Published in final edited form as:
J Res Pers. 2008 December ; 42(6): 1427–1438. doi:10.1016/j.jrp.2008.06.002.

Commonalities and differences in characteristics of persons at risk for narcissism and mania

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Abstract

Clinicians have long noted overlap in some of the key features of narcissism and bipolar disorder, including excessively high goals and impulsivity. In addition, empirical findings consistently document high levels of comorbidity between the two conditions. To better understand the similarities and differences in psychological qualities associated with mania- and narcissism-related vulnerabilities, we administered to 233 undergraduates a broad range of measures pertaining to goals and affects (both their experience and their dysregulation) and impulsivity. As hypothesized, tendencies toward both narcissism and hypomania related to elevations on measures of affective and goal dysregulation. In addition, hypomania tendencies were related to higher impulsivity, but that association did not appear for narcissistic tendencies. Results highlight key commonalities and differences between those at risk for mania versus narcissism. Future research should examine these relationships in clinically diagnosed samples.

Keywords

Narcissism; Hypomania; Impulsivity; Goal regulation; Affect regulation

1. Introduction

For decades, clinicians have written about overlap in several facets of narcissistic personality disorder (NPD) and bipolar disorder. As Akiskal (1992) noted, Kraepelin's early description of persons with manic temperament–versatile, intelligent, and charming, while at the same time restless, temperamental, and unreliable–closely resembles clinical descriptions of NPD. Indeed, epidemiological studies have documented high rates of NPD among persons with bipolar disorder. As many as 31% of people diagnosed with bipolar I or II disorder also meet criteria for cluster B personality disorders (Garno, Goldberg, Ramirez, & Ritzler, 2005; Mantere et al., 2006). Although rates of NPD in the general population rarely exceed 1% (e.g., Torgersen, Kringlen, & Cramer, 2001), bipolar disorder has been related to an eightfold elevation in rates of NPD in both inpatient (Brieger, Ehrt, & Marneros, 2003) and outpatient samples (Garno et al., 2005), despite some lower estimates in other research (Mantere et al., 2006). Even in samples with less extreme manic tendencies, such as persons diagnosed with bipolar II disorder, rates of NPD as high as 5% have been obtained (Vieta et al., 2000). Although NPD in bipolar disorder is most likely to be diagnosed during periods of mania (Akiskal, 1992; Stormberg, Ronningstam, Gunderson, & Tohen, 1998), rates of NPD remain as high as 4.5% even among those in remission from

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mania (George, Miklowitz, Richards, Simoneau, & Taylor, 2003). In sum, narcissism and bipolar disorder are frequently comorbid, and manic episodes appear to exacerbate narcissism symptoms.

Within bipolar disorder, comorbid personality disorders are related to poorer treatment adherence (Colom et al., 2000), more severe symptoms over time (Bieling et al., 2003; Colom et al., 2004; Dunayevich et al., 2000), and poorer medication adherence (Colom et al., 2000). More specific analyses suggest that Cluster B personality disorders are related to increased risk for suicidal behavior (Garno et al., 2005). Hence it is important to understand this comorbidity and its basis. In this study, we consider three characteristics–approach-related affect, goal pursuit, and impulsivity–and their relations to risk for both mania and narcissism.

2. Approach-related affective dysregulation in mania

Why these characteristics? It has been hypothesized that mania stems from heightened sensitivity of the approach system (Depue & Iacono, 1989). This is manifested partly in greater affective responses to success in goal pursuit. Results from several studies are consistent with the idea that people with bipolar disorder and those at risk for bipolar disorder experience more positive emotions in their daily lives than other people (Lovejoy & Steuerwald, 1995). More specifically, they report more approach-relevant affects, such as joy and enthusiasm, as opposed to the relaxed affect of contentedness (Gruber, Johnson, Oveis, & Keltner, 2008).

Mania appears particularly tied to positive emotions in response to reward (Meyer, Johnson, & Winters, 2001). Several studies have found elevated scores on the Carver and White (1994) scale for reward responsiveness among persons diagnosed with bipolar I disorder (Meyer et al., 2001; Salavert et al., 2007; see Jones, Mansell, & Waller, 2006 for a nonreplication), students with bipolar spectrum disorder (Alloy et al., 2006), and those at risk for bipolar disorder (Gruber & Johnson, in press; Johnson & Carver, 2006; Meyer & Hofmann, 2005; Meyer, Johnson, & Carver, 1999; Nusslock, Abramson, Harmon-Jones, Alloy, & Hogan, 2007). Evidence from psychophysiological studies also suggests that people at risk for mania respond more strongly to positive stimuli than do other people (Sutton & Johnson, 2002). In two recent studies, people at risk for bipolar disorder even endorsed engaging in more strategies to maximize positive moods, such as dwelling on how well they did and how great they felt (Feldman, Joormann, & Johnson, in press; Johnson, McKenzie, & McMurrich, in press).

The possibility of particularly intense affect among persons with manic tendencies is not limited to positive affect. Mania and hypomania are also sometimes characterized by intense anger (Benazzi & Akiskal, 2005; Cassidy, Forest, Murry, & Carroll, 1998; Hantouche & Akiskal, 2005). Similarly, there is evidence that people at risk for bipolar disorder and those with diagnosed bipolar disorder experience more intense reactions to goal frustration than do other people (Harmon-Jones et al., 2002, 2008). One might expect this lability of anger responses to be reflected as well in lower levels of trait agreeableness.

3. Goal regulation in mania

Several cognitive effects also emerge in the way that people who are prone to mania react to goal-related successes. Although these effects certainly pertain to intense reward-related affect, they go beyond affective responses. A number of findings suggest easy elevations in confidence among people prone to mania. For example, when in positive moods, persons with bipolar I disorder tend to ignore advice more than others do (Mansell & Lam, 2006). They tend to interpret their high moods as a sign that they can conquer more (Jones et al., 2006). People at risk for bipolar disorder also report greater increases in confidence (Eisner, Johnson, & Carver, 2008) and goal-setting (Johnson, Ruggero, & Carver, 2005) than do others after small successes. Overly positive self-views at treatment entry have predicted maintenance of manic symptoms during treatment (Lam, Wright, & Sham, 2005). Hence people with bipolar disorder and those at risk appear to respond to small successes and positive moods with more extreme elevations in confidence.

Beyond fluctuations in confidence, recent findings suggest that people with bipolar disorder and those at risk for the disorder are more likely to endorse extremely ambitious life goals than are other people (Gruber & Johnson, in press; Johnson & Carver, 2006; Johnson, Eisner, & Carver, submitted for publication). More specifically, they endorse extreme extrinsic goals, such as achieving wealth and fame, but not intrinsic goals, such as quality of close relationships. This high goal-setting appears to be present even during asymptomatic periods.

4. Impulsivity in mania

Another characteristic of persons with manic symptoms is impulsivity (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001). Persons with bipolar spectrum disorder have high rates of impulse control disorders (Akiskal, 2005). Research suggests that mania is characterized by elevations in impulsivity, as measured using the Barratt Impulsiveness Scale (BIS-11; Patton, Stanford, & Barratt, 1995). Particularly robust elevations have been found on the motor impulsivity scale, but elevations on the other BIS-11 subscales have been found as well (Peluso et al., 2007). Although impulsivity appears to be magnified during periods of mania (Swann, Pazzaglia, Nicholls, Dougherty, & Moeller, 2003), several studies document elevated impulsivity during remission (Christodouloua, Lewis, Ploubidis, & Frangou, 2006; Peluso et al., 2007; Perris, 1984). Impulsivity (measured in this case by the Impulsive-Nonconformity Scale of Chapman et al., 1984) has been found to predict the onset of bipolar spectrum disorder over a 13-year period among a high risk sample: 67% of high scorers on this scale, versus only 11% of low scorers, met criteria for bipolar disorder at follow-up (Kwapil et al., 2000).

5. Similar characteristics in narcissism

Aspects of the pattern just described have also been identified among persons at risk for narcissism. High levels of anger have been seen among inpatients with narcissistic personality traits (Goldberg et al., 2007) and healthy persons at risk for narcissism (Bushman & Baumeister, 1998), though less is known about how narcissism relates to positive affect and reward responsivity. Clinical descriptions of narcissism have also emphasized elevated goal pursuit. Indeed, the DSM diagnostic criteria for NPD include a “grandiose sense of self-importance” and “preoccupation with fantasies of unlimited success, power, brilliance, beauty, or ideal love.” The most commonly used measure of narcissistic traits, the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979), correlates with measures of self-confidence and social dominance (Bradlee & Emmons, 1992; Paulhus, 1998), and it has been argued that narcissism reflects an attempt to maintain unrealistically high levels of self-esteem (Raskin, Novacek, & Hogan, 1991; Robins & John, 1997). Morf and Rhodewalt (2001) showed that those high in narcissistic traits emphasize the pursuit of accomplishment and recognition more than others do, and that this pursuit underlies some of the interpersonal difficulties observed in this population. A recent meta-analysis of 10 studies documented three behavioral parallels between impulsivity and narcissism: both tend to involve self-enhancement, both relate to aggression, and both have long-term personal costs (Vazire & Funder, 2006).

Studies have also found correlations of impulsivity with both NPD (Casillas & Clark, 2002) and subclinical narcissism, as measured by the NPI (Raskin & Terry, 1988; Vazire & Funder, 2006). The evidence suggests, however, that only some forms of impulsivity relate to narcissism. Most studies finding such an association used the Adjective Check List (ACL; Gough & Heilbrun, 1983), the California Adult Q-Set (CAQ; Block, 1961), and the self-control subscale of the California Psychological Inventory (CPI; Gough, 1957) to measure impulsivity (cf. Vazire & Funder, 2006). Items on these scales target primarily the tendency to act in antisocial ways. The most frequently used impulsivity scale in studies of narcissism, the self-control scale of the CPI, has mostly items that assess acts such as aggression (e.g., "Sometimes I feel as if I must injure myself or someone else") or manipulation of others to achieve one's own goals (e.g., "I must admit I often try to get my own way regardless of what others may want"). Although such items may reflect impulsive action, they clearly are rooted in antisocial qualities.

Other evidence suggests a motor impulsiveness in narcissism. For example, a CAQ item that has been moderately correlated with the NPI, "Unable to delay gratification," (Colvin, Block, & Funder, 1995), assesses a behavioral tendency to act to obtain immediate gratification. Similarly, adjectives in the ACL that have been correlated with the NPI include "Impatient," "Self-Controlled" (reverse-scored), and "Impulsive." These adjectives lack the specificity needed to assess varying facets of impulsivity. For that reason, in the study reported here, we used a range of measures to help differentiate among aspects of impulsivity. Because our interest is in qualities of impulsiveness per se rather than antisociality, we avoided measures that pertain primarily to antisocial actions.

6. Distinguishing narcissistic tendencies from hypomania

As researchers have documented associations between risk for mania and affective regulation, goal regulation, and impulsivity, it becomes important to consider how specific these variables are to mania. Few controlled studies are available. In light of the literatures reviewed here, we hypothesized that narcissism and mania vulnerabilities would correlate to similar degrees with measures suggesting dysregulation in affect and goal-oriented domains. That is, narcissism and mania vulnerabilities should share elevations in intensity of positive affect, anger, and sensitivity to reward. In addition, narcissism and mania vulnerabilities should relate to similar degrees with overly ambitious extrinsic goal-setting. In contrast to this, we predicted that narcissistic tendencies would relate to endorsement of impulsiveness that is specific to defying social conventions and manipulating others, while tendencies toward mania would relate to multiple facets of impulsivity.

7. Method

Participants were 233 students at the University of Miami (57% female). We did not collect age or ethnicity information in connection with responses to the measures. However, all participants were above 18 years of age, with the majority between 18 and 19 years. The University of Miami has an ethnically diverse student body, which is approximately 23% Hispanic, 6% African American, 8% Asian, 55% non-Hispanic White, and 7% "other." We have no reason to believe that the sample differed materially from this composition. All questionnaires were administered in large group sessions in partial fulfillment of a course requirement.

7.1. Measures of hypomania and narcissistic tendencies

7.1.1. Hypomanic Personality Scale (HPS)—The HPS (Eckblad & Chapman, 1986) is a self-report questionnaire designed to assess risk for bipolar spectrum disorders. The scale contains 48 true–false items to capture shifts in emotions, behavior, and energy (i.e., "There have often been times when I had such an excess of energy that I felt little need to sleep at night," and "I often feel excited and happy for no apparent reason"). In the initial validation study, 78% of persons scoring more than two standard deviations above the mean were found to meet diagnostic criteria for bipolar spectrum disorder, as compared to 0% in the control group defined by lower scores on the HPS (Eckblad & Chapman, 1986). Elevated scores on the HPS also predicted heightened risk for DSM-IV bipolar disorders 10–13 years later (Kwapil et al., 2000). The scale has been widely used to identify analog samples at risk for bipolar disorder (Eisner et al., 2008; Feldman et al., in press; Gruber & Johnson, in press; Johnson & Carver, 2006; Johnson et al., [2005], in press, submitted for publication; Meyer & Hofmann, 2005; Meyer et al., 1999; Nusslock et al., 2007; Trevisani, Johnson, & Carver, in press). The HPS has high internal consistency (α = .87) and good test–retest reliability 15 weeks later (*r* = .81; Eckblad & Chapman, 1986). In this study, internal consistency was high (α = .84).

7.1.2. Narcissistic Personality Inventory (NPI)—

The NPI (Raskin & Hall, 1979) was developed to measure severity of symptoms of narcissism in nonclinical populations. Items were developed to capture the DSM-III criteria for NPD, and psychometric analyses of internal consistency were used to choose 54 items that performed well across a set of studies (Raskin, 1980; Raskin & Hall, 1981). The scale has been shown to have construct validity (Emmons, 1987; Watson, Grisham, Trotter, & Biderman, 1984; Watson, Taylor, & Morris, 1987). In the current study, we used the 37-item version used in previous research by Rhodewalt and colleagues (Morf & Rhodewalt, 1993; Rhodewalt & Morf, 1995; Rhodewalt, Tragakis, & Finnerty, 2006). This shortened version of the scale contains only those items with factor loadings higher than .35 and omits items considered duplicates. Participants choose one of two options for each item. Examples are "I like having authority over other people" versus "I don't mind following orders, or "I find it easy to manipulate people" versus "I don't like when I find myself manipulating people." We also examined four factor-analytically derived subscales of the NPI (Emmons, 1987): sense of authority, self-admiration, arrogance, and exploitiveness. Internal consistency in the current study was high (α = .84).

7.2. Measures pertaining to affect experience and affect dysregulation

7.2.1. Behavioral Inhibition/Behavioral Activation Scales (BIS/BAS)—

The BIS/BAS scales (Carver & White, 1994) are designed to measure individual differences in affective and behavioral responses to threat and reward cues. The BIS scale (7 items) measures the tendency to respond to threatening events with negative affect, anxiety, or fear (i.e., "If I think something unpleasant is going to happen I usually get pretty 'worked up'.") The BAS scales focus on tendencies to respond to cues of incentive and reward with positive affect and engagement. Response options consisted of a four-point scale ranging from "Very true for me" to "Very false for me." There are three factorially distinct BAS subscales: Drive, Reward responsiveness, and Fun seeking. Drive captures the motivation to pursue desired goals energetically (e.g., "If I see a chance to get something I want I move on it right away"). The Reward responsiveness scale measures the tendency to respond with heightened energy and positive affect when desired events are experienced or anticipated (e.g., "When good things happen to me, it affects me strongly"). Fun seeking captures the impulsive behavioral pursuit of pleasurable opportunities (e.g., "I will often do things for no other reason than that they might be fun").

Internal consistency, factor structure, and test–retest reliability of the BIS/BAS scales have been found to be adequate (Carver & White, 1994; Heubeck, Wilkinson, & Cologon, 1998; Jorm et al., 1999). Convergent and discriminant validity has been demonstrated with measures of extraversion, trait anxiety, positive affect, and novelty seeking (Carver &

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White, 1994; Heubeck et al., 1998; Jorm et al., 1999). Normative data are available from a major community sample (Jorm et al., 1999). In the present sample, internal consistencies were satisfactory (α = .79 for total BAS, .68 for Reward Responsiveness, .72 for Drive, .71 for Fun Seeking, .78 for BIS).

7.2.2. Affect Intensity Measure (AIM)—We included an abbreviated set of items from the AIM (Larsen & Diener, 1987; see also Schimmack & Diener, 1997), a measure that was devised to assess the typical intensity with which people experience positive and negative emotions. We reduced the length of this measure primarily because of issues of response burden but partly because some of the items seem ambiguous about whether they reflect affect intensity per se or other aspects of personality (e.g., “I enjoy being with other people very much,” “I get overly enthusiastic”). We extracted 12 items from the original measure (40 items) that appeared to be most representative of the construct, with an emphasis on items that clearly specify occurrence of an emotion-relevant event linked to a statement about the intensity of the emotion that results. Five of the items that were used bear on positive feelings (e.g., “When something good happens, I am usually much more jubilant than others,” α = .69) while seven bear on negative feelings (e.g., “When I feel guilt, this emotion is quite strong,” α = .70). We collected responses using a five-point scale ranging from “I agree a lot” to “I disagree a lot.” Because initial examination of the data in this sample indicated that the items pertaining to positive feelings correlated only .26 with those pertaining to negative feelings, we decided to sum and analyze each set separately.

7.2.3. Responses to Positive Affect questionnaire (RPA)—The RPA (Feldman et al., in press) is a 17-item self-report questionnaire that examines responses to positive affective states. Possible responses range from 1 (“I almost never respond in this way”) to 4 (“I almost always respond in this way”). The measure is composed of three factor-analytically derived subscales: Dampening, Self-Focused Positive Rumination, and Emotion-Focused Positive Rumination (Feldman et al., in press). In the validation studies these subscales demonstrated acceptable internal consistency. The Self-Focused Positive Rumination subscale (e.g., “Think about how proud you are of yourself”) and the Emotion-Focused Positive Rumination subscale (e.g., “Think about how happy you feel”) capture responses related to the intensification of positive affect, while the Dampening subscale captures responses which are thought to diminish positive affect (e.g., “Think about things that could go wrong”).

Both the emotion-focused and self-focused positive rumination subscales demonstrated expected positive correlations with self-esteem and vulnerability to hypomania in the validation studies (Feldman et al., in press). In another study, emotion-focused rumination was elevated among persons with a diagnosis of bipolar spectrum disorder, but not depression, whereas the Dampening scale correlated with a history of depression (Johnson et al., in press). In the current study, reliability estimates for the three subscales were as follows: Dampening α = .84, Self-Focused α = .75, and Emotion-Focused α = .77.

7.2.4. NEO Five-Factor Inventory–Agreeableness (NEO-FFI-A)—The NEO-FFI (Costa & McCrae, 1992) contains 60 items forming five domain scales assessing broad personality traits of the five-factor model of personality: Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C). A five-point scale is used ranging from “strongly disagree” to “strongly agree.” In the current study, only the scale for agreeableness was used. Sample items include “I respect others’ feelings,” “I take others’ interests into account,” and “I am willing to make compromises.” Cronbach’s alpha for this scale, reported by Costa and McCrae using a sample of 1539 respondents, was .86. Test–retest reliability (3-month interval) computed using a sample of 208 college students was 0.75. In the current study, the internal consistency estimate for Agreeableness was adequate (α = .76).

7.2.5. The Buss–Perry Aggression Questionnaire Short Form (AQ-SF)—The AQ (Buss & Perry, 1992) is a 29-item questionnaire that assesses several components of aggression (e.g., "If somebody hits me, I hit back," "I often find myself disagreeing with people," "Some of my friends think I'm a hothead") using a five-point scale ranging from "extremely uncharacteristic of me" to "extremely characteristic of me." Internal consistencies reported by Buss and Perry using a college sample were high. Test–retest reliabilities (over 9 weeks) for the scales using a college sample were also high. Bryant and Smith (2001) developed a shorter version of the AQ using principal-components analysis. The authors identified items with low loadings or multiple loadings and omitted these items, as well as items with reverse-scored wording. The modified scale contains only 12 items and is more psychometrically sound than the original AQ (Bryant & Smith, 2001). Subscales, with their respective internal consistency estimates in the current study, are as follows: Anger (α = .77), Hostility (α = .72), Physical Aggression (α = .74), and Verbal Aggression (α = .73).

7.3. Measures of goal responses and goal dysregulation

7.3.1. Positive Overgeneralization (POG)—The POG (Eisner et al., 2008) assesses ways in which people might overgeneralize after small successes. Each item portrays a potential generalization from a given success to the respondent's broader sense of self. There are three factor-analytically derived subscales: Lateral generalization from a good outcome in one domain to positive outcomes in other areas of life (e.g., "If I succeed at something, it makes me feel I will succeed in other areas as well," α = .81 in the current study), Upward generalization to more lofty goals in the same domain (e.g., "If someone praises the way I express something, it makes me think of writing a book," α = .77 in the current study), and Social generalization, bearing specifically on social outcomes (e.g., "When an attractive person smiles at me, I can tell it means s/he is hot for me," α = .82 in the current study). Possible responses range from 1 ("I disagree with the statement a lot") to 4 ("I agree with the statement a lot"). In previous research, risk of mania (HPS scores) correlated with POG subscales, most robustly with scores on Upward generalization (Eisner et al., 2008).

7.3.2. Willingly Approached Set of Statistically Unlikely Pursuits (WASSUP)—The WASSUP (Johnson & Carver, 2006) is a 30-item self-report questionnaire designed to measure setting of highly ambitious life goals. Respondents rate how likely they will set each response as a personal goal for themselves. Seven factor-analytically derived subscales have been identified, covering the following domains: popular fame (Popular fame: e.g., "you will appear regularly on TV"), idealized relations with friends (Friend: e.g., "everyone you know will love you"), having a positive impact on world well-being (World well-being: e.g., "you will create world peace"), politics (Political influence: e.g., "you will be important in political circles"), idealized relations with family (Family: e.g., "your relationship will be more romantic than Romeo and Juliet"), and financial success (Financial: e.g., "you will have 20 million dollars or more"). The seventh subscale includes items reflecting creativity ("you will create a great work of art, music, or poetry") and self-actualization ("you will self-actualize or reach Nirvana"). For each item, participants rate the likelihood of setting each goal on a scale of "NO CHANCE I will set this goal for myself" (1) to "definitely WILL set this goal for myself" (5). Across five samples, risk for mania and diagnoses of bipolar disorder relate to elevated scores on the WASSUP, particularly on subscales measuring extrinsically motivated goals such as the desire for popular fame or wealth (Gruber & Johnson, in press; Johnson & Carver, 2006; Johnson et al., submitted for publication), even after controlling for current symptoms. In the current study, we used five subscales, with internal consistency estimates as follows: Family α = .72, Financial α = .74, Political influence α = .81, Popular fame α = .88, and World well-being α = .86. This group of scales includes some that have been related to HPS scores in the past (Financial, Political, and Popular fame) and some that have been unrelated to HPS scores in the past (Family and World well-being).

7.4. Measures of impulsivity

7.4.1. The brief Self-Control Scale (SCS)—The SCS (Tangney, Baumeister, & Boone, 2004) is a 36-item questionnaire that assesses individual differences in levels of self-control. Items are rated on a 5-point scale with responses ranging from "Not at all" to "Very much." Example items include "I am good at resisting temptation" and "I get carried away by my feelings." In the validation study, internal consistency estimates were high (α = .89). Tangney et al. also developed a brief (13 item) version of the SCS. In two studies the brief version correlated with the full version at *r* levels of .92 to .93. Internal consistencies of the brief version were .83 and .85 in the two samples, with good test–retest reliability (α = .87). We found similar internal consistency in the current study: α = .83. Relevant to the current study, Tangney et al. also found that people scoring low on the SCS reported a higher rate of impulsive behaviors, including eating disorders and alcohol abuse.

7.4.2. Consideration of Future Consequences Scale (CFC)—The CFC (Strathman, Gleicher, Boninger, & Edwards, 1994) is a 12-item self-report questionnaire that assesses "the extent to which people prefer to construct the future by considering distant versus immediate consequences of potential behaviors and the extent to which behavior is influenced by such perceived outcomes" (Petrocelli, 2003, p. 406). Participants respond to items such as "I consider how things might be in the future, and try to influence those things with my day to day behavior" and "I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time" on a five-point Likert scale ranging from "extremely uncharacteristic" to "extremely characteristic." Petrocelli conducted a principal-components factor analysis of the CFC with 664 participants and concluded that an 8-item version of the scale was more psychometrically stable. In this study, the internal consistency alpha of the shortened version was .82.

7.4.3. The Barratt Impulsiveness Scale, version 11 (BIS-11)—The Barratt Impulsiveness Scale has evolved in multiple iterations over an extended period. It is one of the most widely used of all impulsivity measures. Patton et al. (1995) further revised the BIS-10 (the then-current version) using factor analysis with 412 undergraduates, 248 psychiatric inpatients, and 73 male prisoners. Three second-order factors were identified: Attentional Impulsiveness (e.g., "I have racing thoughts"), Motor Impulsiveness (e.g., "I change jobs"), and Nonplanning Impulsiveness (e.g., "I am self-controlled"). Respondents choose from four options, ranging from "rarely/never" (1) to "almost always/always" (4). The analysis yielded a revised scale (the BIS-11) with 30 items. The BIS-11 was highly correlated with the BIS-10 (α = .98), and internal consistency alpha estimates for the revised scale ranged from .79 to .83. In the current study, internal consistency estimates of the three second-order subscales were adequate: Attentional Impulsiveness α = .76, Motor Impulsiveness α = .72, and Nonplanning Impulsiveness α = .72.

8. Results

We began by computing descriptive statistics for the two measures of risk for mania (HPS scores) and narcissism (NPI scores). The HPS scores were consistent with those in previous studies (Eckblad & Chapman, 1986; Kwapil et al., 2000), ranging from 10 to 44 (*M* = 26.40,

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SD = 7.43). Approximately 10% of the sample (27 persons) scored at or above the cutoff score of 36 used in previous research to identify those at risk for mania (Kwapil et al., 2000). NPI scores ranged from 3 to 33 (M = 18.18, SD = 6.46). Also consistent with previous research (Rhodewalt et al., 2006), the top third of participants (n = 79) scored at 21 or above. As expected, NPI scores were strongly related to HPS scores (r = .51, p < .001). We then computed correlations between these scales and the measures pertaining to affects, goals, and impulsivity. As can be seen in Table 1, there are many similarities in the variables to which the HPS and NPI did and did not relate. There are also key differences.

Both hypomanic and narcissistic tendencies correlated positively with the Drive and Fun Seeking subscales of the BIS/BAS, and inversely with BIS total (anxiety proneness). Neither scale related to Reward Responsiveness. Consistent with the pattern for BIS/BAS scales, both the HPS and the NPI related positively to the AIM Positive-affect items, with the NPI inversely related to the AIM Negative-affect items. Both the NPI and HPS related positively to scales measuring positive rumination after success, with the HPS also relating to a scale assessing the dampening of positive feelings after success.

In general, the pattern to this point suggests that the experiences of persons high in hypomania or narcissistic tendencies involve elevations in reward sensitivity and positive emotions. Both also related positively to scales reflecting anger proneness and tendencies toward both verbal and physical aggression, with negligibly larger relationships for the NPI. Both HPS and NPI related inversely to the measure of Agreeableness, with a slightly stronger relationship for narcissistic tendencies than hypomania. Neither scale related significantly to self-reported hostility.

In regard to goal responses, both scales also related strongly to reports of positive generalization in response to a particular good outcome. On the WASSUP scale, both HPS and NPI related positively to the Popular fame and Financial subscales; the NPI also related to the Political influence subscale. Neither the HPS nor NPI scale related to elevated scores on the World well-being or Family subscales.

The clearest divergence between hypomania and narcissistic tendencies came with respect to scales reflecting self-control and impulsiveness. HPS scores related significantly and inversely to the SCS and the CFC; neither of these associations was significant for NPI scores. HPS also related significantly to all three second-order factors of the BIS-11. The NPI related significantly but weakly to Attentional Impulsiveness and moderately to Motor Impulsiveness, but not at all to Nonplanning Impulsiveness.

To be clear about which associations of scales with the HPS and the NPI measures differed significantly, we compared pairs of associations using the procedures recommended by Cohen and Cohen (1983) for dependent correlations. With this sample size, differences between correlations that were .13 or greater generally were statistically significant.

Among the measures of approach-related affects, the NPI correlated significantly more strongly than did the HPS with BAS Drive and RPA Self-focus. The HPS correlated significantly more strongly than did the NPI with BAS Fun seeking, RPA Dampening, and AIM Positive and Negative affect intensities. Among measures pertaining to goal dysregulation (the POG and the WASSUP), only one difference between correlations was significant: The NPI correlated more strongly with the WASSUP Financial subscale than did the HPS. Regarding measures of impulsivity, in contrast, the HPS correlated more significantly with the SCS and all second-order factors of the BIS-11 than did the NPI (Table 1).

8.1. Overlapping or distinct contributors?

As noted above, HPS and NPI scores both correlated significantly with a wide range of measures. A question naturally arises as to whether these correlations reflect what hypomania and narcissistic tendencies have in common with each other, or whether each is relating separately to the other measures. To examine this question we conducted a series of multiple regression analyses, using as the dependent measures each variable from Table 1 to which both HPS and NPI had significant associations, and entering HPS and NPI simultaneously as predictors. In most cases, the stronger individual correlate, but only that variable, retained a significant association with the outcome variable, after the shared predictive variance was removed. The HPS was a stronger predictor of AIM Positive affect, Fun seeking, AQ anger, BIS-11 Attentional impulsiveness, and BIS-11 Motor impulsiveness. The NPI was a stronger predictor of BAS Drive, BIS Threat sensitivity, RPA self-focus, NEO-FFI Agreeableness, AQ Physical aggression, AQ Verbal aggression, and WASSUP Financial success. These results suggest that HPS and NPI share a good deal of their relation to the outcome, though there was also some extra contribution on the part of the more strongly correlated personality variable.

There were, however, several instances in which both HPS and NPI made significant unique contributions to prediction after removing the predictive variance they shared. This was true for RPA Emotion-focus, all three POG scales, and WASSUP Popular fame. These results suggest that hypomania and narcissistic tendencies may relate to these particular outcomes for somewhat different reasons (see Table 2).

To focus as closely as we could on possible differences between narcissism and hypomania in impulsivity, we examined correlations of individual items on the BIS-11 and the SCS with the NPI and HPS (similar examination of the CFC did not reveal anything of interest). Items from the BIS-11 that were significantly correlated with the HPS but unrelated to the NPI are displayed in Table 3 Part A, followed by items that were significantly correlated with the NPI but unrelated to the HPS. As can be seen, the items that most clearly differentiated hypomania from narcissistic tendencies concern the (self-perceived) ability to concentrate steadily and plan for the future. Hypomania related to problems in doing so. Narcissism related to greater ability to do so.

Analysis of items from the SCS (Table 3, Part B) shows a complementary pattern. The items that related differentially to hypomania cover concentration problems and an ability to override impulses. Items that related differentially to narcissism concern perceptions of self-discipline: those with higher narcissism endorsed higher levels of self-discipline. Interestingly, hypomania and narcissism had opposite associations with the item pertaining to the ability to break bad habits. It is apparent that the low correlation of NPI with this measure follows in part from the fact that there are three items on which NPI relates to higher self-control rather than impulsiveness.

Across the measures of impulsiveness there is only one item that is easily interpreted as having antisocial overtones. It is from the SCS: “I say inappropriate things.” This item had relatively strong inverse associations with both HPS, $r = -.32$, $p < .001$, and NPI, $r = -.29$, $p < .001$. Consistent with the possibility that the tendency to say inappropriate things occurs for different reasons among persons who are narcissistic compared to persons who are hypomanic, a multiple regression analysis revealed that HPS and NPI each made a significant unique contribution to prediction of responses to that item, βs= −.23 and −.17, respectively, ps < .05.

9. Discussion

For decades psychologists have noted parallels in the clinical presentations of those with traits of narcissism and those with symptoms of mania. People with both syndromes have been described as driven, but temperamental and unreliable (Akiskal, 1992). Further, comorbidity between NPD and bipolar disorder has been found to be high in several samples (Brieger et al., 2003; Garno et al., 2005). Given the conceptual and empirical overlap between these clinical phenomena, we sought to identify similarities and differences in the psychological qualities that are related to risk for mania and narcissism. A key goal of the present study was to examine the extent to which such characteristics are uniquely related to mania risk or instead overlap with characteristics observed among those with narcissistic traits. More specifically, we considered affect dysregulation, goal dysregulation, and impulsivity.

In regard to approach-related affect, the NPI and the HPS demonstrated many commonalities. Findings supported our hypothesis that the NPI and HPS would both relate positively to intensity of approach-related affects (with the exception of reward responsiveness, though that association has been found for high HPS scores in previous studies: Meyer et al., 1999; Meyer et al., 2001). High scorers on both scales were also low on agreeableness, and reported that they experienced significant anger and tended to express it in physical and verbal aggression. Given this set of tendencies, it is interesting that neither scale related significantly to self-reported hostility. Those high in both narcissistic tendencies and hypomania reported aspirations for high levels of success in fame and wealth and tended to endorse overly confident reactions to successes.

There were also some interesting ways in which the patterns of correlations differed. As opposed to those with hypomanic tendencies, those with narcissistic tendencies reported significantly more positive self-focus after good outcomes. Manic tendencies correlated significantly more strongly than did narcissistic tendencies with dampening of affect following positive outcomes and positive and negative affect intensity.

In terms of goal regulation, persons with high scores on either at-risk scale described themselves as being highly goal-oriented. Narcissistic tendencies, however, correlated significantly more strongly than did hypomanic tendencies with self-reports of behavioral drive and financial goal-setting. Mania tendencies also correlated significantly more strongly than did narcissistic tendencies with fun seeking.

9.1. Impulsiveness and self-control

The largest divergence between the HPS and NPI was found among measures of self-control and impulsivity. The HPS correlated significantly more strongly with all measures in this domain but the CFC (which was significantly correlated with the HPS and uncorrelated with the NPI, though the difference between correlations was not significant). To further understand this divergence, we examined the relationships between individual items on the measures of impulsivity and both at-risk scales. Many impulsivity items related moderately strongly to both scales. These items tended to be nonspecific in content (e.g., “I act on impulse,” “I do things without thinking,” “I act on the spur of the moment”).

Other items related differentially to one scale or the other in a pattern that seems intelligible. In general, HPS scores related differentially to items addressing deficits in cognitive control (difficulties in thinking steadily, including distractibility). In contrast, NPI scores were differentially associated with impulsivity items related to planfulness and self-discipline. On these items, narcissistic tendencies related *inversely* to impulsive tendencies (i.e., narcissistic tendencies were *positively* related to both planfulness and self-discipline). This clearly interfered with any overall tendency for associations between narcissistic tendencies and impulsiveness in this sample. These findings strongly suggest the need to focus on much more specific aspects of impulsivity in those at risk for narcissism. Previous research on narcissism has tended to use measures of impulsivity that have substantial antisocial overtones (cf. Vazire & Funder, 2006). It should be apparent, however, that not all aspects of impulsiveness involve antisociality. When that quality is not strongly present in the measure of impulsiveness, the association with narcissistic tendencies fades.

It is of interest, in that regard, that only one item in the impulse-related scales used here is readily interpreted as implying an antisocial tendency ("I say inappropriate things"). Both narcissism and mania vulnerabilities related independently to this item, possibly because the contributions they made had different origins.

9.2. Limitations and implications

Limitations of the current study should be mentioned. For one, we used an analog sample of undergraduate students representing generally young, affluent individuals. These constructs need to be examined further among a clinical sample. Second, ethnicity information was not obtained, but it would have been interesting to examine potential differential findings among different groups. Third, measures of current manic symptoms were not obtained. It would be interesting to see if symptoms of current mania were related to differing aspects of impulsivity, especially given previous findings that manic symptoms exacerbate impulsivity (Swann, Anderson, Dougherty, & Moeller, 2001; Swann et al., 2003). Finally, there was a high probability of Type I error, given the large number of correlations tested.

Despite these limitations, this is the first study to examine the differential relationships between narcissistic traits and mania risk using a broad range of measures relevant to goal-related affective experience, tendencies in the management of goal pursuit, and impulsivity. Findings highlight the importance of comorbidity between narcissistic traits and mania risk in terms of the overlap among psychological factors that might help explain the syndromes. More specifically, affective and goal regulation traits may help explain risk for multiple disorders. Problems in goal regulation may contribute to the myriad of interpersonal problems across disorders (e.g., the importance of goal-attainment over cooperation). For a more focused model of risk for bipolar disorder, current findings suggest the need to integrate affective and goal dysregulation with impulsivity.

Our finding that certain aspects of impulsivity may be differentially related to risk for bipolar disorder versus NPD has potential implications for treatment. That is, if replications in clinical samples indicate that those with mania act impulsively because they experience difficulties in thinking and concentrating, then interventions can be designed to aid in the improvement of cognitive processes, or to help persons understand the cognitive processes that might be difficult at certain moments. Similarly, if those with narcissistic traits act on impulse because they lack empathy for others, or overly rely on their ability to follow goals without input, interventions designed to enhance empathy and to encourage considering others may benefit this population. Findings of the current study, then, can provide one step in better understanding the distinction between psychological traits relevant for both narcissism and mania risk, as well as commonalities in affective and goal regulation.

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Table 1

Correlations of hypomanic symptoms and narcissistic traits with a range of other measures

Scale	Lifetime manic symptoms (HPS)	Narcissistic tendencies (NPI)	*t* for difference in correlations
Measures of approach-related affect			
BAS drive	.28***	.42***	−2.36*
BAS reward responsiveness	.10	−.01	ns
BAS fun seeking	.39***	.19**	3.31***
BIS threat sensitivity	−.16*	−.27***	ns
AIM negative	.13	−.15*	4.47***
AIM positive	.45***	.31***	2.40**
RPA dampening	.20**	.03	2.67**
RPA emotion-focus	.32***	.30***	ns
RPA self-focus	.27***	.45***	−3.07**
NEO-FFI agreeableness	−.23***	−.35***	ns
AQ anger	.38***	.27***	ns
AQ hostility	.07	−.03	ns
AQ physical aggression	.23***	.27***	ns
AQ verbal aggression	.23**	.26***	ns
Measures of goal regulation			
POG social	.53***	.48***	ns
POG lateral	.29***	.34***	ns
POG upward	.49***	.46***	ns
WASSUP popular fame	.39***	.39***	ns
WASSUP world well-being	.10	.00	ns
WASSUP political influence	.08	.20**	ns
WASSUP family	.08	.14	ns
WASSUP financial	.23**	.43***	−3.38***
Measures of impulsivity			
SCS	−.39***	−.09	−5.03***
CFC	−.19**	−.12	ns
BIS-11 attentional impulsiveness	.49***	.14*	6.19***
BIS-11 motor impulsiveness	.50***	.32***	3.17**
BIS-11 nonplanning impulsiveness	.26***	−.05	5.04***

AIM, Affect Intensity Measure; AQ, Buss–Perry Aggression Questionnaire; BAS, Behavioral Activation Scale; BIS, Behavioral Inhibition Scale; BIS-11, Barratt Impulsiveness Scale; CFC, Consideration of Future Consequences; HPS, Hypomanic Personality Scale; NEO-FFI, the Narcissism, Extraversion, and Openness Five-Factor Inventory; NPI, Narcissistic Personality Inventory; POG, Positive Overgeneralization Scale; RPA, Responses to Positive Affect questionnaire; SCS, Self-Control Scale; WASSUP, Willingly Approached Set of Statistically Unrealistic Pursuits.

*$p < .05$.

** $p < .01$.

*** $p < .001$.

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Table 2

Multiple regression analyses of the HPS and NPI as unique predictors of various measures

DV	IVs	β	t	p
RPA emotion-focus				
	NPI	.17	2.29	.02
	HPS	.23	3.13	<.01
POG social				
	NPI	.29	4.58	<.01
	HPS	.39	6.19	<.01
POG lateral				
	NPI	.25	3.53	<.01
	HPS	.17	2.30	.02
POG upward				
	NPI	.29	4.55	<.01
	HPS	.35	5.40	<.01
WASSUP pop fame				
	NPI	.27	3.86	<.01
	HPS	.26	3.67	<.01

HPS, Hypomanic Personality Scale; NPI, Narcissistic Personality Inventory; POG, Positive Overgeneralization Scale; RPA, Responses to Positive Affect questionnaire; WASSUP, Willingly Approached Set of Statistically Unrealistic Pursuits

Table 3

Correlations of hypomanic symptoms and narcissistic traits with items from the BIS-11 and the SCS

	HPS	NPI
A. BIS-11 (all items coded such that higher scores = more impulsivity)		
Block 1A		
8. I am self-controlled (R)	.27**	.03
9. I concentrate easily (R)	.29**	−.02
10. I save regularly (R)	.20**	.05
11. I "squirm" at plays or lectures	.18**	.03
12. I am a careful thinker (R)	.20**	−.04
18. I get easily bored when solving thought problems	.21**	.05
21. I am a steady thinker (R)	.26**	−.02
30. I often think about extraneous thoughts when thinking	.32**	.09
31. I am more interested in the present than the future	.15*	−.06
Block 2A		
13. I plan for job security (R)	.10	−.10
19. I have regular health check ups (R)	.06	−.12
Block 3A		
1. I plan tasks easily. (R)	.08	−.18**
7. I plan trips well ahead of time (R)	.06	−.13*
34. I am future oriented (R)	.04	−.17*
Block 4A		
2. I do things without thinking	.42**	.29**
5. I don't "pay attention"	.30**	.14*
6. I have "racing" thoughts	.46**	.14*
14. I say things without thinking	.39**	.19**
17. I act "on impulse"	.50**	.35**
20. I act on the spur of the moment	.50**	.33**
B. SCS (all items coded such that higher scores = more self-control)		
Block 1B		
1. I am good at resisting temptation	−.20**	−.04
3. I am lazy	−.27**	−.06
10. I have trouble concentrating	−.38**	−.11
12. Sometimes I can't stop myself from doing something, even if I know it is wrong	−.32**	−.12
Block 2B		
2. I have a hard time breaking bad habits	−.15*	.13*
Block 3B		
7. I wish I had more self-discipline	−.11	.17*

	HPS	NPI
8. People would say that I have iron self- discipline	−.09	.14*

Items are listed in blocks. Block 1, correlations for HPS exceed those for NPI; block 2: correlations in opposite directions; block 3: correlations for NPI exceed those for HPS; block 4: significant positive correlations for both NPI and HPS.

BIS-11, Barratt Impulsiveness Scale; SCS, Self-Control Scale.

* $p < .05$

** $p < .01$.

Correlations that differ by approximately .13 are significantly different from one another.