University of South Carolina
Scholar Commons

USC Aiken Psychology Theses | Psychology Department

12-2015

Grandiose and Vulnerable Narcissism: Where Do the Emotional Differences Lie?

Katherine E. Wolven
University of South Carolina - Aiken

Follow this and additional works at: https://scholarcommons.sc.edu/aiken_psychology_theses

 Part of the Clinical Psychology Commons, Personality and Social Contexts Commons, and the Social Psychology Commons

Recommended Citation

Wolven, Katherine E., "Grandiose and Vulnerable Narcissism: Where Do the Emotional Differences Lie?" (2015). *USC Aiken Psychology Theses*. 18.
https://scholarcommons.sc.edu/aiken_psychology_theses/18

This Thesis is brought to you by the Psychology Department at Scholar Commons. It has been accepted for inclusion in USC Aiken Psychology Theses by an authorized administrator of Scholar Commons. For more information, please contact digres@mailbox.sc.edu.

Grandiose and Vulnerable Narcissism: Where Do the Emotional Differences Lie?

A Thesis

Presented to

The Faculty of the Department of Psychology

University of South Carolina Aiken

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science

By

Katherine E. Wolven

December 2015

Abstract

Narcissism can be conceptualized as existing on a continuum between grandiose and vulnerable phenotypes (Pincus & Lukowitsky, 2010). Previous studies found differences between narcissistic phenotypes in terms of behavioral task performance (Wallace & Baumeister, 2002) and emotional reactions to threatening conditions (Besser & Priel, 2010; Zeigler-Hill, Clark, & Pickard, 2008); however, research on emotion dysregulation was lacking in narcissistic populations. Thus, the purpose of the present study was to explore the subjective and objective emotional differences between the grandiose and vulnerable phenotypes of narcissism. In a laboratory manipulation, participants (*N*=63) completed self-report questionnaires, read emotionally-evocative vignettes describing achievement failure and interpersonal rejection, and completed a behavioral persistence task. Electrodermal activity was also measured to explore emotional variances in narcissism. Results suggest individuals with higher vulnerable narcissistic characteristics will report more negative affectivity following either threatening situation, and higher levels of narcissism predicted an increase in positive affect following an achievement failure scenario. Furthermore, positive relationships exist between various levels of narcissism (i.e., pathological, grandiose, and vulnerable) and difficulties in emotion regulation. These findings depict how grandiose narcissism and vulnerable narcissism differ in their emotional reactivity and self-regulation when faced with threatening situations.

Narcissism

The perception of narcissism can be traced back to the Greek myth of Narcissus, which depicted the conflict of self-love versus the love of another individual. The psychological phenomena of narcissism revolves around the core features of grandiose fantasies, lack of empathy towards others, and an unwavering need for admiration. According to the *Diagnostic and Statistical Manual of Mental Disorder* (5th ed., *DSM5*; American Psychiatric Association, 2013), individuals whom suffer from Narcissistic Personality Disorder (NPD) display patterns of grandiose traits, a need for admiration from others, an overbearing sense of entitlement, and the strong belief of unidentifiable uniqueness within multiple contexts by early adulthood. Empirical evidence by Pincus & Lukowitsky (2010) suggests that narcissism can be conceptualized in a multitude of ways ranging from the nature of the traits (normal or pathological), the phenotype (grandiose or vulnerable), and the expression of the personality characteristics (overt or covert).

Narcissism is conceptualized as the way in which an individual regulates internal and external stimuli in an environment to maintain a relatively positive self-view (Besser & Zeigler-Hill, 2010; Pincus, Ansell, Pimentel, Cain, Wright, & Levy, 2009; Wallace & Baumeister, 2002). In order to do so, the individual uses regulatory processes internally, affectively, and behaviorally. These self-enhancement strategies and techniques can be viewed as on a continuum of adaptive or maladaptive tactics. Thus, the conceptualization of narcissism into a dimension of "normal" or trait-narcissism versus pathological narcissism. The majority of empirical research on NPD is founded on trait-narcissism that focuses on personality characteristics within nonclinical populations. In their review of pathological narcissism and NPD, Pincus and Lukowitsky (2010) make the point that it is adaptive for humans to possess

some narcissistic traits or needs; however, those traits are considered pathological when they are comparable to DSM5 criteria and functional impairment occurs. Compared to "normal" narcissism, pathological narcissism is described as a difficulty in regulating an extreme need for recognition and admiration from others that can be expressed through grandiosity and vulnerability (Roche, Pincus, Conroy, Hyde, & Ram, 2013). According to Pincus and Lukowitsky (2010), pathological narcissism encompasses maladaptive coping strategies and significant regulatory deficits when faced with disappointments and threats to an overly positive self-perception. Despite the lack of research in clinical populations, research on normal narcissism has improved preexisting assessment measures for personality pathology, promoted research into the clinical population, and contributed to various therapeutic interventions (Pincus & Lukowitsky, 2010). Future research should continue to investigate trait narcissism and replicate significant findings into the clinical population with appropriate assessments.

As clinical research in personality characteristics and pathology has evolved, the measures to assess them have as well. The Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) was initially constructed as a self-report measure of narcissism for subclinical populations based off of the *DSM-III* criteria for NPD. The NPI is the most common measure used in social and personality research to measure narcissism in subclinical populations (Twenge & Campbell, 2003). Furthermore, the NPI is used to assess overt behavioral manifestations of narcissism; however, it lacks criterion content on vulnerable characteristics and covert behaviors. In an attempt to assess the vulnerable narcissistic phenotype, the Hypersensitive Narcissism Scale (HSNS) was designed as a counter measure to the NPI. However, both measures assess unidimensional constructs, which limits a comprehensive conceptualization of pathological narcissism (Wright, Lukowitsky, Pincus, & Conroy, 2010).

For this reason, the Pathological Narcissism Inventory (PNI; Pincus et al., 2009) was constructed to assess the full scope of pathological narcissism and its phenotypes. The PNI is a recently constructed dimensional measure deemed appropriate for assessing narcissism within clinical and subclinical populations (Wright et al., 2010). Narcissistic individuals oscillate between grandiose and vulnerable states along with displaying overt and covert behaviors (Wright et al., 2010). This being said, a well-established assessment that captures both phenotypic themes of narcissism is necessary for accurate clinical assessments and research. One criticism of the NPI is that it assesses overt, externalizing behavioral manifestations of narcissism and ignores covert, internalizing behavior that individuals may experience. Additionally, a downfall to the aforementioned HSNS is that it overly focuses on internalizing behaviors, which may be overlooked by the NPI. By identifying multiple facets embraced within the phenotypes of narcissism, the PNI is a suitable measure that grasps pathological narcissism in its entirety—a previous assessment limitation.

In addition to improving the assessment of narcissistic trait characteristics, research with "normal" narcissists has advanced research in the clinical domain, particularly in the area of treatment. Similar to the continually evolving diagnostic criteria, clinical treatment must be ever changing as well. As research expands and develops, researchers should keep in mind how their findings within the exploration of personality pathology and etiology can contribute to clinical practice. In other words, how can therapists clinically utilize discoveries in empirical research? Concerning personality disorders, Simonsen and Simonsen (2014) emphasize the importance of therapists treating patients with personality pathology must embody patience and perseverance. Furthermore, therapists need to view these patients as multilayered persons that parallel the facets of their disorder.

With the implementation of the Level of Personality Functioning (LPF) scale in the *DSM5*, there may be ways to utilize a more multifaceted dimensional diagnosis with therapeutic strategies. For instance, it is suggested that differentiating a client's perception of self and the world from others views is one strategy to help clients succeed and continue with treatment programs (Simonsen & Simonsen, 2014). With regard to narcissism, a significant problem is empathetic dysfunction. Narcissistic patients may become angry and frustrated with others who contradict their inflated self-perceptions and project blame or downgrade others. By shining insight onto core issues of vulnerability or displaying compassion towards narcissistic patients when they lash out with anger, it is possible for therapists to help these patients develop empathy depending on their LPF severity (Simonsen & Simonsen, 2014). By addressing overt behaviors or underlying shame, therapists can stress the meaning of empathy and provide patients with strategies to regulate emotions.

Grandiose vs. Vulnerable Narcissism

A growing body of research has suggested that narcissism is not solely a category within personality disorders. In fact, it is suggested that narcissism should be thought of dimensionally instead of categorically (Pincus & Lukowitsky, 2010). With the publication of the *DSM5*, a second section for personality disorders was implemented in which the disorders are viewed along a spectrum (American Psychiatric Association, 2013; Skodol, Bender, & Morey, 2013). According to Skodol and colleagues (2013), the hybrid model of personality functioning in Section III attempted to combine broad features of more than one personality disorder to create clinical prototypes. The goal of *DSM5* was to improve diagnostic validity of personality pathology. Specifically pertaining to narcissism, the phenotypes of grandiosity and vulnerability and their varying behavioral manifestations were implemented along a dimension of self and

interpersonal functioning. Although this section of *DSM5* was intended to improve diagnosis of personality disorders, future research is necessary to distinguish between narcissistic phenotypes and behavioral expressions dimensionally.

Previous to the implementation of the dimensional approach in *DSM5* Section III, the most common concept of narcissism is represented by the *DSM-IV* diagnostic criteria for NPD, and most closely resembles the facet of grandiose narcissism. This type of narcissism is often expressed through a maladaptive orientation of self-absorption, aggression, a sense of entitlement, and lack of empathy (Besser & Priel, 2010; Dickinson & Pincus, 2003; Roche et al., 2013; Rohmann, Neumann, Herner, & Bierhoff, 2012). Grandiose narcissists have a lack of insight as to how they portray themselves, which impacts interpersonal relationships. Individuals who embody grandiose narcissism most often use overt self-enhancement strategies in order to maintain their grandiose fantasies and high self-view (Wallace & Baumeister, 2002). The externalizing behaviors, or actions that others can see, that are exemplified in grandiose individuals help them thrive in self-promoting environments. For instance, Wallace and Baumeister (2002) conducted four different experiments in which they investigated the impact of self-enhancement opportunity on task performance. It was found that narcissists performed best in highly challenging situations, under pressure, and when an outside audience was present (Wallace & Baumeister, 2002). In other words, research showed that narcissists are driven by admiration from others and perceived success in highly challenging situations in order to support their inflated self-views.

This being said, by having experience using self-enhancement strategies, grandiose narcissists have been shown to be initially well liked by peers (Küfner, Nestler, & Back, 2013). However, after prolonged exposure to a grandiose narcissistic individual their popularity

decreases. Additionally, in situations with negative feedback, ego-threats, or controversial interactions narcissists react with combative behavior in order to preserve their inflated self-perceptions. In order to maintain their grandiose fantasies, narcissists may come off as arrogant, portray aggression, display interpersonal dominance, have high physiological reactivity, and thrive in self-promoting environments (Dickinson & Pincus, 2003; Roche et al., 2013). When one's personal achievement or sense of accomplishment is threatened, grandiose narcissists tend to lash out with aggression. Any conflict within the individual's external environment that contradicts his or her self-view creates dissonance and requires implementing self-esteem regulation. Externalizing strategies such as devaluing and blaming are just a few of the defense tactics in which grandiose narcissists attempt to regulate their self-esteem and affect (Twenge & Campbell, 2003).

Through the evolution of psychological research and diagnosis, pathological narcissism has also been associated with expressions of hypersensitivity and vulnerability (Besser & Priel, 2010; Pincus & Lukowitsky, 2010; Rohmann et al., 2012). According to Besser and Priel (2010), a vulnerable narcissist embodies the core grandiose fantasies and sense of entitlement, yet this individual shows constraint, and is less equipped to use the exaggerated self-enhancement strategies to modulate self-esteem that a grandiose narcissist may use. In order to regulate self-esteem, vulnerable narcissists rely on interpersonal feedback from others to modulate their hypersensitivity. However, these individuals present with shyness, social avoidance, and can appear to portray empathy (Dickinson & Pincus, 2003). Furthermore, those with vulnerable narcissistic traits have shown an increase in levels of anxiety with regard to interpersonal relationships such that they show greater distress over separation than those at the other end of the narcissistic spectrum (Besser & Priel, 2010). Rather than experiencing intense

rage or envy when their self-perception is threatened, vulnerable narcissists will display an intense feeling of shame as a result of their affect dysregulation (Pincus & Lukowitsky, 2010; Dickinson & Pincus, 2003).

The vulnerable narcissist's labile emotional presentation creates considerable clinical confusion because this criteria overlaps with other personality pathology. Avoidant personality disorder and borderline personality disorder are two distinct personality disorders in which social avoidance and emotion dysregulation are core criteria, respectively. However, the core grandiose expectations and entitlement are suspected to be the distinguishing factor between vulnerable narcissism and similar personality disorders (Dickinson & Pincus, 2003; Pincus & Lukowitsky, 2010). In order to not only distinguish differences between narcissistic phenotypes, but also avoid misdiagnosis with other personality disorders, it is necessary to promote research in populations with personality pathology.

One pathway to establishing differences between narcissistic phenotypes is to conceptualize variances in self-esteem regulation. How narcissists truly feel about themselves is a captivating research question that has generated a plethora of research (Zeigler-Hill, Clark, & Pickard, 2008). Research has questioned if narcissists have an underlying fragile self-esteem or sense of self-worth (Rohmann et al., 2012; Zeigler-Hill & Besser, 2013; Zeigler-Hill, Clark & Pickard, 2008). It is speculated that one particular way these subtypes vary from each other is through the differing contexts in which self-esteem is built and maintained. For instance, individuals high in grandiose narcissism rely on their individual achievements and use behavioral strategies like social downgrading order to maintain their high self-view (Besser & Priel, 2010; Pincus & Lukowitsky, 2010). Yet, it has been found that individuals high in vulnerable narcissism are less capable of using self-enhancement strategies and rely on external feedback

from others to validate their self-esteem (Dickinson & Pincus, 2003). Although observable behavioral differences have been noted between the narcissistic phenotypes, the question emerges: Do narcissistic phenotypes have the same underlying core expectations that determine their self-worth, or is the basis for self-esteem contingent on specific intrapersonal and interpersonal domains?

Zeigler-Hill, Clark, & Pickard (2008) examined the associations between narcissistic subtypes and conditional levels of self-worth based on various domains including interpersonal love and support, achievement in competition, approval from others, and academic competence. Based on previous literature, it was predicted that grandiose narcissism would be positively associated with competition instead of domains contingent upon interpersonal relationships or interactions. It was found that the self-esteem of vulnerable narcissists was positively associated with all tested domains except for competition. Additionally, grandiose narcissism was positively correlated with only the domain of competition. The associations found in this study suggest future research that explores self-esteem contingencies of specific domains pertaining to narcissistic subtypes. More specifically, how grandiose and vulnerable narcissists react to interpersonal situations and competitive scenarios. The differences and/or similarities to the various domains may better distinguish between narcissistic phenotypes. Further exploration into the links between conditional levels of self-worth and personality traits could provide insight into the perceptions and emotional reactions of narcissistic individuals. Understanding of these associations could not only help better conceptualize individual pathology, but potentially improve diagnostic criteria, advance treatments, and expand personality research.

In a study conducted by Zeigler-Hill and Besser (2013), the connections between the narcissistic traits included in the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979)

and the Pathological Narcissism Inventory (PNI; Pincus et al., 2009) with self-esteem were examined. In this study, participants were asked to complete measures of narcissism and self-esteem alongside of keeping a diary of daily experiences and state self-esteem. Researchers found differences between grandiose narcissism and vulnerable narcissism within average levels of self-esteem, reactions to daily events (positive or negative), and fluctuating state self-esteem. These results indicate that narcissists' feelings of self-worth are contingent on different experiences based on particular facets of narcissistic personality traits. For instance, those with high levels of vulnerable narcissism were especially responsive to positive events and interpersonal interactions, yet those who embraced stronger grandiose narcissistic personality traits were exceptionally reactive to negative events in general. Additionally, daily fluctuations in one's self-esteem was only associated within individuals whom displayed vulnerable narcissistic traits (Zeigler-Hill & Besser, 2013). Thus, future research should utilize measures that consider the multifaceted nature of the narcissistic personality when exploring differences in the phenotypic themes.

Emotional Reactivity

Emotional reactivity is broadly defined as reactions that occur within one or more systems of emotional responding following changes in the environment (Gratz et al. 2010). These responses can occur internally or externally and may have a positive or negative impact on the individual. These emotional reactions may provide researchers and clinicians with observable ways in which to differentiate the narcissistic subtypes. Previously, it was inaccurately conceptualized that narcissism could be separated into overt and covert subtypes based on behavioral expressions and emotional reactions (Pincus & Lukowitsky, 2010; Weikel, Avara, Hanson & Kater, 2010). Examples of overt expressions include behaviors and expressed

emotions or attitudes. In contrast, covert elements of expression are cognitions, motives, and needs (Pincus, 2013). Often, an incorrect assumption is made that overt expressions are solely associated with grandiose narcissism and covert expressions are only indicative of vulnerable narcissism. However, as research in narcissism has evolved and expanded it has become apparent that both narcissistic phenotypes oscillate between overt and covert behavioral expressions. The fluctuations in behavioral manifestations, attitudes, cognitions and motives that occur within each subtype suggests that using the terms grandiose and vulnerable better describes the facets of narcissism (Pincus & Lukowitsky, 2010).

Extensive research has supported that when grandiose narcissists experience or perceive potential threats to their achievements, they are likely to use explicit externalizing behaviors to react, such as the derogation or devaluation of others and/or physical aggression towards others (Besser & Priel, 2010; Besser & Zeigler-Hill, 2010; Twenge & Campbell, 2003). Through the implementation of antisocial behaviors, such as committing violent acts, the narcissist is able to gain a sense of admiration from others, which supports and boosts his inflated sense of self (Pincus & Lukowitsky, 2010). By demanding recognition of their entitlement and use of externalizing behaviors like aggressive tactics, individuals high in grandiose narcissism are able to dispute any perceived weaknesses or invalidations of their inflated self-views (Dickinson & Pincus, 2003). Furthermore these individuals may also implement internalizing behaviors in order to gain the recognition they "deserve." More specifically, grandiose narcissists may act empathetic and supportive of others, but will simultaneously harbor disgust and contempt for the vulnerable person. By providing the instrumental support, the grandiose narcissistic individual is using the situation to reinforce his or her self-view of specialness (as cited in Pincus & Lukowitsky, 2010). Additionally, when grandiose narcissists do not succeed, they react

confrontational and use externalizing behavior to blame others for their shortcomings to displace their failures (Twenge & Campbell, 2003). Pincus and Lukowitsky (2010) suggest that these aggressive behaviors displayed by grandiose narcissists in ego threatening situations are the result of their inability to regulate their emotions.

On the contrary, vulnerable narcissistic individuals who require interpersonal interactions to modulate self-perception experience great distress during interpersonal separation, not achievement situations (Besser & Priel, 2010). In other words, vulnerable narcissism is associated with internalizing actions, such as anxiety and shame, when their inflated self-beliefs are threatened. Although vulnerable narcissistic individuals are capable of aggression and rage to regulate their self-esteem, they are more likely to be overcome with shame, feelings of inadequacy, anxiety, or depression when engaging in their grandiose fantasies or when the environment contradicts their high self-views (Pincus & Lukowitsky, 2010). Although these vulnerable individuals need interpersonal relationships to maintain their inflated sense of self, they are likely to evade relationships in order to avoid rejection and criticism (Pincus & Lukowitsky, 2010). The oscillation between feelings of inferiority and grandiosity hinders the individual's ability to regulate his or her emotions, which results in intense shame. While both grandiose and vulnerable narcissists are susceptible to ego-threats, the perception and behavioral reaction to the threat differs contextually based on the current, predominant narcissistic subtype.

Twenge and Campbell (2003) believed that threatened egotism was linked to aggression based on previous empirical research. In various studies, associations between aggressive reactions, heightened emotional reactivity, and narcissism has been established (Twenge & Campbell, 2003; Gratz, Rosenthal, Tull, Lejuez & Gunderson, 2010; Besser & Zeigler-Hill, 2010). Additionally, social rejection has also been linked to maladaptive and aggressive

behaviors (Ayduk, Gyurak & Luerssen, 2008). For this reason, researchers theorized that individual differences, such as levels of narcissistic behaviors, moderated how aggressively people respond to interpersonal rejection. Across four studies, narcissists were found to respond more aggressively after experiencing social rejection than their non-narcissistic counterparts (Twenge & Campbell, 2003). Reactivity to social rejection was investigated through retrospective self-reports, laboratory manipulation, direct aggression, and displaced aggression. Overall, narcissism was highly associated with aggression after experiencing social rejection, but not after an experience of social acceptance (Twenge & Campbell, 2003). These studies indicated that there may be individual differences in emotional and behavioral reactions to social rejection.

Besser and Priel (2010) made remarkable strides in distinguishing between the subtypes of narcissism when faced with perceived achievement failure and interpersonal rejection. Although both forms of narcissism require external validation, self-esteem of vulnerable narcissistic individuals is dependent on approval of others. Alternatively, grandiose narcissists value the level of competition to maintain and enhance self-esteem. This being said, Besser and Priel (2010) used interpersonal and achievement scenarios to induce perceived ego threats in narcissists. Based on previous literature, vulnerable and grandiose narcissists should have strong reactions to the threatening interpersonal and achievement situations, respectively. Grandiose narcissistic individuals respond more negatively to achievement failures because it reflects personal deficits and challenges their high self-views. Additionally, grandiose individuals are likely to blame others for their inadequacies and inferiorities in interpersonal situations. Blaming others is a form of social downward comparison, which is one of the many self-esteem regulation strategies grandiose narcissists will use to regain their high self-view. Vulnerable narcissists,

however, rely on interpersonal feedback and are more aware of social inclusion and rejection cues. In order to regulate self-esteem, vulnerable narcissists rely on external feedback, and when this strategy for boosting esteem is unavailable, they experience feelings of shame and inferiority. Yet, reactions of vulnerable narcissists to achievement failure scenarios was lacking in literature up to this point (Besser & Priel, 2010).

Associations between hypothetical scenarios and negative emotional reactions were examined and found in both narcissistic subtypes. Through the use of the PNI subscales, vulnerable narcissistic individuals displayed a global need for social acceptance to regulate self-esteem. On the contrary, associations between grandiose narcissists and NPI subscales revealed negative emotional reactions to high levels achievement failure, but not to the interpersonal scenarios. These associations show that both narcissistic phenotypes are sensitive to threat; however, emotional reactions are dependent upon specific domains (Besser & Priel, 2010). Furthermore, vulnerable and grandiose narcissists were exposed to both high- and low-levels of interpersonal and achievement threats. While vulnerable narcissists were sensitive to both conditions of interpersonal rejection, grandiose narcissists were only receptive to the high threat conditions. These results indicate domain-specific differences between narcissistic subtypes and reactions, which emphasizes the need to continue research in this area.

Emotion Dysregulation

Emotion dysregulation is considered to be a central defining feature of Cluster B personality disorders that is broadly and inconsistently defined (American Psychiatric Association, 2013). For the purpose of this experiment, it is necessary to specify the definition on which this study is based and to differentiate emotion dysregulation from emotional reactivity. Gratz and Roemer (2004) outlined emotion regulation as a multifaceted construct that

involves: a) understanding and acceptance of emotions, b) the capability of controlling behaviors when experiencing negative events, and c) the ability to flexibly use strategies to modify emotional responses to meet desired goals. Therefore, emotion dysregulation can be conceptualized as a lack of awareness and understanding of one's emotions, an inability to control behaviors in negative contexts, a reluctance to engage in goal-directed behavior when distressed, and difficulty with modulating emotional arousal (Gratz, Tull, Matusiewicz, Breetz, & Lejuez, 2013; Gratz & Roemer, 2004).

An additional neuropsychological construct thought to impact emotion regulation is executive functioning (Suchy, 2009). According to Suchy (2009), the concept of executive functioning suggests that higher-order neurocognitive processes determine how certain organisms, such as humans, engage in goal-directed behavior and make choices. Executive functioning is thought to be extremely effortful and controlled by the prefrontal cortex and numerous other brain areas. Although discussing the neurological processes linked to executive functioning are beyond the scope of this study, the behaviors and emotions impacted by executive functioning are noteworthy. Impairments in executive functioning have been associated with various types of psychopathology, such as antisocial and borderline personality disorders (LeGris & van Reekum, 2006; Suchy, 2009). Performance of complex skills controlled by executive functioning, such as problem solving, reasoning, and judgment are responses in which research participants and/or patients can be easily observed (Suchy, 2009). Additionally, Suchy (2009) suggests that self-regulation, attentional control, and emotional regulation are a few psychological constructs that rely on executive functioning. In order to empirically assess the processes and skills impacted by executive functioning, clinical measures such as the Stroop color and word test have been utilized (LeGris & van Reekum, 2006; Suchy, 2009).

Despite emotion dysregulation theoretically being a core feature of borderline personality disorder (BPD), relatively few studies have examined emotion dysregulation within the BPD population or other personality disorders. As noted in Dickinson and Pincus (2003), the vulnerable narcissistic phenotype has been given countless labels as research has evolved such as, hypersensitive narcissist, closet narcissist, and covert narcissist. Due to experiencing invalidation of one's entitled expectations, the vulnerable narcissistic individual will fluctuate between feelings of shame, depression, and anger, which could be interpreted as emotional lability (Dickinson & Pincus, 2003). Additionally, social withdrawal and depression are promoted after experiencing disappointment or invalidation of their entitled expectations. The hypersensitive nature of an individual with high levels of vulnerable narcissism may lack understanding of their oscillating emotions, which contributes to an inability to control the behaviors like social avoidance or aggressive outbursts that are attributed to feelings of shame and anger. In order to provide support of difficulties in emotion regulation in individuals with varying personality pathology, future research in emotion dysregulation should be extended to other Cluster B disorders, like narcissism.

A majority of the studies that do focus on emotion regulation have examined emotional distress intolerance and anxiety (Szasz, Szentagotai, & Hofmann, 2011). Behavioral measures and persistence tasks have been used in combination with self-report measures within multiple clinical and subclinical populations in order to explore the interactions between cognitions and behaviors (Baumeister, Bratslavasky, Muraven, & Tice, 1998; McHugh, Daughters, Lejuez, Murray, Hearon, Gorka, & Otto, 2011; Szasz et al., 2011). After conducting a review of variance amongst measures in distress intolerance studies, McHugh and colleagues (2011) concluded that self-report assessments were highly correlated, and behavioral measures were too;

yet, a lack of significant associations between the measures were found. Thus, further research should utilize both types of measures to form a comprehensive conceptualization of emotion dysregulation to improve clinical applications.

In a study conducted by Gratz and colleagues (2009) the differences between outpatients with BPD and participants without a personality disorder were examined in two facets of emotion dysregulation. An experimental investigation of distress tolerance was used to explore an individual's unwillingness to experience emotional distress when partaking in goal-directed behavior and difficulties with engaging in goal-directed behavior when distressed (Gratz et al., 2009). To assess these aspects of emotion dysregulation, several self-report measures were completed prior to the experiment, including the DERS. In addition, a laboratory stressor was used to induce anger, irritability, frustration, and anxiety. Immediately after the final level of the stressor task, participants were provided with negative performance feedback, and then asked to solve anagrams as a measure of willingness to engage in goal-directed behavior when distressed (Gratz et al., 2009). A post-experiment self-report measure was used to assess participants' level of distress.

Findings supported the notion that BPD participants were significantly less willing to experience stress than non-BPD participants. However, results did not support the hypothesis that BPD participants actually experienced more difficulty engaging in goal-directed behavior when distressed. Rather, BPD participants were also less willing to approach situations that could potentially create distress, which indicated a perception of more difficulty engaging in goal-directed tasks. Years earlier, similar findings were reported by Baumeister and colleagues (1998) with reference to ego depletion and its maladaptive effects on performance. Moreover, when participants were instructed to refrain from expressing emotion while watching

emotionally evocative film clips, subsequent anagram performance was impaired. This suggests that suppressing one's emotions or not adequately experiencing them can hinder performance. Difficulty modulating emotions and controlling behaviors are essential features of emotion dysregulation, which is a main aspect of many psychological disorders, particularly Cluster B and C personality disorders (Gratz et al., 2009). For this reason, future research should explore emotional unwillingness and dysregulation in individuals who exhibit symptoms of other personality disorders, such as narcissistic personality disorder.

Emotional reactivity has been emphasized throughout personality literature; however, exploration of delayed recovery to baseline and one's ability to regulate emotion is relatively limited (Gratz et al., 2010). More specifically, emotion- and context-specific reactivity research associated with emotion regulation and the BPD population lacks support. Gratz and colleagues (2010) examined the impact of specific stressors to not only emotion reactivity, but delayed emotional recovery in BPD participants. In comparison to participants whom did not meet criteria for BPD, the BPD participants were expected to display heightened reactivity to negative evaluation. Due to their heightened affect, it was hypothesized that BPD participants would report higher levels of shame after receiving negative evaluation, but not a general stressor. Participants used self-report measures to report the intensity of their emotional responses to a laboratory stressor task used to induce feelings such as frustration, irritability, and anxiety (Gratz et al., 2010). Immediately following the stressor task, participants were provided with negative feedback on their performance, asked to rate their current emotional state, and then provided with a timed goal-oriented behavioral measurement of distress intolerance.

The results indicated that rather than a heightened, generalized emotional response, BPD participants were more highly reactive to a particular context. This evidence suggests that BPD

participants reported increased levels of shame in response to the negative evaluation compared to the non-BPD participants. By initially having an elevated emotional state, it was more difficult for the BPD participants to return to baseline levels of shame after receiving negative feedback. It is suggested that this effect was found due to the magnitude of their emotional response, not necessarily a preservation of elevated emotional arousal (Gratz et al., 2010). Future studies need to explore if context- and emotion-specific reactivity can be generalized to other personality disorder or if it is only related to BPD. More specifically, due to the empirical literature that supports intense emotion reactivity and shame found in the phenotypes of narcissism, this type of research should be extended to the NPD and subclinical narcissism populations.

Physiological Arousal

As research in emotional reactivity and emotion dysregulation continues to evolve, self-report measures are abundantly used, but are considered a limitation due to their subjective nature (Gratz et al., 2013; Rosenthal, Gratz, Kosson, Cheavens, Lejuez, & Lynch, 2008; Sloan 2004). As previously described, emotions are considered to be multifaceted processes that guide social, behavioral, and cognitive functioning (Appelhans & Luecken, 2006). Emotional responses are composed of multiple components including behaviors, personal perceptions, and cognitions. However, self-report measures only evaluate an individual's perception and subjective experience (Rosenthal et al., 2008). In recent years, a growing body of research has shown support for a link between psychophysiological measurements and emotional responses.

Amongst a multitude of measurements, electrodermal response (EDR) has steadily been implemented in studies regarding individual differences with emotion. Also referred to as skin conductance response, galvanic skin response or skin resistance, EDR has been implemented in

numerous psychophysiological studies (Rosenthal et al., 2008). Similar to other assessments, EDR does not come without criticisms. Rosenthal and colleagues (2008) highlight in their review of research on BPD and emotional responding the inability to specifically pinpoint EDR with emotion and sympathetic stimulation. However, post behavioral and self-report measures can strengthen associations between EDR and emotional responses.

Although criticisms exist, other studies have found significant success through the use of physiological assessment with self-report and behavioral measures (Crider, 2008; Isen, Iacono, Malone, & McGue, 2012; Kelsey, Ornduff, Reiff, & Arthur, 2002). Crider (2008) calls attention to consistent empirical evidence in his interpretive review of an inverse relationship between emotional responses and antagonistic and agreeable behavior. EDR lability is a psychophysiological trait that reflects an individual's stability, or lack thereof, to control EDR (Crider, 2008). Research suggests individuals with greater EDR lability display the capability to inhibit antagonistic behavior and are associated with relatively agreeable dispositions. On the other hand, those with greater EDR stability are less skilled at using cognitive resources to control those impulses, which is associated with overt, externalizing behaviors (Crider, 2008). With regard to personality characteristics, Crider suggests that EDR lability is associated with facets of agreeableness, extraversion, and neuroticism. Through exploring the psychophysiological responses to stress in populations with these personality traits, relationships between health, emotional reactivity, and emotion regulation have been found (Gratz et al., 2013; Isen et al., 2012; Kelsey et al., 2002).

An important component in emotion research is effective laboratory paradigms in which psychological stress is induced and psychometrically sound measures are implemented. In order to elicit high levels of stress, laboratory stressor tasks are used to simultaneously create

cognitive, emotional, acoustic, and motivational distress. Studies investigating distress intolerance through a combination of self-report and physiological arousal assessments have found that stress rating levels were significantly higher following stress induction (Reinhardt et al., 2012). Specifically, Reinhardt and colleagues (2012) evaluated the changes in participants' subjective stress ratings, electrodermal activity, and other physiological responses before, during, and after stress induction. This study found that during stress induction the mean peak number of skin fluctuation responses per minute significantly increased from baseline, which yielded a large effect, as measured by skin conductance level and numbers of skin fluctuations per minute. Furthermore, all participants reported a significant increase in level of distress following the stress induction. Although this study did not investigate emotional states associated with stress responses, the significant increases found in both subjective and objective measurements warrants additional laboratory research using this combination of measurements in future experiments exploring emotional states.

Currently, a growing body of research is exploring factors of affect intensity and reactivity to emotion-eliciting stimuli to gain more insight into emotion dysregulation in individuals with narcissistic traits. For example, Kelsey and colleagues (2002) explored the psychophysiological correlates of narcissistic characteristics in women during active coping. Researchers explored the associations of the two dimensional phenotypes of narcissism with physiological response, task performance, and stress. Analyses supported relationships linking overt/inflated narcissism to electrodermal hyperreactivity and covert/deflated narcissism to electrodermal hyporeactivity across tasks (Kelsey et al., 2002). According to Kelsey and associates (2002) the diminished behavioral inhibition or lack of ability to control arousal could contribute to narcissistic features such as aggression and impulsivity. Additionally, insufficient

abilities to respond physiologically to stress has been associated with psychological disorders that struggle with emotion regulation, like borderline personality disorder and depression (as cited in Kelsey et al., 2002). The differences in physiological responses to stress and behavioral task performance depicted in this study support the manifestation of dimensional narcissistic phenotypes.

Conceptualizing psychopathology that exhibits externalizing behaviors is a complex, multi-faceted task. Strictly exploring self-report measures or solely behavioral assessments may not provide sufficient support or information for advances in psychopathology literature. For these reasons, researchers implement a combination of assessments in order to support their hypotheses and strengthen potential findings. Isen and associates (2012) examined the electrodermal hyporeactivity of twins that exhibited externalizing behaviors, such as aggression and delinquent behavior. Participants focused their attention on a habituation paradigm involving a sequence of tones and instructed to ignore distracting sounds. Throughout the duration of the experiment, electrodermal activity was recorded along with the collection of information regarding lifetime behavioral disinhibition. Specifically, changes in skin conductance was measured by several parameters: latency, rise time, and skin conductance response (SCR) amplitude (Isen et al., 2012). For latency, experimenters measured the time for a physiological response to start. The rise time was measured between the response start and response peak; therefore, experimenters marked each time the response peak changed from a positive to negative slope, and vice versa. Additionally, SCR amplitude was the difference in skin conductance (measured in microsiemens) from response peak and response onset measured across all trials (Isen et al., 2012). Results indicated a significant inverse association between electrodermal response level and externalizing lability, which supported the notion that reduced

EDR may be an underlying psychophysiological process of externalizing behaviors, like aggression (Isen et al., 2012). However, one limitation to this study was failure to examine psychopathology that exhibits nonexternalizing behaviors, which could have accounted for participants who exhibited accelerated rates of habituation in electrodermal reactivity (Isen et al., 2012).

In line with adding to emotion dysregulation research, Kuo and Linehan (2009) compared BPD individuals to individuals with generalized social anxiety disorder (SAD) and normal controls (NC) to investigate differences in affective responses to standardized emotionally evocative film clips and personally relevant recorded scripts. In order to explore associations between perceived emotional responses and physiological reactions, participants completed self-report assessments, such as the Difficulties in Emotion Regulation Scale (DERS), along with being physiologically monitored throughout the study. Skin conductance response was measured through an EDA computer program that calculated the number of fluctuations that were above .05 microsiemens across 1 minute periods of time (Kuo & Linehan, 2009). It was hypothesized that BPD participants would have heightened physiological baselines compared to the SAD and NC groups. Furthermore, Kuo and Linehan (2009) expected that after experiencing the emotion-eliciting tasks the BPD individuals would also demonstrate a greater emotional reactivity through physiological and self-report measures compared to the SAD and NC groups. After the initial baseline, participants were assigned to either the personally relevant or standardized emotionally evocative conditions. A 5 minute baseline period followed each emotion induction prior to being exposed to the next condition. Respiratory sinus arrhythmia and skin conductance response were collected throughout the entirety of the study.

Findings of this study indicated that BPD individuals have a biological vulnerability to emotion dysregulation based on their physiological responses in comparison to SAD and control participants. Specifically, in comparison to the other two groups, BPD participants displayed high baseline negative emotional intensity on self-report measures and through high baseline EDR (Kuo & Linehan, 2009). Results suggest that because BPD participants were not significantly more reactive during baseline or after emotion induction compared to SAD and control participants they may initially have higher emotional states. The intensity of negative emotions and difficulties with emotion regulation are likely associated with the high physiological baselines. Future research using self-report and physiological measurements is essential within populations that experience emotion regulation difficulties along with individuals with high emotional reactivity to evocative stimuli.

Present Study

As a result of previous empirical findings, the present study sought to examine how the differences between participants with high and low levels of grandiose narcissism and vulnerable narcissism vary in their emotional responses. Specifically, how these narcissistic phenotypes responded to negative events and how quickly they returned to an affective baseline. The main objective of this study was to further explore the narcissistic spectrum with regard to context-specific situations. This proposition was based on previous research that found contingencies in self-worth (Zeigler-Hill et al., 2008) and emotional reaction (Besser & Priel, 2010) within the phenotypic themes of narcissism. It was hypothesized that individuals with high levels of narcissistic traits would have a stronger subjective and objective emotional reactions to stimuli compared to participants with low levels of narcissistic traits. Meaning, not only would these participants report more negative responses to ego-threatening stimuli, but would also have

heightened physiological responses. This was measured through utilization of self-report assessments and tracking electrodermal activity.

Furthermore, Besser and Priel (2010) found that different narcissism phenotypes were more emotionally reactive to different threatening situations. Through the utilizing variations of their high-level ego-threatening vignettes, similar findings were expected. Such that, participants with high levels of vulnerable narcissism were suspected to subjectively and objectively be more responsive to interpersonal threats (i.e., humiliation or betrayal) than those with high levels grandiose narcissistic traits or low levels of narcissism. On the other hand, participants with high levels of grandiose narcissistic traits were expected to be more subjectively and objectively responsive to achievement threats (i.e., competition failure) than participants with high levels of vulnerable narcissistic traits or low levels of narcissistic traits.

A second objective of this study was to investigate individual differences in emotional regulation within the narcissistic phenotypes. Previous research has explored emotion dysregulation in participants with borderline personality disorder (Gratz et al., 2009; Gratz et al., 2010; Gratz et al., 2013); however, emotion dysregulation research is lacking in other Cluster B personality disorders. The purpose of investigating emotion regulation difficulties in narcissism was to shed light on the similarities and differences between borderline personality disorder and the phenotypes of narcissism—specifically, vulnerable narcissism. Similar to individuals with borderline personality disorder, it was hypothesized that those individuals with higher vulnerable narcissistic characteristics would have more difficulty with affective self-regulation compared to those with grandiose narcissism. In other words, participants with high levels of vulnerable narcissistic traits would be less willing to experience distress and perform poorer on a behavioral persistence task than participants with high levels of grandiose narcissism or low levels of

narcissism. It was expected that individuals with high levels of grandiose narcissism would also display difficulty regulating emotions compared to individuals who expressed low levels of narcissism, but not compared to those with high vulnerable narcissism. Difficulties with emotion regulation was assessed through subjective self-report assessments, self-rating scales, and a behavioral persistence task.

Method

Participants

Participants in the present study comprised a total of 63 students enrolled in the Introductory Psychology courses at the University of South Carolina-Aiken, ranging in age from 18 to 25 years (M=19.08, SD=1.61). The sample was racially/ethnically diverse, including participants who self-identified as White (n=32), Black or African American (n=26), Hispanic or Latino (n=4), and Asian/Pacific Islander (n=1). Table 1 includes all of the participants' self-reported demographic information (e.g., gender, years of education, relationship status, etc.) and Table 2 includes the descriptive statistics of each instrument included in the present study. Upon entering the laboratory room and following the informed consent process, each participant completed a demographics questionnaire in paper-pencil format and the remaining questionnaires, vignettes, and behavioral persistence tasks were completed on the computer. All participants were awarded for their voluntary participation with course credit.

Measures

Demographic Questionnaire (see Appendix A). A questionnaire was developed in order to gather important demographic information about each participant (i.e., gender, age, years of education, current relationship status, etc.). Demographic information was assessed through forced-choice response options.

The Pathological Narcissism Inventory (PNI; Pincus et al., 2009; see Appendix B). The PNI is a 52-item multidimensional self-report measure that assesses facets of narcissistic grandiosity and narcissistic vulnerability through seven subscales (Pincus, 2013; Pincus & Lukowitsky, 2010). Responses are made on scales ranging from 0 ("*not at all like me*") to 5 ("*very much like me*"). The PNI measures seven dimensions of pathological narcissism: Exploitativeness (EXP; e.g., "I can usually talk my way out of anything"), Grandiose Fantasy (GF; e.g., "I often fantasize about being admired and respected"), Self-Sacrificing Self-Enhancement (SSSE; e.g., "I can make myself feel good by caring for others"), Contingent Self-Esteem (CSE; e.g., "My self-esteem fluctuates a lot"), Hiding the Self (HS; e.g., "I hate asking for help"), Devaluing (DEV; e.g., "Sometimes I avoid people because I'm concerned that they'll disappoint me"), and Entitlement Rage (ER; e.g., "I get mad when people don't notice all that I do for them"). These dimensions of narcissism create scores for the two broader forms of grandiose narcissism (EXP, GF, SSE) and vulnerable narcissism (CSE, HS, DEV, ER). The PNI is negatively associated with self-esteem and empathy and positively associated with shame, aggression, and interpersonal distress. Cronbach's α values for the seven subscales intercorrelations range from .78 to .93 (Pincus et al., 2009). Consistent with previous studies, the reliability estimates for the present study were acceptable for the following subscales: Pathological Narcissism (α=.94), Grandiosity (α=.82), and Vulnerability (α=.93).

Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004; see Appendix C). The DERS is a 36-item self-report measure that assesses an individual's typical levels of emotion dysregulation across six domains: Nonacceptance of Emotional Responses (NONACCEPTANCE), Difficulties Engaging in Goal-Directed Behavior (GOALS), Impulse Control Difficulties (IMPULSE), Lack of Emotional Awareness (AWARENESS), Limited

Access to Emotion Regulation Strategies (STRATEGIES), and Lack of Emotional Clarity (CLARITY). The DERS has high internal consistency (α = .93) and has adequate construct and predictive validity. Overall, the DERS has good test-retest reliability and the subscales have adequate test-retest reliability (Gratz & Roemer, 2004). The supported that the reliability for the DERS (α=.92) was acceptable and consistent with previous studies.

Positive And Negative Affect Schedule (PANAS; Watson, Clark, & Tellegan, 1988; see Appendix D). The PANAS is a widely used 20-item self-report measure comprised of two mood scales: positive affect (PA) and negative affect (NA). To indicate the extent to which a participant has felt a certain way, each item is rated on a scale ranging from 1 ("*very slightly or not at all"*) to 5 ("*extremely"*). The PA and NA scales can be used to measure affect for the present moment, today, the past few days, the past week, the past few weeks, the past year, and generally (Watson et al., 1988). The correlation between the PA and NA scales is invariably low, which indicates independence. The 10-item scales have excellent convergent and discriminant correlations with other measures that assess mood factors such as distress and psychopathology. The scale developers reported Cronbach's alpha coefficients for the various time periods ranging from .86 to .90 for the PA and .84 to .87 for the NA (Watson et al., 1988). The current study supported the reliability of the PA (α=.86) and NA (α=.86) mood scales.

Emotion-eliciting stimuli. For the induced high-level threat of interpersonal rejection and achievement failure, variations of the scenarios validated by Besser and Priel (2010) were used. Prior to reading the interpersonal rejection scenarios, participants were instructed to "Please think of a serious committed romantic relationship that you currently have, have had in the past, or would like to have in the future." The participants were then asked to imagine the provided interpersonal scenario. Prior to reading the achievement failure threat, participants were

instructed to "Please think of a serious long-term job that you currently have, have had in the past, or would like to have in the future." Again, participants were then asked to imagine the provided scenario (for the two scenarios, see Appendix E).

Behavioral measure of emotion regulation: Stroop. This is a commonly used performance measure of attention, impulsivity, and self-control. The Stroop measures an individual's ability to readily shift his or her attention and suppress a habitual or previously instructed response (LeGris & van Reekum, 2006; Job, Dweck, & Walton, 2010). Color words (*red, green, yellow,* and *blue)* appeared on a computer screen in an ink color that was either consistent or inconsistent with the color word presented. Each participant's accuracy and response latency was recorded before exposure to the emotion-eliciting stimuli and after exposure in order to measure behavioral performance.

Physiological Measures: Electrodermal Response (EDR). Electrodermal activity was measured to assess sympathetic responses. The physiological data was collected using a BIOPAC 5-channel data acquisition system, similar to that used by Kuo and Linehan (2009). Data was collected using bipolar electrodes placed on one of the participant's palms. A 2 minute baseline measure of electrodermal activity was obtained prior to exposure to emotion-eliciting stimuli or behavioral measurement. During exposure to emotion-eliciting stimuli, emotional reactivity was measured by the mean EDR amplitude or peak (Isen et al., 2012). Specifically, after reading the first set of vignettes the EDR amplitude was marked. The EDR peak was again marked after reading the second set of vignettes. As implemented by Isen and colleagues (2012), the average response amplitude is the mean amplitude across all responses during contact with emotion-eliciting stimuli. It is important to note that EDA was measured in delta (change from

the origin, 0, either positively or negatively). The mean EDR amplitude was calculated and used as the dependent variable in multiple linear regressions regarding objective emotional reactivity.

Procedure

Prior to the implementation of the study, a pilot study of 8 volunteers was conducted in order to adjust physiological measures. This helped to designate physiological time markers and choose an appropriate behavioral measure of emotion regulation. During the pilot study, the experimenter determined it was fitting to collect physiological data during a 2 minute physiological baseline period before the experiment.

After a pilot study was conducted and appropriate time durations for the physiological measures were determined, participants were recruited for the present study through undergraduate psychology classes at the University of South Carolina-Aiken. All participants were assessed individually for validity purposes. Prior to beginning the study, individuals were asked to read and sign an informed consent form which indicated that they will be participating in a study investigating individual differences and emotional reactions. This form provided information to participants about the nature of the study, important contact information, participant rights, and important confidentiality information. Participants were asked to read the informed consent form and sign the statement of consent, stating that their participation in the study was voluntary and they understood the nature of confidentiality. All participants were offered a copy of the informed consent document for their own records.

Following the informed consent process, all participants completed a brief demographic questionnaire and then were hooked up to the BIOPAC recording device to record the participant's electrodermal activity (EDA). Next, the experimenter instructed the participant to move as little as possible and await further instructions. Prior to beginning the experiment, the

researcher made sure the device was accurately receiving physiological feedback. Once the experimenter was sure that the participant's EDA was being accurately recorded, the participant's baseline physiological level was documented.

After collecting a baseline physiological level, participants were presented the behavioral persistence task, remaining questionnaires, and vignettes through the E-Prime 2.0 software. This is a suite of applications used to create and direct computerized experiments, collect data, and analysis. Prior to the experimental block, participants completed three practice blocks of the Stroop task. Participants completed a cycle with 10 samples in which the ink color and presented words were consistent or matching. Next, participants completed a color inconsistent block where they were presented with 20 total samples and instructed to either press the color key that corresponds to the word color or to the ink color. The final practice block instructed participants to press the key that matched the ink color; however, if the word was presented inside a box, then participants were to press the key that matched the word and not the ink color. This practice block consisted of 40 switching samples. The experimental portion of the Stroop task provided participants with the same instructions as the switching practice block. Participants were provided with 140 samples, which lasted approximately 6 minutes.

Following the first Stroop task, participants completed following self-report measures on the computer: the Pathological Narcissism Inventory (PNI; Pincus et al., 2009), the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), and the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Following completion of self-report measures, each participant read 6 emotion-eliciting scenarios (3 interpersonal rejection scenarios and 3 achievement failure scenarios). Participants were randomly assigned to which set of 3 vignettes they read first; however, all participants read every interpersonal rejection and achievement

failure scenario. The participant received instructions to read each vignette and imagine the provided scenario. Immediately after reading the first set of vignettes, participants were asked to complete the PANAS as a self-rating scale of emotions. Participants completed the PANAS again after reading the second set of emotion-eliciting vignettes. Next, the participants completed the Stroop color and word test for a second time. After this time period elapsed, the experimenter then removed all recording devices from the participant and debriefed the individual.

Results

Descriptive Statistics

The means and standard deviations for each scale are presented in Table 2. As expected (Pincus et al., 2009), scores on the PNI Grandiosity subscale (M=2.88, SD=.68) correlated positively with scores on the PNI Vulnerability subscale (M=2.45, SD=1.11), r=.56, p=.000. Grandiosity was also positively correlated with the PNI Pathological Narcissism subscale (M=2.67, SD=.80), r=.82, p=.000. Additionally, Vulnerability and Pathological Narcissism were correlated positively, r=.94, p=.000. Positive affect scores on the PANAS showed some variance at baseline (M=31.60, SD=7.76), post achievement failure threat (M=29.85, SD=8.48), and post interpersonal rejection threat (M=28.89, SD=8.34). Negative affect scores on the PANAS were comparable at baseline (M=19.09, SD=6.93), post achievement failure threat (M=19.96, SD=7.51), and post interpersonal rejection threat (M=20.96, SD=8.17). The DERS Total score also varied between participants (M=82.53, SD=21.16), with higher scores indicating greater difficulty with regulating emotions.

Relationships to Narcissism

It was predicted that high levels of self-reported narcissism would be positively correlated with a heightened emotional reaction to a threatening stimulus. To test this assumption, Pearson's *r* correlation analyses were utilized to examine the interrelationships between phenotypes of narcissism, level of pathological narcissism, and self-reported negative affect after reading achievement failure and interpersonal rejection vignettes (see Table 4). Results provided partial support for this hypothesis, denoting a positive correlation between vulnerable narcissism and negative affect following an interpersonal rejection threat, r=.76, p=.038. A positive correlation was also found between vulnerable narcissism and negative affect following an achievement failure threat, r=.37, p=.005. In addition, a positive relationship was found between pathological narcissism and negative affect following an achievement threat, r=.34, p=.010, suggesting those who reported higher levels of pathological narcissism endorsed higher negative feelings following reading an achievement failure scenario. However, no relationship was found between grandiose narcissism and negative affect following an achievement failure threat, r=.20, *n.s.*, or an interpersonal rejection threat, r=.16, *n.s.*

Furthermore, it was posited that higher levels of narcissistic characteristics would be positively correlated with a heightened physiological reaction to a threatening stimulus. The physiological data required pre-processing steps before statistical analysis was possible. Specifically, the mean level of each physiological variable was computed for each data-collection event. The mean amplitude was calculated for the baseline period, the time during the 3 achievement failure scenarios, and the period during the 3 interpersonal rejection scenarios. Pearson's *r* correlation analyses were used to explore the interrelationships between phenotypes of narcissism and mean electrodermal amplitude while readying achievement failure and

interpersonal rejection scenarios. Results did not indicate relationships between Grandiosity and baseline EDA, *r*=-.08, *n.s.*, EDA during an achievement failure threat, *r*=-.11, *n.s.,* or EDA during an interpersonal rejection threat, *r*=--.16, *n.s*. Furthermore, results indicated no relationship between Vulnerability and baseline EDA, *r*=.01, *n.s.*, EDA during an achievement failure threat, *r*=-.18, *n.s.,* or EDA during an interpersonal rejection threat, *r*=-.14, *n.s*.

Narcissism and Emotional Reactivity

In regard to the differences in negative affect, two separate paired samples *t*-tests were conducted using the PANAS baseline negative affect score as the independent variable and the PANAS negative affect score post achievement failure threat and PANAS negative affect score post interpersonal rejection threat as the dependent variables. The results did not yield a significant difference between the PANAS baseline negative affect (M=19.09, SD=6.93) and the PANAS negative affect score post achievement failure threat (M=19.96, SD=7.51) scores; *t*(54)=-1.18, *n.*s (see Table 5). For the second independent samples *t*-test, the results yielded a significant difference between the PANAS baseline negative affect (M=19.09, SD=6.93) and the PANAS negative affect score post interpersonal rejection threat (M=20.96, SD=8.17) scores; *t*(54)=-2.03, p=.047 (see Table 6).

A series of separate multiple linear regressions analyses were utilized to explore the predictive power of narcissistic characteristics on subjective and objective emotional reactivity. It was expected that participants with high levels of a certain narcissistic characteristic would be more subjectively and objectively responsive to specific emotion-eliciting stimuli. More specifically, it was posited that individuals with higher levels of vulnerable narcissism would be more emotionally reactive to interpersonal rejection scenarios and those with higher grandiose narcissism scores would be more emotionally reactive to achievement failure conditions. For the

self-report of negative affect (NA), two multiple regression analyses were run; one to test the self-reported PANAS NA post achievement failure threat (see Table 7) and the other to test the PANAS NA score post interpersonal rejection threat (see Table 8). For each regression analysis, the predictor variables included the Pathological Narcissism Inventory (PNI) Vulnerability subscale, PNI Grandiosity subscale, and their PANAS baseline NA score.

The first multiple linear regression was used to determine if any of the predictor variables accurately predicted the PANAS NA score post achievement threat. Model 1, which included PANAS baseline NA scores (β=0.712, p=.000), accounted for 51% of the variance. Model 2 included the Grandiosity and Vulnerability subscales from the PNI. The R^2 from the analysis was .51, accounting for 0.6% of the variance from Model 1 indicating neither Grandiosity (β=-.004, *n.s.*) or Vulnerability (β=-.098, *n.s.*) were significant predictors of NA post achievement failure threat.

The second multiple regression was used to determine if any of the variables predicted the PANAS NA score post interpersonal threat. Factors included in this analysis include PANAS baseline NA score, Vulnerability score from the PNI, and Grandiosity score from the PNI. Model 1, which included PANAS baseline NA scores (β=0.60, p=.000), accounted for 36% of the variance. Model 2 included the Grandiosity and Vulnerability subscales from the PNI. The R^2 from the analysis was .37, accounting for 1.2% of the variance from Model 1 suggesting neither Grandiosity (β=-.007, *n.s.*) or Vulnerability (β=-.141, *n.s.*) were significant predictors of NA post interpersonal rejection threat.

To further explore narcissistic characteristics and emotional reactivity, it was expected that participants with high levels of a certain narcissistic traits would be more physiologically responsive to specific emotion-eliciting stimuli. More specifically, it was posited that

individuals with higher levels of grandiose narcissism would be more physiologically reactive to achievement failure scenarios (see Table 9) and those with higher vulnerable narcissism scores would be more physiologically reactive to interpersonal rejection conditions (see Table 10). Physiological means and standard deviations for pre-threat baseline (M=0.44, SD=.52), the average physiological reactivity during the achievement failure condition (M=.16, SD=.20), and the average physiological reactivity during the interpersonal rejection condition (M=.19, SD=.27) are reported in Table 3. Two multiple regression analyses were run; one to test the mean electrodermal activity (EDA) amplitude during the achievement failure threats and the other to test the mean electrodermal activity (EDA) amplitude during interpersonal rejection threats. For each regression analysis, the predictor variables included the Pathological Narcissism Inventory (PNI) Vulnerability subscale, PNI Grandiosity subscale, and their baseline mean EDA amplitude.

The first multiple linear regression was used to determine if any of the predictor variables accurately predicted the mean EDA amplitude during the achievement threat. Model 1, which included individuals' baseline mean EDA amplitude (β=0.551, p=.000), accounted for 30% of the variance. Model 2 included the Grandiosity and Vulnerability subscales from the PNI. The R^2 from the analysis was .34, accounting for 3.8% of the variance from Model 1 indicating neither Grandiosity (β=.052, *n.s.*) or Vulnerability (β=-.219, *n.s.*) were significant predictors of EDA during the achievement failure threat.

The second multiple linear regression was used to determine if any of the predictor variables accurately predicted the mean EDA amplitude during the interpersonal rejection threat. Model 1, which included individuals' baseline mean EDA amplitude (β=0.40, p=.000), accounted for 16% of the variance. The baseline mean EDA amplitude proved to be the most

significant factor contributing to the result in Model 1. Model 2 included the Grandiosity and Vulnerability subscales from the PNI. The R^2 from the analysis was .19, accounting for 2% of the variance from Model 1 signifying neither Grandiosity (β=-.605, *n.s.*) or Vulnerability (β=-.106, *n.s.*) were significant predictors of EDA during the interpersonal rejection threat.

Narcissism and Emotion Regulation

It was speculated that participants with high levels of vulnerable narcissistic traits would be less capable of regulating emotions than participants with high levels of grandiose narcissism or low levels of narcissistic characteristics. In other words, it was expected that these participants will self-report more difficulties in emotion regulation on the Difficulties in Emotion Regulation Scale and would perform poorer on a persistence task than other individuals. A multiple linear regression analysis was run to determine the predictive power of narcissistic characteristics on difficulties in emotion regulation (Total DERS score). The predictor variables included the Pathological Narcissism Inventory (PNI) Vulnerability subscale and the PNI Grandiosity subscale. The full model had an R^2 value of .59, accounting for 59% of the variance, which denoted Vulnerability (β=.836, p=.000) was a significant predictor of self-reported difficulties in emotion regulation. However, Grandiosity (β=-.138, *n.s.*) was not found to be a significant predictor of difficulties in emotion regulation (see Table 11).

To further explore narcissism and emotion regulation, a behavioral persistence task was utilized. It was expected that individuals with higher levels of narcissism would display poorer performance on the Stroop task than other individuals. Particularly, it was suggested that individuals with high vulnerable narcissistic characteristics would have the most difficulty performing. Performance on the Stroop task was assessed by analyzing each participant's accuracy pre- and post-threat, as well as calculating the response latency for pre- and post-threat.

The means and standard deviations for Stroop task performance are presented in Table 2. Two separate paired samples *t*-tests were conducted using the Stroop accuracy pre-threat (*M*=61.82, *SD*=25.98) and Stroop response latency pre-threat (*M*=978.78 milliseconds, *SD*=286.80) as independent variables and the Stroop accuracy post-threat (*M*=62.48, *SD*=18.75) and Stroop response latency post-threat (*M*=943.40 milliseconds, *SD*=274.56) were used as dependent variables (see Table 12). The results did not yield a significant difference between the Stroop accuracy pre-threat and the Stroop accuracy post-threat scores; $t(55)=-.22$, *n.s.*. For the second paired samples *t*-test, the results yielded a nonsignificant difference between the Stroop response latency pre-threat and the Stroop response latency post-threat times; $t(55)=1.68$, *n.s.*

Two separate multiple regression analyses were used to investigate the relationship between narcissistic characteristics and Stroop task performance; one to test Stroop accuracy and the other to test Stroop response latency. Results are reported in Tables 13 and 14, respectively. Factors included in the first regression analysis included Stroop accuracy pre-threat, the Grandiosity subscale from the PNI, and the Vulnerability subscale from the PNI. Model 1, which included Stroop accuracy pre-threat (β=0.531, p=.000), accounted for 28.2% of the variance. Model 2 included the Grandiosity and Vulnerability subscales from the PNI. The R^2 from the analysis was .355, accounting for 7% of the variance from Model 1 signifying neither Grandiosity (β=-.190, *n.s.*) or Vulnerability (β=-.114, *n.s.*) were significant predictors of Stroop accuracy post-threat.

For the second regression analysis on Stroop task performance, factors included were the Stroop response latency pre-threat, the Grandiosity subscale from the PNI, and the Vulnerability subscale from the PNI. Model 1, which included Stroop response latency pre-threat (β=0.842, p=.000), accounted for 70.9% of the variance Model 2 included the Grandiosity and

Vulnerability subscales from the PNI. The R^2 from the analysis was .711, accounting for 0.2% of the variance from Model 1 signifying neither Grandiosity (β=.047, *n.s.*) or Vulnerability (β=-.047, *n.s.*) were significant predictors of Stroop response latency post-threat.

Pathological Narcissism and Negative Affect

A series of separate multiple linear regressions were utilized to determine if an individual's level of overall pathological narcissism, as measured by the PNI, predicted self-reported emotional reactivity. It was expected that those with higher levels of pathological narcissism would report higher levels of negative affect following an emotionally-evocative stimuli. Two separate multiple regressions were run; one to test the self-reported PANAS negative affect post achievement failure threat and the other to test the PANAS negative affect score post interpersonal rejection condition. For each regression analysis, the predictor variables included the Pathological Narcissism Inventory (PNI) Pathological Narcissism subscale and the PANAS baseline negative affect (NA) score.

The first multiple linear regression was used to determine if any of the variables predicted the PANAS NA score post achievement failure threat (see Table 15). Factors included in this analysis include PANAS baseline NA score and Pathological Narcissism score from the PNI. Model 1, which included PANAS baseline NA scores (β=0.71, p=.000), accounted for 51% of the variance. Model 2 included the Pathological Narcissism subscale from the PNI. The R^2 from the analysis was .51, accounting for 0.5% of the change from Model 1 suggesting Pathological Narcissism (β=-.089, *n.s.*) was not a significant predictor of NA post achievement failure threat.

The second multiple linear regression was used to determine if any of the variables predicted the PANAS NA score post interpersonal rejection threat (see Table 16). Factors included in this analysis include PANAS baseline NA score and Pathological Narcissism score

from the PNI. Model 1, which included PANAS baseline NA scores (β=0.60, p=.000), accounted for 36% of the variance. Model 2 included the Pathological Narcissism subscale from the PNI. The R^2 from the analysis was .37, accounting for 0.9% of the variance from Model 1 indicating Pathological Narcissism (β=-.116, *n.s.*) did not significantly predict NA post interpersonal rejection threat.

Narcissism and Positive Affect

Supplementary analyses were conducted to explore the relationship between narcissistic characteristics and positive affect following emotionally-evocative stimuli. First, Pearson's *r* correlation analyses were utilized to examine the interrelationships between phenotypes of narcissism, level of pathological narcissism, and self-reported positive affect after reading achievement failure and interpersonal rejection vignettes. Results yielded a positive correlation between Grandiosity and positive affect following an achievement failure threat, r=.33, p=.015. A positive correlation was also found between Grandiosity and positive affect following an interpersonal rejection threat, r=.29, p=.033. However, no relationship was found between Vulnerability and positive affect following an achievement failure threat, r=-.06, *n.s.*, or an interpersonal rejection threat, r=.06, *n.s.* Additionally, results were not indicative of a relationship between pathological narcissism and positive affect following an achievement failure threat, r=-.10, *n.s.*, or an interpersonal rejection threat, r=.17, *n.s.* Results are reported in Table 17.

In regard to the differences in mean scores of positive affect, two separate paired-samples *t*-tests were conducted using the PANAS baseline positive affect (PA) score as the independent variable and the PANAS PA score post-achievement failure threat (see Table 5) and PANAS PA score post-interpersonal rejection threat (see Table 6) as the dependent variables. The results

yielded a significant difference between the PANAS baseline positive affect (M=31.60, SD=7.76) and the PANAS positive affect score post achievement failure threat (M=29.85, SD=8.48) scores; $t(54)=2.27$, p=.027. For the second independent samples *t*-test, the results yielded a significant difference between the PANAS baseline positive affect (M=31.60, SD=7.76) and the PANAS positive affect score post interpersonal rejection threat (M=28.89, SD=8.34) scores; $t(54)=4.09$, p=.000.

A series of separate multiple linear regressions analyses were utilized to explore the predictive power of narcissistic characteristics on positive affect. For the exploration of self-report of positive affect (PA), two multiple regression analyses were run; one to test the self-reported PANAS PA post achievement failure threat and the other to test the PANAS PA score post interpersonal rejection threat. For each regression analysis, the predictor variables included the Pathological Narcissism Inventory (PNI) Vulnerability subscale, PNI Grandiosity subscale, and their PANAS baseline PA score.

The first multiple linear regression was used to determine if any of the predictor variables accurately predicted the PANAS PA score post achievement failure threat (see Table 18). Model 1, which included PANAS baseline PA scores (β=0.757, p=.000), accounted for 57% of the variance. Model 2 included the Grandiosity and Vulnerability subscales from the PNI. The R^2 from the analysis was .67, accounting for 9.3% of the change from Model 1 indicating Grandiosity (β=.353, p=.002) and Vulnerability (β=-.304, $p<.01$) were significant predictors of PA post achievement failure threat.

The second multiple regression was used to determine if any of the variables predicted the PANAS PA score post interpersonal rejection threat (see Table 19). Factors included in this analysis include PANAS baseline PA score, Vulnerability subscale score from the PNI, and

Grandiosity subscale score from the PNI. Model 1, which included PANAS baseline PA scores (β=0.816, p=.000), accounted for 67% of the variance. Model 2 included the Grandiosity and Vulnerability subscales from the PNI. The R^2 from the analysis was .69, accounting for 2.1% of the variance from Model 1 suggesting neither Grandiosity (β=-.091, *n.s.*) or Vulnerability (β=-.179, *n.s.*) were significant predictors of PA post interpersonal rejection threat.

Discussion

The present study had two overarching goals in relation to emotional differences between the phenotypes of narcissism. First, the study aimed to explore the narcissistic spectrum with regard to context-specific situations. Previous research has found associations between high levels of narcissistic characteristics and high emotional reactivity and negative affectivity (Besser & Priel, 2010; Pincus & Lukowitsky, 2010; Twenge & Campbell, 2003). Additionally, this study sought to further explore how certain narcissistic characteristics, such as grandiosity and vulnerability, impacted an individual's emotional reaction to certain situations.

It was hypothesized that a relationship between high levels of narcissistic characteristics and a high emotional reaction to a threatening stimulus would exist. The present study found evidence in support with this hypothesis and consistent with previous research, such that relationships were found between narcissistic characteristics and self-reported negative affectivity. These findings suggest individuals with higher vulnerable narcissistic characteristics will report more negative affectivity following a threatening situation, such as interpersonal rejection and achievement failure. In addition, a positive relationship was found between individuals who endorsed higher levels of pathological narcissism and negative affectivity following an achievement failure. Inconsistent with previous literature (Besser & Priel, 2010), no significant relationship was found between higher levels of grandiose narcissistic

characteristics and emotionally evocative situations. Furthermore, it was found that narcissism did not significantly predict negative affectivity following an emotionally evocative condition, which is inconsistent with previous literature.

An additional way in which the relationship between narcissism and emotional reactivity was explored was through physiological data. Previous research has found associations between diminished skin conductance reactivity and aspects of narcissism (Crider 2008; Isen et al., 2012; Kelsey et al., 2002). Although no significant relationships were found between narcissistic characteristics and EDA, potential limitations and external factors could be the explanation. The present study did not find evidence to support previous literature suggesting an inverse relationship existed between narcissistic characteristics and physiological responsiveness. Further, narcissistic characteristics were not found to significantly predict EDA stability or lability.

The second objective of this study focused on investigating individual differences in emotion regulation within the narcissistic phenotypes. Prior research has found a relationship with pathological personality characteristics and difficulties in emotion regulation (Gratz et al., 2009, Gratz et al., 2010; Szasz et al., 2011). With regard to pathological personality characteristics and emotion dysregulation, a majority of the research has focused on borderline personality disorder (Gratz et al., 2009; Gratz et al., 2013; Gratz & Roemer, 2004; Kuo & Linehan, 2009). In order to build on previous findings and extend research to other Cluster B personality pathology, the present study posited that participants with high levels of vulnerable narcissism would have the most difficulties with emotion regulation. Further, it was suggested that individuals with higher levels of narcissistic characteristics would report and display greater

emotion regulation difficulties than individuals who reported relatively low or "healthy" levels of narcissistic characteristics.

The present study initially explored the relationship between narcissistic characteristics and self-reported difficulties in emotion regulation. Positive relationships were found to exist between various levels of narcissism (i.e., pathological, grandiose, and vulnerable) and difficulties in emotion regulation. This is consistent with previous literature, which suggests individuals with greater personality pathology display greater emotion dysregulation. In addition, it was found that high levels of vulnerable narcissism predicted significantly greater difficulties in emotion regulation. However, grandiose narcissistic characteristics did not significantly predict emotion dysregulation.

In order to objectively investigate emotion regulation, a behavioral persistence task was implemented in the present study. Previous studies in populations with high levels of emotion regulation difficulties and experiments on effortful control have implemented distress tolerance tasks (Gratz et al., 2009; McHugh et al., 2011; Suchy, 2009; Wallace & Baumeister, 2002). The present study utilized the Stroop task as a measure of behavioral persistence following exposure to emotionally threatening stimuli. When exploring the changes in response accuracy and response latency between pre-threat or post-threat performance, significant differences were not found. Additionally, no relationship between narcissistic characteristics and Stroop task performance was found. One explanation for this finding could be the utilized sample exhibited "normal" levels of narcissism and their self-image was not contingent upon task performance. This being said, narcissists thrive in self-promoting situations in which evaluation from others, pressure, and challenging tasks are present (Wallace & Baumeister, 2002). It is also possible that

the Stroop task did not provide the individual participants enough opportunity to enhance a previously established positive self-image.

The present study was significantly influenced by Besser and Priel's (2010) research, which compared and contrasted different narcissistic characteristics (grandiose narcissism and vulnerable narcissism) in terms of emotional responses to perceived achievement failure and interpersonal rejection threats. Through investigating the narcissistic spectrum, researchers found evidence suggesting certain characteristics were associated with emotional reactivity to specific threatening conditions (Besser & Priel, 2010). To further research, it was suggested that future studies explore various levels of threatening conditions with each narcissistic domain. The present study utilized high-level threats, which were found to have an effect on specific domains in previous research. A significant difference was found when comparing pre- and post-threat negative affect scores for the interpersonal rejection condition. This coincides with previous findings that vulnerable narcissism was emotionally reactive to interpersonal rejection scenarios (Besser & Priel, 2010).

In contrast to what was expected, exploratory analyses showed significant increases in positive affect following exposure to both the achievement failure and interpersonal rejection scenarios. Individuals' with pathological levels of narcissism externalize blame, have trouble regulating emotions, and may exhibit maladaptive coping strategies when confronted with evidence that contradicts their self-concept (Pincus & Lukowitsky, 2010; Twenge & Campbell, 2003). Narcissistic grandiosity is associated with arrogance, self-entitlement, and exploitative behaviors. Vulnerable narcissism, on the other hand, is often related to a depleted self-image, self-criticality, and shameful affect. This being said, all individuals fall on a continuum of narcissism that ranges from normal to pathological (Pincus & Lukowitsky, 2010). Considering

the low narcissistic sample in the present study, it is possible that these individuals were better able to regulate their emotions when faced with disappointment or threats to their self-concept. Furthermore, significantly higher self-reports of positive affect following exposure to emotionally threatening stimuli could be an attempt to preserve one's positive self-image.

An additional explanation for the inconsistent findings could be found in the varying behavioral expressions of narcissism. As previous research suggests, grandiose narcissists exhibit overt behaviors when faced with a threat to their self-image (Besser & Zeigler-Hill, 2010; Pincus & Lukowitsky, 2010). In contrast, vulnerable narcissists resort to the use of internalizing behaviors, such as self-blame. It is probable that a significant change in negative affect was not associated with grandiosity due to the vignettes being hypothetical scenarios. Individuals with narcissistic personality disorder (NPD) are thought to lack empathy and embrace a sense of uniqueness (American Psychiatric Association, 2013). With this in mind, someone with high levels of grandiose narcissistic characteristics would have difficulty relating to the fictitious scenarios. Rather than feel a sense of shame or anxiety, individuals with high levels of grandiose narcissism would likely envision these situations occurring to others, which would support their preconceived notions of superiority.

The present study was implemented to further expand research on emotional reactivity associated with narcissistic characteristics. Previous research has attempted to find correlates between physiological responses and individual differences (Crider, 2008; Kelsey et al., 2002). In an interpretive review, Crider (2008) suggested electrodermal response (EDR) stability was associated with hostility, rebelliousness, and nonconformity. In comparison, individuals' who displayed EDR lability tended to be more submissive, cautious, idealistic, and ethical. The notion that individuals with more antisocial behavioral tendencies displaying EDR stability

influenced the present study to explore the psychophysiological correlates of the narcissistic continuum. In addition, Kelsey and colleagues (2002) also found diminished EDR reactivity in their psychophysiological investigation of narcissistic characteristics with women who were actively coping. The utilized sample did not display significant associations between EDR and levels of narcissism. However, it is suggested that EDR lability may reflect differences in effortful control of emotional expression (Crider, 2008). Considering the sample was subclinical, these individuals may have been capable of successfully regulating and controlling their emotional responses.

Previous research has found evidence for emotional reactivity and delayed recovery for individuals with pathological personality traits and disorders (Gratz et al., 2010; Gratz et al., 2013). Gratz and colleagues (2010) suggested that patterns of change in levels of shame and interpersonal blame imply a significant vulnerability in individuals with borderline personality disorder. Moreover, the central feature of narcissism is flawed self-regulation techniques that lead to grandiose and vulnerable self and affective states (Pincus & Lukowitsky, 2010). The present study investigated a dimension of narcissistic personality characteristics in which one portion of the continuum, vulnerable narcissism, is defined by a heightened sense of shame. Results suggested that vulnerable narcissism is a significant predictor of difficulties in emotion regulation. In Pincus and Lukowitsky's (2010) review, it is suggested that vulnerable narcissists deal with threats to their self-concept by engaging in grandiose fantasy while correspondingly feeling intense shame. The co-occurrence of shameful affect and fantasizing of grandiosity could be an additional explanation for increased reported positive affectivity.

An additional component to emotion regulation is the ability to modulate emotional responses in order to partake in goal-oriented behavior. Following what was supposed to be an

ego-depleting task, participants were asked to participate in a behavioral measure of emotion regulation—a Stroop task. Previous research proposes that impaired executive functioning is associated with reduced self-control and difficulty engaging in goal-directed behavior or sustaining attention (Suchy, 2009; Job et al., 2010; Bornovalova et al., 2008). Experimental measures, such as computer-administered Stroop tasks, are typically implemented to measure cognitive control. Even though the Stroop task performance was not found to be a significant measure of emotion regulation in the present study, previous studies have found support for utilizing behavioral measures of distress intolerance (Bornovavlova et al., 2008; Gratz et al., 2013).

In addition, previous research has found that perceived self-enhancement opportunity moderates the effect of narcissism on task performance (Wallace & Baumeister, 2002). It is conceivable to expect a positive relationship to exist between narcissism and performance; however, grandiose fantasies of superior performance does not necessitate success. It is proposed that individuals whom embody high levels of narcissism are driven by avoiding failure rather than seeking success. On the other hand, individuals with lower, "normal" levels of narcissism may not be driven by these self-enhancement needs. For this reason, it is plausible to suspect that a significant difference in Stroop task performance was not found due to a lack of need for self-enhancement opportunity. Furthermore, it is notable to mention the similarity in pre- and post-threat task performance and corresponding significant increase in positive affect for grandiose narcissism. In sum, it could be concluded that the self-report of positive affect following a challenging task is a coping strategy implemented to preserve a positive self-image despite mediocre performance.

Strengths and Limitations

The framework of the present study integrated methods from various studies to explore the narcissistic spectrum. Emotionally-evocative vignettes, a behavioral persistence task of self-control, psychological measures of personality and emotion, and physiological measures were implemented in an intricate fashion to analyze emotional reactivity and emotion regulation. While the design of the present study may be novel and had many strengths, it did not come without limitations. Following suit of previous research, the sample utilized in the present study was drawn from a nonclinical sample and focused on trait narcissism. According to Pincus and Lukowitsky (2010), pathological narcissism is defined by maladaptive coping strategies and substantial regulatory impairments when their overly positive self-concept is threatened. "Normal" narcissism, however, is believed to be adaptive and does not cause significant impairment to daily functioning. Although research suggests that everyone falls on a narcissistic continuum, pathological levels of narcissism are more commonly identified in men instead of women (American Psychiatric Association, 2013).

A potential drawback to the present study is the heavily biased female sample. Out of 63 participants, only 6 were males. Narcissistic grandiosity was not found to be a substantial variable in the present study. It is possible that grandiose characteristics would be more significant in a balanced gender sample. On the other hand, vulnerable narcissism was found to be a significant predictor of difficulties in emotion regulation. This finding supports previous research that provides evidence for pathological personality characteristics, such as narcissism, impacting self-regulatory processes (Dickinson & Pincus, 2003; Baumeister et al., 1998; McHugh et al., 2011; Gratz et al., 2010). The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) identifies specific areas of maladaptive self-regulatory cognitions and

behaviors, which could be important in future adaptations to the conceptualization of personality pathology.

In order to gather information on individual differences, emotion regulation techniques, and affective states, self-report measures were utilized. Prior to the development of the Pathological Narcissism Inventory (PNI; Pincus et al., 2009) research has been limited to a unidimensional scope of narcissism. The Narcissistic Personality Inventory (NPI) and Hypersensitive Narcissism Scale (HSNS) were constructed as self-report measures of narcissism for subclinical populations of narcissism. Although the NPI is a commonly used measure in social and personality research, it assess overt, grandiose behavioral manifestations of narcissism. The HSNS counters the NPI and measures the vulnerable characteristics and covert behaviors that are not included the NPI. Due to the unidimensional constructs assessed in these measures, the PNI was a more comprehensive measure to appropriately capture the dimensional nature of narcissism in clinical and subclinical populations (Wright et al., 2010).

The utilization of the PNI to explore the phenotypes of narcissism in a subclinical population is a significant strength of the present study. However, self-report is limiting and subjective. Participants in the present study were asked to answer questions regarding individual differences in personality characteristics, emotion regulation, and affective states. Furthermore, objective components (physiological measurement and a behavioral persistence task) were employed in attempt to parallel self-reported emotional responses. Despite the lack of significant findings with objective measurement, the multimethod assessment is a notable element of the present study. This being said, the use of the Stroop task prior to a baseline measure of positive and negative affect is a results impairing limitation. In analyses investigating negative affect, the initial reported negative affect score gathered following the Stroop task was controlled for as a

predictor variable. As expected, the initial negative affect score was the most significant predictor of subsequent negative affect scores. By not having a true baseline of negative affect, any effects of narcissistic characteristics could have been overshadowed by self-reported negative affectivity following the Stroop task. Additionally, it is necessary to address the measurement of baseline EDR. The physiological baseline was collected prior to the Stroop task and questionnaires and not immediately before the administration of the vignettes. Thus, the Stroop task or completion of self-report questionnaires could have impacted physiological levels between the measured baseline and exposure to the scenarios. In order to truly assess a physiological baseline prior to emotionally-evocative stimuli, measurements could also be recorded immediately preceding the vignettes.

Conclusions and Future Directions

The Level of Personality Functioning (LPF) scale in Section III of *DSM5* is described as a hybrid model of personality functioning in which broad features of various personality disorders are used to create clinical prototypes (Skodol et al., 2013). Similarly, the present study was a hybrid of methods from studies investigating narcissism, borderline personality disorder, emotion reactivity, and self-regulation. Laboratory manipulations were used to induce emotional reactions and measure the regulations of those emotional processes. As previously mentioned, this multimethod type of assessment, which incorporated subjective and objective reports, should be utilized in future studies. Self-reported emotional responding is heavily biased by the reporter, and interviews can be influenced by the investigator. Furthermore, these methods only provide a snapshot of an individual's functioning, which does not reliably provide an in-depth look into personality pathology. A multimethod assessment of self-reports, semi-structured interviews, and behavioral measures can provide a better overall representation of one's

psychological functioning. While these methods have provided and will contribute to profound discoveries in personality literature, future research should also take the next step and investigate naturalistic interactions.

Experimental designs that investigate daily reports of affect (Zeigler-Hill & Besser, 2013), observable interactions between individuals (Ayduk et al., 2008; Wallace & Baumeister, 2002), and ego depletion (Baumeister et al., 1998; Besser & Priel, 2010; Besser & Zeigler-Hill, 2010) over longer time durations could provide realistic insight into a person's psychological functioning. Cross-sequential and longitudinal designs could help enhance the utilization of the LPF scale in clinical settings and evolve psychotherapy and personality assessments. More specifically to the narcissistic spectrum, diagnostic criteria could be updated to incorporate the vulnerable characteristics and covert behaviors that have been previously more associated with other Cluster B personality pathologies, such as borderline personality disorder. In addition, the maladaptive coping styles associated with pathological levels of narcissism could address context-specific emotional reactivity and difficulties in emotion regulation. Long-term naturalistic investigations of how individuals respond to and evaluate their emotional experiences, which in turn could evolve how these responses are therapeutically addressed.

Similar to previous literature, the present study utilized a nonclinical sample to investigate pathological personality characteristics. In order to truly impact the conceptualization of narcissism, diverse clinical populations should be investigated. The previously proposed multimethod modes of assessment would provide great insight into the impaired functioning associated with personality pathology. Emotion regulation is a multi-faceted component of the psychological impairment associated with personality disorders, which are likewise complex. In order to carry these empirical results into clinical practice, therapists

need to conceptualize individuals with personality pathology as multilayered persons that correspond with the complexity of their disorder. The present study highlights the relationship between vulnerable narcissism and emotion dysregulation. Through exploring the ways in which narcissists' self-regulatory processes are flawed, therapy can be adapted to address these issues. In psychological disorders defined by empathetic dysfunction and flawed self-regulation strategies, therapeutic techniques that focus on building empathy, distress tolerance skills, and adaptive coping should be derived and implemented from empirical findings. Various experimental tasks and physiological measurements that involve cognitive control and self-regulatory processes could provide additional information on specific behaviors associated with pathological personality characteristics that are impacted by difficulties in emotion regulation. The overarching objective of the present study was to explore the emotional differences within the narcissistic spectrum. Despite limitations, a multimethod framework of emotional assessment was established. This type of experimental investigation should be implemented in future studies in order to make significant strides in the conceptualization, assessment, and treatment of personality disorders.

References

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.

Appelhans, B.M., & Luecken, L.J. (2006). Heart rate variability as an index of regulated emotional responding. *Review of General Psychology, 10(3),* 229-240.

Ayduk, Ö., Gyurak, A., & Luerssen, A. (2008). Individual differences in the rejection-aggression link in the hot sauce paradigm: The case of rejection sensitivity. *Journal of Experimental Social Psychology, 44(3),* 775-782.

Baumeister, R.F., Bratslavsky, E., Muraven, M., & Tice, D.M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology, 74(5),* 1252-1265.

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.

Besser, A., & Zeigler-Hill, V. (2010). The influence of pathological narcissism on emotional and motivational responses to negative events: The roles of visibility and concern about humiliation. *JouBrnal of Research in Personality, 44,* 520-534.

Crider, A. (2008). Personality and electrodermal response lability: An interpretation. *Applied Psychophysiology and Biofeedback, 33,* 141-148.

Dickinson, K.A., & Pincus, A.L. (2003). Interpersonal analysis of grandiose and vulnerable narcissism. *Journal of Personality Disorders, 17(3),* 188-207.

Gratz, K.L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and

dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment, 25(1),* 41-54.

Gratz, K.L., Rosenthal, M.Z., Tull, M.T., Lejuez, C.W., & Gunderson, J.G. (2009). An experimental investigation in borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment, 5(1),* 18-26.

Gratz, K.L, Rosenthal, M.Z, Tull, M.T., Lejuez, C.W., & Gunderson, J.G. (2010). An experimental investigation of emotional reactivity and delayed emotional recovery in borderline personality disorder: The role of shame. *Comprehensive Psychiatry, 51,* 275-285.

Gratz, K.L., Tull, M.T., Matusiewicz, A.M., Breetz, A.A., & Lejuez, C.W. (2013). Multimodal examination of emotion regulation difficulties as a function of co-occurring avoidant personality disorder among women with borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment, 4(4),* 304-314.

Kelsey, R.M., Ornduff, S.R., Reiff, S., & Arthur, C.M. (2002). Psychophysiological correlates of narcissistic traits in women during active coping. *Psychophysiology, 39,* 322-332.

Küfner, A.C., Nestler, S., & Back, M.D. (2013). The two pathways to being an (un-)popular narcissist. *Journal of Personality, 81(2),* 184-195.

Kuo, J.R., & Linehan, M.M. (2009). Disentangling emotion processes in borderline personality disorder: Physiological and self-reported assessment of biological vulnerability, baseline intensity, and reactivity to emotionally evocative stimuli. *Journal of Abnormal Psychology, 118(3),* 531-544.

LeGris, J., & van Reekum, R. (2006). The neuropsychological correlates of borderline personality disorder and suicidal behaviour. *Canadian Journal of Psychiatry, 51,* 131-142.

McHugh, R.K., Daughters, S.B., Lejuez, C.W., Murray, H.W., Hearon, B.A., Gorka, S.M., & Otto, M.W. (2011). Shared variance among self-report and behavioral measures of distress intolerance. *Cognitive Therapy and Research, 35(3),* 266-275.

Pincus, A.L. (2013). The pathological narcissism inventory. In J.S. Ogrodniczuk (Ed.), Understanding and treating pathological narcissism (pp. 93-110). Washington, DC: American Psychological Association.

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.

Pincus, A.L., & Lukowitsky, M.R. (2010). Pathological narcissism and narcissistic personality disorder. *Annual Review of Clinical Psychology*, *6*, 421-446.

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.

Reinhardt, T., Schmahl, C., Wüst, S., & Bohus, M. (2012). Salivary cortisol, heart rate, electrodermal activity and subjective stress responses to the manneheim multicomponent stress test (mmst). *Psychiatry Research, 198,* 106-111.

Roche, M.J., Pincus, A.L., Conroy, D.E., Hyde, A.L., & Ram, N. (2013). Pathological narcissism and interpersonal behavior in daily life. *Personality Disorders: Theory, Research, and Treatment, 4(4),* 315-323.

Rohmann, E., Neumann, E., Herner, M., & Bierhoff, H. (2011). Grandiose and vulnerable narcissism: Self-construal, attachment, and love in romantic relationships. *European Psychologist. 17*(4), 279-290.

Rosenthal, M.Z., Gratz, K.L., Kosson, D.S., Cheavens, J.S., Lejuez, C.W., & Lynch, T.R. (2008). Borderline personality disorder and emotional responding: A review of the research literature. *Clinical Psychology Review, 28(1),* 75-91.

Simonsen, S., & Simonsen, E. (2014). Contemporary directions in theories of psychotherapeutic strategies in treatment of personality disorders: Relation to level of personality functioning. *Journal of Contemporary Psychotherapy, 44(2),* 141-148.

Skodol, A.E., Bender, D.S., & Morey, L.C. (2013). Narcissistic personality disorder in dsm-5. *Personality Disorders: Theory, Research, and Treatment. 1,* 1-6.

Sloan, D.M. (2004). Emotion regulation in action: Emotional reactivity in experiential avoidance. *Behaviour Research and Therapy, 42,* 1257-1270.

Suchy, Y. (2009). Executive functioning: Overview, assessment, and research issues for non-neuropsychologists. *Annals of Behavioral Medicine, 37,* 106-116.

Szasz, P.L., Szentagotai, A., & Hofmann, S.G. (2011). The effect of emotion regulation strategies on anger. *Behaviour Research and Therapy, 49,* 114-119.

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. *Society for Personality and Social Psychology, Inc., 29(2),* 261-272.

Wallace, H.M., & Baumeister, R.F. (2002). The performance of narcissists rises and falls with perceived opportunity for glofy. *Journal of Personality and Social Psychology, 82(5),* 819-834.

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),* 1063-1070.

Weikel, K.A., Avara, R.M., Hanson, C.A., & Kater, H. (2010). College adjustment difficulties and the overt and covert forms of narcissism. *Journal of College Counseling, 13*, 100-110.

Wright, A.G., 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.

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.

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),* 753-772.

Appendix A

Demographics Questionnaire

Age: _____ *Sex:* _____ *Years of Education:* _____

Race/Ethnicity: **(Circle)** Asian / Pacific Islander

Black of African American

Hispanic or Latino

Native American or American Indian

White

Other: _____

Current Relationships Status: **(Circle)** Separated Married

Divorced Widowed

Single

Appendix B

PNI-52

Instructions: Below you will find 52 descriptive statements. Please consider each one and indicate how well that statement describes you. There are no right or wrong answers. On the line beside the question, fill in only one answer. Simply indicate how well each statement describes you as a person on the following ***6-point scale****:*

0	1	2	3	4	5
Not at all Like me	Moderately Unlike me	A little Unlike me	A little Like me	Moderately Like me	Very much Like me

___ 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's hard for me to feel good about myself when I'm 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 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 get 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.

0	1	2	3	4	5
Not at all Like me	Moderately Unlike me	A little Unlike me	A little Like me	Moderately Like me	Very much Like me

___ 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 do.

___ 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.

0	1	2	3	4	5
Not at all Like me	Moderately Unlike me	A little Unlike me	A little Like me	Moderately Like me	Very much Like me

___ 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 how good a person I am.

___ 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 I'm 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 is 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's 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.

Appendix C

DERS

Instructions: Please indicate how often the following 36 statements apply to you by writing the appropriate number from the scale below (1-5) in the space provided alongside each item.

1	2	3	4	5
Almost Never	Sometimes	About Half the Time	Most of the Time	Almost Always
(0-10%)	(11-35%)	(36-65%)	(66-90%)	(91-100%)

___ 1. I am clear about my feelings.

___ 2. I pay attention to how I feel.

___ 3. I experience my emotions as overwhelming and out of control.

___ 4. I have no idea how I am feeling.

___ 5. I have difficulty making sense out of my feelings.

___ 6. I am attentive to my feelings.

___ 7. I know exactly how I am feeling.

___ 8. I care about what I am feeling.

___ 9. I am confused about how I feel.

___ 10. When I'm upset, I acknowledge my emotions.

___ 11. When I'm upset, I become angry with myself for feeling that way.

___ 12. When I'm upset, I become embarrassed for feeling that way.

___ 13. When I'm upset, I have difficulty getting work done.

___ 14. When I'm upset, I become out of control.

___ 15. When I'm upset, I believe that I will remain that way for a long time.

___ 16. When I'm upset, I believe that I'll end up feeling very depressed.

___ 17. When I'm upset, I believe that my feelings are valid and important.

1	2	3	4	5
Almost Never	Sometimes	About Half the Time	Most of the Time	Almost Always
(0-10%)	(11-35%)	(36-65%)	(66-90%)	(91-100%)

___ 18. When I'm upset, I have difficulty focusing on other things.

___ 19. When I'm upset, I feel out of control.

___ 20. When I'm upset, I can still get things done.

___ 21. When I'm upset, I feel ashamed with myself for feeling that way.

___ 22. When I'm upset, I know that I can find a way to eventually feel better.

___ 23. When I'm upset, I feel like I am weak.

___ 24. When I'm upset, I feel like I can remain in control of my behaviors.

___ 25. When I'm upset, I feel guilty for feeling that way.

___ 26. When I'm upset, I have difficulty concentrating.

___ 27. When I'm upset, I have difficulty controlling my behaviors.

___ 28. When I'm upset, I believe that there is nothing I can do to make myself feel better.

___ 29. When I'm upset, I become irritated with myself for feeling that way.

___ 30. When I'm upset, I start to feel very bad about myself.

___ 31. When I'm upset, I believe that wallowing in it is all I can do.

___ 32. When I'm upset, I lose control over my behaviors.

___ 33. When I'm upset, I have difficulty thinking about anything else.

___ 34. When I'm upset, I take time to figure out what I'm really feeling.

___ 35. When I'm upset, it takes me a long time to feel better.

___ 36. When I'm upset, my emotions feel overwhelming.

Appendix D

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel at the present moment. Use the following scale to record your answers.

1	**2**	**3**	**4**	**5**
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

_____ 1. Interested

_____ 2. Distressed

_____ 3. Excited

_____ 4. Upset

_____ 5. Strong

_____ 6. Guilty

_____ 7. Scared

_____ 8. Hostile

_____ 9. Enthusiastic

_____ 10. Proud

_____ 11. Irritable

_____ 12. Alert

_____ 13. Ashamed

_____ 14. Inspired

_____ 15. Nervous

_____ 16. Determined

_____ 17. Attentive

_____ 18. Jittery

_____ 19. Active

_____ 20. Afraid

Appendix E

Interpersonal Rejection	Achievement Failure
You get out of work early and decide to surprise your partner, X, and buy her/him a present. As you walk up to the apartment, you hear some laughter coming from inside. As you get closer, you see that the door is cracked open. You open the door, to find X and another person having sexual relations in the living room. You hear X whispering to the person, "I think I might be in love."	Recently, an opportunity for a promotion has opened up for one exceptional employee only; you are competing for this opportunity and want it very much. You have been invited to a meeting with X, the executive manager. You approach X's office earlier than expected. As you walk up to the office, you hear laughter coming from inside. It seems they are celebrating—they probably already know who has won the promotion. As you get closer, you see that the door is cracked open. You open the door, to find X making a toast with your opponent to celebrate his promotion. You hear X saying to this person, "Of all of the candidates for this promotion, you are the best."
You find out that your week long business trip has been cancelled and decide to surprise your partner, X, and buy her/him a present. As you walk up to the apartment, you hear some laughter coming from inside. As you get closer, you see that the door is cracked open. You open the door to find X and another person having sexual relations in the living room. You hear X whispering to the person, "I think I might be in love."	Recently, an opportunity to present business ideas has opened up for one exceptional employee only; you are competing for this opportunity and want it very much. You have been invited to a meeting with X, the executive manager. You approach X's office earlier than expected. As you walk up to the office, you hear laughter coming from inside. It seems they are celebrating—they probably already know who has won the chance to share their ideas. As you get closer, you see the door is cracked open. You open the door, to find X making a toast with your opponent to celebrate his win. You hear X saying to this person, "Of all of the candidates for this promotion, you are the best."
You decide to leave work early to surprise your partner, X, and buy her/him a present. As you walk up to the apartment, you hear some laughter coming from inside. As you get closer, you see that the door is cracked open. You open the door to find X and another person having sexual relations in the living room. You hear X whispering to the person, "I think I might be in love."	Recently, an opportunity to turn your internship into a full-time career has opened up for one exceptional employee only; you are competing for this opportunity and want it very much. You have been invited to a meeting with X, the executive manager. You approach X's office earlier than expected. As you walk up to the office, you hear laughter coming from inside. It seems they are celebrating—they probably already know who has won the job. As you get closer, you

	see the door is cracked open. You open the door, to find X making a toast with your opponent to celebrate his win. You hear X saying to this person, "Of all of the candidates for this promotion, you are the best."

Table 1

Participant Demographics

Variables	*N*	Percent of Sample
Gender		
Male	6	9.5
Female	57	90.5
Race/Ethnicity		
White	32	50.8
Black or African American	26	41.3
Hispanic or Latino	4	6.3
Asian/Pacific Islander	1	1.6
Relationship Status		
Single	61	96.8
Married	2	3.2

Table 2

Descriptive Statistics of Measures Included in Analyses

Measures	Mean	Std. Deviation	Minimum	Maximum
Grandiosity	2.88	.67	1.48	4.18
Vulnerability	2.45	1.11	.42	6.49
Pathological Nar	2.67	.80	1.19	5.06
PANASPosBL	31.60	7.76	17	47
PANASNegBL	19.09	6.93	10	35
PANASPosAch	29.85	8.48	13	50
PANASNegAch	19.96	7.51	10	37
PANASPosInt	28.89	8.34	11	48
PANASNegInt	20.96	8.17	10	40
DERSTotal	82.53	21.16	39	148
StroopACC1	61.82	25.98	0	139
StroopACC2	62.48	18.75	0	130
StroopRT1	978.78	286.80	223.71	1444.09
StroopRT2	943.40	274.56	296.09	1296.27

Note. Pathological Nar=Pathological Narcissism (Pincus et al., 2009); PANASPosBL= PANAS positive affect score at baseline; PANASNegBL=PANAS negative affect score at baseline; PANASPosAch=PANAS positive affect score after achievement threat; PANASNegAch=PANAS negative affect score after achievement threat; PANASPosInt= PANAS positive affect score after interpersonal threat; PANASNegInt=PANAS negative affect score after interpersonal threat; DERSTotal=Difficulties in Emotion Regulation Survey total score (Gratz & Roemer, 2004); StroopACC1=Stroop accuracy pre-threat; StroopACC2= Stroop accuracy post-threat; StroopRT1=Stroop response latency pre-threat; StroopRT2=Stroop response latency post-threat.

Table 3

Descriptive Statistics of Physiological Measures Included in Analyses

Measures	Mean	Std. Deviation	Minimum	Maximum
EDABLMax	.44	.52	-.0049	2.99
EDAAchMean	.16	.20	-.07	1.04
EDAIntMean	.19	.27	-.0171	1.69

Note. EDABLMax=Electrodermal activity baseline maximum amplitude; EDAAchMean=Electrodermal activity mean amplitude during achievement threat; EDAIntMean=Electrodermal activity mean amplitude during interpersonal threat.

Table 4

Interrelations among Narcissism and Negative Affect

Variables	1	2	3	4	5
1. Grandiosity	----				
2. Vulnerability	.56**	----			
3. Path Narcissism	.82**	.94**	----		
4. PANASNegAch	.20	.37**	.34*	----	
5. PANASNegInt	.16	.28*	.26	.96**	----

Note. *=p<.05, **=p<.01; Path Narcissism=Pathological narcissism; PANASNegAch= PANAS negative affect score after achievement threat; PANASNegInt=PANAS negative affect score after interpersonal threat.

Table 5

Negative and Positive Affect Scores for Pre- and Post-Achievement Failure Threat

	Pre-threat		Postthreat			95% CI for Mean		
Variable	M	SD	M	SD	n	Difference	t	df
Negative Affect	19.09	6.93	19.96	7.51	55	-2.36, .615	-1.176	54
Positive Affect	31.60	7.76	29.85	8.48	55	.21, 3.29	2.27*	54

*p<.05.

Table 6

Negative and Positive Affect Scores for Pre- and Post-Interpersonal Rejection Threat

	Pre-threat		Postthreat			95% CI for Mean		
Variable	M	SD	M	SD	n	Difference	t	df
Negative Affect	19.09	6.93	20.96	8.17	55	-3.72, -.02	-2.03*	54
Positive Affect	31.60	7.76	28.89	8.34	55	1.38, 4.04	4.09*	54

*p<.05.

Table 7

Summary of Regression Analyses for Variables Predicting Negative Affect Post Achievement Threat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
PANAS	0.77	0.11	.71**	0.84	0.13	0.77**
Grandiosity				-0.04	1.31	-0.00
Vulnerability				-0.67	0.95	-0.10
R^2		0.51			0.51	
F for change in R^2		54.47			0.01	

*p<.05. **p<.01.

Table 8

Summary of Regression Analyses for Variables Predicting Negative Affect Post Interpersonal Threat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
PANAS	0.71	0.13	.60**	0.81	0.17	0.68**
Grandiosity				0.09	1.62	0.01
Vulnerability				-1.04	1.18	-0.14
R^2		0.36			0.37	
F for change in R^2		29.88			0.48	

*p<.05. **p<.01.

Table 9

Summary of Regression Analyses for Variables Predicting EDA During Achievement Threat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Baseline EDA	0.22	0.05	0.55**	0.23	0.05	0.56**
Grandiosity				0.02	0.05	0.05
Vulnerability				-0.04	0.03	-0.22
R^2		0.30			0.34	
F for change in R^2		17.84			1.12	

*$p<.05$. **$p<.01$.

Table 10

Summary of Regression Analyses for Variables Predicting EDA During Interpersonal Threat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Baseline EDA	0.22	0.08	0.40**	0.22	0.08	0.40**
Grandiosity				-0.03	0.07	-0.07
Vulnerability				-0.03	0.04	-0.11
R^2		0.16			0.19	
F for change in R^2		8.01			0.55	

*p<.05. **p<.01.

Table 11

Summary of Regression Analysis for Variables Predicting Difficulties in Emotion Regulation

		Model 1	
Variable	*B*	*SE B*	*β*
Grandiosity	-4.33	3.37	-0.14
Vulnerability	15.96	2.06	0.84**
R^2		0.59	
F for change in R^2		37.05	

*$p<.05$. **$p<.01$.

Table 12

Stroop Performance Pre- and Post-threat

	Pre-threat		Postthreat			95% CI for Mean		
Variable	M	SD	M	SD	n	Difference	t	df
Accuracy	61.82	25.98	62.48	18.75	56	-6.70, 5.38	-0.22	55
Response Latency	978.78	286.80	943.40	274.56	56	-6.88, 77.62	1.68	55

*$p<.05$.

Table 13

Summary of Regression Analyses for Variables Predicting Stroop Accuracy Postthreat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
StroopACC1	0.38	0.08	0.53**	0.38	0.08	0.53**
Grandiosity				-5.32	3.88	-0.19
Vulnerability				-1.94	2.38	-0.11
R^2		0.28			0.36	
F for change in R^2		20.77			2.92	

Note. StroopACC1=Stroop accuracy pre-threat.
*p<.05. **p<.01.

Table 14

Summary of Regression Analyses for Variables Predicting Stroop Response Latency Postthreat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
StroopRT1	0.81	0.07	0.84**	0.81	0.07	0.84**
Grandiosity				19.19	37.38	0.05
Vulnerability				-11.84	22.75	-0.05
R^2		0.71			0.71	
F for change in R^2		129.42			0.17	

Note. StroopRT1=Stroop response latency pre-threat.
*p<.05. **p<.01.

Table 15

Summary of Regression Analyses for Variables Predicting Negative Affect Post Achievement Threat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
PANAS	0.77	0.11	0.71**	0.83	0.13	0.76**
Path Narcissism				-0.84	1.11	-0.09
R^2		0.51			0.51	
F for change in R^2		54.47			0.57	

Note. Path Narcissism=Pathological Narcissism.
*p<.05. **p<.01.

Table 16

Summary of Regression Analyses for Variables Predicting Negative Affect Post Interpersonal Threat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
PANAS	0.71	0.13	0.60**	0.79	0.16	0.67**
Path Narcissism				-1.19	1.37	-0.12
R^2		0.36			0.37	
F for change in R^2		29.88			0.76	

Note. Path Narcissism=Pathological Narcissism.
*p<.05. **p<.01.

Table 17

Interrelations among Narcissism and Positive Affect

Variables	1	2	3	4	5
1. Grandiosity	----				
2. Vulnerability	.56**	----			
3. Path Narcissism	.82**	.94**	----		
4. PANASPosAch	.33*	-.06	.10	----	
5. PANASPosInt	.29*	.06	.17	.75**	----

Note. *=p<.05, **=p<.01; Path Narcissism=Pathological narcissism; PANASPosAch= PANAS positive affect score after achievement threat; PANASPosInt=PANAS positive affect score after interpersonal threat.

Table 18

Summary of Regression Analyses for Variables Predicting Positive Affect Post Achievement Threat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
PANAS	0.83	0.10	0.76**	0.77	0.09	0.71**
Grandiosity				4.42	1.26	0.35**
Vulnerability				-2.33	0.75	-0.30**
R^2		0.57			0.67	
F for change in R^2		71.23			7.11	

*p<.05. **p<.01.

Table 19

Summary of Regression Analyses for Variables Predicting Positive Affect Post Interpersonal Threat

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
PANAS	0.88	0.09	0.82**	0.84	0.09	0.79**
Grandiosity				2.21	1.19	.18
Vulnerability				-0.69	0.72	-0.09
R^2		0.67			0.69	
F for change in R^2		105.91			1.72	

*p<.05. **p<.01.