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Relations between subclinical narcissism, effortful control, and well-being in emerging
adulthood

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Departmental Honors Thesis
The University of Tennessee at Chattanooga
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Abstract

The present study evaluates relations between subclinical grandiose narcissism, facets of effortful control, and hedonic well-being in a sample of emerging adults. The goal of this study was threefold. First, to assess the relation between subclinical grandiose narcissism and hedonic well-being. Correlational analyses provided support for increased grandiose narcissistic tendencies being associated with increased hedonic well-being. Second, the study sought to examine the relation between effortful control and hedonic well-being. Regression analyses revealed a lack of support for this relationship; however, this could be due to lurking variables such as self-esteem. Last, the study aimed to explore whether there is an interaction between grandiose narcissistic tendencies and effortful control predicting hedonic well-being. Moderation analyses indicated no significant interaction. These results could again, be due to self-esteem, as previous literature has established self-esteem as a mediator between narcissism and well-being. Although not all of the hypotheses were supported, findings from this study nonetheless contribute to the development of the understanding of the intersection between subclinical grandiose narcissism, effortful control, and hedonic well-being and provide avenues for future research.

Keywords: grandiose narcissism, hedonic well-being, temperament, effortful control, emerging adulthood

Introduction

The ability to regulate one's thoughts, feelings, and behaviors is a skill that develops early in one's life and remains essential to both academic and social success across the lifespan (e.g., Becker, McClelland, Loprinzi & Trost, 2013; Best & Miller, 2010; Cain, Pincus, & Ansell, 2008). Such skills, falling within the purview of effortful control, are perhaps most noticeable when absent. Addressing the inherent overlap between impulsivity and effortful control, a clear indicator of effortful control deficits is when an individual surrenders to impulses (DeYoung & Rueter, 2016), displaying behavioral impulsivity (Baumeister & Heatherton, 1996). In turn, the developmental and personality literatures have concurrently addressed these deficits, for instance, how poor inhibitory control (i.e., impulsive behavior) can derail productive social interactions (e.g., Leary & Guadagno, 2004; Mintz, Hamre, & Hatfield, 2011).

An additional topic which is often found in literature exploring the aforementioned topics is narcissism, as it is associated with impulsive behaviors. Although impulsivity is associated with an array of personality traits and disorders, when analyzing narcissism and impulsive tendencies, some patterns emerge. Failing to curb impulsive tendencies, acting in one's own best interest without consideration of how that behavior might be perceived by social partners (Cain et al., 2008), and acting in a self-indulgent manner (Vazire & Funder, 2006) are all ways in which narcissists' impulsive tendencies can manifest. Over time, both effortful control deficits (as exemplified by impulsive behaviors) and narcissistic characteristics can prevent one from achieving more distal goals, such as achieving either self-actualization or a more enduring sense of self (Vazire & Funder, 2006). These serious consequences exemplify a reason why studying this intersection is important; by doing so perhaps researchers can find ways to help individuals with narcissistic tendencies or low effortful control to proactively increase their well-being.

Despite the importance of this intersection, understanding how differences in effortful control abilities and narcissistic tendencies can either facilitate or hinder individuals' abilities to increase their well-being remains scarcely covered by the literature.

Narcissism

The literature surrounding narcissism is multifaceted and extensive, spanning across several disciplines, including the disciplines of clinical, social, and personality psychology. Accordingly, there are multiple interpretations and conceptualizations of narcissism (Cain et al., 2007). Narcissism is frequently bifurcated into two subtypes, grandiose and vulnerable, with a general consensus across several psychological disciplines that these two facets together constitute a more comprehensive conceptualization of narcissism (e.g., Hart, Adams, Burton & Tortoriello, 2017).

Although grandiose and vulnerable narcissism encompass distinct traits, they have overlapping characteristics as well. A few of these commonalities are tendencies to self-indulge, disregard others, and the inclination to be conceited (Wink, 1991). Individuals with narcissistic tendencies are identifiable by their inflated sense of self (Furtner, Rauthmann, & Sachse, 2011), yearning for high social status, and willingness to exploit others (Hart et al., 2016). Additionally, sex differences in narcissistic tendencies have been established, with the consensus that males tend to display more narcissistic tendencies than women. These differences were present both over a time period of twenty years and in samples with varying participants' ages (Grijalva, Newman, Tay, Donnellan, Herms, & Robins, 2015). Furthermore, narcissism is associated with negative long-term outcomes and impulsivity, or lowered effortful control, both of which contribute to their difficulty with managing impulsive tendencies (Vazire & Funder, 2006).

Despite the aforementioned characteristics, some characteristics of narcissistic behavior can be socially advantageous (Weiser, 2015). This socially adaptive behavior is exemplified by the positive association with both extraversion and functional impulsivity (Holtzman et al., 2010), which is a form of impulsivity seen in situations where making a decision quickly is important (e.g., during social interactions) (Jones & Paulhus, 2011). Moreover, research has supported that functional impulsivity is associated with making quick decisions with enthusiasm and the production of ideas when speed is more valued than accuracy (Jones & Paulhus, 2011). As a result, these behaviors help explain why narcissists also tend to have higher social status in the form of short-term popularity and leadership positions (Rauthmann & Kolar, 2012).

Grandiose narcissism.

In differentiating these aspects of narcissism, grandiose narcissistic qualities are often characterized by an increased perceived self-worth, which can manifest as arrogance, entitlement, or egotistic behavior (Vazire & Funder, 2006), whereas vulnerable narcissism reflects an instability in one's self-evaluation (Hart et al., 2016; Vazire & Funder, 2006). Individuals with vulnerable narcissistic qualities maintain a superior sense of self compared to their peers, however, this sense of superiority is a veneer, serving as a defense mechanism to mask feelings of inadequacy and negative affect. Individuals displaying grandiose narcissistic tendencies also maintain a superior sense of self, however, this serves as a form of self-enhancement, rather than a superficial front (Miller et al., 2011). Illustrating this difference further are the associations between grandiose narcissism and extraversion, self-assurance, exhibitionism, and aggression. Conversely, vulnerable narcissism was associated with introversion, defensiveness, and anxiety (Wink, 1991).

Individuals exhibiting greater grandiose narcissistic behaviors have been associated with patterns of attention seeking behavior and grandiosity (Carey et al., 2015), constantly striving for admiration (Weiser, 2015), and demonstrating overconfidence in their social abilities (Hart et al., 2016). Furthermore, these individuals are often characterized by their vanity and arrogance, often perceived by their peers as coming across as egocentric or self-centered. In addition to their inflated self-evaluations, interpersonal relationships are often tainted by the individual's propensity to exploit and manipulate others (Furtner, Rauthmann, & Sachse, 2011). Further research on individuals demonstrating such tendencies suggests that their ability to engage appropriately is fragile, with narcissism being associated with disagreeable behaviors such as arguing, swearing, and using angry language (Holtzman, Vazire, & Mehl, 2010). More recent work has provided another perspective on the impact of narcissistic tendencies on behavior, most noticeably with work on the Dark Tetrad of personality which has suggested that some motivations can include a striving for the feeling of dominance or power, which can result in maladaptive behaviors. Expanding on this finding, narcissism was found to be positively associated with the goals of Hope for Achievement and Hope for Power (Jonason & Ferrell, 2016). These findings are in line with previous literature which asserted that primary motivations of narcissistic behaviors are self-enhancement and a need for power (Campbell, Hoffman, & Marchisio, 2011).

Literature suggests that grandiose narcissists are motivated by approach orientation; that is, they are more motivated to approach favorable outcomes and less motivated to avoid negative ones (Foster & Trimm, 2008). This suggests their focus is on immediate pleasures rather than future consequences of said pleasures, perhaps leading to more impulsive tendencies. Furthermore, studies examining differences in grandiose and vulnerable narcissists' impulsivity

have found that, unlike vulnerable narcissism, grandiose narcissism is positively associated with both self-reported impulsivity and behavioral impulsivity (Malesza & Kacmarek, 2018). Given the significant conceptual overlap between grandiose narcissism and impulsivity (Malesza & Kacmarek, 2018), the present study will focus on individuals with grandiose narcissistic tendencies. Additionally, although some individuals manifest narcissistic qualities severe enough to warrant a clinical diagnosis, the scope of the current study shall remain on subclinical narcissism.

In sum, narcissism is multifaceted, having both positive and negative characteristics, and it is this blending of traits that challenges the common misconception that narcissism is wholly undesirable. Narcissism's blended reputation makes it the focus of many studies. Despite much literature being dedicated to understanding narcissism's intricacies, there are remaining gaps. As narcissism positively correlates with impulsivity, the relation between narcissism and other aspects of effortful control are theorized to negatively associate. This overlap pulls effortful control into the focus of the current research.

Effortful Control

Individuals in college are likely to be demonstrating their burgeoning financial and social independence (Chemers, Li-tze Hu, & Garcia, 2001) and consequently, the capacity to regulate one's thoughts, feelings, and behaviors in a goal-directed pursuit is of increasing importance. Such skills are known as effortful control (Zimmerman, 2000). Effortful control is a general term for the processes that work to maintain balanced, healthy levels of emotional, motivational, and cognitive arousal (Diamond, 2014). One approach to understanding effortful control is by viewing it as an overarching term, under which many related, but distinct constructs fall. All of these constructs, or facets of effortful control, are similar in that they involve the volitional

control of thoughts, feelings, and the overt expression of cognitive processes. These abilities can take many forms, including self-control, will power, effortful control, emotional regulation, delay of gratification, executive function, and inhibitory control (Anzman-Frasca, Francis, & Birch, 2016). These skills build upon themselves through practice; the more frequently an individual engages in effortful control, the less effortful it becomes (Calkins, 2007).

One aspect of effortful control refers to cognitive regulatory processes that are employed during planning, decision making, and problem-solving (McClelland & Ponitz, 2010). As such, conceptualizing this as an umbrella term is a feasible approach (quite similar to the approach for understanding effortful control as a general construct). This cognitive aspect of effortful control has been the focus of many studies across various psychological disciplines over the past several decades due, in part, to the importance of cognitive abilities on other developmental constructs (e.g., Best, Jones, & Miller, 2009; McClelland, Acock, Piccinin, Rhea, & Stallings, 2013).

Effortful control is often conceptualized to include cognitive flexibility, working memory, and inhibitory control (e.g., Garon, Bryson, & Smith, 2008; Miyake, Friedman, Emerson, Witzki, & Howerter, 2000). These abilities are crucial to higher-order skills, such as planning and problem-solving (Miyake et al., 2000) and together, these goal-directed actions are especially beneficial for emerging adults in college (McClelland et al., 2013). The present study will focus on effortful control, specifically, attentional control, inhibitory control, and activation control. As such, an overview delineating between these constructs is provided.

Due to the diversity in disciplines studying effortful control, temperament research has popularized the term effortful control, which, in temperament literature, is understood to be an individuals' natural predisposition to exercise increased or decreased self-regulation and serves as a composite for inhibitory control (also referred to as cognitive inhibition), attentional control

(also termed selective, focused, or executive attention), and activation control (also labeled self-control or discipline) (Diamond, 2013; Zhou, Chen, & Main, 2012). In a developmental study assessing effortful control, it was found that between the ages of two and three, effortful control improves then stabilizes. Additionally, the time mothers spent socializing their child was found to predict an increase in the child's effortful control. This is important because increased effortful control was found to be associated with greater social development; exemplified in an increased ability to regulate anger (Kochanska, Murray, & Harlan, 2000). Not only can effortful control be predictive of social development, but also of academic wellness as effortful control was found to be positively associated with school relationships, classroom participation, and academic competence (Valiente, Lemery-Chalfant, Swanson & Reiser, 2008).

Inhibitory control.

Inhibitory control is another facet of effortful control. The literature surrounding inhibitory control is blurry at times, due to varying interpretations and definitions of this construct. Some understand this to be a broad term, referring to facets of both inhibitory control (cognition inhibition and focused attention) and response inhibition (Diamond, 2013). Inhibitory control can also be understood as an individual's ability to suppress approach behavior that is inappropriate or disadvantageous (ATQ-SF; Evans & Rothbart, 2007). This definition is used in the Adult Temperament Questionnaire, a renowned measure for assessing temperament, specifically inhibitory control among other constructs and will be used for the present study.

An individual demonstrating inhibitory control would be able to view a situation while holding his/her goals in mind, and guide one's attention, behavior, thoughts, and emotions to be more advantageous or appropriate regarding moving towards that goal (even if this course of action seemed unfavorable in the current moment). The 'inhibition' portion of inhibitory control

refers to an individual resisting acting impulsively, suggesting a person demonstrating higher inhibitory control would also display lower impulsivity. In other words, an individual demonstrating inhibitory control would have the ability to stop or alter their unhelpful tendencies and instead choose to engage in more productive ways (Diamond, 2014).

Inhibitory control can be further categorized into inhibition of attention and inhibition of action. Inhibition of attention (also termed selective or focused attention) is an individual consciously choosing to continue focusing on something, despite the presence of distracting stimuli. Inhibition of action (referred to as self-control and discipline) is inhibiting an impulsive or natural response. These are strongly correlated, illustrating their overlapping nature (Friedman & Miyake, 2004). Inhibitory control is a skill that takes time to develop but similar to effortful control, takes less effort through practice. As such, children face challenges when trying to employ their inhibitory control because they have had fewer life experiences and less time to “practice” (Davidson, Amso, Anderson, & Diamond, 2006). With this in mind, as new college students are becoming adjusted to their new lives, the foundation of inhibitory control they developed in their earlier years becomes significant and serves as a starting point for their development in their emerging adult years.

Attentional control.

Attentional control is a second facet of effortful control. An individual exemplifying attentional control would demonstrate an ability to not only focus his/her attention but also shift attention and focus on something else when necessary (ATQ-SF; Evans & Rothbart, 2007). In the literature, attentional control is known by a few different names: attentional inhibition, endogenous, goal-driven, voluntary, volitional, and executive attention (Diamond, 2014). Attentional control is a critical skill to develop for practical reasons such as being able to stay

focused during work or school. Furthermore, research indicates that improving one's attentional control may also lead to increases in general intelligence due to their significant overlap (Rueda, Posner & Rothbart, 2005).

Activation control.

Activation control is the third aspect of effortful control this present study assessed. Activation control is an individual's ability to engage in an action despite there being a strong tendency or desire to avoid the action (ATQ-SF; Evans & Rothbart, 2007). An everyday example of this is choosing to be healthy and workout despite wanting to stay at home and watch TV. Activation control has been found to maintain a positive association with both academic performance and parental involvement as a child (Wong, 2008). Additionally, activation control has been found to be negatively associated with depression, even when controlling for other negative emotional variables (Moriya & Tanno, 2008).

Effortful control and academics.

When generalizing this knowledge of the many forms effortful control can take to everyday occurrences, it becomes quite clear how helpful this skill is when pursuing long-term goals (i.e., a student entering college with the goal of graduating). Students' effortful control capabilities serve as significant predictors of their academic successes, even when students were facing challenges such as being raised in a low-income family or not having English as their first language (McClelland & Wanless, 2012). A recent longitudinal study provides more insight into the positive consequences stemming from students' effortful control abilities by examining relations between preschoolers' attention-span persistence and their educational statuses at age 25. This study was rooted in the understanding that attention span-persistence is a facet of effortful control which reflects one's ability to choose to pay attention to and to continue paying

attention to relevant information. It was found that attention span-persistence in preschool children significantly predicted their school achievement in the future even after controlling for gender, vocabulary skills, adoption status, and maternal education levels. Furthermore, students' attention span-persistence was also significantly associated with a greater likelihood of college completion (McClelland et al., 2013).

More specifically, effortful control abilities are beneficial to college students when they are used to help students decide which academic approaches would be most beneficial to them. By actively seeking and finding strategies that work, students are exercising their effortful control abilities, allowing them to cater their experience to best allow them to learn (Bouffard, Boisvert, Vezeau, & Larouche, 1995). Individuals who reported relying on strategies involving effortful control reported setting more performance-related goals and reported higher academic performances (Bouffard et al., 1995) than their peers who had planned less. Since effortful control has a positive association with both learning goals and academic achievement (Bouffard et al., 1995), students practicing effortful control are subsequently laying the foundation for their professional and academic success.

Well-Being

Although well-being may mistakenly be thought of as simply happiness or a lack of sadness, theorists have more articulately characterized well-being as the combination of ideal experiences and mental states (Ryan & Deci, 2001). The construct of well-being can be conceptualized as an umbrella term with a few forms falling under it: subjective well-being, eudaimonic well-being, and hedonic well-being. Subjective well-being is the combination of an individual's overall life-satisfaction and the presence or lack of positive/negative emotions (Kashdan, Biswas-Diener, & King, 2008). With this definition, the delineation between

eudaimonic and hedonic well-being is not acknowledged (Waterman, Schwartz, Zamboanga, Ravert, Williams, Bede, Agocha, & Donnellan, 2010) and as such, the term is often mentioned in literature concerning any dimension of well-being. Well-being is a construct which philosophers and psychologists alike explore, and philosophers had a slightly different approach to understanding well-being than psychologists initially had. This is important to understand when conducting and digesting research involving well-being because it provides a contextual background from which to understand the varying conceptualizations of well-being.

Philosophical understandings of well-being and happiness are organized into two categories: hedonia and eudaimonia. Aristotle's understanding of this distinction is still prevalent and highly cited as a foundational understanding of these constructs in research exploring the two. His understanding was straightforward but lacked an empirical foundation: hedonism was characterized by the search for pleasure; conversely, eudaimonia was used to describe happiness rooted from doing "good works" (Ross, 1959). In a recent review of research on constructs of hedonia and eudaimonia, researchers found that the intersection between philosophical conceptualizations and psychological approaches to understanding well-being are increasingly being incorporated into an array of multidimensional studies (Ryan & Deci, 2001). As such, many studies are focusing on developing accurate, empirical ways to study eudaimonic and hedonic well-being and distinct definitions between the facets of well-being are being accepted (Ryan & Deci, 2001).

Eudaimonic well-being can be conceptualized as embodying an individual's sense of meaning in life or life satisfaction (Ryan & Deci, 2001). To experience this form of well-being, individuals must act congruently with their daimon, or true self (Waterman, 1993). Through engaging in actions that align with one's personal values and by becoming fully immersed in

these actions, individuals feel a sense of authenticity and genuine satisfaction (Ryan & Deci, 2001). Eudaimonic well-being is associated with developing a sense of purpose in life, and by extension, believing one's life has meaning. Additionally, a hallmark of this form of well-being is the belief that one is progressing towards his/her potentials in life (Waterman et al., 2010). Due to the meaningful, self-reflective, and emotionally intelligent nature of eudaimonic well-being, this facet of well-being may require individuals to weigh the options between more proximal momentarily pleasurable experiences and experiences that will promote personal growth and sense of self that may be more distal (Kashdan et al., 2008).

Alternatively, hedonic well-being can reflect the result of seeking pleasurable (or pain-free) experiences (Ryan & Deci, 2001). Psychologists studying hedonic well-being focus on hedonism as being measured by both subjective happiness and experiences which bring individuals pleasure instead of pain and displeasure (Diener, Sapyta, & Suh 1998). Furthermore, hedonic well-being can be thought of as the ways in which individuals have the presence of positive affect and the absence of negative affect (Deci & Ryan, 2008). Oftentimes, hedonic well-being is characterized by pursuits driven by a longing for instant gratification or external wants. Examples of this include eating gourmet foods, the happiness of winning a game, or the short-term satisfaction accompanying smoking a cigarette. Viewing these examples from a psychological perspective, a critical-thinker might wonder how these experiences can be lumped together despite having dramatically different effects on the brain. While this is true, many psychological measures for assessing hedonic well-being measure it using a broad operational definition, with general phrases such as "enjoying food, sex, leisure, etc." being indicative of hedonic well-being (Schwartz, 1992). Not surprisingly, hedonic well-being is associated with impulsivity as these individuals are more likely to choose immediately gratifying experiences,

without the long-term consideration of overall impact (e.g., such as smoking a cigarette as aforementioned) (Goodwin, Browne, Hing, & Russel, 2017).

Delving into the literature surrounding the influences age has on an individual's hedonic well-being, it becomes clear that a significant relationship exists between one's age and the pursuit of eudaimonic vs. hedonic well-being. The Socioemotional Selectivity Theory asserts that younger adults are more likely to seek goals relative to developing knowledge and experiences. These goals are more short-term and present focused, quite similar in nature to hedonic pursuits. Conversely, as individuals age and fall under the category of "older adults", their understanding of time shifts into one of accepting the limited time they have left. As such, older adults tend to strive towards goals that are rooted in fulfilling emotional satisfaction, which would be bolstering their eudaimonic well-being (Carstensen, 2006).

Complementing this Socioemotional Selectivity Theory is the understanding that emerging adulthood is a unique life stage, characterized by an unprecedented amount of independence, autonomy, and new experiences (Arnett, 2000). Due to the increased opportunities to engage in a variety of novel, yet potentially risky, experiences in college, the current study examines how hedonic well-being operates in relation to an individual's effortful control abilities and grandiose narcissistic tendencies.

Emerging Adulthood

Since college students are emerging adults (falling within the age range of 18-25), they are a distinctive group in many ways: culturally, subjectively, developmentally, and biologically. This age group is characterized by being in a life stage that is relatively undefined by social roles and normative expectations because emerging adults fall in the gray area between childhood and adulthood (Arnett, 2000). Living in the gap between cultural expectations of adolescence and

those of adults, emerging adults are subject to making life-changing decisions, developing bodies and brains, and learning to define their identity. College students, especially, are in some ways a unique population to understand given that these young adults are experiencing the world in a more unguided way than before in that their parents are no longer around to protect and provide for them, at least as visibly as in childhood and adolescence (Arnett, 2000). Although this is not a universal claim, it applies to students who shift from living with their parental figures to a more independent living situation when beginning their college career. Given that college students are increasingly required to independently achieve social and academic success, the opportunities for difficulties in these domains increase commensurately (Chemers et al., 2001).

Not only do cultural and societal factors play a role in rendering emerging adults a unique population, but biology has a role as well. Studies have shown that neurodevelopment during emerging adulthood is aimed at strengthening parts of the brain which will enable individuals to more competently function as adults (Taber-Thomas & Perez-Edgar, 2015). One of these brain structures is the prefrontal cortex. This is a structure theorized to be heavily involved in higher-order cognitive processes, such as organizing behavior to inhibit impulses and planning (and sustaining) towards a long-term goal (Best & Miller, 2010). This brain structure experiences two major periods of synaptic growth. The first of these periods of synaptic growth occurs most noticeably around the ages of 3-4 and again in adolescence, but it continues developing until an individual reaches their mid-twenties (Best & Miller, 2010). More specifically, the frontolimbic fine-tuning model of brain development in emerging adulthood asserts that prefrontal regulations of the limbic functions are strengthened during emerging adulthood. This strengthening aims to create a balance between prefrontal subregions when modulating approach and avoidance (Taber-Thomas & Perez-Edgar, 2015).

In sum, emerging adults are faced with an influx of novel challenges. Coupling these challenges with brain maturation, the ability to engage in effortful control may be strained due to the prolonged maturation of the prefrontal cortex of the brain (Best & Miller, 2010).

The Intersection of Well-Being, Effortful Control, and Grandiose Narcissism

Individuals with narcissistic tendencies are hallmarked by their impulsive tendencies and egocentric perspectives (Vazire & Funder, 2006). Importantly, impulsivity is also a central characteristic of individuals with low effortful control abilities (Mintz, Hamre, & Hatfield, 2011). Both greater narcissistic tendencies and lower effortful control can impede an individual's efforts to increase one's well-being over a protracted period of time. However, as hedonic well-being is maintained through pleasure-seeking and pain avoidance, rather than personal growth, perhaps individuals with greater narcissistic or impulsive tendencies will experience higher levels of this form of well-being.

The goal of the present study was to examine the relations between subclinical grandiose narcissistic tendencies and effortful control in emerging adulthood and how these together intersect to impact an individual's hedonic well-being. As such, I sought to answer three research questions in the current proposal: First, what is the relation between subclinical grandiose narcissism and hedonic well-being? I hypothesized that individuals with subclinical grandiose narcissistic tendencies would have increased hedonic well-being due to impulsivity's association with both narcissistic tendencies and hedonic well-being. Second, what is the relation between effortful control and hedonic well-being? Given that individuals with more effortful control abilities display less impulsivity and hedonic well-being is rooted in momentary pleasure, I hypothesized that as effortful control abilities increase, hedonic well-being would also decrease. Third, is there an interaction between narcissistic tendencies and effortful control abilities

predicting hedonic well-being? Research supports that narcissistic tendencies and low effortful control are counterproductive when striving for well-being. Accordingly, I hypothesized an interaction between narcissistic tendencies and effortful control predicting hedonic well-being with individuals having higher narcissistic tendencies also displaying lower levels of effortful control.

Method

Participants

Participants included 374 undergraduate students who were recruited to participate in the current study, well above the recommended 193 required to detect an effect size of .2 at the $p=0.05$ level. Participants were recruited through the subject research pool (SONA system) facilitated by the Department of Psychology. Before completing the self-report surveys, participants signed an informed consent form. Despite having over three hundred participants, data was assessed for only 268 for a few reasons. The first responses received were not included in the data set due to the instructions not specifying for participants to report their ID's, as such I could not match data to participants' responses and their corresponding SONA ID's. Despite adding detailed instructions, some participants did not report their ID's, rendering their responses to not be included in the data set. Last, attrition played a role in that some participants started but did not complete the survey. Data from their incomplete responses was not used. Despite these challenges, the remaining 268 participants were above the required 193.

This study was approved by the University of Tennessee at Chattanooga's Institutional Research Board.

Measures

Schwartz Value Survey.

The Schwartz Value Survey (SVS; Schwartz, 1992) was used to assess individual differences in values that serve as guiding principles in one's life. The SVS measures ten "universal values" ranging from benevolence to hedonism. As the SVS assesses individuals' values, which are relevant to a myriad of constructs, it has been used in a variety of research ranging from studies which explore well-being to ones focusing on anti-immigrant prejudices and religiosity. Fifty-seven items were grouped into ten subscales, with each subscale representing an individual's value. One of these subscales was hedonism, and this was used to assess participants' hedonic well-being, which was operationally defined as pleasurable or sensuous gratification for oneself (Schwartz, 2012). Participants were presented with a list of values accompanied by a short description (e.g., "Obedient (dutiful, meeting obligations)"). They were asked to first choose the one of highest importance, then the one which most opposed their values, and last rate the rest of the items accordingly. Responses were made using 8-point scales from -1 (opposing the principles in one's life) to 7 (of supreme importance). Examples of items from the hedonism subscale are: Pleasure (gratification of desire), Enjoying Life (enjoying food, sex, leisure, etc.), and Self-Indulgent (doing pleasant things).

The SVS has been widely utilized in psychological studies internationally and has been translated into 47 different languages. Research with the SVS have demonstrated good reliability and validity (e.g., Linderman & Verkasalo, 2005). In the current study, the hedonism subscale of the SVS demonstrated marginal reliability with an internal consistency value of $\alpha = .69$. Perhaps this lower coefficient alpha can, in part, be explained by societal influences. When the test author was exploring results from initial studies employing the SVS, he found substantial individual variance in response to every value in all samples. He asserted this variance could be traced to either a flaw in the measure or to participants' inconsistently understanding their cultural ideals;

perhaps their varying responses reflect reporting a blend of cultural and personal ideals. He continues, explaining that traditional values are generally seen to be negatively associated with hedonism and that hedonism is of higher value in contractual societies. He concludes this argument by maintaining that either way, “an individual’s variance in value priorities would not be associated systematically with individual differences in background characteristics, in attitudes, or in behavior” (Schwartz, 1992).

As directed in the administration instructions, the 57 SVS items were presented in two separate lists (i.e., 1-30 & 31-57). For each list, participants were instructed to only use the values of 0 (opposing the principles in one’s life) and 8 (is supremely important) once per list. However, some participants provided responses in which multiple extreme values were selected per list, such as some participants selecting a value of 8 for 3-4 items. To account for this, the SVS items were rescaled, in essence removing all instances of values of 0 and 8. Despite this not being common practice, this decision was made in hopes that participants would find the new scales to be more straightforward to complete. Although this limits the variability, it was done as an alternative to listwise deletion.

Narcissistic Personality Inventory-13.

To assess participants’ subclinical grandiose narcissistic tendencies, the Narcissistic Personality Inventory-13 (NPI-13; Gentile, Miller, Hoffman, Reidy, Zeichner & Campbell, 2013) was also administered to participants. This measure assesses trait narcissism, specifically grandiose narcissism, and is currently the most widely utilized measure for doing so (Gentile et al., 2013). The self-report NPI-13 survey is comprised of 13 forced-choice pairs of attributes, with each pair containing a response serving as an indicator of narcissistic tendencies. Participants are asked to choose the option that they most agree with. The structure of the NPI-13

is the same as its parent measure, a three-factor structure reflecting the leadership/authority, grandiose/exhibitionism, and entitlement/exploitativeness aspects of grandiose narcissistic behavior. Both the leadership/authority and grandiose/exhibitionism subscales assess hallmarks of grandiose narcissism including high self-esteem, extraversion, and decreased neuroticism. The entitlement/exploitativeness evaluates narcissistic tendencies in the form of decreased self-esteem, extraversion, increased mood variability, and neuroticism. The three subscales have an overlap in that they each are correlated with alternative measures of exploitativeness, antagonism, and entitlement (Gentile et al., 2013).

The NPI-13 is the shortened version of the original Narcissistic Personality Inventory (NPI-40). I opted to use the NPI-13 rather than the NPI-40 in an effort to effectively minimize the number of questions asked of participants (Gentile et al., 2013). For clarity, an example pair of attributes for each subscale is provided with the option indicating a narcissistic response in bold. An example from the leadership/authority subscale: **A) I like having authority over people.** B) I don't mind following orders. An example from the grandiose/exhibitionism subscale: A) I try not to be a show off. **B) I will usually show off if I get the chance.** Last, an example from the entitlement/exploitativeness subscale: **A) I will never be satisfied until I get all that I deserve** B) I will take my satisfactions as they come.

Research has supported that, although shortened, the NPI-13 maintained convergent and discriminant validity and adequate overall reliability (Gentile et al., 2013). In the current study, two subscales demonstrated unacceptable reliability: the leadership/authority and entitlement/exploitativeness with internal consistency values of $\alpha = .02$ and $.49$, respectively. Despite previous studies in which the NPI-13 maintained overall adequate reliability, the entitlement/exploitativeness subscale's demonstration of low reliability is not unheard of, having

demonstrated low reliability in a study which sought to examine what the NPI “really measures”. Despite finding low reliability, researchers did not alter the entitlement/exploitativeness subscale to increase the number of included items because doing so would surpass the item constraint of the subscales. Studies have found that low reliability on this scale does not limit its associations with other external constructs (Ackerman, Witt, Donnellan, Trzesniewski, Robins & Kashy, 2011).

Additionally, in the current study, the grandiose/exhibitionism subscale of the NPI-13 demonstrated questionable reliability with a coefficient alpha of $\alpha = .60$ while the NPI-13 Total also demonstrated questionable reliability with a coefficient alpha of $\alpha = .65$. While, ideally the measures would have demonstrated excellent reliability, perhaps the low coefficient alpha is reflective of the comprehensive nature of the NPI-13. Expanding upon this possibility, it has been asserted that since the NPI-13 encompasses several dimensions, or subscales, this might lead to complications as the different dimensions might not maintain the same relations within criterion variables (Ackerman et al., 2011). Furthermore, when studies use the NPI-13 but report only the total scores rather than reporting both the aggregate and the subscale statistics, these simplified summaries could conflate both results and readers’ interpretations of the results. A study assessing the NPI as a measure did not find a way to consistently produce good-fit statistics for the subscales. In discussing their results, researchers attribute their lack of consistent findings to the omnibus nature of the assessment itself (Ackerman et al., 2011).

Adult Temperament Questionnaire- Short Form.

Lastly, I measured participants’ effortful control by using the three subscales within the Effortful Control factor of the Adult Temperament Questionnaire-Short Form (ATQ-SF; Evans & Rothbart, 2007). The ATQ-SF was chosen to measure effortful control using a temperament

approach, as the ATQ-SF is frequently used in research and has been shown to have reliable subscales, as well as evidence of good convergent and divergent validity (Evans & Rothbart, 2008). The ATQ-SF is a self-report measure consisting of 77 items and is comprised of several factor scales: Negative Affect, Extraversion/Surgency, Effortful Control, and Orienting Sensitivity. Participants were asked to rate how accurately each item described them on a 7-point scale with -1 meaning the item is extremely untrue for the respondent and 7 meaning the item is extremely true for the respondent. For this study, I was most interested in results from the Effortful Control factor, as I wanted to understand effortful control and impulsivity; participants only self-reported on this factor scale. In the current sample, internal consistency values ranged from .49 to .71 for the three subscales and $\alpha = .71$ for the Effortful Control factor.

The Effortful Control factor scale encompasses three sub-scales, Inhibitory, Activation, and Attentional Control, with Effortful Control serving as a composite of these three. The first Effortful Control subscale used in this study was Attentional Control, in which an individual is able to both focus and shift focus when appropriate. Inhibitory Control, the second subscale of Effortful Control employed in this study, is conceptualized as response inhibition, or an individual's ability to inhibit natural or habitual responses that are disadvantageous. Last, the activation control subscale was used to assess participants' ability to perform an action despite not wanting to (Evans & Rothbart, 2007). For ease of understanding, example items from each subscale is provided. An example item from the attentional control subscale is: "When I am interrupted or distracted, I usually can shift my attention back to whatever I was doing before". In the current study, this subscale demonstrated acceptable reliability with an alpha value of $\alpha = .71$. An example item from the activation control subscale is: "I can make myself work on a difficult task even when I don't feel like trying". In the current study, the activation control

subscale of the ATQ-SF demonstrated low reliability with an $\alpha = .69$. Last, an example of the inhibitory control subscale is: “Even when I feel energized, I can usually sit still without much trouble if it’s necessary.” In the current study, the Inhibitory Control subscale of the ATQ-SF demonstrated poor internal consistency ($\alpha = .49$). The composite score, effortful control, demonstrated acceptable reliability in the current study with $\alpha = .71$.

Perhaps the low reliability in the current study can be partly explained by using the ATQ-SF instead of the longer version. The decision to incorporate the shortened version into my data collection process was made in an effort to avoid participant fatigue while completing a survey comprised of three measures. However, in doing so I might have unintentionally lowered the reliability of the ensuing data.

Procedure

For this study, participants were undergraduate psychology students. Recruitment was publicized on the basis that upon completion of the self-report surveys, students would receive extra credit points for their psychology course using SONA Systems. I used three self-report surveys: the SVS, the NPI-13, and the ATQ-SF. To compile these into a single survey for participants to complete, I created a comprehensive survey in Qualtrics. Regretfully, the first responses received were omitted because I did not initially specify in the instructions for the participants to report their ID. Despite adding detailed instructions, additional data was excluded due to my inability to connect data to a participant’s responses to their corresponding SONA ID. Unfortunately, some individuals did not follow instructions on each measure. As such, data cleaning was necessary to account for both the inappropriate responses received and attrition. In total, 374 participants participated in the study however, data from 106 participants were excluded from the current study due to a technical error in which data from two sources (i.e.,

SONA and Qualtrics) were unable to be matched to a participant. The resulting sample size of 268 participants was found to be sufficient for the purposes of this study after running a power analysis.

Data Analytic Plan

To evaluate my research questions, associations between grandiose narcissistic tendencies, hedonic well-being, and effortful control were assessed using correlational and multiple regression analyses. Bivariate correlations were conducted to partially evaluate the associations between subclinical grandiose narcissism and hedonic well-being, as well as the relationship between effortful control and hedonic well-being. As one of the objectives of the current study was to examine potential interaction effects exhibited between aspects of effortful control and narcissistic tendencies when predicting hedonic well-being, moderation analyses were conducted using the SPSS PROCESS macro described in Hayes (2012). Furthermore, consistent with Hayes (2009), bootstrapping estimates were utilized to repeatedly resample the sampling distribution of the interaction effect to obtain accurate point estimates. A total of 16 models were run, reflecting all possible combinations of effortful control (i.e., inhibitory control subscale, activation control subscale, attentional control subscale, & effortful control composite) entered as the independent variable and all aspects of subclinical grandiose narcissism (i.e., grandiose/exhibitionism subscale, leadership/authority subscale, entitlement/exploitativeness subscale, & grandiose narcissism composite) entered as moderating variables within the PROCESS macro for Model 1 [simple moderation] in SPSS.

[Table 1 around here]

Table 1: Descriptive Statistics and Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
1. SVS Hedonism	-										
2. NPI-13 LA	.14*	-									
3. NPI-13 GE	.11	.21**	-								
4. NPI-13 EE	.18**	.19**	.24**	-							
5. NPI-13 Total Score	.20**	.66**	.75**	.66*	-						
6. ATQ-SF ACQ	-.06	.10	-.07	-.18**	-.06	-					
7. ATQ-SF ATT	.03	.11	.11	-.07	.09	.32**	-				
8. ATQ-SF INH	-.07	-.13*	-.05	-.18**	-.16**	.22**	.38**	-			
9. ATQ-SF EC	-.05	.036	-.01	-.20**	-.06	.73**	.75**	.72**	-		
10. Age	-.03	-.09	-.12	-.02	-.12	-.05	.14*	.14*	.10	-	
11. Gender	.036	.01	.06	.02	.05	-.05	-.04	.04	-.023	.01	-
M	-.07	1.40	1.58	0.78	3.76	4.98	3.83	4.34	4.44	19.95	.16
SD	.96	1.25	1.41	0.99	2.54	0.88	1.04	0.82	0.66	3.60	.36
Range	6.78	8.43	11.09	10.23	27.19	4.72	4.45	6.07	4.74	34	

Note: * $p \leq 0.05$; ** $p \leq 0.01$; Descriptive statistics are based on unstandardized estimates; Correlations are based on standardized estimates. SVS = Schwartz Value Survey; NPI-13 = Narcissistic Personality Inventory 13-item version; LA = Leadership/Authority; GE = Grandiose/Exhibitionism; EE = Entitlement/Exploitativeness; ATQ-SF = Adult Temperament Questionnaire – Short Form; ACQ = Activation Control subscale; ATT = Attentional Control subscale; INH = Inhibitory Control subscale; EC = Effortful Control composite; Gender was dummy-coded with Male=1, Female=0.

Results

Initial means and correlations can be seen in Table 1. Reflecting support for my first hypothesis, that an increase in subclinical grandiose narcissistic tendencies would be associated with an increase in hedonic well-being. Correlation analyses revealed significant positive associations between the leadership/authority subscale of the NPI-13 and hedonic well-being, indicating that individuals who endorsed more statements reflecting leadership or authority behaviors also tended to report greater hedonic well-being. The grandiose/exhibitionism subscale positively correlated with the leadership/authority subscale, implying that as individuals exhibit greater grandiosity they also behave more like a leader and with more authority. Additionally, the entitlement/exploitativeness subscale was positively correlated with both NPI-13 subscales (leadership/authority and grandiose/exhibitionism) and hedonic well-being. The composite of grandiose narcissistic tendencies was found to be significantly positively associated with all NPI-13 subscales as well as hedonic well-being. That the composite of grandiose narcissistic tendencies and hedonic well-being were positively correlated suggests that individuals who rated themselves as engaging in more narcissistic tendencies tended to demonstrate greater hedonic well-being.

Also shown in Table 1, effortful control had significant associations with the aforementioned constructs. Specifically, activation control was significantly negatively associated with the entitlement/exploitativeness subscale, indicating that individuals with more developed activation control tended to be less entitled and less likely to exploit others. The data also revealed a significant positive association between activation control and attentional control. Inhibitory control was found to have a few significant associations as it was positively associated with both activation and attentional control. Additionally, inhibitory control was negatively

associated with the composite of grandiose narcissistic tendencies, the leadership/authority subscale, and the entitlement/exploitativeness subscale of the NPI-13. Individuals who report greater effortful control also rate themselves as engaging in fewer narcissistic tendencies.

Complementing this find, effortful control was revealed to be significantly negatively associated with the entitlement/exploitativeness subscale of the NPI-13. As expected, as individuals rated themselves as displaying increased effortful control, or the composite of the specific effortful control facets I assessed, they also rated themselves as demonstrating increased activation control, attentional control, and inhibitory control.

Lending further support for my first hypothesis, results of regression analyses between subclinical grandiose narcissistic tendencies and effortful control predicting hedonic well-being can be seen in Tables 2-5. Regression results indicate that in analyses with all effortful control models, the degree of entitlement/exploitativeness consistently predicted increases in hedonic well-being. Furthermore, the leadership/authority subscale positively predicted hedonic well-being; this relation was maintained in all models except for when solely accounting for inhibitory control. Grandiose/exhibitionism was only a significant predictor of hedonic well-being in the attentional control model, although significance values were modest in the remaining three effortful control models. When using the composite of grandiose narcissistic tendencies, this significantly predicted increases in hedonic well-being across all effortful control models.

Analyses revealed a lack of support for my second hypothesis, that increases in effortful control would be associated with decreases in hedonic well-being as results indicated that no aspect of effortful control significantly predicted hedonic well-being. In line with my findings that no aspect of effortful control predicted hedonic well-being, moderation analyses were utilized to assess my third research question investigating whether there was a significant

interaction between effortful control and subclinical grandiose narcissistic tendencies predicting hedonic well-being. As shown in Tables 2-5, results do not provide support for my third hypothesis as results indicated that there were no significant interactions between any aspect of effortful control and NPI-13 subscales or the composite of grandiose narcissism.

Table 2: PROCESS Regression results for the moderation of the effect of inhibitory control on hedonic well-being by narcissistic tendencies

	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.01	0.06	-0.14	0.89
Inhibitory Control (<i>X</i>)	-0.06	0.06	-1.03	0.30
Grandiose/Exhibitionism (<i>M</i>)	0.04	0.02	1.91	0.06
Inhibitory Control x Grandiose/Exhibitionism (<i>XM</i>)	-0.00	0.02	-0.24	0.81
$R^2 = .02, MSE = 1.00$ $F(3, 264) = 1.72, p = .16$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.02	0.06	-0.30	0.76
Inhibitory Control (<i>X</i>)	-0.05	0.06	-0.78	0.43
Leadership/Authority (<i>M</i>)	0.05	0.02	0.96	0.05
Inhibitory Control x Leadership/Authority (<i>XM</i>)	-0.02	0.02	-1.02	0.31
$R^2 = .02, MSE = 1.00$ $F(3, 264) = 2.18, p = .09$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.00	0.06	-0.02	0.98
Inhibitory Control (<i>X</i>)	-0.04	0.06	-0.58	0.56
Entitlement/Exploitativeness (<i>M</i>)	0.08	0.03	0.10	0.00
Inhibitory Control x Entitlement/Exploitativeness (<i>XM</i>)	0.00	0.03	0.12	0.91
$R^2 = .04, MSE = 0.98$ $F(3, 264) = 3.78, p < .05$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.01	0.06	-0.23	0.82
Inhibitory Control (<i>X</i>)	-0.04	0.06	-0.59	0.55
NPI-13 Composite (<i>M</i>)	0.04	0.01	0.36	0.00
Inhibitory Control x NPI-13 Total (<i>XM</i>)	-0.01	0.01	-0.58	0.56
$R^2 = .05, MSE = 0.98$ $F(3, 264) = 4.58, p < .01$				

Note: All estimates reported are standardized. NPI-13 = Narcissistic Personality Inventory – 13 item version

Table 3: PROCESS Regression results for the moderation of the effect of attentional control on hedonic well-being by narcissistic tendencies

	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.01	0.06	-0.14	0.89
Attentional Control (<i>X</i>)	0.01	0.06	0.18	0.86
Grandiose/Exhibitionism (<i>M</i>)	0.04	0.02	1.97	0.00
Attentional Control x Grandiose/Exhibitionism (<i>XM</i>)	0.01	0.02	0.05	0.96
$R^2 = .01, MSE = 1.01$				
$F(3, 264) = 1.35, p = .26$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.02	0.06	-0.03	0.97
Attentional Control (<i>X</i>)	0.02	0.06	0.39	0.70
Leadership/Authority (<i>M</i>)	0.05	0.02	2.04	0.04
Attentional Control x Leadership/Authority (<i>XM</i>)	-0.03	0.02	-1.36	0.18
$R^2 = .02, MSE = 1.00$				
$F(3, 264) = 2.21, p = .09$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.04	0.06	-0.07	0.94
Attentional Control (<i>X</i>)	0.03	0.06	0.57	0.57
Entitlement/Exploitativeness (<i>M</i>)	0.08	0.02	3.32	0.00
Attentional Control x Entitlement/Exploitativeness (<i>XM</i>)	-0.01	0.03	-0.36	0.72
$R^2 = .04, MSE = 0.98$				
$F(3, 264) = 3.83, p < .05$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.05	0.06	-0.08	0.94
Attentional Control (<i>X</i>)	0.01	0.06	0.15	0.88
NPI-13 Composite (<i>M</i>)	0.04	0.01	3.52	0.00
Attentional Control x NPI-13 Total (<i>XM</i>)	-0.07	0.01	-0.69	0.49
$R^2 = .05, MSE = 0.98$				
$F(3, 264) = 4.52, p < .01$				

Note: All estimates reported are standardized. NPI-13 = Narcissistic Personality Inventory – 13 item version

Table 4: PROCESS Regression results for the moderation of the effect of activation control on hedonic well-being by narcissistic tendencies

	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.01	0.06	-0.23	0.82
Activation Control (<i>X</i>)	-0.06	0.06	-1.03	0.30
Grandiose/Exhibitionism (<i>M</i>)	0.03	0.02	1.78	0.07
Activation Control x Grandiose/Exhibitionism (<i>XM</i>)	-0.02	0.02	-1.12	0.26
$R^2 = .02, MSE = 1.00$				
$F(3, 264) = 2.04, p = .11$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.00	0.06	-0.01	0.99
Activation Control (<i>X</i>)	-0.08	0.06	-1.36	0.17
Leadership/Authority (<i>M</i>)	0.06	0.02	2.43	0.01
Activation Control x Leadership/Authority (<i>XM</i>)	-0.04	0.02	-1.59	0.11
$R^2 = .03, MSE = 0.99$				
$F(3, 264) = 2.98, p < .05$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	0.05	0.06	0.09	0.93
Activation Control (<i>X</i>)	-0.03	0.06	-0.45	0.65
Entitlement/Exploitativeness (<i>M</i>)	0.08	0.03	3.26	0.01
Activation Control x Entitlement/Exploitativeness (<i>XM</i>)	0.02	0.02	0.75	0.45
$R^2 = .04, MSE = 0.98$				
$F(3, 264) = 3.92, p < .01$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.01	0.06	-0.20	0.84
Activation Control (<i>X</i>)	-0.05	0.06	-0.88	0.38
NPI-13 Composite (<i>M</i>)	0.04	0.01	3.38	0.00
Activation Control x NPI-13 Total (<i>XM</i>)	-0.01	0.01	-0.88	0.38
$R^2 = .05, MSE = 0.97$				
$F(3, 264) = 4.84, p < .01$				

Note: All estimates reported are standardized. NPI-13 = Narcissistic Personality Inventory – 13 item version

Table 5: PROCESS Regression results for the moderation of the effect of effortful control on hedonic well-being by narcissistic tendencies

	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.01	0.06	-0.14	0.89
Effortful Control (<i>X</i>)	-0.05	0.06	-0.86	0.39
Grandiose/Exhibitionism (<i>M</i>)	0.04	0.02	1.90	0.06
Effortful Control x Grandiose/Exhibitionism (<i>XM</i>)	-0.01	0.02	-0.60	0.54
$R^2 = .02, MSE = 1.01$				
$F(3, 264) = 1.70, p = .16$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.07	0.06	-0.11	0.91
Effortful Control (<i>X</i>)	-0.05	0.06	-0.75	0.45
Leadership/Authority (<i>M</i>)	0.05	0.02	2.17	0.03
Effortful Control x Leadership/Authority (<i>XM</i>)	-0.04	0.02	-1.65	0.10
$R^2 = .03, MSE = 1.00$				
$F(3, 264) = 2.792, p < .05$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	0.00	0.06	0.05	0.99
Effortful Control (<i>X</i>)	-0.01	0.06	-0.21	0.83
Entitlement/Exploitativeness (<i>M</i>)	0.08	0.03	3.16	0.00
Effortful Control x Entitlement/Exploitativeness (<i>XM</i>)	0.01	0.03	0.27	0.79
$R^2 = .04, MSE = 0.98$				
$F(3, 264) = 3.70, p < .05$				
	Coeff	SE	<i>t</i>	<i>p</i>
Intercept	-0.01	0.06	-0.20	0.84
Effortful Control (<i>X</i>)	-0.04	0.06	-0.62	0.53
NPI-13 Composite (<i>M</i>)	0.04	0.01	3.35	0.00
Effortful Control x NPI-13 Total (<i>XM</i>)	-0.01	0.01	-0.94	0.35
$R^2 = .05, MSE = 0.97$				
$F(3, 264) = 4.79, p < .01$				

Note: All estimates reported are standardized. NPI-13 = Narcissistic Personality Inventory – 13 item version

Discussion

Although subclinical grandiose narcissism, hedonic well-being, and effortful control have been extensively studied by psychologists in recent literature, little is known about their intersection, especially in emerging adult populations. The present study explored the relations between these constructs with the goal of developing an understanding of both the relation between subclinical grandiose narcissistic tendencies and effortful control as well as how these together intersect to influence one's level of hedonic well-being.

Research Question 1: What is the relation between subclinical grandiose narcissism and hedonic well-being?

To explore this intersection, I began by assessing the relation between subclinical grandiose narcissism and hedonic well-being. As impulsivity is positively associated with both narcissistic tendencies (Malesza & Kaczmarek, 2018) and hedonic well-being (Goodwin, Browne, Hing, & Russel, 2017), I expected results to indicate that an individual with subclinical grandiose narcissistic tendencies would experience an increase in hedonic well-being. Analyses revealed support for this hypothesis as individuals who rated themselves as displaying more grandiose narcissistic tendencies, as indicated by the NPI-13 total score, also exhibited increased hedonic well-being. Viewing this finding in more depth, it becomes clear that some facets of narcissism were more predictive of hedonic well-being than others. For example, both the leadership/authority and entitlement/exploitation subscales of the NPI-13 were significantly positively associated with hedonic well-being.

These associations appear congruent with previous literature which established a positive association between sub-clinical narcissism and well-being (Aghababaei & Blachnio, 2015).

Expanding upon the positive relation between narcissism and well-being, it has been found that this relation is more complex than simply being a positive association. More specifically, narcissism has an inverse relation with daily sadness, dispositional subjective well-being, dispositional loneliness, dispositional depression, and daily anxiety. However, these inverse relations are contingent upon self-esteem, which was found to fully explain these relations.

These findings can be interpreted to mean that narcissism can be positive for individuals' mental health but only if the individual has high self-esteem (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004). A second study also found the association of narcissism and increased well-being to be mediated by self-esteem rather than impulsivity. People displaying narcissistic tendencies garner self-esteem by believing they are both competent and well thought of by their peers. With their perceived superior social evaluation serving a cornerstone of their self-esteem, when they are confronted with a social interaction that undermines this inflated sense of self, their self-esteem suffers as does their well-being. However, this study found the mediating effect of self-esteem to be contingent upon negative interpersonal events (Zuckerman & O'Loughlin, 2009).

Research Question 2: What is the relation between effortful control and hedonic well-being?

To further understand the relation between effortful control and hedonic well-being, I evaluated a second hypothesis to see if an individual's increased effortful control would be associated with a decrease in his/her hedonic well-being. I expected the data to provide evidence of this relation. As such, I was surprised my findings revealed a lack of support for hypothesis 2. I found that hedonic well-being was not predicted by any aspect of effortful control. Perhaps this unexpected result could be explained by other variables that influence individuals' hedonic well-

being more directly than facets of effortful control. For example, studies found that positive affect can be used to measure hedonic well-being (Huta, 2015). This assertion is rooted in evidence from a study which found that 75% of the variance in hedonic well-being was accounted for by positive affect. Although positive affect is similar to both hedonic and eudaimonic well-being when assessed at the trait level, positive affect has a primary relationship with hedonic well-being. Also discussed in the aforementioned study were the associations between hedonic well-being, low negative affect, and feelings of carelessness (Huta, 2015). Perhaps had I used a measure with these associations included, different results would have been found.

A second possible explanation for this finding could be explained by a study which found a relation between effortful control and well-being by assessing different aspects of effortful control than I did in this current study. The study used goal disengagement and goal reengagement tendencies to assess effortful control and found that appropriately disengaging from unattainable goals, then reengaging in plausibly procurable goals could maintain one's well-being despite not being able to initially succeed (Wrosch, Scheier, Miller, Schulz, & Carever, 2003).

Although I did not find evidence of facets of effortful control predicting hedonic well-being, I found other constructs to be predictive of this form of well-being. Regression analyses indicate that in all effortful control models, the NPI-13 subscale of entitlement/exploitativeness positively predicted an increase in one's hedonic well-being. Additionally, I found that the leadership/authority subscale also positively predicted an increase in one's hedonic well-being in all models except for one. I was surprised this finding was present in all models except for when accounting for only inhibitory control because prior studies have found associations between

narcissism and increased well-being (Aghababaei & Blachnio, 2015). Perhaps this finding is due to the complex and unique circumstances that present themselves when someone is in a position of leadership, such as the influences social and emotional intelligence have on a leader's effortful control and leadership skills or the potentially stressful, novel situations that might arise (Murphy, 2002). Furthermore, by using the composite grandiose narcissism score, a predictive relation for hedonic well-being was present across all effortful control models. Returning focus to both the entitlement/exploitativeness and leadership/authority subscales and the composite grandiose narcissism score's positive associations with hedonic well-being, these findings are congruous with literature which reveals that sub-clinical narcissism is related to increased happiness and psychological well-being, both of which are encompassed by hedonic well-being (Aghababaei & Blachnio, 2015). This provides additional support for my first hypothesis.

The grandiosity/exhibitionism subscale was found to have a predictive relation with hedonic well-being in the attentional control model only. This exception can be understood when looking at a recent study which found that attentional control mechanisms doubled as a form of resilience against dispositional vulnerabilities. In this study, dispositional vulnerabilities were understood to be chronic impulsive, 'hot reaction' tendencies and attentional control was thought to protect or work against consequences of these rash tendencies (Mischel & Ayduk, 2002). Despite the data's lack of evidence for hypothesis 2, results of my analyses were telling in that they revealed more support for my first hypothesis as the composite grandiose narcissism score significantly predicted increased hedonic well-being in all effortful control models.

Research Question 3: Is there an interaction between narcissistic tendencies and effortful control predicting hedonic well-being?

My third research aim was to evaluate the intersection between narcissistic tendencies and effortful control and whether the interaction between them predicted hedonic well-being. I hypothesized there would be an interaction between narcissistic tendencies and effortful control which would predict hedonic well-being, with individuals displaying more narcissistic tendencies also exhibiting lower levels of effortful control. My data from moderation analyses provided no evidence regarding the presence of significant interactions between any aspects of effortful control, the NPI-13, and each subscale of the NPI-13.

A possible explanation for these unexpected results is self-esteem, a correlate of grandiose narcissism (Miller et al., 2011). Not only does self-esteem serve as a mediator between narcissism and well-being (Sedikides et al., 2004), but it also affects effortful control abilities. A study found that in situations with no ego threat, individuals with high self-esteem demonstrated effortful control competencies in that they successfully set and achieved goals. However, when individuals with high self-esteem were confronted with an ego threat, they set unrealistically high expectations for themselves and inevitably were unable to accomplish the goals. The researchers interpreted these findings as evidence that one's perception of his/her ego can interfere with effortful control processes (Baumeister, Heatherton, & Tice, 1993).

Additionally, perhaps these surprising results were, in part, due to a lack of participants' effort or thoughtful consideration while responding. An unfortunate consequence of using undergraduate students as participants is that, while many students are diligent in their responses, some undoubtedly mindlessly complete the surveys with the goal of simply earning extra credit points.

Despite my data not supporting an interaction between narcissistic tendencies and effortful control predicting hedonic well-being, some interesting negative correlations between

the aforementioned constructs were revealed while evaluating data for my first hypothesis. First, the NPI-13 total was negatively associated with inhibitory control, as well as the leadership/authority and entitlement/exploitativeness subscales. As inhibitory control is an individual's ability to inhibit impulses, this negative association between narcissistic tendencies and inhibitory control is in line with literature which established that individuals displaying increased narcissistic tendencies would also display increased impulsivity (Vazire & Funder, 2006). Secondly, the entitlement/exploitativeness subscale of the NPI-13 was found to be negatively associated with both effortful control and the activation control subscales of the ATQ-SF. This finding is also congruent with current literature which has established an association between narcissism and decreased effortful control abilities (Vazire & Funder, 2006). Furthermore, this is consistent with studies which found effortful control abilities are, in part, contingent upon personality factors with individuals displaying high neuroticism (a hallmark of narcissism) also displaying lower effortful control (Gramzow et al., 2004). Further supporting this finding, in the above-mentioned study, individuals who scored low on conscientiousness (another hallmark of narcissism) also displayed a maladaptive style of effortful control by succumbing to impulses, even when this means others will be negatively affected (Gramzow et al., 2004).

Limitations and Future Directions

There are several limitations to the contribution of this study that bear mentioning. First, by focusing on specifically hedonic well-being, perhaps the lack of findings was due to the non-inclusive nature of this construct. I chose to assess a specific facet of well-being in hopes of finding results that added to literature detailing the intricacies of individuals with grandiose narcissistic tendencies. However, perhaps a more encompassing approach would be beneficial in

future studies as there is an overlap between narcissism, hedonic, and eudaimonic well-being (Aghababaei & Blachnio, 2015).

A second potential limitation of this study stems from all of my data being collected in the form of self-report surveys. The decision to employ self-report surveys was made due to limitations in feasibility of constructing a more in-depth data collection method as an undergraduate without funding or a research team. Considering the propensity of individuals with narcissistic tendencies to engage in self-promoting behavior (Carey et al., 2015), it is possible some participants might have responded in ways which reflected a genuine overestimation or intentionally embellished responses reporting their well-being. If all of the participants in the current study demonstrated grandiose narcissistic tendencies, it is likely these overestimations would have resulted in a stronger positive relation between the aforementioned constructs. However, as the participants were recruited based on their enrollment in a psychology course at The University of Tennessee at Chattanooga, rather than being recruited in regard to their narcissistic tendencies, this effect could have been negated by responses from individuals who did not display grandiose narcissistic tendencies.

Perhaps the low reliability for some of the measures in the current study is due, in part, to the measure being a self-report. Empirical evidence has come to light that self-report assessments can render low validity and reliability simply because the participants have lowered accountability. Researchers offer four recommendations for future use of self-report measures. First, they remind researchers that all questions need to be explicitly clear and not unnecessarily complex. Second, before beginning the survey, participants should be instructed whether to report the initial answer that comes to mind, or whether a more in-depth thought process and memory search is what the researchers are looking for. Third, participants should be prompted

for an overt commitment to cooperate and verbal reinforcement should be given periodically throughout the course of their completing the survey. Their last suggestion is in regard to the participants' ability to accurately answer. Explaining that it is quite normal for a person to become mentally fatigued or disengaged during a timely task, these researchers recommends structuring the assessment so that the most challenging and thought-provoking questions are first, with simple questions wrapping up the assessment. These changes have proven quite effective, exemplified by the increase in detection of mental disorders by the U.S. National Comorbidity Survey (Stone, Christine, Cachrach, Jobe, Kurtzman, & Cain, 1999).

To circumvent potentially misleading data from self-report surveys, future studies could incorporate observer reports into the data collection portion of their study. Contingent upon logistics and funding, future researchers could construct a study that incorporates both self-report surveys and controlled observation. The inclusion of controlled observation would be advantageous for many reasons including that it would increase the amount of data collected, the observations could be replicated by other researchers, thus increasing reliability, and by observing in a controlled setting, the observations could be made over a relatively short period of time.

A third possible shortcoming of this study was that, when assessing participants' hedonic well-being, I rescaled the SVS values which could have limited the variability in responses. Initially, responses were made using 8-point scales from 0 to 8. However, after collecting a few invalid responses, I opted to rescale the SVS values in hopes that doing so would avoid further invalid responses by creating a scale that was more straightforward for participants to respond to.

Future studies exploring the intersection of similar constructs could use a different measure for hedonic well-being (such as the Emotional subscale of the Mental Health

Continuum Short Form; Keyes, 2009) to determine whether the findings are consistent with this study or if my results were an artifact of the hedonic well-being measure I employed. Doing so would both provide information regarding the consistency of my results as well as avoid complications with erroneous responses.

Conclusion

Although the literature on effortful control, subclinical narcissism, and hedonic well-being is substantial, this study helps fill a gap in the research by examining the intersection of facets of these constructs. The goals of this study were threefold. First, I aimed to understand the relation between subclinical grandiose narcissism and hedonic well-being and found a significant positive association between grandiose narcissistic tendencies and hedonic well-being. Secondly, I strove to learn about the relation between effortful control and hedonic well-being and found no significant associations between the two. Last, I explored whether an interaction exists between narcissistic tendencies and effortful control, and if this interaction would predict hedonic well-being. My analyses did not reveal a significant interaction between these constructs. Despite not all of the hypotheses being supported, findings from this study are helpful in more accurately understanding the unique intersection between effortful control, sub-clinical narcissism, and hedonic well-being. For example, realizing that grandiose narcissistic tendencies and hedonic well-being are significantly associated has many practical implications, as both narcissistic tendencies and hedonic well-being can take many forms. Furthermore, understanding the ways in which narcissistic tendencies manifest is important because it provides a context from which to attempt to understand an individuals' behaviors and hopefully help them manage their disadvantageous impulsive behaviors.

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