7-13-2020

Reducing Narcissistic Aggression: Examining the Effect of Self-Affirmation on Subclinical Levels of Narcissism

Kelsey Ann Anello
Illinois State University, kelseyaanello@gmail.com

Recommended Citation

REDUCING NARCISSISTIC AGGRESSION: EXAMINING THE EFFECT OF SELF-

AFFIRMATION ON SUBCLINICAL LEVELS OF NARCISSISM

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64 Pages

The concept of narcissism has been studied for hundreds of years and has typically emphasized grandiose aspects of personality – inflated self-esteem and being socially domineering. More recent literature has sought to differentiate between two aspects of narcissism – grandiosity and vulnerability; that is, narcissism may be marked by not only grandiose thoughts and beliefs, but also have negative emotionality and hypersensitivity. Both grandiose and vulnerable narcissism exhibit tendencies to act out aggressively, especially in the face of interpersonal rejection. There are still gaps in the literature when it comes to interventions, especially ones that may be used in order to reduce narcissistic aggression. Self-affirmation is an intervention that has been used in many different scenarios to bolster one's self-esteem. Self-affirmation can take many different forms, but the current study utilized a values reflection activity, which has been shown to be effective in other studies. The present study examined the effects of a self-affirmation activity – writing about a personal value – on narcissistic aggression in both high levels of grandiose and vulnerable narcissism from a population of undergraduate students at Illinois State University. Participants completed questionnaires to determine their levels of narcissistic grandiosity and vulnerability, played a game of Cyberball (a manipulation intended to induce aggression via ostracism), and partook in one of two self-affirmation activities – reflecting on a personal value (experimental condition) or reflecting on a favorite ice cream flavor (control condition). It was

expected that high vulnerability scores and self-affirmation would interact to predict lower aggression scores. It was also expected that grandiosity would display a similar interaction with self-affirmation in that the resulting aggression scores will be lower than those in the control condition, but not as low as those high in vulnerability and in the self-affirmation condition. It was also predicted that those high in vulnerability and in the control condition would display the highest aggression scores, and that those high in grandiosity and in the control condition would also report higher aggression scores but not as high as the vulnerable control group. Such findings may contribute to potential interventions for individuals with high levels of narcissistic tendencies and provide more insight into narcissism as it is today.

REDUCING NARCISSISTIC AGGRESSION: EXAMINING THE EFFECT OF SELF-

AFFIRMATION ON SUBCLINICAL LEVELS OF NARCISSISM

KELSEY ANN ANELLO

A Thesis Submitted in Partial
Fulfillment of the Requirements
for the Degree of

MASTER OF SCIENCE

Department of Psychology

ILLINOIS STATE UNIVERSITY

2020

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KELSEY ANN ANELLO

COMMITTEE MEMBERS:

Daniel G. Lannin, Chair

Suejung Han

ACKNOWLEDGMENTS

Finally, I would like to thank my mother, Lynda Anello, father, Angelo Anello, and brother, Nicholas Anello, for being an amazing and supportive family. I would not be where I am today if it were not for their unconditional love and emotional support.

<div align="right">K. A. A.</div>

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CHAPTER I: INTRODUCTION

The conceptualization of narcissistic facets such as grandiose and vulnerable narcissism suggests that narcissism may not be an entirely unitary construct (Kernberg, 1975; Kohut, 1977). Researchers have found a connection between narcissism and aggression (Bushman & Baumeister, 1998), and more recently, studies have discovered aggressive tendencies in people who demonstrate traits of both vulnerable and grandiose narcissism (Besser & Priel, 2010). Grandiose narcissism is defined as being domineering in interpersonal relationships and placing oneself on a higher pedestal than everyone else, whereas, vulnerable narcissism is characterized by negative emotionality and hypersensitivity (Murray, 1938). Both of these dimensions have been observed to act aggressively when threatened. Baumeister, Smart, and Boden (1966) proposed an aggression model that stipulates that there are three key elements to consider: egotism, threat, and aggression. Egotism is an inflated view of oneself, which is one of the core components of narcissism. A threat to one's ego is characterized as stimuli that contradicts one's views of him or herself. Baumeister et al. (1966) then defined aggression as a behavior that intentionally causes harm to someone else. Therefore, when those with high levels in either grandiose or vulnerable narcissism feel that their ego has been threatened, they are likely going to act out behaviors that are harmful to whomever is associated with that threat.

While it is known that those high in narcissism may act aggressively towards others, there is still a lack of understanding when it comes to interventions that reduce narcissistic aggression, especially in regards to self-affirmation exercises. Self-affirmation theory was derived from the belief that people are motivated to maintain self-integrity. That is, people want to maintain beliefs that they are good, consistent, moral, etc. (Steele, 1988). Self-affirmation

exercises help to bolster a part of the self so that people are more accepting of adverse or contradicting information (Sherman & Cohen, 2006).

The present study examined the effects that self-affirmation has on those high in grandiose and vulnerable narcissism after they experienced interpersonal rejection. In order to simulate such rejection, the current study utilized a program called Cyberball, an online "game" that simulates a boll-tossing exercise commonly used in interpersonal rejection and ostracism research (Williams, Bernieri, Faulkner, Grahe, & Gada-Jain, 2000). While playing Cyberball, participants were told that they are tossing a ball around with two other participants. These "other people" were actually computer-generated characters. The characters included the participant in the tossing activity at first but eventually ignored and excluded the participant. After being rejected during the Cyberball portion of the current study, participants either completed a self-affirmation exercise or a food exercise. Participants in the self-affirmation exercise wrote about a highly held value while those in the food exercise wrote about their favorite flavor of ice cream. At the end of the study, participants completed a questionnaire that measured their state aggression in order to determine if the self-affirmation exercise reduced aggressive tendencies. It was hypothesized that high vulnerability and self-affirmation would interact with one another to predict the lowest aggression scores when compared to those high in grandiosity as well as those in the control condition. Similar effects were predicted for the interaction between grandiosity and self-affirmation, but it was predicted that those resulting aggression scores would be, on average, lower than those high in vulnerability in the self-affirmation condition. Finally, it was predicted that those high in vulnerability and in the control condition would demonstrate the highest aggression scores followed by those high in grandiosity and in the control condition.

CHAPTER II: REVIEW OF THE LITERATURE

Narcissism is derived from Narcissus, a hunter from Greek mythology who was distinguished for his beauty. Narcissus rejected the love of others and instead fell in love with himself; he spent the rest of his life pining away while staring at his reflection in a stream (Benjamin, 1996). Based on the mythological story of Narcissus, Sigmund Freud defined narcissism (Freud, 1957) as referring to someone who treats his own body as a sexual object. According to Freud (1957), primary narcissism is the act of directing one's libido inward; he believed that the more libido that is directed inward, the less is available for others. Narcissism, then, was the act of focusing on one's self as opposed to others. The idea of narcissism has been around for hundreds of years, but its biggest impact within the world of research was in the 20th century.

Throughout the 1900s, conceptualizations of narcissism had taken different forms. Some researchers, typically those that followed the psychoanalytic school of thought, view narcissism as a type of sexual perversion; others describe it as a developmental stage; some researchers see it as a method in which people relate to objects; more recently, narcissism has been used to describe one's self-esteem (Pulver, 1970). Kohut furthered the psychoanalytic language and redefined narcissism as "the libidinal investment of the self" (Kohut, 1966, p.243). As Pulver (1970) describes, more modern researchers sought to redefine narcissism in order to give it a more precise and specific formulation. Such a task has been proven difficult as the term narcissism has been used to describe many different abstract concepts, as demonstrated previously.

In the late 1900s, researchers began to move away from the language of the Freudian conceptualization of narcissism. In 1980, the third edition of the *Diagnostic and Statistical*

Manual of Mental Disorders (DSM) described those with Narcissistic Personality Disorder (NPD) as having an exaggerated sense of self-importance, preoccupations with success, need for admiration, and lack of empathy (American Psychiatric Association, 1980). A more recent definition of narcissism was placed into the DSM when the fifth edition was released in 2013. It provided clinical guidelines for narcissism that include a pattern of grandiose self-importance as well as a pattern of vulnerability which results in hypersensitivity to interpersonal rejection or competitive loss (American Psychiatric Association, 2013).

Recent literature has sought to further the definition of narcissism by differentiating between those who meet diagnostic criteria for NPD and those who do not by focusing on the idea of self-love. Differentiating between narcissistic self-love and normal self-love revolves around interactions with others. Aligning with what Freud (1957) proposed, those high in narcissism will diminish and ignore the needs of others while solely focusing on themselves (Benjamin, 1993). Along with this self-love, those high in narcissism may also judge their weaknesses more negatively than those lower in narcissism and, therefore, only work towards goals they know they can accomplish (Dimaggio, Fiore, & Salvatore, 2007). That is, in order to continue to hold such high views of oneself, an individual with more narcissitic tendencies may solely utilize and focus on their strengths and ignore tasks that would call upon their weaknesses.

While language used in day-to-day life suggests that narcissism is categorized as a type (he or she is a narcissist versus he or she is not a narcissist), researchers and professionals within the clinical field often describe and study narcissism as a more continuous trait (he or she has high/low levels of narcissism). Such a gap between professionals in the clinical or research fields and society poses an important question – are personality disorders, such as narcissism, categorical or continuous in nature? A categorical variable is a variable that contains a specific

number of concrete values that do not have extraneous values in between them. For example, in clinical psychology, Narcissistic Personality Disorder has been viewed as a categorical variable in that individuals either have it or they do not (Foster & Campbell, 2007). On the other hand, a continuous variable is defined as a variable that has an infinite amount of values that fall between two distinct values that are observed. In other words, a continuous variable can be visualized as a continuum in which the two observed values are on either end (Garvetter & Wallnau, 2011). When considering such a structure for narcissism, NPD would be on the extreme high end of a continuum and may represent a point where both narcissistic grandiosity and narcissistic vulnerability are extremely high (Jauk & Kaufman, 2018). Viewing narcissism as a continuous variable indicates that there are "fuzzy boundaries" along the continuum where an individual moves from "normal" to "narcissist" (Foster & Campbell, 2007). Foster and Campbell (2007) stipulate that narcissism has been viewed as either categorical or continuous depending on which lens of psychology one is looking through – clinical psychology tends to view narcissism as categorical whereas social psychology studies narcissism as continuous. According to their research, Foster and Campbell (2007) concluded that clinical narcissism may be categorical and subclinical may be continuous.

Clinical narcissism refers to a high level of narcissism that may be diagnosable as Narcissistic Personality Disorder in the DSM (Foster & Campbell, 2007). In order to be considered as having clinical narcissism, one must meet the criteria of the diagnostic manual and be diagnosed by a health care provider. The DSM-V states that in order to be diagnosed with Narcissistic Personality Disorder (NPD), one must meet 5 of the 9 following criteria: grandiose sense of self-importance; preoccupation with fantasies of unlimited success, power, beauty, etc.; belief that he or she is "special" and can only be understood or acquainted with other high-status

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people; requires excessive admiration; sense of entitlement; interpersonally exploitative; lack of empathy; often envious of others or believes others are envious of him or her; and displays arrogant behaviors and/or attitudes (American Psychiatric Association, 2013). Furthermore, according to the American Psychiatric Association (2013), only about one half to one percent of the population is clinically diagnosed with NPD. This poses a dilemma for researchers. Since NPD is so uncommon, it makes it hard to study individuals within this population.

The Narcissistic Dimensions

In 1938, Murray provided one of the first conceptualizations of a duel-dynamic structure to narcissism. These two dynamics are characterized as narcissistic grandiosity and vulnerability. *Grandiosity* is defined as being interpersonally domineering and self-absorbent. Grandiosity is the dimension of narcissism that the rest of society typically sees. Those who are high in grandiose narcissism tend to be outwardly exploitative and blatantly place themselves on a higher pedestal than those around them. The more covert or hidden side to narcissism is vulnerability. *Vulnerability* is characterized by hypersensitivity and negative emotions. Researchers such as Kernberg (1975) believed that the arrogant and contemptuous mask of the narcissists was used to hide the fragile and vulnerable narcissist underneath (Dimaggio, Fiore, & Salvatore, 2007). Therefore, those high in vulnerability are not as easily noticeable and tend to only act out once their self-concept has been threatened or questioned. While the two dimensions of narcissism may differ in their presentation and subjective distress, they both have an underlying theme of entitlement and exploitativeness (Reidy, Zeichner, Foster, & Martinez, 2008). Narcissism gained more of a spark in the 1950s and 60s with Kernberg's and Kohut's research. Both Kohut (1977) and Kernberg (1975) characterized narcissism as having grandiose traits such as being self-aggrandizing and domineering in interpersonal settings. However, the

two also acknowledged the vulnerable side to narcissism, in which the individual with narcissism feels inferior and experiences negative emotionality.

Differentiating between these two facets of narcissism – grandiosity and vulnerability – has also gained much empirical support. The labels may vary, but the underlying meaning and distinction between grandiose and vulnerable narcissism remains constant, e.g.; overt vs. covert (Wink & Donahue, 1997; Fossati, Borroni, Eisenberg, & Maffei, 2010), well-defended vs. poorly-defended (Daig, Klapp, & Fliege, 2009), and adaptive vs. maladaptive (Hill & Yousey, 1998; Barry, Frick, Adler, & Grafeman, 2007). Studies conducted using factorial analyses have suggested that grandiosity and vulnerability exist independently of one another (Wink, 1991; Cain, Pincus, & Ansell, 2008). While the two facets may share underlying traits, one exists in spite of the other. Further research has explored the underlying differences of the two features.

More recent research has sought to differentiate the two dimensions of narcissism by comparing their scores on different personality inventories. Participants displaying grandiose qualities have been found to score higher than those demonstrating more vulnerable traits on criteria for Narcissitic Personality Disorder, Antisocial Personality Disorder, and Histrionic Personality Disorder; these findings may be due to the "grandiose bias" seen in narcissistic inventories and diagnostic criteria (Dickinson & Pincus, 2003). Past inventories and diagnostic criteria were mostly based on Kernberg's definition of narcissism which relied heavily on the grandiose dimension. Dickinson & Pincus (2003) also found that grandiose participants reported more difficulties in interpersonal relationships as a result of their domineering or vindicitve nature. They also reported attachment styles that are related to more positive self-representation as well as low interpersonal distress. To further explain, individuals higher in grandiosity experience less distress resulting from their personally-domineering life styles than their

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vulnerable counterparts. On the other hand, those higher in vulnerability scored higher than those diplaying more grandiose traits on Avoidant Personality Disorder criteria. This finding suggests that the dimension of vulnerability places more of an emphasis on concern with interpersonal relationships, and while individuals may report high entitlement and exploitation on other measures such as the Narcissistic Personality Inventory, they also fear being disappointed or ashamed within relationships. Those high in vulnerability also reported higher interpersonal distress than those high in grandiosity. Finally, participants who scored higher on vulnerablility selected attachment styles with more negative self-representations (Dickinson & Pincus, 2003).

The contrast between higher grandiosity and higher vulnerability suggests that they differ in the sources of their distress. Besser and Priel (2010) found that those who score higher on grandiosity experience more subjective distress after an achievement failure whereas those higher on vulnerability experience negative emotionality after interpersonal rejection. These findings suggest that those who display more grandiose traits are more concerned with goal achievement while individuals higher in vulnerability are more concerned with how others perceive them. It seems that people who represent a more grandiose personality respond negatively to more internal cues whereas those who demonstrate more vulnerable characteristics respond to external cues. While both have different sources for the distress, both failure settings undermine the entitlement and exploitativeness of the two facets of narcissism which have the strongest relationship to aggression (Reidy, Zeichner, Foster, & Martinez, 2008).

Subclinical Narcissism

Social critics have argued that traits of narcissism can be found among people of society. That is, those who do not meet the full criteria for an NPD diagnosis may still possess characteristics of the disorder (Emmons, 1987). Fischer (1984) defined this phenomenon as

subclinical narcissism. In other words, subclinical narcissism is defined as less extreme forms of narcissistic behaviors that are reflective of a personality trait (Emmons, 1987). With this in mind, it is possible to measure narcissistic tendencies within a population that has not been clinically diagnosed with the personality disorder. Subclinical populations are ideal for research because they are more easily accessible and provide a larger pool of participants. The present study will be utilizing a subclinical population.

Narcissistic Aggression

Aggression is defined as any behavior that is directed at another person with an intent to harm him or her (Konrath et al., 2006; Anderson & Bushman, 2002). One of the most commonly used questionnaires to measure aggression – The Buss-Perry Aggression Questionnaire – conceptualizes aggression as occurring in four different types: verbal aggression, physical aggression, anger, and hostility (Buss & Perry, 1992). According to Buss and Perry (1992) verbal aggression surrounds behaviors in which the aggressor openly disagrees and argues with others; physical aggression is characterized by fighting and physically threatening others; anger surrounds the emotionality and the rate of change in emotionality experienced when facing external threats; hostility focuses on paranoia and feelings of not having a fair life.

Aggression may be a result of high self-esteem – the aggressors feel that they are superior to others (Baumeister, Smart, & Boden, 1996). In Baumeister and colleagues' (1996) model, there are three key factors to consider: egotism, threat, and aggression. *Egotism*, an inflated view of the self, is one of the core components of narcissism (Bushman & Baumeister, 1998). An important distinction to make is between self-esteem and egotism. According to Baumeister and his colleagues (1996), self-esteem is not directly related to aggression. The connection, then, between narcissism and aggression lies within the egotism that is displayed by those with

narcissistic personality traits. Individuals who display narcissistic tendencies perceive themselves to be better than others in terms of agentic traits, such as intelligence. However, the difference between those with higher levels of narcissism and those who have a high self-esteem is that those with high levels of narcissism do not believe that they are better than others in the communal sense whereas those with high-self-esteem do (Campbell, Rudich, & Sedikides, 2002). In other words, the individual with narcissism's lack in positive communal (e.g., empathy, agreeableness) self-views is related to their lack of close interpersonal relationships; therefore, this lack in close connections with others may play a factor into narcissistic aggression (Konrath, Bushman, & Campbell, 2006).

Egotism, one of the core components of narcissism according to Bushman and Baumeister (1998), is defined as the tendency, or motivation, to use attributions that help to put oneself in the best possible light (Snyder, Walter, & Rosenfield, 1976; Zhang & Baumeister, 2006). In other words, an individual may attribute a good outcome or success to their own skills rather than luck or fate. Egotism has also been defined as the inflated and sometimes unstable view of the self (Konrath, Bushman, & Campbell, 2006). *Egotism threat,* therefore, occurs when another person or circumstance disputes an individual's highly favorable views of oneself (Baumeister et al., 1996). For example, a person may hold the belief that they are very skilled at poker, but when they enter a tournament, they end up losing all of their money. This circumstance of losing poses a threat to that person's ego. These beliefs may be challenged, contradicted, or even questioned. Aggression is increased as a result of many different types of threat, but when specifically looking at those who display narcissistic tendencies, the two biggest threat influences are interpersonal rejection and achievement failure (Besser & Priel, 2010). It has also been supported that negative feedback and criticism provoke aggression (Bushman &

Baumeister, 1998). Each of these threats are directly linked to an agentic domain, providing support for narcissistic aggression being directly related to an egotism threat.

According to Bushman and Baumeister (1998) those with narcissism typically only aim their aggression at the perceived threat. In psychodynamic literature, it has been postulated that narcissistic rage can be unguided in that it can be unprovoked and directed at an "innocent" party; however, there has not been any empirical evidence to support this claim (Konrath et al., 2006). Therefore, it can be concluded that narcissistic aggression is a result of an egotism threat that is directed towards the provocative stimulus.

In clinical studies, researchers found that those high in narcissism view others as an obstacle to their goals and react to those obstacles with anger by attacking or despising them (Dimaggio, Fiore, & Salvatore, 2007). One study found that both grandiose and vulnerable narcissism were positive predictors for both reactive and proactive self-reported aggression whereas grandiose narcissism also positively predicted behavioral aggression and an increase in testosterone levels when completing a competitive task (Lobbestael, Baumeister, Fiebig, & Eckel, 2014). The similarities between the two suggests that they both engage in affect-loaded defensive behavior when provoked by an external stimuli, though, the source of the threat may be different. Thus, the threatened egotism hypothesis, formulated by Baumeister, Smart, and Boden (1996), can be applied to both grandiose and vulnerable narcissism (Lobbestael, Baumeister, Fiebig, & Eckel, 2014). Lobbestael et al. (2014) also proposed that both vulnerable and grandiose narcissism were predictive of proactive and reactive aggression. Proactive aggression is aggression that is planned out and used to exploit others for personal gain; reactive aggression is aggressive behavior that is a result of some sort of threat – it is used in defense.

While both those with grandiose and vulnerable tendencies engage in similar behaviors in terms of aggression, there are some differences between the two that are important to highlight.

There may be important differences between the narcissistic facets that provide some insight as to how these traits influence action related to aggressive thoughts. Those high in vulnerable narcissism may be more likely to internalize issues when compared to those high in grandiosity. This finding further confirms that grandiosity is predictive of externalization while vulnerability is associated with internalization (Miller, Gentile, & Campbell, 2013). In line with this conceptualization, Lobbestael et al. (2009) discovered that grandiosity was predictive of behavioral aggression whereas vulnerability was not. Relatedly, another study found that grandiosity predicted overt refusals to help an inconsiderate research partner, while vulnerability only predicted anonymous refusals to help (Lannin, Guyll, Krizan, Madon, & Cornish, 2014). Based on the research presented, those who are higher in grandiosity are more likely to act out physically and openly report feelings of aggression while those high in vulnerability are more likely to act out verbally and hide aggressive feelings.

As mentioned previously, there are two main types of aggression-inducing situations that have been a focus within narcissism research – interpersonal rejection and achievement failure. The underlying commonality between the two situations is that both pose threats to an individual's ego. Different methods have been used within empirical research in order to elicit aggressive responses within the laboratory setting. Several studies have produced aggression-like symptoms within the laboratory using an interpersonal-rejection design. Bushman and Baumeister (1998) looked at self-love and self-hate and which one tends to lead to aggression in individuals who display narcissistic tendencies. In order to get participants – whose levels of narcissism were measured prior to the manipulation – into an aggressive state, they used an

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interpersonal rejection manipulation in the first study. Participants were told to write about their stance on abortion. Once completed, another "participant" – who was really one of the experimenters – wrote comments on the writing. Those that were in the experimental condition received negative comments and ratings, thus producing a threat to their egos. A manipulation check confirmed that those in the bad evaluation condition felt more threatened, malicious, and treated less fairly (Bushman & Baumeister, 1998). Several other studies have demonstrated that non-narcissistic participants devalue and aggress towards those who have made them feel rejected (Leary, Twenge, & Quinlivan, 2006). Such manipulations include rejection from a confederate (Geller, Goodstein, Silver, & Sternberg, 1974), rejection from group members (Leary, Tambor, Terdal, & Downs, 1995), rejection from another participant (Buckley, Winkel, & Leary, 2004), rejection within a chat room (Williams, et al., 2002), and rejection within games (i.e. ball tossing) (Williams & Sommer, 1997).

Manipulating Interpersonal Rejection Online

The current study will use an online game, here-on referred to as Cyberball, to simulate interpersonal rejection within a ball-tossing game. Several studies have used this technique in order to elicit aggressive responses (Ruggieri, Bendixen, Gabriel, & Alsaker, 2013). Cyberball is a ball-tossing simulation that was created to mimic ball-tossing exercises typically used in-person (Williams et al., 2000). When playing Cyberball, participants toss around a ball with two other computer-generated people – typically the participants are told that the other players are also participants within the study in order to make the experience feel more real. Those in the interpersonal rejection condition may receive the ball a few times, but after a while, the other "players" will stop including them completely. Studies have shown that this lack of inclusion makes participants feel rejected by the other "players" in the game (Williams, 2006). Some

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studies have looked at when participants in the rejection condition choose to exit the game. Those that were ostracized chose to quit playing more quickly than those who were not ostracized and derogated their rejectors (Williams, Bernieri, Faulkner, Grahe, & Gada-Jain, 2000; Pepitone & Wilpizeski, 1960). Studies have shown that while interpersonal rejection induces aggression for individuals that are high in either vulnerable and grandiose narcissism, the effects were shown to be greater for those with more vulnerable tendencies (Besser & Priel, 2010).

Other studies have used achievement failure in order to evoke aggression within participants. Studies inducing achievement failure within the laboratory setting have used vignettes (Besser & Priel, 2010; Zeigler-Hill, Besser, & King, 2011), anagrams (Bar-Tal & Hanson Frieze, 1977; Moulton, 1965; Dickhauser, Buch, & Dickhauser, 2011), and word association (Plaks & Stecher, 2007). The purpose of achievement failure conditions is to have participants feel as if they have failed at a task or did not complete a task within a certain amount of time. Achievement failure has been shown to have a greater effect for grandiose narcissism when compared to vulnerable narcissism (Besser & Priel, 2010). While both failure conditions affect those who are high in grandiose and vulnerable narcissism, the current study will be utilizing an interpersonal rejection condition in order to focus more on vulnerable narcissism.

Self-Affirmation Theory and its Potential for Buffering Narcissistic Aggression

Steele postulated that people are motivated to maintain self-integrity based on research conducted by James (1915) and Allport (1943). James and Allport stated that people utilize self-preservation in order to seek out different things, such as beliefs, in order to protect one's self-esteem and welfare (Steele, 1988). Researchers have expanded upon this definition by stating that one can compensate psychologically to adverse stimuli by utilizing an indirect adaptation of

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affirming self-resources that are not related to the threat (Sherman & Cohen, 2006). That is, the act of self-affirmation draws upon aspects of identity that are positive and unrelated to the threat (McQueen & Klein, 2006); in doing so, the individual's sense of self-worth is bolstered. Activities such as winning a game, reflecting on the importance of family, receiving a gift from a loved one, or receiving a passing grade on a difficult task can have a big impact on an individual (Cohen & Sherman, 2014). According to Cohen and Sherman (2014), affirmations of the self help people to recognize the psychological resources that they possess that go beyond the threatening stimuli. The recognition of these psychological resources allow individuals to focus on stimuli other than whatever is causing the threat to their ego. Self-affirmations buffer the psyche against threatening circumstances and have also been found to reduce defensive responses by curbing these reactions (Cohen & Sherman, 2014). It has been suggested that implementing self-affirmation strategies aids in reducing the likelihood of self-control failure (Schmeichel & Vohs, 2009), information avoidance (Howell & Shepperd, 2012), and failure-related cognitions (Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999).

One of the most widely used self-affirmation manipulations in contemporary experimental research is reflecting on personal values via an essay-writing task (McQueen & Klein, 2006; Cohen & Sherman, 2014; Schmeichel & Vohs, 2009). Such a task entails choosing one highly held value and writing an essay describing the importance of that value in one's life, what that value means to the person, etc. The effectiveness of reflecting on personal values may be due the basis of self-justification provided by values (Maio, 2017). McQueen and Kleing (2006) found that people are more accepting of information that threatens their beliefs about themselves after they have written a few short sentences about the value that they find most important. Self-affirming by using values – paired with contemplation – has also been found to

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increase the likelihood that people will choose to view mental health screening results, counteracting internalized help-seeking stigma (Lannin, Ludwikowski, Vogel, Seidman, & Anello, 2018). Furthermore, another study found that self-affirmation not only buttresses self-esteem, but it also reduces the psychological impact of the threatening stimulus (Creswell et al., 2005). Reflecting on personal values has been studied in many different settings, and the consensus seems to be that conducting this self-affirmation technique increases participants' acceptance of potentially harmful information.

Because narcissistic aggression can be conceptualized as resulting from ego threat, interventions that help to buffer one's self-views against a threat may reduce aggression. It is also important to point out that narcisstic personalities demonstrate less severe antisocial behavior than some of the other personality disorders (Kernberg, 2004). This finding indicates that those with narcissism may be more receptive to therapeutic interventions than those with antisocial personality disorder (Kernberg, 2004). It has also been noted that the actions of those high in narcissism are driven not only by the pursuit of perfection but by values as well (Dimaggio, Fiore, & Salvatore, 2007). If those with high levels of narcissism rely on their values to guide behavior, then reflecting on such values may bolster self-esteem, leading to a reduction in aggressive behaviors.

Reflecting on personal values has been used to reduce narcissistic aggression in youth (Thomaes, Bushman, Orobio de Castro, Cohen, & Denissen, 2009). The researchers utilized a short self-affirmation writing exercise in which participants wrote about two or three values that they found to be most important to them. Those who wrote about their values displayed a decrease in narcissistic aggression when compared to the control condition. Thomaes and his colleagues (2009) also found that the effects of the self-affirmation activity lasted up to one week

after the intervention was implemented. This suggests that using a self-affirmation activity centered around values may be an appropriate and effective therapeutic intervention for those displaying subclinical narcissism tendencies. However, the researchers did not differentiate between grandiosity and vulnerability. The present study hopes to fill that gap and differentiate between grandiose and vulnerable narcissism in terms of the effectiveness of a self-affirmation intervention to buttress self-worth following either interpersonal rejection or achievement failure.

It should be noted that some evidence suggests that using values in the therapeutic setting with a clinically-diagnosed narcissism patient may actually worsen their monitoring of their own behaviors (i.e., acting on one's values without consciously considering consequences to the behaviors), perpetuate egocentrism, and worsen their relationships with others (Dimaggio, Fiore, & Salvatore, 2007). In general, both those diagnosed with NPD and those who display narcissistic traits emphasize the importance of self-centered values such as achievement and personal power while not placing importance in values that emphasize others' well-being such as social justice and benevolence (Anello, Lannin, & Hermann, 2019). Research has demonstrated that those with NPD generate behaviors that are based on these values as opposed to emotion (Dimaggio et al., 2007). According to Dimaggio and colleagues (2007), those wih NPD set goals based on the rigid inner values they posess; goals that do not align with these rigid values and beliefs of the ideal self are rejected. Such pervasive use of values in goal setting reduces emotional experience thus perpetuating the individual with NPD's use of goals to influence behavior as opposed to emotion (Dimaggio et al., 2007). Therefore, reflecting on such self-centered values with someone diagnosed with NPD may further perpetuate that individual's narcissistic tendencies, such as placing themself above others and dominating interpersonal relationships. While this is an important finding when considering treatment modalities for those

coping with NPD, such findings have not been demonstrated in a subclinical population. One study observed the relationship between a values reflection self-affirmation activity and narcissistic aggression. Thomaes and his colleagues (2009) reported that reflecting on values can reduce aggression in sublinical populations with effects being observed up to a week after the intervention was conducted. In fact, the participants did not report an increase in narcissistic tendencies a week after the values reflection intervention was conducted. With this in mind, it is possible that utilizing a values reflection intervention within a therapy session with clients who fall into the subclinical population will help to reduce their narcissistic aggression, at least temporarily.

Few studies have looked at the impact of self-affirmation on individuals with higher levels of narcissism, and even fewer have differentiated between grandiose and vulnerable narcissism. A study conducted by Thomaes et al. (2009) demonstrated that a self-affirmation activity, such as writing about personal values, is effective in reducing narcissistic aggression in adolescents. However, it is important to note that the questionnaire used to measure narcissism – the Childhood Narcissism Scale – focuses more on the grandiose aspects of narcissism such as entitled self-views and adverse interpersonal relationships (Thomaes et al., 2009). Therefore, it is expected that those with higher scores in grandiose narcissism will experience a decrease in aggression. However, given that those with vulnerable narcissism experience more negative emotionality and internalizing behaviors, it is expected that there may be a greater decrease in aggression scores after a self-affirmation activitiy.

The Proposed Study

Due to the gap in the literature regarding self-affirmation as a potential intervention for narcissisitc aggression when dealing with both grandiose and vulnerable narcissism, the current

study has two purposes: (a) to examine differentiated responses to interpersonal rejection between narcissistic dimensions of grandiosity and vulnerability, and (b) to examine whether encouraging self-affirmation is effective in reducing aggression levels for individuals with higher levels of either grandiose or vulnerable narcissism. Because of gaps in the literature related to vulnerable narcissism (Dickinson & Pincus, 2003), the present study will be utilizing an interpersonal rejection condition, which has been found to increase aggression in those high in vulnerability to a greater extent that those high in grandiosity.

Hypotheses

Based on the previous literature presented, it was hypothesized that those high in vulnerability and in the self-affirmation condition will demonstrate a lower aggression score after the posttest measures when compared to those high in grandiosity as well as those in the control condition. That is, it was predicted that the self-affirmation intervention would be the most effective in reducing aggression scores for those higher in vulnerable narcissism. A similar effect was predicted for those high in grandiose narcissism; however, it was expected that those who were higher in grandiose narcissism and in the self-affirmation condition would produce lower aggression scores but not as low as those high in vulnerability. In other words, it was expected that the interaction between narcissistic dimension levels and the self-affirmation condition would be significant in that aggresssion scores would be lower for those in the self-affirmation condition compared to the control condition, with aggression scores being even lower for those high in vulnerable narcissism as compared to those high in grandiose narcissism. Such findings were expected for two reasons: interpersonal rejection has a higher impact for those high in vulnerability (Besser & Priel, 2010), and one of the charactersitics of vulnerability is negative emotionality, so reflecting on values may help to bolster other parts of a highly vulnerable

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participant's self, and therefore, reduce aggressive tendencies. Those high in grandiosity may not require such defenses, such as a value reflection, against interpersonal threats because they do not experience negative emotionality as significantly.

Overall, participants in the control condition were predicted to have higher aggression scores than those in the self-affirmation condition. Within the control group, it was expected that those higher in vulnerability would display higher aggression scores than those higher in grandiosity due to the interpersonal rejection manipulation.

CHAPTER III: METHODOLOGY

Power Analysis

A power analysis was conducted to determine an optimal sample size for the present study. To date there have been no studies using narcissistic aggression as an outcome variable with narcissistic dimension type and self-affirmation as independent variables. An analogous experimental study (Thomaes et al., 2009) utilized 405 participants for a two group between-subjects experiment with random assignment to self-affirmation versus control, where interaction effects between the experimental variable (self-affirmation vs. control) and narcissism was examined. Unfortunately, Thomaes et al. (2009) did not provide effect sizes for the regression-based interaction analyses it conducted. Therefore, to roughly approximate the size of the effects the confidence intervals of the unstandardized beta values were examined, and it was concluded that the interaction effects were small.

Therefore, to predict the minimum sample size of the hypothesized interaction effects between experimental (self-affirmation vs. control) and narcissism continuous variables, an estimate based on a small effect size was conducted. The analysis utilized G-Power 3.0.10 software, and specified F-test analyses for linear multiple regression, with a priori analysis that computes required sample size, given α, power, and effect size. For the analyses, I specified effect size f as a small effect (.02) α error probability equal to .05, power equal to .80, the number of tested predictors equal to one, and the total number of predictors equal to three. Approximately 396 participants (198 per group) were required to achieve a critical F value of 3.87, with an actual power equal to .80. Balancing the desire to achieve ample power for detecting small effects, with the practical limitations of data collection in the present setting,

leads me to target sampling 450 total participants, which will account for quality checks to detect random and extreme response patterns.

Participants

After receiving IRB approval, a total of about 650 participants were recruited for the study. Because the focus of the current study was the effect of the self-affirmation writing condition on aggression levels in those high in grandiose and vulnerable narcissism, participants were excluded if they did not respond to one of the two essay prompts (i.e., the essay was skipped completely). After removing participants that did not complete the writing activity, about 267 valid responses were left. Of the 267 participants, 30.8% were freshman, 21.0% were sophomores, 20.2% were juniors, 20.6% were seniors, and 7.1% were graduate students all at Illinois State University. The average age of the sample was about 20.72 years old ($SD = 3.37$), with a range from 18 to 55 years of age.

A large proportion of the sample identified as either cisgender male ($n = 54$) or cisgender female ($n = 205$) with a cumulative percent of 97.0%. In the sample, there was only one participant who identified as transgender female (0.4%), two nonbinary (0.7%), two gender fluid (0.7%), and three did not prefer to answer (1.1%). Furthermore, 80.8% of the sample identified as heterosexual. The next largest percentage was bisexual, with about 10.5% of the sample selecting that sexual orientation. Three participants selected gay (1.1%), seven lesbian (2.6%), five pansexual (1.9%), two asexual (0.7%), five other (1.9%), and one did not prefer to answer (0.4%). With this data in mind, the upcoming analyses are based on a predominantly cisgender, heterosexual sample. Approximately 75.7% of the sample identified as White/Caucasian. Such a finding was not a surprise in a predominantly White university. About 10.9% of the sample identified as Hispanic, Spanish, or Latinx. Of the remaining participants, 15 identified as Black

or African American (5.6%), 8 identified as Asian (3.0%), 10 identified as biracial or multiracial (3.7%), and three selected the other or not listed option (1.1%).

Study Design and Recruitment

The current study utilized an online two-group, between-subjects experimental design with random assignment into a control or self-affirmation condition. Narcissistic aggression was the outcome variable, with positive and negative mood serving as covariates. Potential interaction effects between grandiosity and vulnerability with the experimental manipulation were the primary foci of the present study.

Participants were recruited for the study using two different platforms. First, participants were provided the opportunity to sign up for the study through SONA, an online research portal provided by the psychology department at ISU. SONA is available to all students at ISU who take introductory psychology courses. Participants who sign up using SONA were awarded 0.5 credits upon completion that could be used as extra credit for qualifying classes. The second recruitment method was through the university's email. A mass email was distributed to all enrolled students. Unlike participants using the SONA portal, participants who opt to participate through the email were not given the chance to earn extra credit points. Instead, participants were given the opportunity to enter a raffle in which two $25 gift cards were randomly awarded. In order to sign up for the raffle, participants provided their names and emails in a separate Qualtrics survey after completing the initial study; the personal information was not tied to survey responses in order to maintain participant confidentiality.

The study was completed online using a Qualtrics survey and took less than 30 minutes to complete. Participants were randomly assigned a participant ID. The participants received a confidentiality form at the beginning of the study and a disclosure form at the end. They were

also given the option to save or print these two items. Upon completion, participants who completed the study through the SONA portal were awarded 0.5 extra credit points that they can allocate to the class of their choice. Participants who completed the study through the mass email provided their name and email in order to enter the raffle for a chance to win one of the gift cards mentioned previously. Participants received a message upon entering the raffle informing them that their personal information will be kept separate from their questionnaire results.

Measures

      Grandiose Narcissism. The Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) assessed narcissistic grandiosity. The NPI utilizes paired statements in which the participants chose one of two paired statements that most closely resembled their feelings about themselves. When scoring the NPI, the items that resemble narcissistic tendencies received one point. A higher score indicates higher levels of grandiose narcissism. Sample items include "A) I am assertive. B) I wish I were more assertive." or "A) I will never be satisfied until I get all that I deserve. B) I take my satisfactions as they come." Researchers have found the NPI to be internally valid, Cronbach's α = .84 (Anello, Lannin, & Hermann, 2019). The present study also found the NPI to be internally valid, Cronbach's α = .83. In addition, previous studies confirmed the validity of the NPI by reporting positive correlations with the Pathological Narcissism Scale (PNS) and the subscale of grandiosity within the PNS while also reporting a negative partial correlation with the vulnerability subscale within the PNS (Maxwell, Donnellan, Hopwood, & Ackerman, 2011).

      Vulnerable Narcissism. The Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 1997) assessed participants' narcissistic vulnerability scores. Participants answered 10 items based on how much they feel the statements described themselves using a five-point Likert-type

scale where *1 = very uncharacteristic* and *5 = very characteristic*. A higher score indicates

higher levels of vulnerable narcissism. A sample item is "I easily become wrapped up in my own

interests and forget the existence of others." In a similar college sample, the internal validity was

estimated to be Cronbach's α = .74 (Anello, Lannin, & Hermann, 2019). The present study

reported a Cronbach's alpha of .59 for the HSNS scale. Previous studies have demonstrated the

validity of the HSNS by finding a strong positive correlation with other vulnerable scales such as

the vulnerable scales for the Five-Factor Narcissism Inventory and the Pathological Narcissism

Inventory (Miller, et al., 2014).

Narcissistic Aggression. The Buss-Perry Aggression Questionnaire (AQ; Buss & Perry,

1992) assessed narcissistic aggression. Following the procedure of Farrar and Krcmar (2006), 11

items of the AQ were utilized and reworded in order to measure state as opposed to trait

aggression. Participants responded to the 11 items using a five-point scale ranging from *1 =*

extremely disagree to *5 = extremely agree*. A higher score indicates higher levels of state

aggression. Example items include "I could not control my urge to strike this person." and "This

person would have pushed me so far that we came to blows." Researchers have found the

original (trait) AQ to be internally valid with a Cronbach's α of .68 (Barnett & Powell, 2016).

The present study also found the AQ to be internally valid, Cronbach's α = .77. The AQ can be

broken down into four different factors – verbal aggression, physical aggression, anger, and

hostility. The four subscales of the AQ have been found to be positively associated with scales

that focus on aggressive attitudes and instable affect further promoting the validity of the scale

(Harris, 1997). Farrar and Krcmar (2006) also found that changing the items so that they reflect

state aggression does not hinder the reliability of the four subscales – verbal aggression

(Cronbach's α = .88), physical aggression (Cronbach's α = .89), anger (Cronbach's α = .80), and hostility (Cronbach's α = .92).

Mood. The International Positive and Negative Affect Schedule Short Form (I-PANAS-SF; Thompson, 2007) assessed participant's mood. The instructions asked participant to consider whether they feel 10 different emotions. Example items included "Upset" and "Attentive." Participants responded to those 10 items using a five-point likert scale where *1 = never* and *5 = always.* Thompson (2007) found that reducing the original PANAS to this 10-item short form resulted in a reliable brief mood scale, Cronbach's α = .82. The present study confirmed the I-PANAS-SF's internal reliability, Cronbach's α = .78. Thompson (2007) also tested the convergent validity of the positive affect and negative affect of the I-PANAS-SF by comparing it to a five-item measure of subjective well-being and a four-item subjective happiness scale presented by Lyubomirsky and Lepper (1999). The positive affect subscale of the I-PANAS-SF was found to positively correlate with both the subjective well-being scale ($r = .33$) and happiness ($r = .39$). The negative affect subscale was found to negatively correlate with the subjective well-being scale ($r = -.33$) and happiness ($r = -.51$).

Procedure

Data was collected using an online survey created through Qualtrics. One time slot was created on SONA with 200 available participant slots that students could sign up for. The deadline for this time slot was April 25, 2020 at 11:59pm which gave participants about a week to begin and complete the study. Any participant that started the study before the deadline was awarded credit. However, if a participant signed up for a time slot and did not start the study, they were not awarded credit. A mass email containing a link to the Qualtrics survey was also distributed to all enrolled students at Illinois State University.

After signing up on SONA, participants received an email with a link to the Qualtrics study. Participants who chose to complete the study via the mass email were able to follow a different Qualtrics link to do so. Participants were able to complete the study from any computer of their choosing and were not required to come to the lab. First, participants were provided a brief overview of the study along with a consent statement. They were then asked to verify that they are at least 18 years of age and provided consent to be a part of the experiment. Following consent, participants were then redirected to the first part of the survey.

Demographics and Personality Measures

Participants first responded to a questionnaire that was comprised of demographic items, followed by the NPI and HSNS. Demographic items included age, year in school, gender, sexual orientation, and race/ethnicity. Before each section of the questionnaire, participants were given instructions on how to properly answer each part. Once the questionnaire was completed, all participants were redirected via an embedded link to play Cyberball, which is the manipulation used to induce aggression using interpersonal rejection (Williams, Yeager, Cheung, & Choi, 2012).

Interpersonal Rejection

The Cyberball game consisted of two computer generated players – labeled Player 1 and Player 3 – who threw a ball back and forth. The participant acted as the third player – labeled as Player 2. At first, the computer-generated players included the participant in the game, but after about ten tosses to the participant, the two computer generated players stopped passing the ball to the participant and ignored them. As mentioned previously, studies have demonstrated that this causes participants to feel rejected and frustrated (Williams, 2006). Before the game started, participants were presented with a message on their screen stating:

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For the next part of the survey, you will be playing a boll-tossing game. You will be

matched up with two other participants who are also completing the survey. The game

will take about 3 to 5 minutes to play. It is important that you play this game in an

environment where there are minimal distractions. Please do not switch between tabs

while playing and refrain from doing other activities. Essentially, make sure that you are

only playing this game.

During the game, you are labeled as Player 2. When you receive the ball, you should

click on either Player 1 or Player 3 to toss the ball to them.

If you are completing the study on a mobile device, it is recommended that you flip your

phone sideways so that the screen is landscape/horizontal and not portrait/vertical. This

will make it easier to see the game and participate.

If you receive an error before the game loads and a "continue" option is available, please

click "continue" and you should be brought to the starting screen of the game.

The game was then delayed for five seconds to make participants think that they were playing

with real people. After the five seconds, the Cyberball game started and was played for about

five minutes. Immediately after the game ended, participants answered three manipulation

checks to ensure that they felt interpersonally rejected after playing. Following the study

conducted by Ruggieri, Bendixen, Gabriel, and Alsaker (2013), the participants were asked,

"How often were you thrown the ball?" and "Did you feel included by the other participants

during the game?" Participants answered the first question by estimating how may times they

received the ball. They answered the second question using a five-point rating scale where *1=

not at all* and *5 = very much so.* Participants were also asked to indicate if they felt *rejected (1)*

or *accepted (9)* on a nine-point scale.

Self-Affirmation

Once the manipulation questions for the Cyberball game were completed, participants were randomly assigned to either participate in the self-affirmation condition or control condition. Participants who were directed to the self-affirmation activity were first asked to choose a value that they found important via the following instructions, "Below is a list of 11 values. Please read through each of them and decide which one you find to be the most important." The values list provided consisted of 11 values – artistic skills/aesthetic appreciation, athletics, business/managerial skills, creativity, musical ability/appreciation, physical attractiveness, relations with friends/family, romantic values, sense of humor, social skills, spontaneity/living life in the moment (Cohen, Aronson, & Steele, 2000). Once participants chose a value, they were then provided these directions, "Please write about your chosen value and why it is important to you. How do you implement this value in your life? How does it influence you? We do not care about grammar or how good your writing is. Just take this time to reflect on the value you have chosen. Please try to write about 100 words."

Participants in the control condition were given similar prompts. They were first asked to choose their favorite ice cream flavor: "Below is a list of 11 ice cream flavors. Please read through each of them and decide which one you consider to be your favorite." The list of ice flavors that was shown to the participants consisted of chocolate, vanilla, strawberry, cookies and cream, rocky road, moose tracks, caramel, cookie dough, chocolate-vanilla swirl, chocolate brownie, or peanut butter. These control condition items were based on another study that asked participants to write about their favorite flavor of jellybeans (Vail III, Morgan, & Kahle, 2018). For the essay portion, participants in the control condition were given the following instructions: "Please write about your chosen ice cream flavor and why it is your favorite. What makes this

ice cream flavor so good? What makes it better than the other flavors? We do not care about your grammar or how good your writing is. Just take this time to reflect on your favorite flavor of ice cream. Please try to write about 100 words." In both conditions, participants were able to move on to the next portion of the study if they felt that their essay was complete.

Posttest Measures

Upon completion of the self-affirmation or ice cream writing activity, participants were asked a manipulation question to ensure that they completed the essays. For the self-affirmation condition, participants were asked to select which value they chose to write about. Some of the options were values that were not included in the original list. The same format was used for the control condition in which participants were asked to choose the ice cream flavor they chose to write about. After the manipulation questions, participants were directed to the AQ questionnaire followed by the I-PANAS-SF questionnaire. While mood was not a focus of the current study, a mood questionnaire was utilized in order to control for mood influences on aggression. Once participants finished the last survey, they were given a debriefing statement explaining the intentions of the study as well as contact information if they had any questions or concerns about the experiment. Credit for the completion of the survey was awarded through SONA after the due date. Participants were not given credit if they did not start the survey before the due date. Incomplete surveys were still awarded credit.

Descriptive Analyses

Bivariate correlations were conducted (see Table 1). The results showed that the

aggression scores positively correlated with HSNS ($r = 0.13$, $p < .05$) and NPI ($r = 0.31$, $p < .01$).

According to these correlations, NPI has a slightly stronger correlational relationship with the

aggression scores than HSNS. Furthermore, the HSNS scores were positively correlated with the

negative affect subscale derived from the I-PANAS-SF ($r = .26$, $p < .01$). The NPI did not have a

significant relationship with the negative affect variable. The opposite effect was found for the

positive affect subscale. HSNS scores did not have a significant correlational relationship with

positive affect, but NPI did ($r = .37$, $p < .01$).

Table 1. Correlational Matrix of the Narcissistic Dimensions and Questionnaires

	1	2	3	4	5
1. HSNS	—				
2. NPI	–0.01	—			
3. AQ	0.13[*]	0.31[***]	—		
4. Positive Affect	–0.08	0.36[***]	0.07	—	
5. Negative Affect	0.26[***]	0.08	0.23[***]	0.22[***]	—
Mean	3.02	0.34	2.46	2.58	1.72
Standard Deviation	0.47	0.16	0.68	0.82	0.77

Note. The I-PANAS-SF was split into two factors – negative affect and positive affect. All

variables were centered before the average score was calculated.

*$p < .05$ ** $p < .01$ *** $p < .001$

Manipulation Checks

To test whether participants actually felt excluded after playing the Cyberball game, descriptive statistics were run on the three separate manipulation questions that followed the Cyberball game. The first question measured how many times participants believed they received the ball. On average, participants reported that they received the ball about 7.85 times ($SD = 2.30$). Since the game was programmed to toss the ball to the participants about 10 times, participants seem to have underestimated how many times they received the ball. The second manipulation question asked participants how much they felt included by the "other participants." Participants responded using a five-point scale with higher scores indicating that they felt included. On average, participants marked 2.77 ($SD = 0.99$) with a range of responses being one to five, which indicates that they did feel somewhat excluded. Finally, the last manipulation check looked at how much each participant felt rejected or accepted on a nine-point scale, with higher scores indicating that participants felt accepted. The average response was 4.47 ($SD = 1.94$), with a minimum response of 1 and a maximum response of 9. These findings indicate that participants felt a little more rejected than they did accepted. Overall, it seems that the Cyberball manipulation did make participants feel somewhat rejected by the other "players" in the game.

Experimental Main Effects

A variable was also created in order to track which condition each participant was assigned to. Dummy coding was utilized, and "0" represented the control, or ice cream, condition while "1" represented the experimental, or self-affirmation, condition. Within the Model 2 analysis, when aggression was entered as the outcome variable, self-affirmation did not have a significant main effect on aggression scores, $b = -0.08$, $t(254) = -1.08$, $p = .282$.

Main Analysis: Moderation Effects Predicting Aggression

In the first hypothesis, it was predicted the interaction between vulnerability and self-affirmation would predict the lowest aggression scores compared to those high in grandiosity as well as those in the control condition. In order to test the first hypothesis, a Model 2 PROCESS analysis was conducted (Hayes, 2013). In these analyses, self-affirmation was the focal predictor and vulnerability and grandiosity were entered as moderator variables. In other words, self-affirmation acted as the independent variable (X) while aggression score acted as the dependent variable (Y). The moderator variables in the statistical analysis were vulnerability (W) and grandiosity (Z). In the Model 2 analysis, the focus was on the two moderator variables and their interactions with the independent variable when controlling for the other. In addition, the positive and negative affect subscales of the I-PANAS-SF were included as covariates to determine if they also had an influence on aggression scores. See Figure 1 for a conceptual diagram of the Model 2 analysis.

```
        ┌─────┐        ┌─────┐
        │  W  │        │  Z  │
        └──┬──┘        └──┬──┘
           │              │
┌─────┐    ▼              ▼    ┌─────┐
│  X  │────────────────────────▶│  Y  │
└─────┘                         └─────┘
```
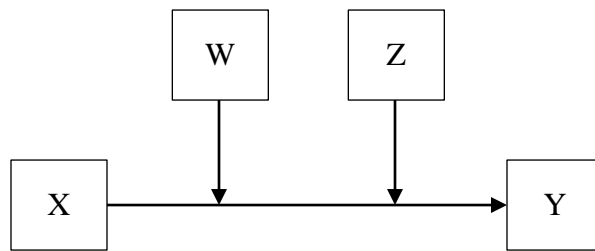
Figure 1. Hayes' 2013 conceptual diagram of a Model 2 PROCESS Analysis.

Overall, the model was found to be significant indicating that all the variables explain a significant portion of variance in the aggression scores, $R^2 = 0.17$, $F(7,\ 256) = 7.32$, $p < .001$. The first hypothesis predicting that those high in vulnerability and in the self-affirmation

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condition would display lower aggression levels than all other experimental groups was not supported by this Model 2 analysis. When looking specifically at vulnerability and self-affirmation, no significant interaction was found, $b = 0.26$, $t(256) = 1.60$, $p = .110$. In fact, the interaction between the two yielded a positive coefficient value which would imply that as vulnerability increases, aggression scores increase for those in the self-affirmation condition. While it is not significant, this trend indicates that self-affirmation may actually make aggression worse. See for the statistical diagram of the results from Model 2.

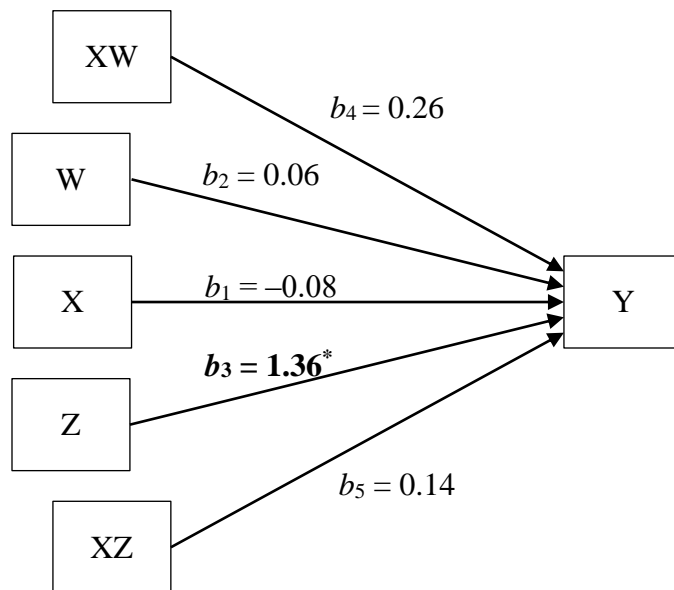*Figure 2.* Hayes' (2013) statistical diagram of a Model 2 PROCESS analysis where X = Self-Affirmation, W = Vulnerability, Z = Grandiosity, and Y = Aggression. Bolded variables indicate a significant coefficient.

* $p < .001$

The second hypothesis – that grandiosity would also interact with self-affirmation to predict lower aggression scores but not as low as those high in vulnerability and in the self-

affirmation condition – was also not supported. In the Model 2 PROCESS analysis, the interaction between grandiosity and self-affirmation was not found to be significant in predicting aggression, $b = 0.14$, $t(254) = 0.30$, $p = .762$. Therefore, the null of the second hypothesis was accepted.

The third hypothesis focused the main effect of vulnerability. It was predicted that those high in vulnerability and in the control condition would display the highest aggression scores compared to those in the self-affirmation condition and those high in grandiosity. Studies have shown that those high in vulnerability tend to be more reactive to interpersonal rejection than those high in grandiosity (Besser & Priel, 2010). In the Model 2 analysis, vulnerability did not significantly predict aggression scores when controlling for the other variables, $b = 0.06$, $t(256) = 0.74$, $p = .458$. Such results led to the null for the third hypothesis to also be accepted.

Finally, the fourth hypothesis, focusing on the main effect of grandiosity on aggression, was examined. In the Model 2 analysis, narcissistic grandiosity was found to be significantly predictive of aggression scores when controlling for all other variables including narcissistic vulnerability and mood, $b = 1.36$, $t(256) = 5.40$, $p < .001$. These findings indicate that higher grandiosity scores significantly predicted higher aggression scores after the interpersonal rejection condition. Such findings indicate that those higher in grandiosity may have been more impacted by the interpersonal rejection condition than those higher in vulnerability. While the fourth hypothesis was mostly supported, grandiosity did not demonstrate a smaller predictive relationship with aggression than vulnerability, which means that the null for this hypothesis was also accepted.

As mentioned previously, the negative and positive affect subscales of the I-PANAS-SF were entered as covariates to see if they had any predictive relationship with aggression. In both

models, negative mood was found to be significantly predictive of aggression scores (Model 2: *b* = 0.18, $t(256) = 3.42$, $p < .01$; Model 3: *b* = 0.17, $t(254) = 3.26$, $p < .01$). Both these findings indicate that a higher negative mood is predictive of a higher aggression score when holding all other variables constant. No significant findings were found in regards to positive mood and its predictiveness of aggression scores. The interaction between the narcissistic dimensions and self-affirmation was also examined but did not yield a significant result.

Exploratory Analyses

Moderation: Three-Way Interaction

A second regression analysis was conducted using a Model 3 PROCESS analysis (Hayes, 2013). All of the variables were entered similarly to the previous regression analysis – aggression as Y, self-affirmation as X, vulnerability as W, and grandiosity as Z. The main difference between this analysis and the first is that now the interaction between the two facets of narcissism was considered as well as the three-way interaction between vulnerability, grandiosity, and self-affirmation. See figure 3 for a conceptual diagram depicting a Model 3 PROCESS analysis. This model was also found to be significant $R^2 = 0.17$, $F(9, 254) = 5.81$, $p < .001$. See figure 4 for the statistical diagram of the results of the Model 3 regression analysis.
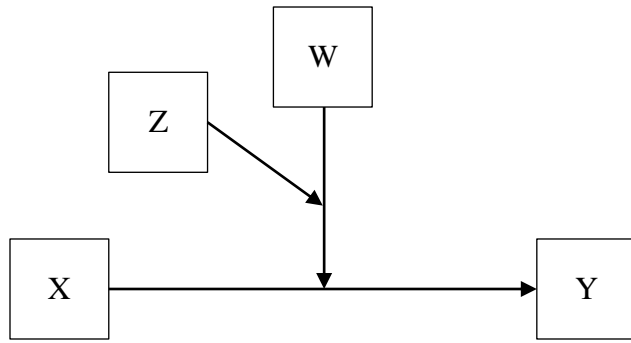
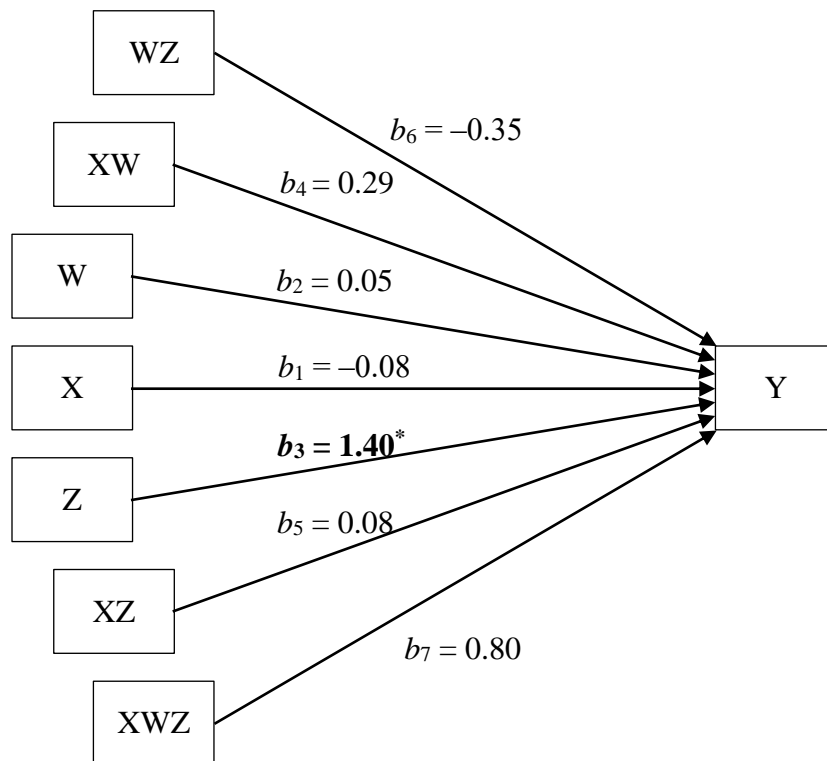*Figure 3.* Hayes' (2013) conceptual diagram of a Model 3 PROCESS Analysis.

Figure 4. Hayes' (2013) statistical diagram of a Model 3 PROCESS Analysis where X = Self-Affirmation, W = Vulnerability, Z = Grandiosity, and Y = Aggression. Bolded variables indicate a significant coefficient.

* p < .001

An interesting discovery within this Model 3 PROCESS analysis was the interactive relationship between vulnerability and self-affirmation. While the findings displayed that the interaction between the two is not significant, it seems that it may be approaching significance, $b = 0.29$, $t(254) = 1.75$, $p = .082$. Such findings suggest that reflecting on a personal value may not be helpful for those high in vulnerability because such a phenomenon predicted higher aggression scores within the current study. The only significant finding within this exploratory analysis was grandiosity's predictive relationship with aggression scores. It seems that higher grandiosity scores predicted higher aggression scores when controlling for the other variables, $b = 1.40$, $t(254) = 5.49$, $p < .001$. High scores of both vulnerability and grandiosity did not interact to significantly predict aggression scores. Similarly, the three-way interaction between vulnerability, grandiosity, and self-affirmation did not significantly predict aggression. [1]

Moderation: Predicting Negative Affect

In order to further examine the interactive relationship between high levels of vulnerability and self-affirmation, another Model 2 PROCESS analysis was conducted (see figure 1; Hayes, 2013). This time, negative affect was entered as the dependent variable (Y). Self-affirmation acted as the independent variable (X) and vulnerability (W) and grandiosity (Z) remained as moderator variables. The model was found to be significant, $R^2 = 0.09$, $F(5, 258) = 5.25$, $p < .001$. When controlling for the other variables, high levels of vulnerability were found to be significantly predictive of negative affect, $b = 0.42$, $t(258) = 4.30$, $p < .001$. Since mood was measured at the very end of the study, these results indicate that those high in vulnerability experienced negative emotionality most likely due to the interpersonal rejection condition

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[1] Two independent samples t-tests were conducted using the top 27% of scores for both vulnerability and grandiosity in order to determine if there were differences in aggression scores between the experimental and control conditions for each facet. There were no significant between-group differences for those high in vulnerability ($t(83) = -0.003$, $p = .997$) or those high in grandiosity ($t(74) = 0.39$, $p = .696$).

(Besser & Priel, 2010). The interaction between vulnerability and self-affirmation also approached significance, $b = -0.34$, $t(258) = -1.78$, $p = .076$. Such a finding suggests that self-affirmation may be an effective way to reduce negative emotionality in those who are high in vulnerable narcissism. A similar trend was found with narcissistic grandiosity; however, those results were not found to be significant. See figure 5 for the statistical diagram.

Figure 5. Hayes' (2013) statistical diagram of a Model 2 PROCESS Analysis where X = Self-Affirmation, W = Vulnerability, Z = Grandiosity, and Y = Negative Affect. Bolded variables indicate a significant coefficient.

* $p < .001$

Keeping negative mood as the dependent variable, a Model 3 PROCESS analysis was conducted to determine if there is a significant interaction between vulnerability and grandiosity as well as a significant three-way interaction between vulnerability, grandiosity, and self-affirmation (see figure 6; Hayes, 2013). The regression model was found to be significant, $R^2 = 0.11$, $F(7, 256) = 4.35$, $p < .001$. Once again, narcissistic vulnerability was found to be

significantly predictive of negative affect when controlling for the other variables, $b = 0.38$,

$t(256) = 3.81$, $p < .001$. In addition, grandiosity was not found to be a significant predictor of

negative affect, $b = 0.48$, $t(256) = 1.68$, $p = 0.95$. None of the interaction terms were found to be

significantly predictive of negative affect (vulnerability X self-affirmation, grandiosity X self-

affirmation, vulnerability X grandiosity, and vulnerability X grandiosity X self-affirmation).
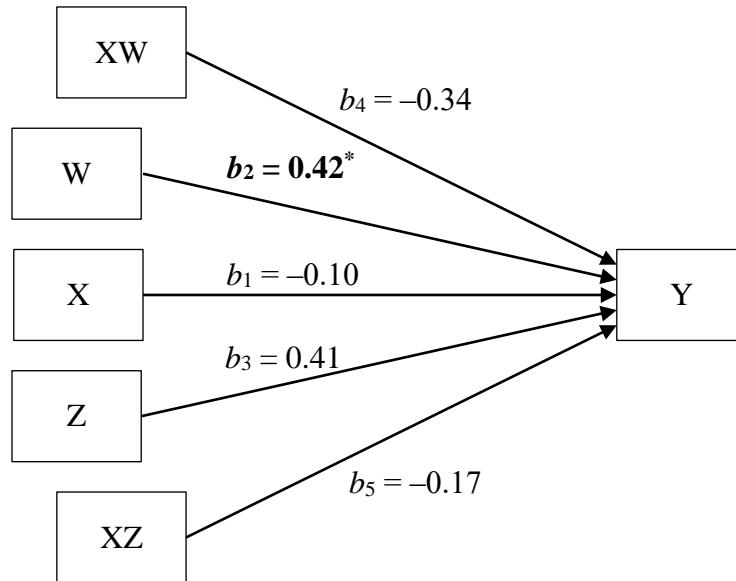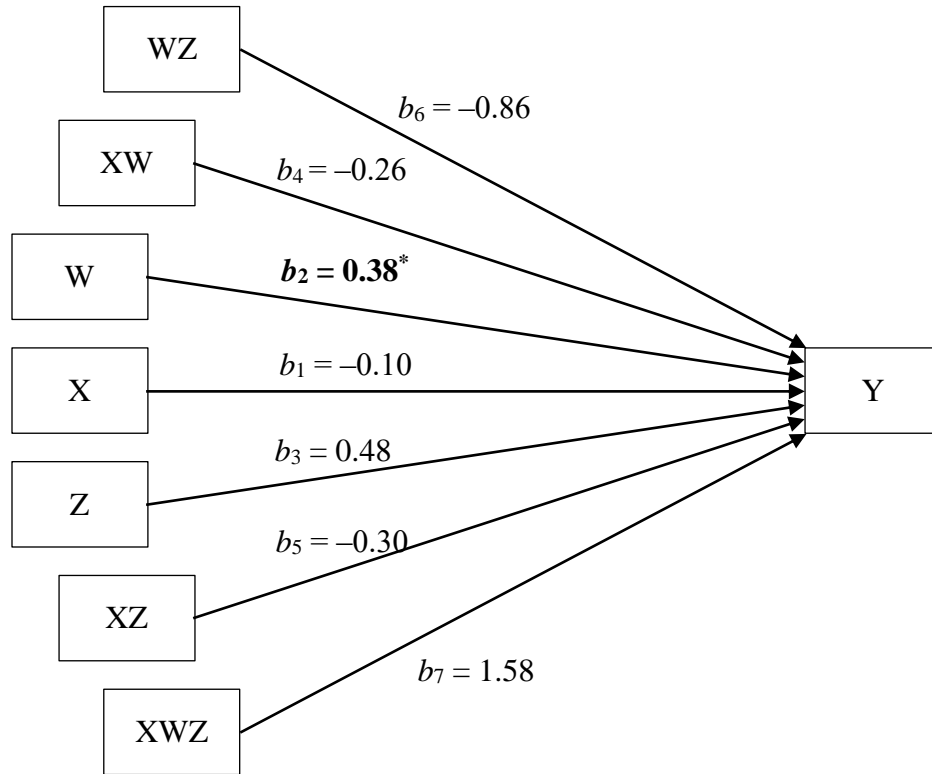

Figure 6. Hayes' (2013) statistical diagram of a Model 3 PROCESS Analysis where X = Self-

Affirmation, W = Vulnerability, Z = Grandiosity, and Y = Negative Affect. Bolded variables

indicate a significant coefficient.

* $p < .001$

Moderation: Predicting Positive Affect

Finally, further exploratory analyses were conducted in order to examine positive affect as the dependent variable. First, a Model 2 PROCES/S analysis was utilized with positive affect as the dependent variable (Y), self-affirmation as the independent variable (X), and vulnerability (W) and grandiosity (Z) as moderator variables (see figure 7; Hayes, 2013). The regression model was found to be significant, $R2 = 0.16$, $F(5, 258) = 9.59$, $p < .001$. When controlling for the other variables, high levels of grandiosity were found to predict higher levels of positive affect, $b = 1.86$, $t(258) = 6.36$, $p < .001$. However, the interaction between self-affirmation and grandiosity did not produce a significant result. In fact, the insignificant coefficient for the interaction term was negative. Such findings indicate that self-affirmation was not helpful in helping participants high in grandiosity feel more positive at the end of the study. Vulnerability on its own was not found to be significantly predictive of positive affect, but the interaction between vulnerability and self-affirmation was a significant predictor, $b = -0.46$, $t(258) = -2.28$, $p < .05$. The negative coefficient indicates that higher levels of vulnerability are predictive of lower levels of positive affect when a self-affirmation activity is completed. Again, such findings indicate that a values-reflection writing activity may not be helpful for those who are high in vulnerable narcissism.

Figure 7. Hayes' (2013) statistical diagram of a Model 2 PROCESS Analysis where X = Self-Affirmation, W = Vulnerability, Z = Grandiosity, and Y = Positive Affect. Bolded variables indicate a significant coefficient.

* $p < .05$ ** $p < .001$

Finally, following the procedure of the other regression analyses conducted, a Model 3 PROCESS analysis was utilized (Hayes, 2013). All variables remained the same as the previous analysis, but now the interactions between vulnerability and grandiosity and vulnerability, grandiosity, and self-affirmation were examined. The model was found to be significant, $R2 = 0.16$, $F(7, 256) = 6.91$, $p < .001$. Within this analysis, the interaction between vulnerability and self-affirmation was found to significantly predict lower scores of positive affect, $b = -0.42$, $t(256) = -2.03$, $p < .05$. Such a finding supports the previous results. Furthermore, grandiosity was again found to be significantly predictive of higher positive affect scores, $b = 1.89$, $t(256) = 6.38$, $p < .001$. See figure 8 for the statistical diagram outlining these findings.
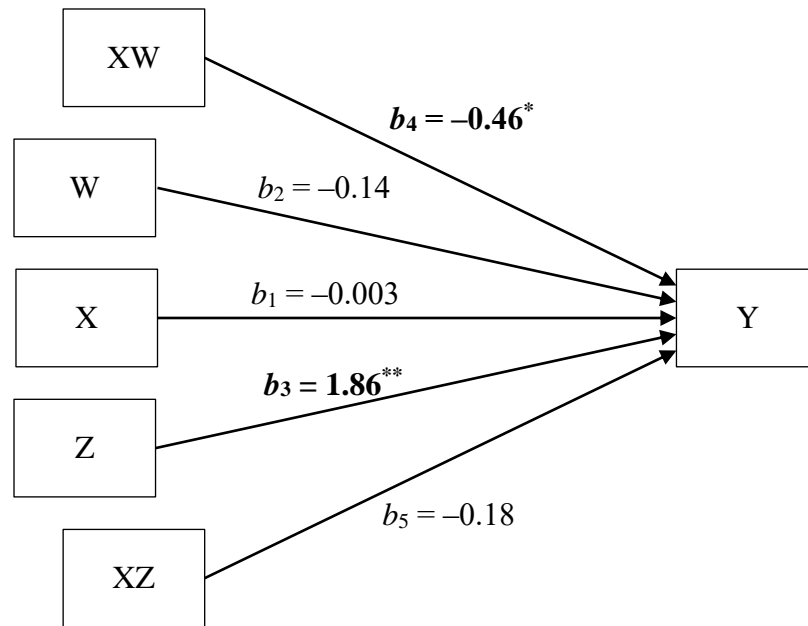
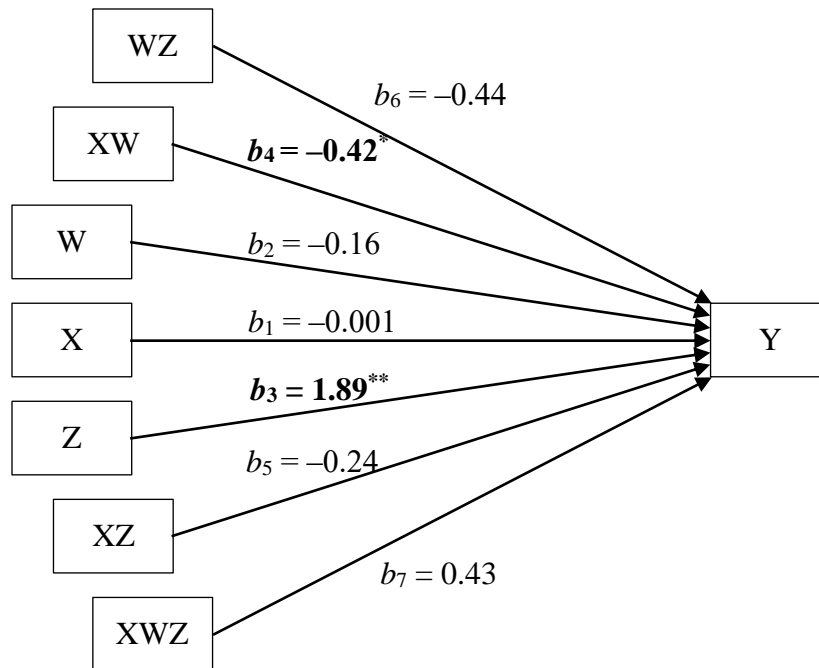*Figure 8.* Hayes' (2013) statistical diagram of a Model 3 PROCESS Analysis where X = Self-Affirmation, W = Vulnerability, Z = Grandiosity, and Y = Positive Affect. Bolded variables indicate a significant coefficient.

* $p < .05$ ** $p < .001$

CHAPTER V: DISCUSSION

The purpose of the present study was to determine if self-affirmation could be utilized to reduce narcissistic aggression in individuals who are high in narcissistic vulnerability and/or narcissistic grandiosity. To date, only one other study has examined the impact of a self-affirmation activity on aggression levels in a sample of adolescents high in narcissism (Thomaes et al., 2009). However, in Thomaes' and colleagues' (2009) experiment, they did not examine the different effects of the two narcissistic dimensions nor the effect of mood on participants' responses. The present study sought to further this literature by examining the facets separately while also seeing if an interaction between the two had an impact on aggression scores. In addition, the current study utilized a common mood measure, the I-PANAS-SF, in order to control for the effects of participant mood on the responses. No other study has controlled for mood effects when examining the predictive relationship that vulnerability, grandiosity, and self-affirmation have with aggression.

The present findings did not support the prediction that a self-affirmation intervention, such as writing about a personal value, would reduce narcissistic aggression in those who are high in narcissistic vulnerability (cf. Thomaes et al., 2009). Previous studies have indicated that those high in vulnerability are more impacted by interpersonal rejection (e.g., Cyberball) than those high in grandiosity (Besser & Priel, 2010) and that vulnerable narcissism uniquely experiences negative emotions after rejection (Kernberg, 1975; Kohut, 1977). Furthermore, self-affirmation has been shown to help individuals reduce aggression and negative affect both before and after a threat (Schmeichel & Martens, 2005; Sherman & Cohen, 2006). Results from the Model 2 PROCESS analysis where aggression was the outcome variable indicated that vulnerability did not interact with self-affirmation to reduce aggression scores. In fact, in both

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the Model 2 and Model 3 analyses, the interactions between vulnerability and self-affirmation yielded a positive coefficient which indicates that as vulnerability increased, aggression scores increased.

There are a few explanations as to why reflecting on a personal value may not have been helpful for those high in vulnerable narcissism. As mentioned before, those high in vulnerability tend to be more reactive and experience more negative emotions when encountering interpersonal rejection (Besser & Priel, 2010). One explanation could lie in the values that participants chose to write about. In the present study, participants were presented with a list of values and were able to choose which one they found most important. Within that list, there were four items that fall within a social or interpersonal category (i.e., relations with friends/family, social skills, sense of humor, and romantic values). Participants that were high in vulnerability who chose to reflect on one of the interpersonal values would be focusing on the part of their ego that was threatened. Such an intervention would not be helpful according to self-affirmation theory; instead, it would more likely have been helpful for those participants to reflect on a value that does not relate to relationships with others (Sherman & Cohen, 2006). For example, if Susie values success and family and discovers that she failed her final exam (a direct threat to her value of success), it may be helpful for Susie to then reflect on her value of family. Affirming her other value that is not related to success can help Susie to bolster her self-esteem, and she may not perceive her failure as threatening as she did previously. With this in mind, it is possible that a values intervention might be helpful if the person utilizing it chooses a value that does not correspond to relationships with others.

Another potential reason for the insignificant results and apparent unhelpfulness of the self-affirmation activity could be due to the medium in which the study was completed. An

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experiment conducted by Bartneck, Duenser, Moltchanova, and Zawieska (2015) compared participant responses that were gathered online and in person. They found that participants in the online condition seemed to complete less of the survey which could indicate less focus on the material. It is possible that since participants were able to complete the study on their own time and in the setting of their choice, distractions could have been present preventing participants from participating fully in the study. If participants did not fully participate in the self-affirmation condition, then they may have not benefitted from it.

Finally, as Dimaggio and his colleagues (2007) mentioned in their study, those who are clinically diagnosed with NPD may experience worsened narcissistic symptoms after reflecting on a highly held value. According to the study, those high in narcissism tend to base their goals and behaviors on what they value. Past research has indicated that those high in narcissism report that they value self-enhancement (Anello et al., 2019). Reflecting on such values may perpetuate their beliefs about themselves which might not protect them from a threat to their ego. More studies are needed in order to determine if this effect discovered by Dimaggio, Fiore, and Salvatore (2007) is generalizable to a subclinical population or if a values reflection exercise can benefit those who are high in the narcissistic tendencies but not to the extent to where they could be clinically diagnosed with NPD.

The second hypothesis, that narcissistic grandiosity would display lower levels of aggression after a self-affirmation condition, was also not supported by the present results. The interactions between grandiosity and self-affirmation in both the Model 2 and Model 3 analyses did not significantly predict aggression scores. It seems that an intervention focusing on values does not help those high in grandiosity reduce aggressive tendencies. Such a finding is further supported by Dimaggio et al. (2007). These researchers found that such an intervention may

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actually make aggression worse for those who are diagnosed with NPD. They also suggested that those high in narcissism, and more specifically grandiose narcissism, may already utilize a similar strategy but, instead, to perpetuate their narcissistic beliefs about themselves. Partaking in the self-affirmation activity in the present study seems to have not had an effect on those high in grandiosity probably due to the fact that they already place a lot of emphasis on their values (Dimaggio et al., 2007).

The third hypothesis, that those high in vulnerability and in the control condition would display the highest aggression scores out of the experimental groups, was not supported by the present study. There was no significant relationship found between vulnerability and aggression scores. As mentioned previously, this could be due to the more covert nature of narcissistic vulnerability. A past study found that those high in vulnerability were more likely to act aggressively in more covert ways than those high in grandiosity (Lannin et al., 2014). Therefore, participants who were high in narcissistic vulnerability may have concealed their aggression and not reported it on the questionnaire. However, they did demonstrate higher negative affect scores indicating that the interpersonal rejection activity did upset them.

The fourth hypothesis, looking at the direct effect of grandiosity on aggression was partially supported. When examining the predictive nature of the narcissistic dimensions and self-affirmation on aggression, results showed that only higher levels of grandiosity were predictive of higher levels of aggression (controlling for self-affirmation and other variables). These findings may indicate that those high in grandiosity were more likely to openly report desires to be aggressive, which is supported by the study conducted by Lannin and his colleagues (2014).

While self-affirmation was not helpful in reducing aggression in the current sample, further analyses indicated that self-affirmation may be helpful in reducing negative affect in those high in vulnerability. This suggests that reflecting on a value can help reduce the negative emotions experienced after getting rejected by others, but the individual may still experience higher aggression levels. In other words, a self-affirmation intervention may be helpful in reducing internal negative experiences, but it does not seem to be helpful in reducing external negative experiences for those high in vulnerable narcissism. However, as mentioned previously, if participants chose to reflect on a value that relates to interpersonal relationships, they may have felt better overall but were still focusing on the rejection that they just experienced, thus perpetuating the narcissistic aggression felt towards the other "players" of the Cyberball game.

Overall, the results provide some interesting suggestions that should be examined in future studies. Those high in vulnerability were less likely to report desires to be aggressive, but it seems that the interpersonal rejection did make them feel worse, based on the results of the exploratory analyses with negative affect as the outcome variable. More specifically, those who were high in vulnerability and reflected on a personal value demonstrated higher aggression scores. Those high in vulnerable narcissism may not have the ability to successfully utilize defensive properties, such as a self-affirmation activity, to protect their self-worth and reduce aggressive tendencies.

Implications

The current study sought to determine if a self-affirmation activity, specifically reflecting on a personal value, would help those high in narcissistic vulnerability and grandiosity reduce aggression responses to interpersonal rejection. If self-affirmation was found to be helpful, such techniques could be taught to clients who score higher in the narcissism dimensions so that they

can use them in aggression-invoking situations. However, it seems that the current findings do not support the idea of using such therapeutic skills with those high in either narcissistic dimension.

Vulnerability was not found to be predictive of aggression scores. In fact, the results indicate that self-affirmation may have helped to make aggression scores worse for those high in vulnerability. As discussed, these findings could be because participants in the self-affirmation condition wrote about a value that aligns with interpersonal relationships. However, if this finding was not due to that possibility, then a self-affirmation intervention may actually be harmful for White, cisgender, heterosexual, college-aged females who are high in vulnerable narcissism. Such findings align with those of Dimaggio et al. (2007). Dimaggio and his colleagues (2007) found that reflecting on values may perpetuate egocentric beliefs and behaviors in those who could be clinically diagnosed with NPD. The findings of the current study may indicate that similar trends may be found within subclinical samples. If this is the case, then the current findings give the psychological field more insight into subclinical narcissism as well as the facets of narcissism regarding values and their impact.

An important implication from the present study lies within the exploratory analyses conducted. The results indicate that self-affirmation may help those high in vulnerability reduce negative affect. As mentioned, vulnerability is different from grandiosity in that those who are high in vulnerable narcissism experience negative emotions (Anello et al., 2019; Cain et al., 2008). These negative emotions may lead to negative behaviors such as aggression. Clients who are high in vulnerability may benefit from reflecting on their personal values when they are experiencing more negative emotions. So, such a technique could be taught to such clients in a therapeutic setting as long as the therapist outlines appropriate times to use it and provides other

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strategies to reduce external responses to ego threats. While such implications may be drawn from the present study, it is important to highlight that this is the only study of its kind, and interpretations made based on the results presented may not be accurate. More studies need to be conducted using a similar procedure in order to determine the true effect of a self-affirmation activity on narcissistic aggression.

Strengths and Limitations

One strength of the current study is that it is the first to examine the effect of a self-affirmation intervention on reducing narcissistic aggression for those with high levels in vulnerable and grandiose narcissism. As mentioned previously, the current study was influenced by the study conducted by (Thomaes et al., 2009); however, the current study uses a slightly different method in order to look at the two narcissistic dimensions. An older sample was also used for this study. Another strength of the study was the inclusionary demographic items that were used. There is a large gap in psychological literature when it comes to diverse populations. Many studies, including the current one, are comprised of samples that are predominantly Caucasian, cisgender, and heterosexual. Future studies should include such demographic questions in order to gather more information on often neglected populations.

Furthermore, the sample size collected after participants were excluded based on the previously mentoioned criteria was relatively small. As mentioned in the planned analyses, the goal was to have at least 398 participants in order to achieve a critical F value of 3.87, with an actual power equal to .80. Since the actual sample size ended up being smaller, the power of the current study was less than .80. A low power reduces the likelihood that the current findings reflect a true effect. Furthermore, as mentioned, the sample was made up of predominantly cisgender, heterosexual, White individuals. Due to a lack of diversity in the sample, results can

only be generalized to college-aged, cisgender, heterosexual, White individuals. Future studies should replicate the current study with more diverse populations to determine if self-affirmation could be an effective intervention for those who are higher in the narcissistic dimensions and who are not Caucasian, cisgender, or heterosexual.

Another limitation of the study was the participants' perceptions of the Cyberball game. As mentioned, participants' response to the last manipulation check (rating how rejected or accepted one felt on a scale of one to nine, one being rejected, and nine being accepted) indicated that they only felt slightly less than neutral ($M = 4.47$, $SD = 1.94$). Some participants marked a nine indicating that they did feel accepted by the other "players" in the Cyberball game. Such results do indicate that participants felt somewhat rejected, but scores for the manipulation questions were not low enough to confidently determine that the Cyberball condition was rejecting enough. Future studies should utilize a more exclusionary Cyberball game in order to simulate a more rejecting experience for the participants. Furthermore, the HSNS also seemed to be lacking in reliability (Cronbach's $\alpha = .59$). To attempt to improve the internal reliability, each item of the scale was examined to determine which ones were bringing down the overall score. Three problematic items were discovered and removed, but the value of the Cronbach's alpha remained the same. Therefore, the internal consistency of the HSNS could not be improved.

In addition, since aggression levels were only measured at the end of the study, it is unclear whether participants' aggression levels increased as a result of the Cyberball activity. Future studies should include more aggression questionnaire time points, specifically at the beginning of the study and immediately after the Cyberball manipulation in order to truly determine if the aggression levels were impacted by the manipulation and interventions.

Finally, an interesting result from the study was that participants only found the interpersonal rejection manipulation – Cyberball – to be somewhat rejecting. In fact, the average score for the last manipulation question that measured how rejected or accepted one felt was very close to the middle or neutral option. So, if participants did not feel rejected by the ball-tossing game, why were some of their aggression scores and negative affect scores higher? There could have been confounding variables that caused participants to feel aggressive and rate higher levels of negative affect. One common event that has impacted every student in the United States is the Coronavirus pandemic (Sauer, 2020). Back in March of 2020, a pandemic swept across the US causing wide-spread school closures, including universities. The data collection period of the current study took place right after students were told that all classes would be held online, and students that lived in campus dormitories were asked to move back to their homes. Such a disruption in daily activities and mass panic could have increased participants' overall negative affect and aggressiveness. The pandemic may also explain why it may have been harder for students to direct all focus to the current study.

Conclusions

The present study sought to begin to fill the gap in the literature concerning therapeutic techniques, specifically self-affirmation strategies, that can be utilized to reduce narcissistic aggression in a subclinical sample. The findings indicated that a values writing activity was not helpful in reducing aggression, and may have even aided in increasing aggression responses in those high in vulnerable narcissism. However, due to the lack in supportive literature, it is not clear whether the results outlined captured the true effect of self-affirmation on those high in the narcissistic facets. It is pertinent that future researchers utilize a similar procedure in order to gather a larger pool of samples to draw conclusions from. Many therapeutic clients may present

subclinical levels of narcissistic vulnerability and/or grandiosity. Understanding how these personality variables influence their interpersonal dynamics is an important step in helping to improve these clients' every day, interpersonal functioning. Finding an appropriate therapeutic intervention that one can easily use may also help reduce narcissistic aggression responses. Teaching clients who are high in vulnerability or grandiosity how to utilize different coping strategies when they feel threatened may also help them to maintain relationships with others and maintain their social standing. Social critics such as Emmons (1987) have postulated that narcissistic tendencies can be found within most people of a population, so finding techniques that can help those who display a higher frequency of narcissistic traits can benefit a large number of clients within the population.

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