental consequences including poor attributions from others (Jones & Berglas, 1978) and poor performance (Zuckerman, Kieffer, & Knee, 1998). Self-handicapping was also found to undermine performance-attainment (Elliot & Church, 2003).

The second main theoretical contribution of this dissertation is its discovery of the existence of a third sub-type of narcissism: absolute narcissism. This new type of narcissism is not in congruence with the NSM (Krizan & Herlache, 2017). Although the model indirectly opens an opportunity for the existence of other types of narcissism besides grandiosity and vulnerability, it emphasises that approach/avoidance motivation differentiates between these types. However, absolute narcissism is positively correlated with both approach and avoidance motivation though the association with approach motivation was higher than avoidance motivation. Moreover, the NSM is depicted as a spectrum anchored on self-importance and entitlement, and the variation of these personality features is represented by the vertical vector from the origin point at the centre of the spectrum. Angles smaller than 90° from the anchor represent features positively linked in the population, and angles larger than 90° represent negatively linked features. The findings of the current study can however be represented in a continuum from non-narcissists to absolute narcissists and not in a spectrum as Krizan and Herlache (2017) suggested.

Moreover, this study identified three types of narcissism in a normal sample. This means that vulnerable narcissism and absolute narcissists can be found in a normal population and not necessarily in a pathological sample as suggested by Pincus and Lukowitsky (2010). It is thus clear that different types of narcissism can be considered normal or pathological. Labelling any type of narcissism as pathological depends on the distress it causes and the degree of functional impairment (American Psychiatric Association, 2013; Miller et al., 2017).

Identifying a third type of extreme narcissism can further clarify narcissism as concept that has quite competing characteristics. For example, there is growing interest in the idea of the fluctuation between grandiosity and vulnerability within individuals high in grandiose or vulnerable narcissism (Gore & Widiger, 2016), and the notion of narcissism as a trait or state (Giacomin & Jordan, 2016). Absolute narcissism can explain

the coexistence of some characteristics of grandiosity and vulnerability in the same person. Absolute narcissists have almost all of the features of grandiosity and vulnerability.

Furthermore, differentiating between the three types of narcissism can also help clarify the relationship between narcissism and explicit self-esteem. In this study, absolute narcissists reported the lowest self-esteem, whereas grandiose narcissists reported the highest score in explicit self-esteem. These findings support earlier studies that argued grandiose narcissists have positive views about themselves and are psychologically healthy (Sedikides et al., 2004). On the contrary, absolute narcissists' low self-esteem indicates that they may suffer feelings of inferiority about themselves. This supports the mask model of narcissism, for which findings have not yet been conclusive (Bosson et al., 2008).

Accordingly, it is plausible to expect that various types of narcissists react differently to self-esteem threats. Specifically, absolute narcissists are expected to react aggressively to negative feedback more than grandiose and vulnerable narcissists. This is due to their low self-esteem, low agreeableness and high neuroticism. Future studies might explore the association between different types of narcissism and the aggressive reaction.

7.6.1.2 Methodological contribution:

The first methodological contribution is that Study 1 is the first study, to my knowledge, to examine the factorial structure of different models of the NPI using a relatively modern technique: ESEM. Six models for the NPI were examined: Emmons' (1987) four factors, Raskin and Terry's (1988) seven factors, Kubarych et al.'s (2004) two and three factors, Corry et al.'s (2008) two factors and Ackerman et al.'s (2011) three factors. These results suggest that ESEM models provide better goodness of fit models in comparison to CFA. Raskin and Terry's seven-factor model proved to be the best according to conventional goodness of fit statistics.

Studies 4 and 5 are the first to use an LPA approach to examining different patterns of narcissism using the seven factors of the PNI. The nomological networks of the grandiose, vulnerable and absolute narcissists were examined with self-esteem, the Big Five factors of personality, and approach and avoidance motivation. Two previous studies have used LPA on narcissism: the first used three items only as indicators, while the

second study used two factors only. Thus, this study used relatively wider indicators than previous studies. Moreover, two separate large samples were used to successfully replicate the findings of the LPA.

Unlike most previous studies, which used undergraduate samples, the samples used here were composed of working adults, with the mean age falling in the 30's and work experience of more than ten years. Furthermore, half of the sample self-reported holding supervisory positions. This sample specification might increase the generalisability of the findings of this thesis to organisational settings.

The data analysis of this dissertation used SEM. Almost all previous studies have used regression analysis as the main data analysis technique. SEM however has advantages over conventional regression analysis, in that it investigates both direct and indirect effects among constructs in one step and provides explicit estimates of errors.

7.7 Limitations:

As with any research, several limitations have to be considered when interpreting the findings of this thesis. The first limitation is that Study 2 used a vignette experiment and Study 3 used an experimental method. Both experiments were conducted online rather than in a laboratory setting. Thus, results might have changed if an experimenter was available in the laboratory because narcissists are very keen to impress others. Given that narcissists self-enhance even when comparing themselves with a partner (Campbell, Reeder, Sedikides, & Elliott, 2000) and game-play in romantic relationships (Campbell et al., 2002) their attitude might change in the presence of other people.

Similarly, reactions to negative feedback might be moderated by a number of other factors, such as the relationship between the narcissist and the feedback provider, the feedback provider's position within the organisational hierarchy, and that of the narcissist (O'Boyle et al., 2012). For example, a narcissist supervisor's reaction to negative feedback from a subordinate would be expected to vary from that of the reaction of a narcissistic subordinate to negative feedback from a narcissistic supervisor. Thus, a narcissistic reaction cannot be expected to be the same in all situations; such reactions are context sensitive.

Congruent to this is the idea of narcissism being a trait or a state: that is, a narcissist—in a certain situation—might react as a trait: exhibiting grandiosity; but in

other situations they might exhibit vulnerability, the state (Giacomin & Jordan, 2016), or the fluctuations of grandiosity and vulnerability (Gore & Widiger, 2016).

Accordingly, self-reporting reactions in such situations may not be the most convenient measurement. Other informants such as friends or co-workers can provide a more vivid picture of narcissists' reactions to threats to self-esteem. Another promising way of capturing the real reactions of narcissists might be by using diary studies in which individuals report how they reacted to real life self-esteem threats and how they felt about it.

Moreover, a qualitative study might add insight into the study of grandiose and vulnerable narcissists. A focus group of individuals who have worked with grandiose or vulnerable narcissists might be useful to describe their behaviours in response to negative feedback and the variables that determine their response.

Another limitation of this thesis is its sample characteristics. Most previous studies used university students, whilst this thesis employed samples of adults with an average age of 30 years. Accordingly, it is viable to believe that the discrepancies of the findings presented above are due to sample specifications—especially considering narcissism is negatively associated with age. This would mean that the samples in this thesis are less narcissistic than those of previous studies.

In Studies 4 and 5, absolute narcissism as a sub-type of narcissism was extracted using LPA. To validate the existence of absolute narcissism it is important to employ exploratory factor analysis on various vulnerable and grandiose narcissists to determine if the third sub-factor can be extracted. It will be important to include in the inventories measures that can capture narcissistic rage. Furthermore, developing a measurement that can capture the three sub-types of narcissism will further clarify the construct of narcissism.

Another venue for future studies is to investigate a convenient way to present negative feedback in an organisational context. Studies have examined the reactions of narcissists at the moment of receiving feedback only. It would be a contribution to the literature to examine the effect of feedback on the long-term productivity of narcissists.

7.8 Conclusion

This chapter summarised the main findings of the five studies that form this thesis. The findings were interpreted in light of the general literature on narcissism. It also emphasised the theoretical, methodological, and practical contributions made by these studies and, finally, addresses the limitations and possible directions for future research.

References

Ackerman, R. A., Donnellan, M. B., Roberts, B. W., & Fraley, R. C. (2016). The Effect of Response Format on the Psychometric Properties of the Narcissistic Personality Inventory: Consequences for Item Meaning and Factor Structure. *Assessment*, *23*(2), 203–220. http://doi.org/10.1177/1073191114568113

Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the narcissistic personality inventory really measure? *Assessment*, *18*(1), 67–87. http://doi.org/10.1177/1073191110382845

Ackerman, R. a, Donnellan, M. B., & Robins, R. W. (2012). An item response theory analysis of the narcissistic personality inventory. *Journal of Personality Assessment*, *94*(2), 141–55. http://doi.org/10.1080/00223891.2011.645934

Adams, H. M., Luevano, V. X., & Jonason, P. K. (2014). Risky business: Willingness to be caught in an extra-pair relationship, relationship experience, and the Dark Triad. *Personality and Individual Differences*, *66*, 204–207. http://doi.org/10.1016/j.paid.2014.01.008

Akaike, H. (1987). Factor Analysis And AIC. *Psychometrika*, *52*(3), 317–332.

Alicke, M. D., & Sedikides, C. (2009). Self-enhancement and self-protection: What they are and what they do. *European Review of Social Psychology*, *20*(1), 1–48. http://doi.org/10.1080/10463280802613866

American Psychiatric Association. (1980). *DSM-III. Diagnostic and Statistical Manual of Mental Disorders (Third Edition)*. *Text*.

American Psychiatric Association. (2013a). *Diagnostic and Statistical Manual of Mental Disorder, Fifth Edicion*. *American Journal of Psychiatry* (Fifth Edit). Washington, DC.: American Psychiatric Publishing. Retrieved from dsm.psychiatryonline.org

American Psychiatric Association. (2013b). *Diagnostic and statistical manual of mental disorder 5 th edition*. American Psychiatric Association.

American Psychiatric Association. (2013c). *Diagnostic and statistical manual of mental disorders (5th*. *American Journal of Psychiatry* (Fifth edit). http://doi.org/10.1176/appi.books.9780890425596.744053

Asparouhov, T., Muthen, B., & Muthén, B. O. (2009). Exploratory Structural Equation Modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, *16*(794379768), 397–438. http://doi.org/10.1016/j.neuroimage.2008.12.049

Asparouhov, T., & Muthén, B. O. (2012). Using Mplus TECH11 and TECH14 to test the number of latent classes. *Mplus Web Notes*, (14), 1–17. Retrieved from https://www.statmodel.com/examples/webnotes/webnote14.pdf

Atlas, G. D., & Them, M. a. (2008). Narcissism and sensitivity to criticism: A preliminary investigation. *Current Psychology*, *27*(1), 62–76. http://doi.org/10.1007/s12144-008-9023-0

Back, M. D., Küfner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. a. (2013). Narcissistic admiration and rivalry: disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology*, *105*(6), 1013–37. http://doi.org/10.1037/a0034431

Back, M. D., Schmukle, S. C., & Egloff, B. (2010). Why are narcissists so charming at first sight? Decoding the narcissism-popularity link at zero acquaintance. *Journal of Personality and Social Psychology*, *98*(1), 132–145. http://doi.org/10.1037/a0016338

Barlett, C. P., & Anderson, C. A. (2012). Direct and indirect relations between the Big 5 personality traits and aggressive and violent behavior. *Personality and Individual Differences*, *52*(8), 870–875. http://doi.org/10.1016/j.paid.2012.01.029

Barnett, M. D., & Womack, P. M. (2015). Fearing, not loving, the reflection: Narcissism, self-esteem, and self-discrepancy theory. *Personality and Individual Differences*, *74*, 280–284. http://doi.org/10.1016/j.paid.2014.10.032

Barry, C. T., Chaplin, W. F., & Grafeman, S. J. (2006). Aggression following performance feedback: The influences of narcissism, feedback valence, and comparative standard. *Personality and Individual Differences*, *41*(1), 177–187. http://doi.org/10.1016/j.paid.2006.01.008

Bateman, T. S., & Crant, J. M. (1993). The Proactive Component of Organizational-Behavior - a Measure and Correlates. *Journal of Organizational Behavior*, *14*(2), 103–118. http://doi.org/10.1002/job.4030140202

Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review*, *103*(1), 5–33. http://doi.org/10.1037/0033-295X.103.1.5

Baumeister, R. F., & Vohs, K. D. (2001). Narcissism as Addiction to Esteem. *Psychological Inquiry*, *12*(4), 206–210.

Behrend, T. S., Sharek, D. J., Meade, A. W., & Wiebe, E. N. (2011). The viability of crowdsourcing for survey research. *Behavior Research Methods*, *43*(3), 800–813. http://doi.org/10.3758/s13428-011-0081-0

Belschak, F. D., & Den Hartog, D. N. (2009). Consequences of positive and negative feedback: The impact on emotions and extra-role behaviors. *Applied Psychology*, *58*(2), 274–303. http://doi.org/10.1111/j.1464-0597.2008.00336.x

Berglas, S., & Jones, E. E. (1978). Drug choice as a self-handicapping strategy in response to noncontingent success. *Journal of Personality and Social Psychology*, *36*(4), 405–417. http://doi.org/10.1037//0022-3514.36.4.405

Bergman, L. R., & Wangby, M. (2014). The person-oriented approach: A short theoretical and practical guide. *Eesti Haridusteaduste Ajakiri*, *2*(1), 29–49. http://doi.org/10.1017/S095457949700206X

Besser, A., & Priel, B. (2010). Grandiose Narcissism Versus Vulnerable Narcissism in Threatening Situations: Emotional Reactions to Achievement Failure and Interpersonal Rejection. *Journal of Social and Clinical Psychology*, *29*(8), 874–902. http://doi.org/10.1521/jscp.2010.29.8.874

Blickle, G., Schlegel, A., Fassbender, P., & Klein, U. (2006). Some personality correlates of business white-collar crime. *Applied Psychology*, *55*(2), 220–233. http://doi.org/10.1111/j.1464-0597.2006.00226.x

Bosson, J. K., Lakey, C. E., Campbell, W. K., Zeigler-Hill, V., Jordan, C. H., & Kernis, M. H. (2008a). Untangling the links between narcissism and self-esteem: A theoretical and empirical review. *Social and Personality Psychology Compass*, *2*(3), 1415–1439. http://doi.org/10.1111/j.1751-9004.2008.00089.x

Bosson, J. K., Lakey, C. E., Campbell, W. K., Zeigler-Hill, V., Jordan, C. H., & Kernis, M. H. (2008b). Untangling the links between narcissism and self-esteem: A theoretical and empirical review. *Social and Personality Psychology Compass*, *23*(10), 1415–1439. http://doi.org/10.1111/j.1751-9004.2008.00089.x

Brown, R. P. (2004). Vengeance is mine: Narcissism, vengeance, and the tendency to forgive. *Journal of Research in Personality*, *38*(6), 576–584. http://doi.org/10.1016/j.jrp.2003.10.003

Brown, R. P., Budzek, K., & Tamborski, M. (2009). On the Meaning and Measure of Narcissism. *Personality and Social Psychology Bulletin*, *35*(7), 951–964.

http://doi.org/10.1177/0146167209335461

Brown, R. P., Budzek, K., & Tamborski, M. (2009). On the Meaning and Measure of Narcissism. *Personality and Social Psychology Bulletin*, *35*(7), 951–964. http://doi.org/10.1177/0146167209335461

Brummelman, E., Thomaes, S., & Sedikides, C. (2016). Separating Narcissism From Self-Esteem. *Current Directions in Psychological Science*, *25*(1), 8–13. http://doi.org/10.1177/0963721415619737

Brummelman, E., Thomaes, S., & Sedikides, C. (2016). Separating Narcissism From Self-Esteem. *Current Directions in Psychological Science*, *25*(1), 8–13. http://doi.org/10.1177/0963721415619737

Brunell, A. B., & Buelow, M. T. (2017). Narcissism and Performance on Behavioral Decision-making Tasks. *Journal of Behavioral Decision Making*, *30*(1), 3–14. http://doi.org/10.1002/bdm.1900

Brunell, A. B., Gentry, W. A., Campbell, W. K., Hoffman, B. J., Kuhnert, K. W., & Demarree, K. G. (2008). Leader emergence: the case of the narcissistic leader. *Personality and Social Psychology Bulletin*, *34*(12), 1663–1676. http://doi.org/10.1177/0146167208324101

Burns, D. J. (2005). Performance on the Final Exam in the Principles of Marketing Course: Relationships With Self-Handicapping. *Journal for Advancement of Marketing Education*, *6*(Wahlroos 1981), 10–27. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=71428104&site=ehost-live

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, *75*(1), 219–229. http://doi.org/10.1037/0022-3514.75.1.219

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, *75*(1), 219–229. http://doi.org/10.1037/0022-3514.75.1.219

Bushman, B. J., & Baumeister, R. F. (2002). Does self-love or self-hate lead to violence? *Journal of Research in Personality*, *36*(6), 543–545. http://doi.org/10.1016/S0092-

6566(02)00502-0

Bushman, B. J., Baumeister, R. F., Thomaes, S., Ryu, E., Begeer, S., & West, S. G. (2009). Looking again, and harder, for a link between low self-esteem and aggression. *Journal of Personality*, *77*(2), 427–446. http://doi.org/10.1111/j.1467-6494.2008.00553.x

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

Cain, N. M., Pincus, A. L., & Ansell, E. B. (2008). Narcissism at the crossroads: Phenotypic description of pathological narcissism across clinical theory, social/personality psychology, and psychiatric diagnosis. *Clinical Psychology Review*, *28*(4), 638–656. http://doi.org/10.1016/j.cpr.2007.09.006

Campbell, W. K., Bonacci, A. M., Shelton, J., Exline, J. J., & Bushman, B. J. (2004). Psychological entitlement: interpersonal consequences and validation of a self-report measure. *Journal of Personality Assessment*, *83*(1), 29–45. http://doi.org/10.1207/s15327752jpa8301_04

Campbell, W. K., Bosson, J. K., Goheen, T. W., Lakey, C. E., & Kernis, M. H. (2007). Do narcissists dislike themselves "deep down inside?" *Psychological Science. Vol 18(3)*, 227–229. http://doi.org/10.1111/j.1467-9280.2007.01880.x

Campbell, W. K., Brunell, A. B., & Finkel, E. (2006). Narcissism, Interpersonal Self-Reulation, and Romantic Relationships; An Agency Model Approach. In K. D. Vohs & E. Finkel (Eds.), *Self and Relationships*. The Guilford Press.

Campbell, W. K., & Campbell, S. M. (2009). On the Self-regulatory Dynamics Created by the Peculiar Benefits and Costs of Narcissism: A Contextual Reinforcement Model and Examination of Leadership. *Self and Identity*, *8*, 214–232. http://doi.org/10.1080/15298860802505129

Campbell, W. K., Foster, C. A., & Finkel, E. J. (2002). Does self-love lead to love for others? A story of narcissistic game playing. *Journal of Personality and Social Psychology*, *83*(2), 340–354. http://doi.org/10.1037/0022-3514.83.2.340

Campbell, W. K., & Foster, J. D. (2007). The narcissistic self: Background, an extended agency model, and ongoing controversies. *The Self*, 115–138. http://doi.org/10.4324/9780203818572

Campbell, W. K., Foster, J. D., & Brunell, A. B. (2004). Running from shame or reveling

in pride? Narcissism and the regulation of self-conscious emotions. *Psychological Inquiry*, *15*(2), 150–153. http://doi.org/10.2307/20447220

Campbell, W. K., Goodie, A. S., & Foster, J. D. (2004). Narcissism, confidence, and risk attitude. *Journal of Behavioral Decision Making*, *17*(4), 297–311. http://doi.org/10.1002/bdm.475

Campbell, W. K., Hoffman, B. J., Campbell, S. M., & Marchisio, G. (2011). Narcissism in organizational contexts. *Human Resource Management Review*, *21*(4), 268–284. http://doi.org/10.1016/j.hrmr.2010.10.007

Campbell, W. K., & Miller, J. D. (2013). Narcissistic personality disorder and the five-factor model: Delineating narcissistic personality disorder, grandiose narcissism, and vulnerable narcissism. In T. A. Widiger & P. T. Costa (Eds.), *Personality Disorders and the Five-Factor Model of Personality* (3rd editio, pp. 133–145). Washington,D C.: American Psychological Association.

Campbell, W. K., Reeder, G. D., Sedikides, C., & Elliot, A. J. (2000). Narcissism and comparative self-enhancement strategies. *Journal of Research in Personality*, *34*(3), 329–347. http://doi.org/10.1006/jrpe.2000.2282

Campbell, W. K., & Rudich, E. A. (2002). Narcissism , Self-Esteem , and the Positivity of Self-Views : Two Portraits of Self-Love. *Personality and Social Psychology Bulletin*, *28*(3), 358–368.

Campbell, W. K., Rudich, E., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: two portraits of self-love, 358–368. http://doi.org/10.1177/0146167202286007

Carlson, E. N., Vazire, S., & Oltmanns, T. F. (2011). You probably think this paper's about you: narcissists' perceptions of their personality and reputation. *Journal of Personality and Social Psychology*, *101*(1), 185–201. http://doi.org/10.1037/a0023781

Carver, C. S., & White, T. L. (1994). Behavioral Inhibition , Behavioral Activation , and Affective Responses to Impending Reward and Punishment : The BIS / BAS Scales. *Journal of Personality and Social Psychology*, *67*(2), 319–333.

Chatterjee, A., & Hambrick, D. C. (2011). Executive personality, capability cues, and risk taking: How narcissistic CEOs react to their successes and stumbles. *Administrative Science Quarterly*, *56*(2), 202–237. http://doi.org/10.1177/0001839211427534

Chatterjee, A., & Hambrick, D. C. D. (2007). It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, *52*(3), 351–386. http://doi.org/10.2189/asqu.52.3.351

Church, A. T., & Burke, P. J. (1994a). Exploratory and Confirmatory Tests of the Big Five and Tellegen ' s Three- and Four-Dimensional Models, *66*(1), 93–114.

Church, A. T., & Burke, P. J. (1994b). Exploratory and Conformatory Tests of the Big Five and Tellegen's Three and Four-Dimensional Models. *Jounal of Personality and Social Psychology*, *66*(1), 93–114.

Clarke, I. E., Karlov, L., & Neale, N. J. (2015). The many faces of narcissism: Narcissism factors and their predictive utility. *Personality and Individual Differences*, *81*, 90–95. http://doi.org/10.1016/j.paid.2014.11.021

Clough, P., Earle, K., & Sewell, D. (2002). Mental toughness: The concept and its measurement. *Solutions in sport psychology*, 32-43

Corry, N., Merritt, R. D., Mrug, S., & Pamp, B. (2008). The factor structure of the Narcissistic Personality Inventory. *Journal of Personality Assessment*, *90*(6), 593–600. http://doi.org/10.1080/00223890802388590

Coudevylle, G. R., Gernigon, C., & Martin Ginis, K. A. (2011). Self-esteem, self-confidence, anxiety and claimed self-handicapping: A mediational analysis. *Psychology of Sport and Exercise*, *12*(6), 670–675. http://doi.org/10.1016/j.psychsport.2011.05.008

del Rosario, P. M., & White, R. M. (2005). The Narcissistic Personality Inventory: Test-retest stability and internal consistency. *Personality and Individual Differences*, *39*(6), 1075–1081. http://doi.org/10.1016/j.paid.2005.08.001

Di Pierro, R., Costantini, G., Benzi, I. M. A., Madeddu, F., & Preti, E. (2018). Grandiose and entitled, but still fragile: A network analysis of pathological narcissistic traits. *Personality and Individual Differences*, (March), 0–1. http://doi.org/10.1016/j.paid.2018.04.003

Dickinson, K. A., & Pincus, A. L. (2003). Interpersonal analysis of grandiose and vulnerable narcissism. *Journal of Personality Disorders*, *17*(3), 188–207. http://doi.org/10.1521/pedi.17.3.188.22146

DiGiuseppe, R., Robin, M., Szeszko, P. R., & Primavera, L. H. (1995). Cluster analysis of narcissistic personality disorders on the MCMI-II. *Journal of Personality*

Disorders, *9*(4), 304–317. http://doi.org/10.1521/pedi.1995.9.4.304

Edershile, E. A., Simms, L. J., & Wright, A. G. (2018). A multivariate analysis of thepathological Narcissism inventory's nomological network. *Assessment,* 1073191118766412.

Elliot, A. J., & Church, M. A. (2003). A motivational analysis of defensive pessimism and self-handicapping. *Journal of Personality*, *71*(3), 369–396. http://doi.org/10.1111/1467-6494.7103005

Elliot, A. J., & Thrash, T. M. (2001). Narcissism and motivation. *Psychological Inquiry*, *12*(4), 216–219.

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

Emmons, R. A. (1987). Narcissism: Theory and measurement. *Journal of Personality and Social Psychology*, *52*(1), 11–17. http://doi.org/10.1037/0022-3514.52.1.11

Ensari, N., Riggio, R. E., Christian, J., & Carslaw, G. (2011). Who emerges as a leader? Meta-analyses of individual differences as predictors of leadership emergence. *Personality and Individual Differences*, *51*(4), 532–536. http://doi.org/10.1016/j.paid.2011.05.017

Erdle, S., & Rushton, J. P. (2010). The General Factor of Personality, BIS-BAS, expectancies of reward and punishment, self-esteem, and positive and negative affect. *Personality and Individual Differences*, *48*(6), 762–766. http://doi.org/10.1016/j.paid.2010.01.025

Exline, J. J., Bushman, B. J., Baumeister, R. F., Keith Campbell, W., & Finkel, E. J. (2004). Too proud to let go: Narcissistic entitlement as a barrier to forgiveness. *Journal of Personality and Social Psychology*, *87*(6), 894–912. http://doi.org/10.1037/0022-3514.87.6.894

Farwell, L., & Wohlwend-Lloyd, R. (1998). Narcissistic processes: optimistic expectations, favorable self-evaluations, and self-enhancing attributions. *Journal of Personality*, *66*(1), 65–83. http://doi.org/10.1111/1467-6494.00003

Fatfouta, R., Gerlach, T. M., Schröder-Abé, M., & Merkl, A. (2015). Narcissism and lack of interpersonal forgiveness: The mediating role of state anger, state rumination, and state empathy. *Personality and Individual Differences*, *75*, 36–40. http://doi.org/10.1016/j.paid.2014.10.051

Fatfouta, R., & Schröder-Abé, M. (2018). Agentic to the core? Facets of narcissism and positive implicit self-views in the agentic domain. *Journal of Research in Personality*, *74*, 78–82. http://doi.org/10.1016/j.jrp.2018.02.006

Finez, L., & Sherman, D. K. (2012). Train in vain: The role of the self in claimed self-handicapping strategies. *Journal of Sport & Exercise Psychology*, *34*, 600–20. http://doi.org/10.1123/jsep.34.5.600

Foster, J. D., & Brennan, J. C. (2011). Narcissism, the Agency Model, and Approach-Avoidance Motivation. In *The Handbook of Narcissism and Narcissistic Personality Disorder* (pp. 89–100). Hoboken, New Jersey: John Wiley & Sons, Inc. http://doi.org/10.1002/9781118093108.ch8

Foster, J. D., & Campbell, W. K. (2005). Narcissism and resistance to doubts about romantic partners. *Journal of Research in Personality*, *39*(5), 550–557. http://doi.org/10.1016/j.jrp.2004.11.001

Foster, J. D., Campbell, W. K., & Twenge, J. M. (2003). Individual differences in narcissism: Inflated self-views across the lifespan and around the world. *Journal of Research in Personality*, *37*(6), 469–486. http://doi.org/10.1016/S0092-6566(03)00026-6

Foster, J. D., Misra, T. A., & Reidy, D. E. (2009). Narcissists are approach-oriented toward their money and their friends. *Journal of Research in Personality*, *43*(5), 764–769. http://doi.org/10.1016/j.jrp.2009.05.005

Foster, J. D., Shenesey, J. W., & Goff, J. S. (2009). Why do narcissists take more risks? Testing the roles of perceived risks and benefits of risky behaviors. *Personality and Individual Differences*, *47*(8), 885–889. http://doi.org/10.1016/j.paid.2009.07.008

Foster, J. D., & Trimm, R. F. (2008). On being eager and uninhibited: narcissism and approach-avoidance motivation. *Personality & Social Psychology Bulletin*, *34*(7), 1004–17. http://doi.org/10.1177/0146167208316688

Freis, S. D., Brown, A. A., Carroll, P. J., & Arkin, R. M. (2015). Shame, rage, and unsuccessful motivated reasoning in vulnerable narcissism. *Journal of Social and Clinical Psychology*, *34*(10), 877–895. http://doi.org/10.1521/jscp.2015.34.10.877

Freud, S. (1914). On narcissism: An introduction. In J. Sandler, E. Person, & P. Fonagy (Eds.), *Freud's "On Narcissism: An Introduction."* New Haven: Yale University Press.

Freud, S. (1931). Libidinal Types. In J. Strachey (Ed.), *Collected Papers, Vol 5*. London: Hogarth Press Ltd.

Freud, S. (1953). Three essays on the theory of sexuality. In J. Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud* (7th ed., pp. 135–243). London: Hogarth Press Ltd.

Furnham, A., Milner, R., Akhtar, R., & DeFruyt, F. (2014). A review of the measures designed to assess DSM-5 personality disorders. *Psychology*, *5*(14), 1646–1686.

Gabriel, M. T., Crltelll, J. W., & Ee, J. S. (1994). Narcissistic Illusions In Self-Evaluations of Intelligence and Attractiveness. *Journal of Personality*, *62*(1), 143–155.

Galvin, B. M., Waldman, D. a., & Balthazard, P. (2010). Visionary communication qualities as mediators of the relationship between narcissism and attributions of leader charisma. *Personnel Psychology*, *63*, 509–537. http://doi.org/10.1111/j.1744-6570.2010.01179.x

Garcia, G. M., Watson, P. J., Cunningham, C. J. L., O'Leary, B. J., & Chen, Z. (2015). Narcissism and anger: Self-esteem and contingencies of self-worth as mediating self-structures. *Interpersona: An International Journal on Personal Relationships*, *9*(1), 59–71. http://doi.org/10.5964/ijpr.v9i1.163

Giacomin, M., & Jordan, C. H. (2016). The wax and wane of narcissism: Grandiose narcissism as a process or state. *Journal of Personality*, *84*(2), 154–164. http://doi.org/10.1111/jopy.12148

Gignac, G. E., Bates, T. C., & Jang, K. L. (2007). Implications relevant to CFA model misfit, reliability, and the five-factor model as measured by the NEO-FFI. *Personality and Individual Differences*, *43*(5), 1051–1062. http://doi.org/10.1016/j.paid.2007.02.024

Glover, N., Miller, J. D., Lynam, D. R., Crego, C., & Widiger, T. a. (2012). The five-factor narcissism inventory: A five-factor measure of narcissistic personality traits. *Journal of Personality Assessment*, *94*(5), 500–512. http://doi.org/10.1080/00223891.2012.670680

Goldman, A. (2006). Personality disorders in leaders: Implications of the <IT>DSM IV-TR</IT> in assessing dysfunctional organizations. *Journal of Managerial Psychology*, *21*, 392–414. http://doi.org/10.1108/02683940610673942

Gore, W. L., & Widiger, T. A. (2016). Fluctuation between grandiose and vulnerable

narcissism. *Personality Disorders: Theory, Research, and Treatment*, *7*(4), 363–371. http://doi.org/10.1037/per0000181

Gregg, A. P., & Sedikides, C. (2010). Narcissistic fragility: Rethinking its links to explicit and implicit self-esteem. *Self and Identity*, *9*(2), 142–161. http://doi.org/10.1080/15298860902815451

Grijalva, E., Harms, P. D., Newman, D. a., Gaddis, B. H., & Fraley, R. C. (2015). Narcissism and leadership: A meta-analytic review of linear and nonlinear relationships. *Personnel Psychology*, *68*(1), 1–47. http://doi.org/10.1111/peps.12072

Grijalva, E., & Newman, D. a. (2015). Narcissism and counterproductive work behavior (CWB): Meta-analysis and consideration of collectivist culture; Big Five personality; and narcissism's facet structure. *Applied Psychology*, *64*(1), 93–126. http://doi.org/10.1111/apps.12025

Grijalva, E., Newman, D. a., Tay, L., Donnellan, M. B., Harms, P. D., Robins, R. W., … Robins, R. W. (2015). Gender differences in narcissism: A meta-analytic review. *Psychological Bulletin*, *141*(2), 261–310. http://doi.org/10.1037/a0038231

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis*. Pearson Education Limited.

Heimpel, S. A., Elliot, A. J., & Wood, J. V. (2006). Basic personality dispositions, self-esteem, and personal goals: An approach-avoidance analysis. *Journal of Personality*, *74*(5), 1293–1319. http://doi.org/10.1111/j.1467-6494.2006.00410.x

Hepper, E. G., Gramzow, R. H., & Sedikides, C. (2010). Individual differences in self-enhancement and self-protection strategies: An integrative analysis. *Journal of Personality*, *78*(2), 781–814. http://doi.org/10.1111/j.1467-6494.2010.00633.x

Higgs, M. (2009). The good; the bad and the ugly: Leadership and narcissism. *Journal of Change Management*, *9*(2), 165–178. http://doi.org/10.1080/14697010902879111

Hoffman, B. J., Strang, S. E., Kuhnert, K. W., Campbell, W. K., Kennedy, C. L., & LoPilato, a. C. (2012). Leader Narcissism and Ethical Context: Effects on Ethical Leadership and Leader Effectiveness. *Journal of Leadership & Organizational Studies*, *20*(1), 25–37. http://doi.org/10.1177/1548051812465891

Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership. Effectiveness and personality. *The American Psychologist*, *49*(June), 493–504. http://doi.org/10.1037/0003-066X.49.6.493

Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated? *Personality and Social Psychology Review*, *14*(3), 332–346. http://doi.org/10.1177/1088868310361240

Horney, K. (1939). *New ways in psychoanalysis*. New York: W.H. Norton & Company.

Horvath, S., & Morf, C. C. (2009). Narcissistic defensiveness: Hypervigilance and avoidance of worthlessness. *Journal of Experimental Social Psychology*, *45*(6), 1252–1258. http://doi.org/10.1016/j.jesp.2009.07.011

Houlcroft, L., Bore, M., & Munro, D. (2012). Three faces of Narcissism. *Personality and Individual Differences*, *53*(3), 274–278. http://doi.org/10.1016/j.paid.2012.03.036

Hu, L., Bentler, P. M., & Kano, Y. (1992). Can test statistics in covariance structure analysis be trusted. *Quatitative Methods in Psychology*, *112*(2), 351–362. http://doi.org/10.1017/CBO9781107415324.004

Hu, X., Chen, Y., & Tian, B. (2016). Feeling better about self after receiving negative feedback: When the sense that ability can be improved is activated. *The Journal of Psychology*, *150*(1), 72–87. http://doi.org/10.1080/00223980.2015.1004299

Hyatt, C., Sleep, C. E., Lynam, D. R., Widiger, T. A., Campbell, W. K., and Miller, J. D. (2017). Ratings of affective and interpersonal tendencies differ for grandiose and vulnerable narcissism: a replication and extension of Gore and Widiger (2016). *J. Personal. Adv*. 86, 422–434. doi: 10.1111/jopy.12325

Ilgen, D. R., & Davis, C. (2000). Bearing bad news: Reactions to negative performance feedback. *Applied Psychology*, *49*(3), 550–565. http://doi.org/10.1111/1464-0597.00031

Jauk, E., & Kaufman, S. B. (2018). The Higher the Score, the Darker the Core: The Nonlinear Association Between Grandiose and Vulnerable Narcissism. *Frontiers in psychology*, 9, 1305.

Jauk, E., Weigle, E., Lehmann, K., Benedek, M., & Neubauer, A. C. (2017). The relationship between grandiose and vulnerable (hypersensitive) narcissism. *Frontiers in Psychology*, *8*, 1600. http://doi.org/10.3389/fpsyg.2017.01600

John, O. P., & Robins, R. W. (1994). Accuracy and bias in self-perception: Individual differences in self-enhancement and the role of narcissism. *Journal of Personality and Social Psychology*, *66*(1), 206–219. http://doi.org/10.1037/0022-3514.66.1.206

John, O. P., & Srivastava, S. (1999). The Big Five Taxonomy: History, measurement and

theoretical perspective. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd editio, pp. 102–138). New York: Guilford Press.

Jones, D. N., & Paulhus, D. L. (2010). Different provocations trigger aggression in narcissists and psychopaths. *Social Psychological and Personality Science*, *1*(1), 12–18. http://doi.org/10.1177/1948550609347591

Jones, D. N., & Paulhus, D. L. (2010). Different Provocations Trigger Aggression in Narcissists and Psychopaths. *Social Psychological and Personality Science*, *1*(1), 12–18. http://doi.org/10.1177/1948550609347591

Jones, E. (1951). *Essays in applied psychoanalysis, Vol II: Essays in folklore, anthropology, and religion*. London: Hogarth Press Ltd.

Jones, E. E., & Berglas, S. (1978). Control of attributions about the self through self-handicapping strategies: The appeal of alcohol and the role of underachievement. *Personality & Social Psychology Bulletin*, *4*(2), 200–206.

Jordan, C. H., Spencer, S. J., Zanna, M. P., Hoshino-Browne, E., & Correll, J. (2003). Secure and defensive high self-esteem. *Journal of Personality and Social Psychology*, *85*(5), 969–978. http://doi.org/10.1037/0022-3514.85.5.969

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: a qualitative and quantitative review. *The Journal of Applied Psychology*, *87*(4), 765–780. http://doi.org/10.1037/0021-9010.87.4.765

Judge, T. A., LePine, J. A., & Rich, B. L. (2006). Loving yourself abundantly: relationship of the narcissistic personality to self-and other perceptions of workplace deviance, leadership, and task and contextual performance. *The Journal of Applied Psychology*, *91*(4), 762–776. http://doi.org/10.1037/0021-9010.91.4.762

Kausel, E. E., Culbertson, S. S., Leiva, P. I., Slaughter, J. E., & Jackson, A. T. (2015). Too arrogant for their own good? Why and when narcissists dismiss advice. *Organizational Behavior and Human Decision Processes*, *131*, 33–50. http://doi.org/10.1016/j.obhdp.2015.07.006

Kelloway, E. K. (2015). *Using Mplus for Structural Equation Modeling* (Second edi). SAGE Publications.

Kernberg, O. (1975). *Borderline conditions and pathological narcissism*. New York: Jason Aronson.

Kernberg, O. F. (2004). *Aggressivity, Narcissism, and Self-Destructiveness in the*

Psychotherapeutic Relationship. *Yale University Press* (Vol. 39). Yale University Press. http://doi.org/10.1017/CBO9781107415324.004

Kernis, M. H., & Sun, C. R. (1994). Narcissism and reactions to interpersonal feedback. *Journal of Research in Personality*, *28*(1), 4–13. http://doi.org/10.1016/jrpe.1994.1002

Kets de Vries, M. F. (1994). The leadership mystique. *Academy of Management Perspectives*, *8*(3), 73–89. http://doi.org/10.5465/AME.1994.9503101181

Kets de Vries, M. F., & Miller, D. (1985). Narcissism and leadership: An object relations perspective. *Human Relations*, *38*(6), 583–601. http://doi.org/10.1177/001872678503800606

King, G. (2007). Narcissism and effective crisis management: A review of potential problems and pitfalls. *Journal of Contingencies and Crisis Management*, *15*(4), 183–193.

Kirkpatrick, L. A., Waugh, C. E., Valencia, A., & Webster, G. D. (2002). The functional domain specificity of self-esteem and the differential prediction of aggression. *Journal of Personality and Social Psychology*, *82*(5), 756–767. http://doi.org/10.1037//0022-3514.82.5.756

Klavina, E., Schröder-Abé, M., & Schütz, A. (2012). Facets of self-esteem at an implicit level? Investigation of implicit-explicit correlations and development of four IATs. *Personality and Individual Differences*, *53*(5), 693–698. http://doi.org/10.1016/j.paid.2012.05.028

Kline, R. B. (2011). *Principles and Practice of Structural Equation Modelling*. *Statewide Agricultural Land Use Baseline 2015* (Third Edit). Guilford Press.

Kline, R. B. (2016). *Principles and practices of structural equation modelling*. *The Guilford Press*.

Kohut, H. (1966). Forms and transformations of narcissism. *Journal of the American Psychoanalytic Association*, *14*, 243–272.

Kohut, H. (1968). The psychoanalytic treatment of narcissistic personality disorders: Outline of a systematic approach. *The Psychoanalytic Study of the Child*, *23*, 86–113.

Kohut, H. (1971). *The Analysis of the Self*. Chicago: University of Chicago Press.

Kohut, H. (1972). Thoughts on narcissism and narcissistic rage. *The Psychoanalytic Stidy of the Child*, *27*(1), 360–400.

Kohut, H. (1977). *The Restortion of the Self*. Chicago: University of Chicago Press.

Kolditz, T. A., & Arkin, R. M. (1982). An impression management interpretation of the self-handicapping strategy. *Journal of Personality and Social Psychology*, *43*(3), 492–502. http://doi.org/10.1037/0022-3514.43.3.492

Konrath, S., Bushman, B. J., & Campbell, W. K. (2006). Attenuating the link between threatened egotism and aggression. *Psychological Science*, *17*(11), 995–1001. http://doi.org/10.1111/j.1467-9280.2006.01818.x

Krizan, Z., & Herlache, A. D. (2017). The Narcissism Spectrum Model. *Personality and Social Psychology Review*, 108886831668501. http://doi.org/10.1177/1088868316685018

Krizan, Z., & Johar, O. (2015). Narcissistic rage revisited. *Journal of Personality and Social Psychology*, *108*(5), 784–801. http://doi.org/10.1037/pspp0000013

Kubarych, T. S., Deary, I. J., & Austin, E. J. (2004). The Narcissistic Personality Inventory: Factor structure in a non-clinical sample. *Personality and Individual Differences*, *36*(4), 857–872. http://doi.org/10.1016/S0191-8869(03)00158-2

Lambe, S., Hamilton-Giachritsis, C., Garner, E., & Walker, J. (2018). The role of narcissism in aggression and violence: A systematic review. *Trauma, Violence, and Abuse*, *19*(2), 209–230. http://doi.org/10.1177/1524838016650190

Landers, R. N., & Behrend, T. S. (2015). An inconvenient truth: Arbitrary distinctions between organizational, mechanical turk, and other convenience samples. *Industrial and Organizational Psychology*, *8*(2), 142–164. http://doi.org/10.1017/iop.2015.13

Lannin, D. G., Guyll, M., Krizan, Z., Madon, S., & Cornish, M. (2014). When are grandiose and vulnerable narcissists least helpful? *Personality and Individual Differences*, *56*(1), 127–132. http://doi.org/10.1016/j.paid.2013.08.035

Lapsley, D. K., & Aalsma, M. C. (2006). An empirical typology of narcissism and mental health in late adolescence. *Journal of Adolescence*, *29*(1), 53–71. http://doi.org/10.1016/j.adolescence.2005.01.008

Leary, M. R., & Shepperd, J. a. (1986). Behavioral self-handicaps versus self-reported handicaps: A conceptual note. *Journal of Personality and Social Psychology*, *51*(6), 1265–1268.

Leary, M. R., Terry, M. L., Allen, A., & Tate, E. B. (2009). The concept of ego threat in social and personality psychology: Is ego threat a viable scientific construct?

Personality and Social Psychology Review, *13*(3), 151–164. http://doi.org/10.1177/1088868309342595

Lehman, W. E., & Simpson, D. D. (1992). Employee substance use and on-the-job behaviors. *The Journal of Applied Psychology*, *77*(3), 309–321. http://doi.org/10.1037/0021-9010.77.3.309

Levy, K. N., Ellison, W. D., & Reynoso, J. S. (2011). A historical review of narcissism and narcissistic personality. In *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments* (pp. 1–13).

Li, C. H. (2016). Confirmatory factor analysis with ordinal data: Comparing robust maximum likelihood and diagonally weighted least squares. *Behavior Research Methods*, *48*(3), 936–949. http://doi.org/10.3758/s13428-015-0619-7

Lo, Y., Mendell, N. R., & Rubin, D. B. (2001). Testing the number of components in a normal mixture. *Biometrika*, *88*(3), 767–778.

Lobbestael, J., Baumeister, R. F., Fiebig, T., & Eckel, L. A. (2014). The role of grandiose and vulnerable narcissism in self-reported and laboratory aggression and testosterone reactivity. *Personality and Individual Differences*, *69*, 22–27. http://doi.org/10.1016/j.paid.2014.05.007

Lord, R. G., Foti, R. J., & De Vader, C. L. (1984). A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. *Organizational Behavior and Human Performance*, *34*(3), 343–378. http://doi.org/10.1016/0030-5073(84)90043-6

Luo, Y. L. L., Cai, H., Sedikides, C., & Song, H. (2014). Distinguishing communal narcissism from agentic narcissism: A behavior genetics analysis on the agency-communion model of narcissism. *Journal of Research in Personality*, *49*(1), 52–58. http://doi.org/10.1016/j.jrp.2014.01.001

Lupien, S. P., Seery, M. D., & Almonte, J. L. (2010). Discrepant and congruent high self-esteem: Behavioral self-handicapping as a preemptive defensive strategy. *Journal of Experimental Social Psychology*, *46*(6), 1105–1108. http://doi.org/10.1016/j.jesp.2010.05.022

Maccoby, M. (2000). Narcissistic leaders: The incredible pros, the inevitable cons. *The Harvard Business Review*, *78*(1), 68–78.

MacLaren, V. V., & Best, L. A. (2013). Disagreeable narcissism mediates an effect of BAS on addictive behaviors. *Personality and Individual Differences*, *55*(2), 101–105. http://doi.org/10.1016/j.paid.2013.02.004

Malkin, M. L., Barry, C. T., & Zeigler-Hill, V. (2011). Covert narcissism as a predictor of internalizing symptoms after performance feedback in adolescents. *Personality and Individual Differences*, *51*(5), 623–628. http://doi.org/10.1016/j.paid.2011.05.031

Maples, J. L., Miller, J. D., Wilson, L. F., Seibert, L. A., Few, L. R., & Zeichner, A. (2010). Narcissistic personality disorder and self-esteem: An examination of differential relations with self-report and laboratory-based aggression. *Journal of Research in Personality*, *44*(4), 559–563. http://doi.org/10.1016/j.jrp.2010.05.012

Marsh, H. W., Hau, K. T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling*, *11*(3), 320–341. http://doi.org/10.1207/s15328007sem1103_2

Marsh, H. W., Liem, G. A. D., Martin, A. J., Morin, A. J. S., & Nagengast, B. (2011). Methodological measurement fruitfulness of exploratory structural equation modeling (ESEM): New approaches to key substantive issues in motivation and engagement. *Journal of Psychoeducational Assessment*, *29*(4), 322–346. http://doi.org/10.1177/0734282911406657

Marsh, H. W., Lüdtke, O., Muthén, B., Asparouhov, T., Morin, A. J. S., Trautwein, U., & Nagengast, B. (2010). A new look at the big five factor structure through exploratory structural equation modeling. *Psychological Assessment*, *22*(3), 471–491. http://doi.org/10.1037/a0019227

Marsh, H. W., Lüdtke, O., Nagengast, B., Morin, A. J. S., & Von Davier, M. (2013). Why item parcels are (Almost) never appropriate: Two wrongs do not make a right-camouflaging misspecification with item parcels in CFA models. *Psychological Methods*, *18*(3), 257–284. http://doi.org/10.1037/a0032773

Marsh, H. W., Morin, A. J. S., Parker, P. D., & Kaur, G. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology*, *10*(1), 85–110. http://doi.org/10.1146/annurev-clinpsy-032813-153700

Marsh, H. W., Muthén, B. O., Asparouhov, T., Lüdtke, O., Robitzsch, A., Morin, A. J. S., & Trautwein, U. (2009). Exploratory structural equation modeling, integrating CFA and EFA: Application to students' evaluations of university teaching. *Structural Equation Modeling*, *16*(1), 439–476. http://doi.org/10.1016/j.addbeh.2016.11.016

Marsh, H. W., Nagengast, B., Morin, A. J. S., Parada, R. H., Craven, R. G., & Hamilton, L. R. (2011). Construct validity of the multidimensional structure of bullying and victimization: An application of exploratory structural equation modeling. *Journal of Educational Psychology*, *103*(3), 701–732. http://doi.org/10.1037/a0024122

Martinez, M. a., Zeichner, A., Reidy, D. E., & Miller, J. D. (2008). Narcissism and displaced aggression: Effects of positive, negative, and delayed feedback. *Personality and Individual Differences*, *44*(1), 140–149. http://doi.org/10.1016/j.paid.2007.07.012

Masselink, M., Van Roekel, E., & Oldehinkel, A. J. (2018). Self-esteem in early adolescence as predictor of depressive symptoms in late adolescence and early adulthood: the mediating role of motivational and social factors. *Journal of Youth and Adolescence*, *47*(5), 932–946. http://doi.org/10.1007/s10964-017-0727-z

Mathieu, C. (2013). Personality and job satisfaction: The role of narcissism. *Personality and Individual Differences*, *55*(6), 650–654. http://doi.org/10.1016/j.paid.2013.05.012

Maxwell, K., Donnellan, M. B., Hopwood, C. J., & Ackerman, R. A. (2011). The two faces of Narcissus? An empirical comparison of the Narcissistic Personality Inventory and the Pathological Narcissism Inventory. *Personality and Individual Differences*, *50*(5), 577–582. http://doi.org/10.1016/j.paid.2010.11.031

McCrae, R. R., Zonderman, A. B., Costa, P. T., Bond, M. H., & Paunonen, S. V. (1996). Evaluating replicability of factors in the Revised NEO Personality Inventory: Confirmatory factor analysis versus Procrustes rotation. *Journal of Personality and Social Psychology*, *70*(3), 552–566. http://doi.org/10.1037/0022-3514.70.3.552

McDonald, L., & Robinson, P. (2009). *A colossal failure of common sense: The incredible inside story of the collapse of Lehman Brothers*. London: Ebury.

McGregor, I., Nail, P. R., Kocalar, D., & Haji, R. (2013). I'm OK, I'm OK: Praise makes narcissists with low implicit self-esteem indifferent to the suffering of others. *Personality and Individual Differences*, *55*(6), 655–659.

http://doi.org/10.1016/j.paid.2013.05.007

McIntyre, M. H., Barrett, E. S., McDermott, R., Johnson, D. D. P., Cowden, J., & Rosen, S. P. (2007). Finger length ratio (2D:4D) and sex differences in aggression during a simulated war game. *Personality and Individual Differences*, *42*(4), 755–764. http://doi.org/10.1016/j.paid.2006.08.009

Meade, A. W., Johnson, E. C., & Braddy, P. W. (2008). Power and sensitivity of alternative fit indices in tests of measurement invariance. *Journal of Applied Psychology*, *93*(3), 568–592. http://doi.org/10.1037/0021-9010.93.3.568

Miller, J. D., & Campbell, W. K. (2008). Comparing clinical and social-personality conceptualizations of narcissism. *Journal of Personality*, *76*(3), 449–476. http://doi.org/10.1111/j.1467-6494.2008.00492.x

Miller, J. D., & Campbell, W. K. (2010). The case for using research on trait narcissism as a building block for understanding narcissistic personality disorder. *Personality Disorders: Theory, Research, and Treatment*, *1*(3), 180–191. http://doi.org/10.1037/a0018229

Miller, J. D., & Campbell, W. K. (2011). Addressing criticisms of the narcissistic personality inventory (NPI. In W. K. Campbell & J. D. Miller (Eds.), *The Handbook of Narcissism and Narcissistic Personality Disorder* (pp. 146–152). John Wiley and sons.

Miller, J. D., Dir, A., Gentile, B., Wilson, L., Pryor, L. R., & Campbell, W. K. (2010). Searching for a vulnerable dark triad: Comparing factor 2 psychopathy, vulnerable narcissism, and borderline personality disorder. *Journal of Personality*, *78*(5), 1529–1564. http://doi.org/10.1111/j.1467-6494.2010.00660.x

Miller, J. D., Gaughan, E. T., Pryor, L. R., Kamen, C., & Campbell, W. K. (2009). Is research using the narcissistic personality inventory relevant for understanding narcissistic personality disorder? *Journal of Research in Personality*, *43*(3), 482–488. http://doi.org/10.1016/j.jrp.2009.02.001

Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Keith Campbell, W. (2011). Grandiose and vulnerable narcissism: A nomological network analysis. *Journal of Personality*, *79*(5), 1013–1042. http://doi.org/10.1111/j.1467-6494.2010.00711.x

Miller, J. D., Lynam, D. R., Hyatt, C. S., & Campbell, W. K. (2017). Controversies in

narcissism. *Annual Review of Clinical Psychology*, *13*(1), 291–315. http://doi.org/10.1146/annurev-clinpsy-032816-045244

Miller, J. D., Lynam, D. R., McCain, J. L., Few, L. R., Crego, C., Widiger, T. A., & Campbell, W. K. (2016). Thinking Structurally About Narcissism: An Examination of the Five-Factor Narcissism Inventory and Its Components. *Journal of Personality Disorders*, *30*(1), 1–18. http://doi.org/10.1521/pedi_2015_29_177

Miller, J. D., Lynam, D. R., Vize, C., Crowe, M., Sleep, C., Maples-Keller, J. L., … Campbell, W. K. (2017). Vulnerable Narcissism Is (Mostly) a Disorder of Neuroticism. *Journal of Personality*, 1–54. http://doi.org/10.1111/jopy.12303

Miller, J. D., Price, J., & Campbell, W. K. (2012). Is the Narcissistic Personality Inventory Still Relevant? A Test of Independent Grandiosity and Entitlement Scales in the Assessment of Narcissism. *Assessment*, *19*(1), 8–13. http://doi.org/10.1177/1073191111429390

Miller, J. D., McCain, J., Lynam, D. R., Few, L. R., Gentile, B., MacKillop, J., & Campbell, W. K. (2014). A comparison of the criterion validity of popular measures of narcissism and narcissistic personality disorder via the use of expert ratings. *Psychological Assessment*, 26(3), 958

Mitchell, J., & Decker, P. (2017a). Self-Handicapping: From business School to leadership. *Global Journal of Business Pedagogy*, *1*(3), 95–107.

Mitchell, J., & Decker, P. (2017b). Self-Handicapping in Leadership: A call for research. *Global Journal of Business Disciplines*, *1*(1), 56–72.

Morey, L. C., Waugh, M. H., & Blashfield, R. K. (1985). MMPI scales for DSM-III personality disorders: Their derivation and correlates. *Journal of Personality Assessment*. http://doi.org/10.1207/s15327752jpa4903_5

Morf, C. C., & Rhodewalt, F. (1993). Narcissism and self-evaluation maintenance: Explorations in object relations. *Personality and Social Psychology Bulletin*, *19*(6), 668–676. http://doi.org/10.1177/0146167293196001

Morf, C. C., & Rhodewalt, F. (2001a). Expanding the dynamic self-regulatory processing model of narcissism: Research directions for the future. *Psychological Inquiry*, *12*(4), 243–251. http://doi.org/10.1207/S15327965PLI1204_3

Morf, C. C., & Rhodewalt, F. (2001b). The Paradoxes of Narcissism : Unraveling Model Processing A Dynamic Self-Regulatory Processing Model. *Psychological Inquiry*,

12(4), 177–196. http://doi.org/10.1207/S15327965PLI1204

Morf, C. C., & Rhodewalt, F. (2001c). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, *12*(4), 177–196. http://doi.org/10.1207/S15327965PLI1204_1

Morf, C. C., Torchetti, L., & Schurch, E. (2011). Narcissism from the perspective of the dynamic self-regulatory processing model. In W. K. Campbell & J. D. Miller (Eds.), *the Handbook of Narcissism and Narcissitic Personality Disorder* (pp. 56–70). New Jersey: John Wiley and sons.

Morf, C. C., Weir, C., & Davidov, M. (2000a). Narcissism and intrinsic motivation: The role of goal congruence. *Journal of Experimental Social Psychology*, *36*(4), 424–438. http://doi.org/10.1006/jesp.1999.1421

Morf, C. C., Weir, C., & Davidov, M. (2000b). Narcissism and intrinsic motivation: The role of goal congruence. *Journal of Experimental Social Psychology*, *36*(4), 424–438. http://doi.org/10.1006/jesp.1999.1421

Morin, A. J. S., Morizot, J., Boudrias, J.-S., & Madore, I. (2011). A multifoci person-centered perspective on workplace affective commitment: A latent profile/factor mixture analysis. *Organizational Research Methods*, *14*(1), 58–90. http://doi.org/10.1177/1094428109356476

Myers, E. M., & Zeigler-Hill, V. (2012). How much do narcissists really like themselves? Using the bogus pipeline procedure to better understand the self-esteem of narcissists. *Journal of Research in Personality*, *46*(1), 102–105. http://doi.org/10.1016/j.jrp.2011.09.006

Nevicka, B., Baas, M., & Ten Velden, F. S. (2016). The bright side of threatened narcissism: Improved performance following ego threat. *Journal of Personality*, *84*(6), 809–823. http://doi.org/10.1111/jopy.12223

Nevicka, B., De Hoogh, A. H., Van Vianen, A. E., Beersma, B., & McIlwain, D. (2011).). All I need is a stage to shine: Narcissists' leader emergence and performance. *Leadership Quarterly*, *22*(5), 910–925. http://doi.org/10.1016/j.leaqua.2011.07.011

Nevicka, B., Ten Velden, F. S., De Hoogh, A. H. B., & Van Vianen, A. E. M. (2011). Reality at odds with perceptions: Narcissistic leaders and group performance. *Psychological Science*, *22*(10), 1259–1264. http://doi.org/10.1177/0956797611417259

Niemann, J., Wisse, B., Rus, D., Van Yperen, N. W., & Sassenberg, K. (2014). Anger and attitudinal reactions to negative feedback: The effects of emotional instability and power. *Motivation and Emotion*, 687–699. http://doi.org/10.1007/s11031-014-9402-9

Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling*, *14*(4), 535–569. http://doi.org/10.1080/10705510701575396

O'Boyle, E. H., Forsyth, D. R., Banks, G. C., & McDaniel, M. a. (2012). A meta-analysis of the Dark Triad and work behavior: A social exchange perspective. *Journal of Applied Psychology*, *97*(3), 557–579. http://doi.org/10.1037/a0025679

Oltmanns, T. F., & Carlson, E. (2013). Informant reports and the assessment of personlity disordersusing five-factor model. In T. Widiger & P. T. Costa (Eds.), *Personality Disorders and the Five-Factor Model of Personality*. Washington,D C.: American Psychological Association.

Oltmanns, T. F., Friedman, J. N. W., Fiedler, E. R., & Turkheimer, E. (2004). Perceptions of people with personality disorders based on thin slices of behavior. *Journal of Research in Personality*, *38*, 216–229. http://doi.org/10.1016/S0092-6566(03)00066-7

Onley, M., Veselka, L., Schermer, J. A., & Vernon, P. A. (2013). Survival of the scheming: a genetically informed link between the dark triad and mental toughness. *Twin Research and Human Genetics*, 16(6), 1087-1095.

Ong, C. W., Roberts, R., Arthur, C. A., Woodman, T., & Akehurst, S. (2015). The leader ship is sinking: A temporal investigation of narcissistic leadership. *Journal of Personality*, n/a-n/a. http://doi.org/10.1111/jopy.12155

Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology*, *45*(4), 867–872. http://doi.org/10.1016/j.jesp.2009.03.009

Ouimet, G. (2010). Dynamics of narcissistic leadership in organizations: Towards an integrated research model. *Journal of Managerial Psychology*, *25*(7), 713–726. http://doi.org/10.1108/02683941011075265

Park, S. W., & Brown, C. M. (2014). Different perceptions of self-handicapping across

college and work contexts. *Journal of Applied Social Psychology*, *44*(2), 124–132. http://doi.org/10.1111/jasp.12204

Papageorgiou, K. A., Wong, B., & Clough, P. J. (2017). Beyond good and evil: Exploring the mediating role of mental toughness on the Dark Triad of personality traits. *Personality and Individual Differences*, 119, 19-23.

Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Personality and Social Psychology*, *46*(3), 598–609. http://doi.org/http://dx.doi.org/10.1037/0022-3514.46.3.598

Paulhus, D. L. (1998a). Egoistic and moralistic biases in self-perception: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality*, *66*(6), 1025. http://doi.org/10.1111/1467-6494.00041

Paulhus, D. L. (1998b). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: a mixed blessing? *Journal of Personality and Social Psychology*, *74*(5), 1197–1208. http://doi.org/10.1037/0022-3514.74.5.1197

Paulhus, D. L. (2001). Normal narcissism: Two minimalist accounts. *Psychological Inquiry*, *12*(4), 228–230.

Paulhus, D. L., Westlake, B. G., Calvez, S. S., & Harms, P. D. (2013). Self-presentation style in job interviews: The role of personality and culture. *Journal of Applied Social Psychology*, *43*, 2042–2059. http://doi.org/10.1111/jasp.12157

Pearson, M. M., Barnes, J. W., & Onken, M. H. (2006). Development of a computerized in-basket exercise for the classroom: A sales management example. *Journal of Marketing Education*, *28*(3), 227–236. http://doi.org/10.1177/0273475306291467

Penney, L. M., & Spector, P. E. (2002). Narcissism and counterproductive work behavior: Do bigger egos mean bigger problems? *International Journal of Selection and Assessment*, *10*(1), 126–134. http://doi.org/10.1111/1468-2389.00199

Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G., & Levy, K. N. (2009). Initial construction and validation of the Pathological Narcissism Inventory. *Psychological Assessment*, *21*(3), 365–379. http://doi.org/10.1037/a0016530

Pincus, A. L., & Lukowitsky, M. R. (2010). Pathological Narcissism and Narcissistic Personality Disorder. *Annual Review of Clinical Psychology*, *6*(1), 421–446. http://doi.org/10.1146/annurev.clinpsy.121208.131215

Pincus, A. L., Wright, A. G. C., & Cain, N. M. (2014). Narcissistic grandiosity and

narcissistic vulnerability in psychotherapy. *Personality Disorders: Theory, Research, and Treatment*, *5*(4), 439–443. http://doi.org/10.1037/per0000031

Raskin, R. N., & Hall, C. S. (1979). Narcissistic Personality Inventory. *Psychological Reports*, *45*(1), 590.

Raskin, R. N., & Hall, C. S. (1979). A narcissistic personality inventory. *Psychological Reports*, *45*(2), 590.

Raskin, R., & Hall, C. S. (1981). The Narcissistic Personality Inventory: alternative form reliability and further evidence of construct validity. *Journal of Personality Assessment*. http://doi.org/10.1207/s15327752jpa4502_10

Raskin, R., & Novacek, J. (1989). An MMPI description of the narcissistic personality. *Journal of Personality Assessment*. http://doi.org/10.1207/s15327752jpa5301_8

Raskin, R., Novacek, J., & Hogan, R. (1991a). Narcissism, Self-Esteem, and Defensive Self-Enhancement. *Journal of Personality*, *59*(1), 19–38. http://doi.org/10.0.4.87/1467-6494.ep9106030312

Raskin, R., Novacek, J., & Hogan, R. (1991b). Narcissistic self-esteem management. *Journal of Personality and Social Psychology*, *60*(6), 911–918. http://doi.org/10.1037/0022-3514.60.6.911

Raskin, R., Novacek, J., & Hogan, R. (1991c). Narcissistic self-esteem management. *Journal of Personality and Social Psychology*, *60*(6), 911–918. http://doi.org/10.1037/0022-3514.60.6.911

Raskin, R., & Shaw, R. (1988). Narcissism and the use of personal pronouns. *Journal of Personality*, *56*(June), 393–404. http://doi.org/10.1111/1467-6494.ep8970928

Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, *54*(5), 890–902. http://doi.org/10.1037/0022-3514.54.5.890

Rathvon, N., & Holmstrom, R. W. (1996). An MMPI-2 portrait of narcissism. *Journal of Personality Assessment*. http://doi.org/10.1207/s15327752jpa6601_1

Raykov, T. (1998). On the use of confirmatory factor analysis in personality research. *Personality and Individual Differences*, *24*(2), 291–293.

Reich, A. (1960). Pathological forms of self-esteem regulation. *The Psychoanalytic Study of the Child*, *15*, 215–232.

Reich, W. (1933). *Character Analysis* (3rd editio). New York: Farrar, Straus, & Giroux, Inc.

Reidy, D. E., Foster, J. D., & Zeichner, A. (2010). Narcissism and unprovoked aggression. *Aggressive Behavior*, *36*(6), 414–422. http://doi.org/10.1002/ab.20356

Reidy, D. E., Zeichner, A., Foster, J. D., & Martinez, M. a. (2008). Effects of narcissistic entitlement and exploitativeness on human physical aggression. *Personality and Individual Differences*, *44*(4), 865–875. http://doi.org/10.1016/j.paid.2007.10.015

Rhodewalt, F. (1990). Self-handicappers: Individual differnces in the prefernce for anticipatory, self-protective acts. In R. Higgins, C. R. Snyder, & S. Berglas (Eds.), *Self-Handicapping : The Paradox That Isn't* (pp. 69–103). New York: Springer Science+Business Media. http://doi.org/10.1007/978-1-4899-0861-2 ISBN

Rhodewalt, F., & Eddings, S. K. (2002). Narcissus reflects: Memory distortion in response to ego-relevant feedback among high- and low-narcissistic men. *Journal of Research in Personality*, *36*(2), 97–116. http://doi.org/10.1006/jrpe.2002.2342

Rhodewalt, F., Madrian, J. C., & Cheney, S. (1998). Narcissism, self-knowledge organization, and emotional reactivity: The effect of daily experiences on self-esteem and affect. *Personality and Social Psychology Bulletin*, *24*(1), 75–87. http://doi.org/10.1177/0146167298241006

Rhodewalt, F., & Morf, C. C. (1995). Self and interpersonal correlates of the Narcissistic Personality Inventory: A review and new findings. *Journal of Research in Personality*. http://doi.org/10.1006/jrpe.1995.1001

Rhodewalt, F., & Morf, C. C. (1998). On self-aggrandizement and anger: a temporal analysis of narcissism and affective reactions to success and failure. *Journal of Personality and Social Psychology*, *74*(3), 672–685. http://doi.org/10.1037/0022-3514.74.3.672

Rhodewalt, F., Tragakis, M. W., & Finnerty, J. (2006). Narcissism and self-handicapping: Linking self-aggrandizement to behavior. *Journal of Research in Personality*, *40*(5), 573–597. http://doi.org/10.1016/j.jrp.2005.05.001

Rijsenbilt, A., & Commandeur, H. (2013). Narcissus enters the courtroom: CEO narcissism and fraud. *Journal of Business Ethics*, *117*(2), 413–429. http://doi.org/10.1007/s10551-012-1528-7

Robins, R. W., & John, O. P. (1997). Effects of visual perspective and narcissism on self-

perception: Is seeing believing? *Psychological Science*, *8*(1), 37–42. http://doi.org/10.1111/j.1467-9280.1997.tb00541.x

Rogoza, R., Żemojtel-Piotrowska, M., Rogoza, M., Piotrowski, J., & Wyszyńska, P. (2016). Narcissistic admiration and rivalry in the context of personality metatraits. *Personality and Individual Differences*, *102*, 180–185. http://doi.org/10.1016/j.paid.2016.07.003

Ronningstam, E. (2009). Narcissistic personality disorder. *Psychiatric Annals*, *39*(3), 111–121. Retrieved from http://www.mayoclinic.com/health/narcissistic-personality-disorder/DS00652

Ronningstam, E. F. (2005). *Identifying and understand the narcissistic personality*. *Identifying and understand the narcissistic personality*. New York: Oxford University Press, Inc. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc5&NEWS=N&AN=2005-05680-000

Rosenberg, M. (1979). *Conceiving the Self*. Basic Books.New York.

Rosenthal, S. A., Matthew Montoya, R., Ridings, L. E., Rieck, S. M., & Hooley, J. M. (2011). Further evidence of the narcissistic personality inventory's validity problems: A meta-analytic investigation-Response to Miller, Maples, and Campbell (this issue). *Journal of Research in Personality*, *45*(5), 408–416. http://doi.org/10.1016/j.jrp.2011.06.004

Rosenthal, S. a., & Pittinsky, T. L. (2006). Narcissistic leadership. *The Leadership Quarterly*, *17*(6), 617–633. http://doi.org/10.1016/j.leaqua.2006.10.005

Ross, S. R., Canada, K. E., & Rausch, M. K. (2002). Self-handicapping and the Five Factor Model of personality: Mediation between Neuroticism and Conscientiousness. *Personality and Individual Differences*, *32*(7), 1173–1184. http://doi.org/10.1016/S0191-8869(01)00079-4

Russ, E., Shedler, J., Bradley, R., & Westen, D. (2008). Refining the construct of narcissistic personality disorder: Diagnostic criteria and subtypes. *American Journal of Psychiatry*, *165*(11), 1473–1481.

Sabouri, S., Gerber, M., Bahmani, D. S., Lemola, S., Clough, P. J., Kalak, N., & Brand, S. (2016). Examining Dark Triad traits in relation to mental toughness and physical activity in young adults. *Neuropsychiatric disease and treatment*, 12, 229.

Schmitt, T. A., & Sass, D. A. (2011). Rotation criteria and hypothesis testing for exploratory factor analysis: Implications for factor pattern loadings and interfactor correlations. *Educational and Psychological Measurement*, *71*(1), 95–113. http://doi.org/10.1177/0013164410387348

Schwarz, G. (1978). Estimating the dimension of a model. *The Annals of Statistics*, *6*(2), 461–464. http://doi.org/10.1214/aos/1176344136

Schwinger, M., Wirthwein, L., Lemmer, G., & Steinmayr, R. (2014). Academic self-handicapping and achievement: A meta-analysis. *Journal of Educational Psychology*, *106*(3), 744–761. http://doi.org/10.1037/a0035832

Sclove, L. S. (1987). Application of model selection criteria to some problems in multivariate analysis. *Psychometrika*, *52*(3), 333–343.

Sedikides, C., & Campbell, W. K. (2017). Narcissistic force meets systemic resistance: The energy clash model. *Perspectives on Psychological Science*, 12(3), 400-421.

Sedikides, C., & Gregg, A. P. (2001). Narcissists and feedback: motivational surfeits and motivational deficits. *Psychological Inquiry*, *12*(4), 237–239. http://doi.org/10.1207/S15327965PLI1204_2

Sedikides, C., & Gregg, A. P. (2008). Self-Enhancement Food for Thought. *Perspectives on Psychological Science*, *3*(2), 102–116.

Sedikides, C., Luke, M. A., & Hepper, E. G. (2016). Enhancing feedback and improving feedback: subjective perceptions, psychological consequences, behavioral outcomes. *Journal of Applied Social Psychology*, *46*(12), 687–700. http://doi.org/10.1111/jasp.12407

Sedikides, C., Rudich, E. A., Gregg, A. P., Kumashiro, M., & Rusbult, C. (2004). Are normal narcissists psychologically healthy?: Self-esteem matters. *Journal of Personality and Social Psychology*, *87*(3), 400–416. http://doi.org/10.1037/0022-3514.87.3.400

Shapiro, D. N., Chandler, J., & Mueller, P. A. (2013). Using mechanical turk to study clinical populations. *Clinical Psychological Science*, *1*(2), 213–220. http://doi.org/10.1177/2167702612469015

Smith, J. a., & Foti, R. J. (1998). A pattern approach to the study of leader emergence. *The Leadership Quarterly*, *9*(2), 147–160. http://doi.org/10.1016/S1048-9843(98)90002-9

Snyder, C. R., Smith, T. W., Augelli, R. W., & Ingram, R. E. (1985). On the self-serving function of social anxiety: Shyness as a self-handicapping strategy. *Journal of Personality and Social Psychology*, *48*(4), 970–980. http://doi.org/10.1037/0022-3514.48.4.970

South, S. C., Oltmanns, T. F., & Turkheimer, E. (2003). Personality and the derogation of others: Descriptions based on self- and peer report. *Journal of Research in Personality*, *37*(1), 16–33. http://doi.org/10.1016/S0092-6566(02)00526-3

Soyer, R. B., Rovenpor, J. L., Kopelman, R. E., Mullins, L. S., & Watson, P. J. (2001). Further assessment of the construct validity of four measures of narcissism: replication and extension. *The Journal of Psychology*, *135*(3), 245–258. http://doi.org/10.1080/00223980109603695

Spacone, E., Mander, J. B., Science, A., Sritharan, S., Wipf, T. J., Porter, M. L., … Wu, H. (2013). *Overt and Covert Forms of Narcissism in Relation to Ego Defense Styles and Neuroticism*. *PhD Proposal*. Retrieved from http://repository.tamu.edu/handle/1969.1/ETD-TAMU-2009-12-7545%5Cnhttp://repository.tamu.edu/handle/1969.1/1315

Stein, M. (2013). When does narcissistic leadership become problematic? Dick Fuld at Lehman Brothers. *Journal of Management Inquiry*, *22*(3), 282–293. Retrieved from http://jmi.sagepub.com/cgi/doi/10.1177/1056492613478664

Stronge, S., Cichocka, A., & Sibley, C. G. (2016). Narcissistic self-esteem or optimal self-esteem? A latent profile analysis of self-esteem and psychological entitlement. *Journal of Research in Personality*, *63*, 102–110. http://doi.org/10.1016/j.jrp.2016.06.016

Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics*. Pearson Education, Inc.

Tamborski, M., & Brown, R. P. (2011). The measurement of trait narcissism in social-personality research. In W. K. Campbell & J. D. Miller (Eds.), *the Handbook of Narcissism and Narcissitic Personality Disorder* (1st ed., pp. 133–140). New Jersey: John Wiley and sons.

Taylor, C. M. (1995). *The profile of narcissistic dispositions (POND*. University of British Colombia.

Terrell, H. K., Hill, E. D., & Nagoshi, C. T. (2008). Gender differences in aggression: The

role of status and personality in competitive interactions. *Sex Roles*, *59*(11–12), 814–826. http://doi.org/10.1007/s11199-008-9486-3

Tett, R. P., & Guterman, H. A. (2000). Situation trait relevance, trait expression, and cross-situational consistency: Testing a principle of trait activation. *Journal of Research in Personality*, *34*(4), 397–423. http://doi.org/10.1006/jrpe.2000.2292

Thomaes, S., Bushman, B. J., Orobio De Castro, B., Cohen, G. L., & Denissen, J. J. a. (2009). Reducing narcissistic aggression by buttressing self-esteem: An experimental field study. *Psychological Science*, *20*(12), 1536–1542. http://doi.org/10.1111/j.1467-9280.2009.02478.x

Tibman, J. (2009). *The murder of Lehman Brothers: An insider's look at global meltdown*. New York: Brick Tower Press.

Tice, D. M. (1991). Esteem protection or enhancement? Self-handicapping motives and attributions differ by trait self-esteem. *Journal of Personality and Social Psychology*, *60*(5), 711–725. http://doi.org/10.1037/0022-3514.60.5.711

Tice, D. M., & Baumeister, R. F. (1990). Self-esteem, self-handicapping, and self-presentation: The strategy of inadequate practice. *Journal of Personality*, *58*(2), 443–464. http://doi.org/10.1111/j.1467-6494.1990.tb00237.x

Tracy, J. L., Cheng, J. T., Martens, J. P., & Robins, R. W. (2011). The emotional dynamocs of narcissism: inflated by pride, deflated by shame. In W. K. Campbell & J. D. Miller (Eds.), *The Handbook of Narcissism and Narcissistic Personality Disorder* (Vol. 1, pp. 330–343). John Wiley & Sons, Inc. http://doi.org/10.1002/9781118093108.ch29

Tracy, J. L., Cheng, J. T., Robins, R. W., & Trzesniewski, K. H. H. (2009). Authentic and hubristic pride: The affective core of self-esteem and narcissism. *Self and Identity*, *8*(2), 196–213. http://doi.org/10.1080/15298860802505053

Tremblay, P. F., & Ewart, L. A. (2005). The Buss and Perry Aggression Questionnaire and its relations to values, the Big Five, provoking hypothetical situations, alcohol consumption patterns, and alcohol expectancies. *Personality and Individual Differences*, *38*(2), 337–346. http://doi.org/10.1016/j.paid.2004.04.012

Trull, T. J., & McCrae, R. R. (2002). A Five-factor perspective on personality diorder research. In P. T. Costa & T. A. Widiger (Eds.), *Personality Disorders and the Five-Factor Model of Personality* (pp. 45–58). Washington,D C.: American Psychological

Association.

Twenge, J. M. (2010). A review of the empirical evidence on generational differences in work attitudes. *Journal of Business and Psychology*, *25*, 201–210. http://doi.org/10.1007/s10869-010-9165-6

Twenge, J. M., & Campbell, W. K. (2003). "Isn't it fun to get the respect that we're going to deserve?" Narcissism, social rejection, and aggression. *Personality and Social Psychology Bulletin*, *29*(2), 261–272. http://doi.org/10.1177/0146167202239051

Vaillancourt, T. (2013). Students aggress against professors in reaction to receiving poor grades: An effect moderated by student narcissism and self-esteem. *Aggressive Behavior*, *39*(1), 71–84. http://doi.org/10.1002/ab.21450

VanDellen, M. R., Campbell, W. K., Hoyle, R. H., & Bradfield, E. K. (2011). Compensating, resisting, and breaking: A meta-analytic examination of reactions to self-esteem threat. *Personality and Social Psychology Review*, *15*(1), 51–74. http://doi.org/10.1177/1088868310372950

Vazire, S., & Funder, D. C. (2006). Impulsivity and the self-defeating behavior of narcissists. *Personality and Social Psychology Review*, *10*(2), 154–165. http://doi.org/10.1207/s15327957pspr1002_4

Vazire, S., Naumann, L. P., Rentfrow, P. J., & Gosling, S. D. (2008). Portrait of a narcissist: Manifestations of narcissism in physical appearance. *Journal of Research in Personality*, *42*, 1439–1447. http://doi.org/10.1016/j.jrp.2008.06.007

Volney, S., & Rathmell, J. P. (2012). Essentials of Pain Medicine, 3rd ed. *Anesthesia & Analgesia*. http://doi.org/10.1213/ANE.0b013e31824abc69

von Eye, A. (2010). Developing the person-oriented approach: theory and methods of analysis. *Development and Psychopathology*, *22*(2), 277-285; discussion 287-294. http://doi.org/10.1017/S0954579410000052

Wälder, R. (1925). The Psychoses: Their Mechanisms and Accessibility to Influence. *International Journal of Psycho-Analysis*, *6*(259–281).

Wallace, H. M. (2011). Narcissistic Self-Enhancement. In *The Handbook of Narcissism and Narcissistic Personality Disorder* (pp. 309–318). Hoboken, New Jersey: John Wiley & Sons, Inc. http://doi.org/10.1002/9781118093108.ch27

Wallace, H. M., & Baumeister, R. F. (2002). The performance of narcissists rises and falls with perceived opportunity for glory. *Journal of Personality and Social Psychology*,

82(5), 819–834. http://doi.org/10.1037/0022-3514.82.5.819

Wallace, H. M., Ready, C. B., & Weitenhagen, E. (2009). Narcissism and task persistence. *Self and Identity*, *8*(1), 78–93.

Wang, J., & Wang, X. (2012). *Structural Equation Modeling Applications Using Mplus*. John Wiley and sons.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–70. http://doi.org/10.1037/0022-3514.54.6.1063

Watson, D., Clark, L. a, & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–70. http://doi.org/10.1037/0022-3514.54.6.1063

Wetzel, E., Leckelt, M., Gerlach, T. M., & Back, M. D. (2016). Distinguishing subgroups of narcissists with latent class analysis. *European Journal of Personality*, *30*(4), 374–389. http://doi.org/10.1002/per.2062

Wetzel, E., Roberts, B. W., Fraley, R. C., & Brown, A. (2016). Equivalence of Narcissistic Personality Inventory constructs and correlates across scoring approaches and response formats. *Journal of Research in Personality*. http://doi.org/10.1016/j.jrp.2015.12.002

Wink, P. (1991). Two faces of narcissism. *Journal of Personality and Social Psychology*, *61*(4), 590–597. http://doi.org/10.1037/0022-3514.61.4.590

Wink, P. (1992). Three narcissism scales for the California Q-set. *Journal of Personality Assessment*. http://doi.org/10.1207/s15327752jpa5801_5

Wink, P. (1992). Three types of narcissism in women from college to mid-life. *Journal of Personality*, *60*(1), 7–30. http://doi.org/10.1111/j.1467-6494.1992.tb00263.x

Wink, P., Dillon, M., & Fay, K. (2005). Spiritual seeking, narcissism, and psychotherapy: How are they related? *Journal for the Scientific Study of Religion*, *44*(2), 143–158. http://doi.org/10.1111/j.1468-5906.2005.00272.x

Wink, P., & Gough, H. G. (1990). New narcissism scales for the California Psychological Inventory and MMPI. *Journal of Personality Assessment*. http://doi.org/10.1207/s15327752jpa5403&4_2

Wright, A. G. C., Lukowitsky, M. R., Pincus, A. L., & Conroy, D. E. (2010). The higher order factor structure and gender invariance of the Pathological Narcissism

Inventory. *Assessment*, *17*(4), 467–483. http://doi.org/10.1177/1073191110373227

Zeigler-Hill, V. (2006). Discrepancies between implicit and explicit self-esteem: Implications for narcissism and self-esteem instability. *Journal of Personality*, *74*(1), 119–143. http://doi.org/10.1111/j.1467-6494.2005.00371.x

Zeigler-Hill, V., & Besser, A. (2013). A glimpse behind the mask: Facets of narcissism and feelings of self-worth. *Journal of Personality Assessment*, *95*(3), 249–260. http://doi.org/10.1080/00223891.2012.717150

Zeigler-Hill, V., Clark, C. B., & Pickard, J. D. (2008). Narcissistic subtypes and contingent self-esteem: Do all narcissists base their self-esteem on the same domains? *Journal of Personality*, *76*(4), 753–774. http://doi.org/10.1111/j.1467-6494.2008.00503.x

Zeigler-Hill, V., Myers, E. M., & Clark, C. B. (2010). Narcissism and self-esteem reactivity: The role of negative achievement events. *Journal of Research in Personality*, *44*(2), 285–292. http://doi.org/10.1016/j.jrp.2010.02.005

Zuckerman, M., Kieffer, S. C., & Knee, C. R. (1998). Consequences of self-handicapping: effects on coping, academic performance, and adjustment. *Journal of Personality and Social Psychology*, *74*(6), 1619–1628. http://doi.org/10.1037/0022-3514.74.6.1619

Appendixes

Appendix A: Narcissistic Personality Inventory NPI

This inventory consists of a number of pairs of statements with which you may or may not identify. Consider this example:

A. I like having authority over people

B. I don't mind following orders

Which of these two statements is closer to your own feelings about yourself? If you identify more with "liking to have authority over people" than with "not minding following orders", then you would choose option A.

You may identify with both A and B. In this case you should choose the statement which seems closer to yourself. Or, if you do not identify with either statement, select the one that is least objectionable or remote. In other words, read each pair of statements and then choose the one that is closer to your own feelings. Indicate your answer by circling the letter (A **or** B) for each item. If you do not feel comfortable answering a question you may leave it blank.

		Item A		Item B
1	A	I have a natural talent for influencing people	B	I am not good at influencing people
2	A	Modesty doesn't become me	B	I am essentially a modest person
3	A	I would do almost anything on a dare	B	I tend to be a fairly cautious person
4	A	When people compliment me I sometimes get embarrassed	B	I know that I am good because everybody keeps telling me so
5	A	The thought of ruling the world frightens the hell out of me	B	If I ruled the world it would be a better place
6	A	I can usually talk my way out of anything	B	I try to accept the consequences of my behaviour
7	A	I prefer to blend in with the crowd	B	I like to be the centre of attention
8	A	I will be a success	B	I am not too concerned about success
9	A	I am no better or worse than most people	B	I think I am a special person

10	A	I am not sure if I would make a good leader	B	I see myself as a good leader
11	A	I am assertive	B	I wish I were more assertive
12	A	I like to have authority over other people	B	I don't mind following orders
13	A	I find it easy to manipulate people	B	I don't like it when I find myself manipulating people
14	A	I insist upon getting the respect that is due me	B	I usually get the respect I deserve
15	A	I don't particularly like to show off my body	B	I like to show off my body
16	A	I can read people like a book	B	People are sometimes hard to understand
17	A	If I feel competent I am willing to take responsibility for making decisions	B	I like to take responsibility for making decisions
18	A	I just want to be reasonably happy	B	I want to amount to something in the eyes of the world
19	A	My body is nothing special	B	I like to look at my body
20	A	I try not to be a show off	B	I will usually show off if I get the chance
21	A	I always know what I am doing	B	Sometimes I am not sure of what I am doing
22	A	I sometimes depend on people to get things done	B	I rarely depend on anyone else to get things done
23	A	Sometimes I tell good stories	B	Everybody likes to hear my stories
24	A	I expect a great deal from other people	B	I like to do things for other people
25	A	I will never be satisfied until I get all that I deserve	B	I take my satisfactions as they come
26	A	Compliments embarrass me	B	I like to be complemented
27	A	I have a strong will to power	B	Power for its own sake doesn't interest me
28	A	I don't care about new fads and fashions	B	I like to start new fads and fashions
29	A	I like to look at myself in the mirror	B	I am not particularly interested in looking at myself in the mirror
30	A	I really like to be the centre of attention	B	It makes me uncomfortable to be the centre of attention
31	A	I can live my life any way I want to	B	People can't always live their lives in terms of what they want
32	A	Being an authority doesn't mean that much to me	B	People always seem to recognise my authority
33	A	I would prefer to be a leader	B	It makes little difference to me whether I am a leader or not
34	A	I am going to be a great person	B	I hope I am going to be successful
35	A	People sometimes believe what I tell them	B	I can make anybody believe anything that I want them to

36	A	I am a born leader	B	Leadership is a quality that takes a long time to develop
37	A	I wish that somebody would someday write my biography	B	I don't like people to pry into my life for any reason
38	A	I get upset when people don't notice how I look when I go out in public	B	I don't mind blending into the crowd when I go out in public
39	A	I am more capable than other people	B	There is a lot that I can learn from other people
40	A	I am much like everybody else	B	I am an extraordinary person

Appendix B: NPI Items loadings on CFA and ESEM models

CFA models

Corry et al., 2008: Two Factor Model

	Items	L/A	E/E
33	I would prefer to be a leader	.82	-
36	I am a born leader	.77	-
10	I see myself as a good leader	.72	-
32	People always seem to recognise my authority	.72	-
27	I have a strong will to power	.69	-
1	I have a natural talent for influencing people	.65	-
12	I like to have authority over other people	.64	-
8	I will be a success	.60	-
11	I am assertive	.57	-
7	I like to be the centre of attention	-	.86
30	I really like to be the centre of attention	-	.86
15	I like to show off my body	-	.76
19	I like to look at my body	-	.76
20	I will usually show off if I get the chance	-	.70
29	I like to look at myself in the mirror	-	.63
38	I get upset when people don't notice how I look when I go out in public	-	.62
28	I like to start new fads and fashions	-	.57
4	I know that I am good because everybody keeps telling me so	-	.54
25	I will never be satisfied until I get all that I deserve	-	.53
3	I would do almost anything on a dare	-	.49
39	I am more capable than other people	-	.47
14	I insist upon getting the respect that is due me	-	.29
24	I expect a great deal from other people	-	.29

L/A= Leadership/ authority; E/E = exhibitionism/ entitlement

Kubarych et al. (2004) Three Factor Model

	Item	P	E	SP
36	I am a born leader	.77	-	-
33	I would prefer to be a leader	.76	-	-
12	I like to have authority over other people	.70	-	-
10	I see myself as a good leader	.69	-	-
27	I have a strong will to power	.69	-	-
32	People always seem to recognise my authority	.68	-	-
1	I have a natural talent for influencing people	.63		-
8	I will be a success	.59	-	-
13	I find it easy to manipulate people	.58	-	-
6	I can usually talk my way out of anything	.54	-	-
11	I am assertive	.54	-	-

25	I will never be satisfied until I get all that I deserve	.54	-	-
5	If I ruled the world it would be a better place	.51	-	-
21	I always know what I am doing	.42	-	-
16	I can read people like a book	.38	-	-
24	I expect a great deal from other people	.30	-	-
30	I really like to be the centre of attention	-	.87	-
7	I like to be the centre of attention	-	.86	-
20	I will usually show off if I get the chance	-	.71	-
2	Modesty doesn't become me	-	.63	-
38	I get upset when people don't notice how I look when I go out in public	-	.61	-
18	I want to amount to something in the eyes of the world	-	.58	-
28	I like to start new fads and fashions	-	.57	-
37	I wish that somebody would someday write my biography	-	.53	-
26	I like to be complemented	-	.52	-
40	I am an extraordinary person	-	-	.79
9	I think I am a special person	-	-	.77
4	I know that I am good because everybody keeps telling me so	-	-	.62
23	Everybody likes to hear my stories	-	-	.62
19	I like to look at my body	-	-	.58
35	I can make anybody believe anything that I want them to	-	-	.55
39	I am more capable than other people	-	-	.55
34	I am going to be a great person	-	-	.53
3	I would do almost anything on a dare	-	-	.50
31	I can live my life any way I want to	-	-	.47
17	I like to take responsibility for making decisions	-	-	.32
14	I insist upon getting the respect that is due me	-	-	.30

P= Power; E= Exhibitionism; SP= Being a special person

Emmons 1984

		L/A	S/S	S/A	E/E
7	I like to be the centre of attention	.86	-	-	-
30	I really like to be the centre of attention	.86	-	-	-
33	I would prefer to be a leader	.77	-	-	-
10	I see myself as a good leader	.70	-	-	-
12	I like to have authority over other people	.70	-	-	-
32	People always seem to recognise my authority	.68	-	-	-
1	I have a natural talent for influencing people	.66	-	-	-
11	I am assertive	.55	-	-	-
40	I am an extraordinary person	-	.82	-	-
9	I think I am a special person	-	.80	-	-
19	I like to look at my body	-	.78	-	-

15	I like to show off my body	-	.77	-	-
29	I like to look at myself in the mirror	-	.64	-	-
4	I know that I am good because everybody keeps telling me so	-	.63	-	-
34	I am going to be a great person	-	.54	-	-
26	I like to be complemented	-	.53	-	-
36	I am a born leader	-	-	.73	-
20	I will usually show off if I get the chance	-	-	.66	-
23	Everybody likes to hear my stories	-	-	.59	-
6	I can usually talk my way out of anything	-	-	.53	-
35	I can make anybody believe anything that I want them to	-	-	.53	-
3	I would do almost anything on a dare	-	-	.48	-
21	I always know what I am doing	-	-	.39	-
16	I can read people like a book	-	-	.37	-
27	I have a strong will to power	-	-	-	.72
13	I find it easy to manipulate people	-	-	-	.68
38	I get upset when people don't notice how I look when I go out in public	-	-	-	.64
39	I am more capable than other people	-	-	-	.61
25	I will never be satisfied until I get all that I deserve	-	-	-	.59
14	I insist upon getting the respect that is due me	-	-	-	.35
24	I expect a great deal from other people	-	-	-	.33

L/A= leadership/ authority; S= self-absorption; SS= superiority/ arrogance; EE= exploitiveness/ entitlement

Raskin and Terry,1988 : Seven factor Model

		A	SS	S	EX	EXP	V	ENT
33	I would prefer to be a leader	.81	-	-	-	-	-	-
36	I am a born leader	.81	-	-	-	-	-	-
12	I like to have authority over other people	.74	-	-	-	-	-	-
10	I see myself as a good leader	.73	-	-	-	-	-	-
32	People always seem to recognise my authority	.72	-	-	-	-	-	-
1	I have a natural talent for influencing people	.67	-	-	-	-	-	-
8	I will be a success	.62	-	-	-	-	-	-
11	I am assertive	.57	-	-	-	-	-	-
39	I am more capable than other people	-	.57	-	-	-	-	-
34	I am going to be a great person	-	.55	-	-	-	-	-
31	I can live my life any way I want to	-	.48	-	-	-	-	-
21	I always know what I am doing	-	.45	-	-	-	-	-

17	I like to take responsibility for making decisions	-	.34	-	-	-	-	-
22	I rarely depend on anyone else to get things done	-	.06	-	-	-	-	-
40	I am an extraordinary person	-	-	.88	-	-	-	-
9	I think I am a special person	-	-	.83	-	-	-	-
4	I know that I am good because everybody keeps telling me so	-	-	.69	-	-	-	-
26	I like to be complemented	-	-	.57	-	-	-	-
37	I wish that somebody would someday write my biography	-	-	.56	-	-	-	-
30	I really like to be the centre of attention	-	-	-	.88	-	-	-
7	I like to be the centre of attention	-	-	-	.87	-	-	-
20	I will usually show off if I get the chance	-	-	-	.75	-	-	-
38	I get upset when people don't notice how I look when I go out in public	-	-	-	.65	-	-	-
2	Modesty doesn't become me	-	-	-	.63	-	-	-
28	I like to start new fads and fashions	-	-	-	.61	-	-	-
3	I would do almost anything on a dare	-	-	-	.53	-	-	-
23	Everybody likes to hear my stories	-	-	-	-	.70	-	-
13	I find it easy to manipulate people	-	-	-	-	.69	-	-
35	I can make anybody believe anything that I want them to	-	-	-	-	.63	-	-
6	I can usually talk my way out of anything	-	-	-	-	.62	-	-
16	I can read people like a book	-	-		-	.44	-	-
19	I like to look at my body	-	-		-	-	.91	-
15	I like to show off my body	-	-		-	-	.88	-
29	I like to look at myself in the mirror	-	-		-	-	.77	-
5	If I ruled the world it would be a better place	-	-		-	-	-	.55
14	I insist upon getting the respect that is due me	-	-		-	-	-	.34
18	I want to amount to something in the eyes of the world	-	-		-	-	-	.60
24	I expect a great deal from other people	-	-		-	-	-	.33
25	I will never be satisfied until I get all that I deserve	-	-		-	-	-	.62
27	I have a strong will to power	-	-		-	-	-	.76

A= authority; SS= self-sufficiency, S= superiority, EX= exhibitionism, EXP= exploitativeness, V= vanity, ENT = entitlement

Ackerman et al., 2011

		L/A	G/E	E/E
33	I would prefer to be a leader	.78	-	-
36	I am a born leader	.76	-	-
10	I see myself as a good leader	.71	-	-
12	I like to have authority over other people	.71	-	-
27	I have a strong will to power	.69	-	-
32	People always seem to recognise my authority	.69	-	-
1	I have a natural talent for influencing people	.64	-	-
40	I am an extraordinary person	.62	-	-
11	I am assertive	.55	-	-
5	If I ruled the world it would be a better place	.52	-	-
34	I am going to be a great person	.50	-	-
30	I really like to be the centre of attention	-	.88	-
7	I like to be the centre of attention	-	.85	-
19	I like to look at my body	-	.78	-
15	I like to show off my body	-	.77	-
20	I will usually show off if I get the chance	-	.72	-
29	I like to look at myself in the mirror	-	.65	-
4	I know that I am good because everybody keeps telling me so	-	.62	-
38	I get upset when people don't notice how I look when I go out in public	-	.62	-
28	I like to start new fads and fashions	-	.59	-
26	I like to be complemented	-	.55	-
13	I find it easy to manipulate people	-	-	.74
25	I will never be satisfied until I get all that I deserve	-	-	.71
14	I insist upon getting the respect that is due me	-	-	.41
24	I expect a great deal from other people	-	-	.41

L/A= Leadership/ authority; G/E= grandiose/ exhibitionism; E/E= entitlement/ exploitativeness

ESEM Models

Kubarych et al., 2 factor ESEM

N	Items	F1	F2
40	I am an extraordinary person	.87	.10
9	I think I am a special person	.81	.06
7	I like to be the centre of attention	.78	.09
20	I will usually show off if I get the chance	.74	.05
30	I really like to be the centre of attention	.72	.16
38	I get upset when people don't notice how I look when I go out in public	.66	.07
19	I like to look at my body	.60	.01
4	I know that I am good because everybody keeps telling me so	.57	.07
28	I like to start new fads and fashions	.56	.00

23	Everybody likes to hear my stories	.50	.16
37	I wish that somebody would someday write my biography	.47	.06
2	Modesty doesn't become me	.45	.20
26	I like to be complemented	.43	.08
18	I want to amount to something in the eyes of the world	.42	.18
24	I expect a great deal from other people	.42	.18
25	I will never be satisfied until I get all that I deserve	.42	.17
3	I would do almost anything on a dare	.41	.12
13	I find it easy to manipulate people	.34	.29
27	I have a strong will to power	.32	.43
34	I am going to be a great person	.32	.24
39	I am more capable than other people	.32	.26
33	I would prefer to be a leader	.08	.89
10	I see myself as a good leader	.08	.82
12	I like to have authority over other people	.00	.75
32	People always seem to recognise my authority	.06	.67
1	I have a natural talent for influencing people	.03	.65
36	I am a born leader	.25	.59
11	I am assertive	.01	.59
8	I will be a success	.22	.42
6	I can usually talk my way out of anything	.23	.35
5	If I ruled the world it would be a better place	.22	.33
35	I can make anybody believe anything that I want them to	.27	.32
16	I can read people like a book	.08	.32
21	I always know what I am doing	.15	.31
17	I like to take responsibility for making decisions	.06	.30
31	I can live my life any way I want to	.29	.21
14	I insist upon getting the respect that is due me	.27	.04

Kubarych 3 factors ESEM

N		F1	F2	F3
7	I like to be the centre of attention	.90	.01	.33
30	I really like to be the centre of attention	.86	.04	.40
20	I will usually show off if I get the chance	.78	.08	.00
40	I am an extraordinary person	.75	.01	.26
9	I think I am a special person	.67	.04	.27
4	I know that I am good because everybody keeps telling me so	.66	.00	.13
19	I like to look at my body	.62	.03	.00
26	I like to be complemented	.58	.02	.24
38	I get upset when people don't notice how I look when I go out in public	.55	.00	.27
23	Everybody likes to hear my stories	.54	.12	.10
28	I like to start new fads and fashions	.54	.01	.08
37	I wish that somebody would someday write my biography	.47	.05	.01
2	Modesty doesn't become me	.39	.24	.03

3	I would do almost anything on a dare	.38	.13	.01
18	I want to amount to something in the eyes of the world	.30	.26	.13
33	I would prefer to be a leader	.24	.99	.12
12	I like to have authority over other people	.21	.89	.01
10	I see myself as a good leader	.03	.77	.44
32	People always seem to recognise my authority	.03	.68	.22
36	I am a born leader	.18	.63	.11
1	I have a natural talent for influencing people	.10	.59	.36
11	I am assertive	.00	.57	.26
27	I have a strong will to power	.18	.52	.07
8	I will be a success	.09	.50	.03
6	I can usually talk my way out of anything	.05	.47	.14
39	I am more capable than other people	.08	.43	.28
16	I can read people like a book	.05	.42	.09
13	I find it easy to manipulate people	.17	.41	.17
35	I can make anybody believe anything that I want them to	.17	.39	.04
24	I expect a great deal from other people	.14	.38	.35
21	I always know what I am doing	.04	.38	.05
5	If I ruled the world it would be a better place	.18	.36	.06
25	I will never be satisfied until I get all that I deserve	.03	.44	.57
14	I insist upon getting the respect that is due me	.05	.27	.50
17	I like to take responsibility for making decisions	.04	.28	.13
31	I can live my life any way I want to	.21	.26	.05
34	I am going to be a great person	.27	.27	.00

Corry 2 factor

N	Items	F1	F2
15	I like to show off my body	.88	.23
19	I like to look at my body	.84	.26
29	I like to look at myself in the mirror	.73	.42
20	I will usually show off if I get the chance	.66	.10
38	I get upset when people don't notice how I look when I go out in public	.64	.06
7	I like to be the centre of attention	.60	.02
30	I really like to be the centre of attention	.57	.15
28	I like to start new fads and fashions	.56	.23
4	I know that I am good because everybody keeps telling me so	.38	.27
25	I will never be satisfied until I get all that I deserve	.36	.10
3	I would do almost anything on a dare	.34	.02
1	I have a natural talent for influencing people	.01	.88
10	I see myself as a good leader	.14	.82
33	I would prefer to be a leader	.08	.75
11	I am assertive	.02	.69
12	I like to have authority over other people	.00	.68
36	I am a born leader	.15	.66

24	I expect a great deal from other people	.11	.56
8	I will be a success	.14	.51
32	People always seem to recognise my authority	.05	.50
27	I have a strong will to power	.28	.45
39	I am more capable than other people	.23	.33
14	I insist upon getting the respect that is due me	.24	.06

Ackerman et al., 2011

N	Items	F1	F2	F3
33	I would prefer to be a leader	.93	.13	.00
12	I like to have authority over other people	.86	.10	.13
10	I see myself as a good leader	.67	.01	.42
32	People always seem to recognise my authority	.61	.08	.14
36	I am a born leader	.60	.20	.10
27	I have a strong will to power	.50	.26	.11
25	I will never be satisfied until I get all that I deserve	.49	.15	.58
1	I have a natural talent for influencing people	.45	.15	.40
24	I expect a great deal from other people	.45	.08	.42
11	I am assertive	.44	.10	.22
5	If I ruled the world it would be a better place	.37	.18	.06
14	I insist upon getting the respect that is due me	.35	.03	.55
13	I find it easy to manipulate people	.31	.30	.11
19	I like to look at my body	.27	.96	.01
15	I like to show off my body	.26	.94	.07
29	I like to look at myself in the mirror	.21	.81	.04
7	I like to be the centre of attention	.00	.80	.45
30	I really like to be the centre of attention	.05	.78	.48
20	I will usually show off if I get the chance	.07	.77	.09
38	I get upset when people don't notice how I look when I go out in public	.02	.62	.25
28	I like to start new fads and fashions	.00	.60	.06
4	I know that I am good because everybody keeps telling me so	.04	.57	.20
26	I like to be complemented	.02	.53	.27
40	I am an extraordinary person	.14	.52	.03
34	I am going to be a great person	.23	.31	.05

Emmons, 1984: Four Factor

No	Item	F1	F2	F3	F4
1	I have a natural talent for influencing people	.69	.04	.10	.23
3	I would do almost anything on a dare	.21	.24	.11	.17
4	I know that I am good because everybody keeps telling me so	.20	.41	.19	.00
6	I can usually talk my way out of anything	.34	.00	.18	.26
7	I like to be the centre of attention	.39	.65	.09	.08

9	I think I am a special person	.00	.01	.89	.00
10	I see myself as a good leader	.84	.03	.05	.30
11	I am assertive	.62	.10	.10	.03
12	I like to have authority over other people	.74	.05	.12	.25
13	I find it easy to manipulate people	.29	.08	.19	.33
14	I insist upon getting the respect that is due me	.03	.07	.14	.54
15	I like to show off my body	.04	.76	.06	.53
16	I can read people like a book	.27	.10	.19	.12
19	I like to look at my body	.03	.78	.00	.41
20	I will usually show off if I get the chance	.08	.55	.19	.20
21	I always know what I am doing	.27	.05	.06	.19
23	Everybody likes to hear my stories	.26	.26	.29	.01
24	I expect a great deal from other people	.16	.07	.02	.44
25	I will never be satisfied until I get all that I deserve	.09	.02	.21	.63
26	I like to be complemented	.21	.42	.10	.08
27	I have a strong will to power	.44	.16	.06	.27
29	I like to look at myself in the mirror	.04	.63	.03	.36
30	I really like to be the centre of attention	.48	.69	.05	.07
32	People always seem to recognise my authority	.70	.09	.05	.00
33	I would prefer to be a leader	.89	.07	.13	.11
34	I am going to be a great person	.24	.14	.23	.07
35	I can make anybody believe anything that I want them to	.32	.01	.30	.08
36	I am a born leader	.63	.05	.19	.03
38	I get upset when people don't notice how I look when I go out in public	.03	.44	.03	.52
39	I am more capable than other people	.21	.06	.34	.31
40	I am an extraordinary person	.04	.09	.89	.01

Raskin and Terry, 1988: seven factor

		F1	F2	F3	F4	F5	F6	F7
4	I know that I am good because everybody keeps telling me so	.73	.01	.61	.05	.08	.04	.03
21	I always know what I am doing	.38	.24	.20	.19	.18	.05	.07
13	I find it easy to manipulate people	.05	.63	.08	.03	.08	.03	.16
6	I can usually talk my way out of anything	.11	.60	.00	.06	.03	.05	.13
35	I can make anybody believe anything that I want them to	.02	.48	.03	.09	.06	.20	.01
16	I can read people like a book	.08	.45	.17	.11	.04	.13	.01
39	I am more capable than other people	.08	.41	.08	.02	.02	.27	.22
23	Everybody likes to hear my stories	.10	.30	.28	.04	.08	.18	.12
7	I like to be the centre of attention	.17	.03	.74	.18	.06	.16	.03
30	I really like to be the centre of attention	.02	.03	.73	.27	.12	.03	.04
2	Modesty doesn't become me	.03	.21	.46	.07	.09	.01	.26
26	I like to be complemented	.39	.04	.45	.09	.07	.00	.11

38	I get upset when people don't notice how I look when I go out in public	.05	.15	.42	.21	.30	.05	.42
37	I wish that somebody would someday write my biography	.02	.06	.39	.09	.11	.11	.15
20	I will usually show off if I get the chance	.07	.00	.37	.01	.35	.24	.06
22	I rarely depend on anyone else to get things done	.12	.06	.30	.09	.06	.13	.07
10	I see myself as a good leader	.04	.07	.05	.86	.04	.06	.25
33	I would prefer to be a leader	.07	.04	.02	.86	.04	.02	.28
32	People always seem to recognise my authority	.07	.06	.03	.66	.08	.05	.04
12	I like to have authority over other people	.05	.06	.00	.66	.03	.05	.36
1	I have a natural talent for influencing people	.11	.39	.10	.52	.02	.00	.26
8	I will be a success	.00	.25	.03	.51	.09	.21	.26
11	I am assertive	.10	.28	.06	.49	.07	.24	.06
36	I am a born leader	.07	.25	.15	.45	.04	.12	.07
27	I have a strong will to power	.11	.02	.04	.40	.19	.08	.26
17	I like to take responsibility for making decisions	.28	.12	.05	.35	.05	.04	.03
19	I like to look at my body	.05	.05	.00	.08	.90	.05	.08
15	I like to show off my body	.06	.15	.01	.04	.86	.02	.01
29	I like to look at myself in the mirror	.03	.02	.10	.00	.70	.05	.01
28	I like to start new fads and fashions	.10	.06	.17	.00	.40	.10	.08
9	I think I am a special person	.01	.06	.04	.01	.00	.86	.02
40	I am an extraordinary person	.09	.10	.06	.03	.06	.80	06
18	I want to amount to something in the eyes of the world	.00	.23	.18	.23	.03	.41	.29
25	I will never be satisfied until I get all that I deserve	.01	.01	.08	.04	.09	.32	.69
24	I expect a great deal from other people	.05	.04	.10	.04	.13	.02	.57
14	I insist upon getting the respect that is due me	.01	.06	.02	.11	.02	.17	.53
3	I would do almost anything on a dare	.00	.24	.24	.02	.10	.06	.08
31	I can live my life any way I want to	.09	.14	.03	.13	.09	.15	.07
34	I am going to be a great person	.16	.03	.00	.22	.15	.22	.02
5	If I ruled the world it would be a better place	.24	.06	.02	.29	.00	.17	.01

Appendix C: Pathological narcissism inventory (PNI)

Please indicate how accurately each of the following statements describes you by circling the appropriate number. Work as fast as you can without making careless errors. It is best to rely on first impressions in answering each item. If you do not feel comfortable answering a question you may leave it blank.

1	2	3	4	5
Completely false	Mainly false	Partly true and partly false	Mainly true	Completely true

		1	2	3	4	5
1	I often fantasize about being admired and respected.					
2	My self-esteem fluctuates a lot.					
3	I sometimes feel ashamed about my expectations of others when they disappoint me.					
4	I can usually talk my way out of anything					
5	It is hard to feel good about myself when I am alone.					
6	I can make myself feel good by caring for others.					
7	I hate asking for help.					
8	When people don't notice me, I start to feel bad about myself.					
9	I often hide my needs for fear that others will see me as a needy and dependent.					
10	I can make anyone believe anything I want them to.					
11	I get mad when people don't notice all that I do for them.					
12	I got annoyed by people who are not interested in what I say or do.					
13	I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.					
14	I often fantasize about having a huge impact on the world around me.					
15	I find it easy to manipulate people.					
16	When others don't notice me, I start to feel worthless.					
17	Sometimes I avoid people because I'm concerned that they'll disappoint me.					
18	I typically get very angry when I'm unable to get what I want from others.					
19	I sometimes need important others in my life to reassure me of my self-worth.					

20 When I do things for other people, I expect them to do things for me.
21 When others don't meet my expectations, I often feel ashamed about what I wanted.
22 I feel important when others rely on me.
23 I can read people like a book.
24 When others disappoint me, I often get angry at myself.
25 Sacrificing for others makes me the better person.
26 I often fantasize about accomplishing things that are probably beyond my means.
27 Sometimes I avoid people because I'm afraid they won't do what I want them to.
28 It's hard to show others the weaknesses I feel inside.
29 I get angry when criticized.
30 It's hard to feel good about myself unless I know other people admire me.
31 I often fantasize about being rewarded for my efforts.
32 I am preoccupied with thoughts and concerns that most people are not interested in me.
33 I like to have friends who rely on me because it makes me feel important.
34 Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.
35 Everybody likes to hear my stories.
36 It's hard for me to feel good about myself unless I know other people like me.
37 It irritates me when people don't notice all that I do for them.
38 I will never be satisfied until I get all that I deserve.
39 I try to show what a good person I am through my sacrifices.
40 I am disappointed when people don't notice me.
41 I often find myself envying others' accomplishments.
42 I often fantasize about performing heroic deeds.
43 I help others in order to prove that I am a good person.
44 It's important to show people I can do it on my own, even if I have some doubts inside.
45 I often fantasize about being recognized for my accomplishments.
46 I can't stand relying on other people because it makes me feel weak.
47 When others don't respond to me the way that I would like them to, it's hard for me to still feel ok with myself.
48 I need others to acknowledge me.
49 I want to amount to something in the eyes of the world.
50 When others get a glimpse of my needs, I feel anxious and ashamed.

51 Sometimes it is easier to be alone than to face not getting everything I want from other people.
52 I can get pretty angry when others disagree with me.

Contingent self-esteem:36, 30, 16,8,40, 48,47,32,19.41,5, 2.

Exploitaitvness:10,15,4, 23, 35.

Self-sacrifice/self-enhancement:39,43,33,22,25,6

Hiding the self :50,9,28,46,44,7,13.

Grandiose fanracy:45,31,42,1,14,26,49.

Devaluing others :21,34,24,17,27,3,51.

Entitlement rage:37,11,12,18,38,20,29,52.

Vulnerability: contingent self-esteem, hiding the self, devaluing of others, entitlement rage.

Grandiose: exploitativness, self-sacrificing /self-enhancement, and grandiose fantasy

Appendix D: Rosenberg Self-Esteem Scale (RSES)

Below is a list of statements dealing with your general feelings about yourself. For each of the following, please corresponds with the answer that best describes how strongly you agree or disagree with each statement.

		Strongly Agree	Agree	Disagree	Strongly disagree
1	On the whole, I am satisfied with myself				
2	At times, I think I am no good at all				
3	I feel that I have a number of good qualities				
4	I am able to do things as well as most other people				
5	I feel I do not have much to be proud of.				
6	I certainly feel useless at times.				
7	I feel that I'm a person of worth, at least on an equal plane with others				
8	I wish I could have more respect for myself.				
9	All in all, I am inclined to feel that I am a failure.				
10	I take a positive attitude toward myself				

Negative items: 2,5,6,8,9.

Appendix E: Intentions to show positive work Behaviour and Intentions to engage in Psychological withdrawal

Please indicate the extend to which you will take each of the following actions after receiving your supervisor comments about his opinion of your performance. Please use the following scale to record your answers

1. Very slightly or not at all.
2. A little.
3. Moderately.
4. Quite a bit.
5. Extremely

	Items	1	2	3	4	5
	Intention to show positive work behaviour					
1	Do more work than required.					
2	Volunteer to work overtime.					
3	Make an attempt to change working conditions.					
4	Negotiate with my supervisor to improve my job.					
5	Try to think of ways to do the job better.					
	Intention to engage in psychological withdrawal					
1	Think of being absent.					
2	Chat with co-workers about non-work topics.					
3	Leave the workstation for unnecessary reasons.					
4	Spend work time on personal matters.					
5	Put less effort into the job than I should.					
6	Think of leaving my current job.					
7	Let others do my job.					

Appendix F: BIS / BAS Scales

Each item of this questionnaire is a statement that a person may either agree with or disagree with. For each item, indicate how much you agree or disagree with what the item says. Please respond to all the items; do not leave any blank. Choose only one response to each statement. Please be as accurate and honest as you can be. Respond to each item as if it were the only item. That is, don't worry about being "consistent" in your responses. Choose from the following four response options:

1 = very false for me.
2 = somewhat false for me.
3 = somewhat true for me.
4 = very true for me.

	Item	1	2	3	4
1	A person's family is the most important thing in life.				
2	Even if something bad is about to happen to me, I rarely experience fear or nervousness.				
3	I go out of my way to get things I want.				
4	When I'm doing well at something I love to keep at it				
5	I'm always willing to try something new if I think it will be fun.				
6	How I dress is important to me.				
7	When I get something I want, I feel excited and energized.				
8	Criticism or scolding hurts me quite a bit.				
9	When I want something I usually go all-out to get it.				
10	I will often do things for no other reason than that they might be fun.				
11	It's hard for me to find the time to do things such as get a haircut.				
12	If I see a chance to get something I want I move on it right away.				
13	I feel pretty worried or upset when I think or know somebody is angry at me.				
14	When I see an opportunity for something I like I get excited right away.				
15	I often act on the spur of the moment.				
16	If I think something unpleasant is going to happen I usually get pretty "worked up."				
17	I often wonder why people act the way they do.				
18	When good things happen to me, it affects me strongly.				
19	I feel worried when I think I have done poorly at something important.				
20	I crave excitement and new sensations.				
21	When I go after something I use a "no holds barred" approach.				

22 I have very few fears compared to my friends.
23 It would excite me to win a contest.
24 I worry about making mistakes.

Appendix G: Time Management Exercise

Task instructions:

"The aim of this study is to examine the effectiveness of a simulated managerial in-basket exercise in assessing managerial potential. You will be asked to complete two in basket exercises which simulate some tasks a marketing manager might face. The exercise will be scored immediately, and you will be given your score. Please note that participants who score the best five answers in the in-basket exercises will be awarded 5 Sterling pound each. You will be asked to complete few surveys about your feelings and opinions about the exercise."

Exercise 1 instructions:

"The next section presents the first "in-basket exercise" which simulate the situations a marketing manager might face in a real working day. Please read the instructions carefully before answering the exercise.

"You are a district sales manager for a national life insurance company. You have eight salespersons reporting to you. You are the first person at the office at 7:15 a.m. Your secretary and all other office personnel are due in at 8:00 a.m. The following is a list of situations that face you this morning. In the right-hand margin, rank the items as to which you would handle 1st, 2nd . . . 7th.

In the next section, you will be provided with the result of your performance in the exercise you have just completed."

1. You have a 1-hour meeting scheduled with all of your salespersons at 8:00 a.m. in the boardroom. (3rd task).
2. Telephone message on answering machine: John Smith (the richest man in town) wants to talk about some new insurance. (4th task).
3. You have a noon lunch appointment at a local restaurant with your director of recruiting and Becky Williams, a senior at State University who is a candidate for a financial representative position at your firm. (7th task).
4. Telephone message on answering machine: Tom Thompson (your boss at corporate headquarters) Please call first thing when you get into the office. (1st task).

5. Telephone message on answering machine: Bruce Williams (your neighbour) wants to talk about some additional insurance. (5th task).
6. You have a telephone message from your teenaged daughter to call her because she has to talk to you about a serious matter. (2nd task).
7. Telephone message on answering machine: Ted Wilson (a person you do not know) wants to talk about some new insurance. (6th task).

Task feedback:

Positive feedback: "Your score is within the highest 15% of persons completed this exercise,"

Negative feedback "Your score is within the lowest 15% of persons completed this exercise."