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The positive-passion hypothesis: Grandiose but not vulnerable narcissism relates to high-approach positive affect following provocation

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ABSTRACT

Affect figures prominently in theories of narcissists' reaction to provocation, but because these theories focus on negative affects, high-approach positive affect has not been studied. Here, we posited the "positive-passion hypothesis," which states grandiose- but not vulnerable-narcissistic individuals experience high-approach positive affect rather than negative affect when provoked, which can co-occur with aggressive behavior. In this study, participants simulated provocations that varied in extent. Regardless of provocation level, grandiose- and vulnerable-narcissistic individuals indicated greater aggression, and only vulnerable-narcissistic individuals indicated greater anticipated negative affect in the situation. Consistent with the positive-passion hypothesis, regardless of provocation level, grandiose-narcissistic individuals indicated greater anticipated high-approach positive affect (controlling for feelings of surprise and calmness) in the situation, but vulnerable-narcissistic individuals did not. The effects of the narcissism forms seemed determined by the type(s) of goals adopted in a provoking situation.

1. Introduction

Narcissism embodies entitlement and self-importance (Sedikides, 2021). It may arise in at least two dimensional forms: grandiose and vulnerable. Although grandiose- and vulnerable-narcissistic people are viewed as arrogant and conceited by spouses (Wink, 1991), grandiose-narcissistic people come across as confident and socially competent and vulnerable narcissistic people come across as shy and neurotic (Miller et al., 2011).

Both grandiose- and vulnerable-narcissistic individuals are prone to provoked aggression (Rasmussen, 2016). Affective experiences are central to theories of narcissistic provoked aggression (see Bushman & Baumeister, 1998; Kernberg, 1975; Kohut, 1972; Rasmussen, 2016). These theories suggest that narcissistic individuals experience an intense admixture of negative affects (e.g., anger and/or sadness-based affects) that co-occur with aggression responses when provoked. Yet, the extent to which grandiose- and vulnerable-narcissistic individuals share this affective experience is debatable.

When provocation is simulated or real, grandiose-narcissistic individuals generally do not self-report enhanced negative affect (Hart, Adams, & Tortoriello, 2017; Krizan & Johar, 2015; Tortoriello & Hart, 2018) but vulnerable-narcissistic individuals do (Hart, Adams, & Tortoriello, 2017; Krizan & Johar, 2015). One idea is that grandiose-narcissistic individuals experience enhanced negative affect but conceal it (Brown & Brunell, 2017; Cascio et al., 2015). Indeed, when provoked with insults or an impending evaluation, grandiose-narcissistic individuals show greater basal cortisol levels (Reinhard et al., 2012), cardiovascular responding (Sommer et al., 2009), and activation in brain regions associated with social pain (Cascio et al., 2015).

However, other ideas on grandiose-narcissistic individuals' affective experience are also plausible. For example, consider that grandiose-narcissistic individuals might conceptualize provocation as an opportunity to accomplish goals (e.g., to fight back; Hart, Adams, & Tortoriello, 2017; Krizan & Johar, 2015). Hence, provocation could create feelings of enthusiasm, excitement, and motivation that typify "high-approach positive affect" (Gable & Harmon-Jones, 2008, 2011).

Affect is complicated in that it (a) can arise from different motivational systems (approach vs. avoidance), (b) vary in motivational intensity, and (c) be positive or negative in valence. For example, human behavior may be dictated by an approach and avoidance system that manages affective responses (Carver, 2001; Gable & Harmon-Jones, 2008, 2011). The approach system manages appetitive/approach motivation (i.e., obtaining a desired object/state), and the avoidance

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system manages avoidance/withdrawal motivation (i.e., avoiding an undesired object/state; Carver, 2001). Motivational intensity refers to the strength of approach and avoidance motivation (Gable & Harmon-Jones, 2011). Motivational intensity co-occurs with arousal, but motivational intensity has action implications, whereas arousal, apart from motivation, does not (Gable & Harmon-Jones, 2010). Positive vs. negative valence refers to whether the affect is subjectively pleasant vs. unpleasant. So, "high-approach positive affect" is high in motivational intensity, based in the approach system, and positive in valence (e.g., Gable & Harmon-Jones, 2008, 2011).

High-approach positive affect must be distinguished from other categorically-distinct affects. For example, positive affects that are low in motivational intensity (e.g., calmness; Carver, 2001) may be orthogonal to high-approach positive affects (Watson & Tellegen, 1985). These affects can be irrelevant to motivation (Gable & Harmon-Jones, 2011), occur after goal achievement (Gable & Harmon-Jones, 2011), or be produced by the avoidance system (Carver, 2001). Also, high-arousal affects such as surprise have vague or unclear links to motivation (Gable & Harmon-Jones, 2010) and valence (Noordewier & Breugelmans, 2013).

Herein, we propose the "positive-passion hypothesis." This hypothesis states that, when provoked by slights, grandiose-narcissistic individuals are impassioned by high-approach positive affect (not negative affect). Presumably, these slights need only be minor to activate high-approach positive affect. Grandiose-narcissistic individuals may only require minor insults to perceive goal-pursuit opportunities. For example, in one study (Hart, Adams, & Tortoriello, 2017), participants imagined experiencing trivial vs. non-trivial slights from a provocateur; regardless of the extent of the slight, grandiose-narcissistic individuals anticipated being more aggressive and adopting hostile (e.g., to get revenge and dominate) and self-relevant goals (e.g., to earn respect). Hostile goals are particularly likely to be based in the approach system and can be a source of high-approach positive affect (Chester, 2017).

This positive-passion hypothesis is not inconsistent with the physiological evidence linking grandiose narcissism to cortisol, cardiovascular responding, or social-pain brain areas. Cortisol can be secreted to anticipated rewards (food and drugs; Chumbley et al., 2014). Enhanced cardiovascular responses can be symptomatic of preparation for effort expenditure toward a goal (Brener, 1987). Further, some social-pain brain areas are also activated when people are motivated (Bush et al., 2002).

Vulnerable-narcissistic individuals are unlikely to experience enhanced high-approach positive affect following provocation. Consider that high-approach positive affect is manufactured by the approach system (Carver, 2001). Whereas grandiose narcissism relates to a stronger approach system, vulnerable narcissism is unrelated to this system (Hart, Adams, Burton, & Tortoriello, 2017).

1.1. Present research

We tested the positive-passion hypothesis using materials from Hart, Adams, and Tortoriello (2017). Participants indicated their grandiose and vulnerable narcissism. Next, as a between-subjects manipulation ("provocation extent"), they simulated scenarios depicting either trivial (lower provocation) or non-trivial (higher provocation) devaluing remarks from a provocateur.

Participants indicated their anticipated high-approach positive affect, surprise, and calmness in the situation. High-approach positive affect was conceptualized as feelings of excitement, enthusiasm, and goal engagement (i.e., motivation and interest; Gable & Harmon-Jones, 2010). Surprise and calmness were conceptualized as covariates of high-approach positive affect. By partialling surprise and calmness variance from high-approach positive affect, we created a purer indicator of high-approach positive affect. Neither surprise nor calmness is high-approach positive affect, but these reactions could contaminate reports of high-approach positive affect. For example, grandiose-narcissistic individuals could be more surprised by provocation (Chester & DeWall, 2016), and the arousal deriving surprise could be mistaken for the excitement deriving from approach motivation. Moreover, grandiose-narcissistic individuals might seek to remain calm following provocation (Cascio et al., 2015), and the positive feelings deriving from this attempt might be mistaken for the positive valence inherent in high-approach positive affect. By partialling surprise and calmness variance from high-approach positive affect, these complications were addressed in the analyses.

Participants indicated their adoption of eleven goals that narcissistic people might adopt when provoked in the situations (Hart, Adams, & Tortoriello, 2017). Goal pursuit occurs after goal adoption, and goal pursuit is a presumed mediator between narcissism constructs and high-approach positive affect. Like Hart, Adams, and Tortoriello (2017), the eleven goals were collapsed into three conceptually distinct goal categories: self-relevant (e.g., earn respect, demonstrate worth), hostile (e.g., get revenge, dominate the person), and affiliation (e.g., get along, forgive).

For grandiose narcissism, we anticipated it would relate to enhanced high-approach positive affect, which would, at least in part, be mediated by the enhanced adoption of self-relevant and hostile goals (Hart, Adams, & Tortoriello, 2017). For vulnerable narcissism, we anticipated it would have a null effect on high-approach positive affect. We addressed whether this null effect might, in part, reflect inconsistent mediation via hostile and affiliation goals. For example, vulnerable narcissism should relate to enhanced adoption of hostile goals (Hart, Adams, & Tortoriello, 2017), and these goals should enhance its relation to high-approach positive affect. But, vulnerable narcissism may also relate to the reduced adoption of affiliation goals that should reduce its relation to high-approach positive affect. In Hart, Adams, Burton, and Tortoriello (2017) and Hart, Adams, and Tortoriello (2017), vulnerable narcissism was negatively related to affiliation goals, albeit this effect did not achieve significance. In other research, vulnerable narcissism related negatively to tendencies to engage in affiliative behavior (i.e., productive communication) with a provocateur (Hart et al., 2018). Affiliation goals are largely appetitive in nature (Cullum et al., 2011), so their reduced adoption can decrease high-approach positive affect. For both grandiose and vulnerable narcissism, the overall association patterns and magnitudes were unlikely to be moderated by provocation condition (Hart, Adams, & Tortoriello, 2017).

Finally, participants indicated their anticipated aggression and negative affect in the situation. The positive-passion hypothesis arose in the context of evidence that grandiose narcissism is positively related to aggression but not negative affect, whereas vulnerable narcissism is positively related to both aggression and negative affect (Hart, Adams, & Tortoriello, 2017; Krizan & Johar, 2015). Hence, we should be able to confirm these past findings while supporting the positive-passion hypothesis.

2. Method

2.1. Participants

A power analysis indicated that a sample size of $N = 395$ was required to detect a small effect ($f^2 = 0.02$) with a power of 0.80 and $\alpha = 0.05$. To account for attrition, we recruited 498 undergraduate students who participated for course credit. Twenty-two cases were excluded for failing 2/2 attention-check questions; one case was excluded for non-variable responding across narcissism measures; 31 cases were excluded as incomplete on the main variables (final $N = 444$; $M_{age} = 18.84$; 81.8% female; 80.6% White).

2.2. Procedure and materials

After consenting and passing an attention-check item, participants

learned they would complete two ostensibly unrelated studies. "Study 1" involved completing randomized personality questionnaires, including the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) to assess grandiose narcissism and Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 1997) to assess vulnerable narcissism.

"Study 2" entailed answering questions about how the participant would feel and respond in six randomly-presented situations (from Hart, Adams, & Tortoriello, 2017). In the three "target" situations, participants were randomly assigned to the lower-provocation ($n = 229$) or higher-provocation ($n = 215$) condition. Participants in each condition imagined the same situations (e.g., joining co-workers on trivia night). The three higher-provocation vignettes incorporated an unambiguously offensive statement directed at them in each situation (e.g., a teammate for trivia night looks disappointed to be on the same team as you and says, "*We got stuck with 'Stupid'*"); the three lower-provocation situations incorporated an ambiguously offensive statement directed at them in each situation (e.g., a teammate for trivia night looks disappointed to be on the same team as you and says, "*Just try your best*"). Participants also read three neutral vignettes (e.g., shopping behavior) to make the study's focus less transparent. For the target situations, participants reported their anticipated aggression, affect, and goals in the situations. Also, to check on the provocation-extent manipulation, they reported agreement with feeling devalued. All ratings were made on a 1 (*strongly disagree*) to 10 (*strongly agree*) scale. Items for aggression, negative affect, and goals were taken from Hart, Adams, and Tortoriello (2017). To view study materials, visit: https://osf.io/5qkvx/?view_only=b4d3ecb6412744f683a0e53f48c271b2.

2.2.1. Aggression

To assess aggression, participants indicated agreement with engaging in verbal (e.g., "*I would say something mean back to them*"), physical (e.g., "*I would hit or push them*"), and symbolic aggression (e.g., "*I would spread a rumor about them behind their back*") toward the provocateur in the situation.

2.2.2. Negative affect

To index negative affect, participants indicated agreement with feeling "angry," "sad," and "hurt" in the situation.

2.2.3. High-approach positive affect, surprise, and calm

To index high-approach positive affect, participants indicated agreement with feeling "enthusiastic," "excited," "motivated," and "interested" in the situation (Gable & Harmon-Jones, 2008, 2011). Participants also indicated agreement with feeling "surprise" and "calm" in the situation.

2.2.4. Hostile, self-relevant, and affiliation goals

Participants indicated agreement to adopting three types of goals. "Hostile goals" included three items (e.g., "*To hurt this person like they hurt me*"). "Self-relevant goals" included five items (e.g., "*To demonstrate my self-worth*"). "Affiliation goals" included three items (e.g., "*To get along with this person*").

2.2.5. Provocation-extent manipulation check

The provocation-extent manipulation involved devaluing remarks, so participants' agreement with feeling devalued was the manipulation check. Participants completed one item each for feeling "disliked" (e.g., "*This person doesn't like me*") and "disrespected" (e.g., "*This person doesn't respect me*") by the provocateur.[1]

3. Results

3.1. Manipulation check

The six items (i.e., two items per each of the three vignettes) assessing feeling disliked and disrespected were averaged to create the devaluation outcome ($\alpha = 0.86$; $M = 6.85$; $SD = 2.07$). Devaluation was submitted to a one-way ANOVA with provocation extent as the predictor. The ANOVA revealed an effect of provocation extent on devaluation, $F(1, 442) = 21.06$, $p < .001$, $d = 0.44$. Devaluation was higher in the higher- ($M = 7.30$, $SD = 1.98$) vs. lower-provocation ($M = 6.42$, $SD = 2.06$) condition. This does not mean people did not agree that they were devalued in the lower-provocation condition. According to a one-sample *t*-test, the mean rating of devaluation in the lower-provocation condition was significantly greater than the scale midpoint of 5.5 (i.e., uncertainty about being devalued), $t(442) = 7.07$, $p < .001$.

3.2. Main analyses

For descriptives and raw correlations among observed variables of interest, please see Supplemental Table S1: https://osf.io/5qkvx/?view_only=b4d3ecb6412744f683a0e53f48c271b2. Structural equation modeling (SEM) was used for the main analysis to test the positive-passion hypothesis. SEM provides a comprehensive picture of the association among variables of interest and partials out measurement error from the latent construct to enhance assessment accuracy. To increase confidence in the confirmatory tests of the positive-passion hypothesis, we sought to first replicate some previous findings. That is, we first modeled aggression (see Figs. 1 and 2) and negative affect (see Figs. 3 and 4) as a function of each narcissism form (continuous), provocation (0 = lower; 1 = higher), and the narcissism*provocation interaction (i.e., the moderating effect of provocation on narcissism—aggression/negative affect association).

In the confirmatory models (see Figs. 5 and 6), we modeled high-approach positive affect (adjusting for surprise and calmness) as a function of one narcissism form (exogenous predictor) and the three goals (mediators). Given the three goals are presumed to be theoretically distinct (Hart, Adams, & Tortoriello, 2017), their simultaneous entry can aid in understanding their unique effects. In both models, we allowed disturbances in the three goals and the covariates to co-vary, to account for shared residual variances. As with the previous analyses, we accounted for the potential moderating effect of provocation extent on the associations among narcissism forms, high-approach positive affect, and goals. This was done by conducting invariance tests across higher and lower provocation-extent conditions on the overall models in Figs. 5 and 6. Invariance tests involved comparing the fit of two models. The first model constrained all regression paths to be equal across provocation-extent conditions, and the second model allowed all regression paths to be freely estimated across provocation-extent conditions. Significant model fit change, indicated by a difference in comparative fit index (ΔCFI) of 0.01 or greater (Cheung & Rensvold, 2002), suggests a significant moderating effect of provocation extent on the overall model. Otherwise, the moderating effect of provocation extent is non-significant (i.e., the overall association patterns and magnitudes are consistent across provocation conditions).

Before modeling, we divided the variables into indicators using

[1] We also included the other measures from Hart, Adams, and Tortoriello (2017). These measures were not relevant to testing the positive-passion hypothesis, but are relevant to testing the threatened-egotism model and the narcissistic-rage model (see Hart, Adams, & Tortoriello, 2017). We summarize regression findings with these outcomes in supplemental files posted to: https://osf.io/5qkvx/?view_only = b4d3ecb6412744f683a0e53f48c271b2.

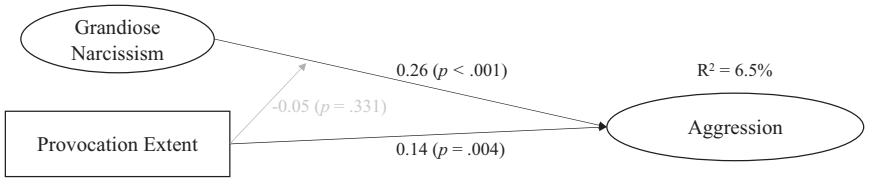

Fig. 1. Grandiose narcissism, provocation extent, and their interaction on aggression. *Note.* The path from provocation extent to the path linking grandiose narcissism to aggression represents the provocation extent*grandiose narcissism effect on aggression. Path coefficients are standardized betas. Light-gray coloring signifies a non-significant path.

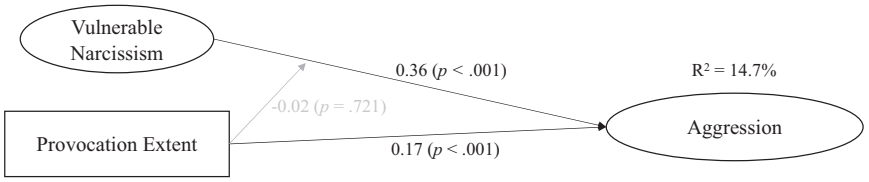

Fig. 2. Vulnerable narcissism, provocation extent, and their interaction on aggression. *Note.* The path from provocation extent to the path linking vulnerable narcissism to aggression represents the provocation extent*vulnerable narcissism effect on aggression. Path coefficients are standardized betas. Light-gray coloring signifies a non-significant path.

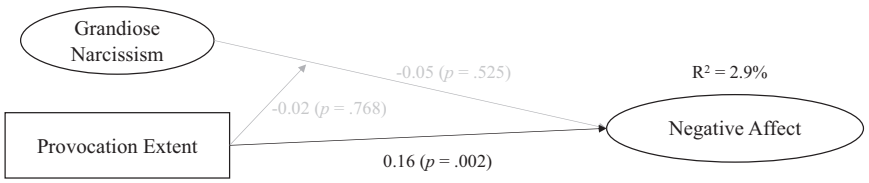

Fig. 3. Grandiose Narcissism, provocation extent, and their interaction on negative affect. *Note.* The path from provocation extent to the path linking grandiose narcissism to negative affect represents the provocation extent*grandiose narcissism effect on negative affect. Path coefficients are standardized betas. Light-gray coloring signifies a non-significant path.

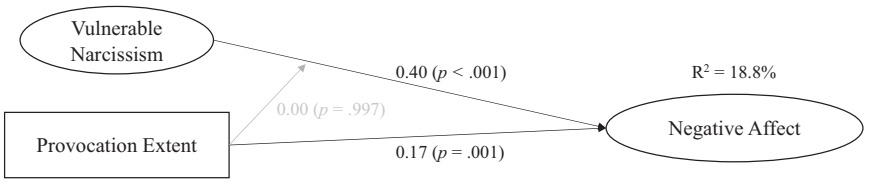

Fig. 4. Vulnerable narcissism, provocation extent, and their interaction on negative affect. *Note.* The path from provocation extent to the path linking vulnerable narcissism to negative affect represents the provocation extent*vulnerable narcissism effect on negative affect. Path coefficients are standardized betas. Light-gray coloring signifies a non-significant path.

parceling (Bandalos, 2002). Parceling typically improves model fit and provides more precise estimations of parameters than individual items. Items were selected from each measure and averaged together to create parcels (indicators). For grandiose narcissism, we created three parcels (containing 13, 13, and 14 items per parcel). For vulnerable narcissism, we created three parcels (containing 4, 3, and 3 items per parcel). For aggression, we created three parcels (containing 3 items per parcel); for negative affect, we created three parcels (containing 3 items per parcel). For each of the goals, we created three parcels (containing between 3 and 5 items per parcel). For high-approach positive affect, we created three parcels (containing 4 items per parcel). These parcels were used to estimate the respective latent variables. Model fit was assessed using the comparative fit index (CFI), normed fit index (NFI), and the root mean squared error of approximation (RMSEA). For CFI and NFI, values above 0.90 are usually deemed acceptable. For RMSEA, values below 0.06 are usually deemed acceptable (Hu & Bentler, 1999). In addition, a chi-square test is reported; a non-significant chi-square indicates a close fit between the implied and observed covariances.

As shown in Figs. 1 and 2, grandiose and vulnerable narcissism had about a moderate positive effect on aggression; neither effect was moderated by provocation. Both figures also show a small effect of provocation extent on aggression (i.e., enhanced aggression in the higher vs. lower provocation condition). As shown in Figs. 3 and 4, grandiose narcissism had no effect on negative affect, but vulnerable narcissism was had a moderate-to-large positive effect on negative affect; neither effect was moderated by provocation. Both figures show that provocation extent had a small effect on negative affect (i.e., enhanced negative affect in the higher vs. lower provocation condition).

By establishing these findings, confirmatory testing could commence with greater confidence. The confirmatory models displayed in Figs. 5 and 6 were used to test the positive-passion hypothesis. See Fig. 5 for evidence on grandiose narcissism. Grandiose narcissism had a small "total" positive effect on high-approach positive affect ($\beta = 0.20$, $p < .001$). This total effect was composed of a significant total indirect effect via the three goals ($\beta = 0.14$, $p < .001$) and a non-significant direct effect ($\beta = 0.06$, $p = .250$). The total indirect effect was composed of only one significant path: Grandiose narcissism related positively to high-approach positive affect via hostile goals ($\beta = 0.17$, $p < .001$). Paths

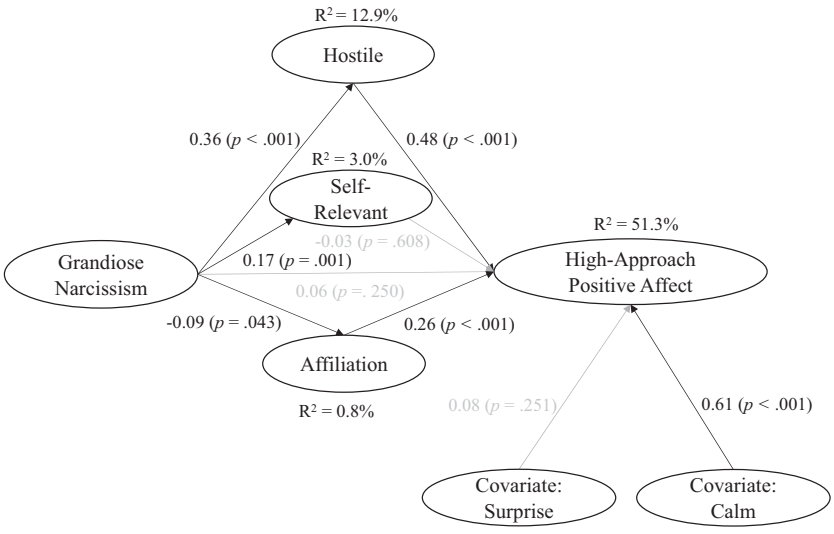

Fig. 5. Grandiose narcissism, hostile, self-relevant, and affiliation goals on high-approach positive affect. *Note.* Path coefficients are standardized betas. We allowed correlated residuals between the goals and covariates. Light-gray coloring signifies a non-significant path.

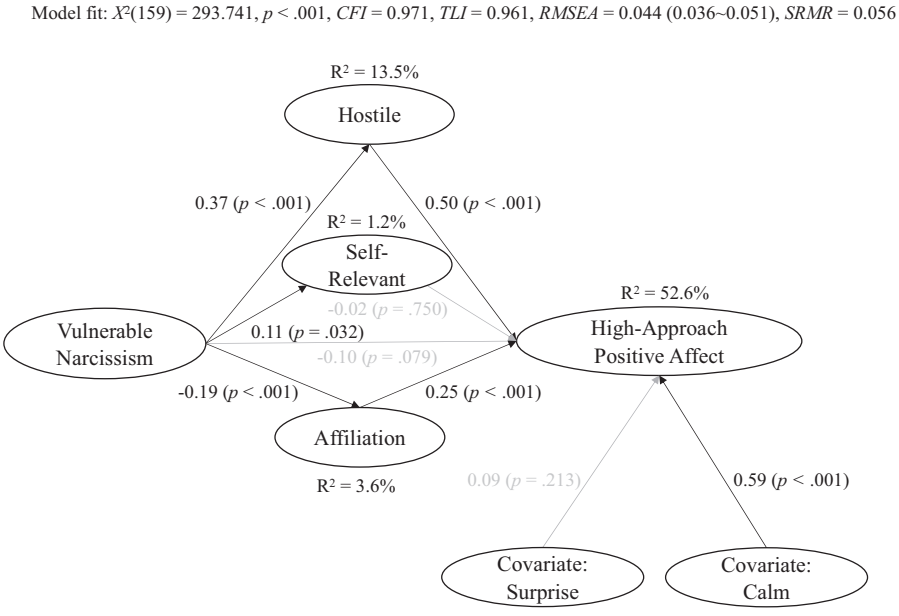

Fig. 6. Vulnerable narcissism, hostile, self-relevant, and affiliation goals on high-approach positive affect. *Note.* Path coefficients are standardized betas. We allowed correlated residuals between the goals and covariates. Light-gray coloring signifies a non-significant path.

from grandiose narcissism to high-approach positive affect via self-relevant goals ($\beta = -0.01$, $p = .612$) and affiliation goals ($\beta = -0.02$, $p = .077$) were non-significant. The non-significant model fit change in the invariance test across provocation conditions (ΔCFI = 0.000)

indicated that the pathways in the model were invariant across provocation extent.[2,3,4]

See Fig. 6 for findings on vulnerable narcissism. Vulnerable narcissism had a null total effect on high-approach positive affect ($\beta = 0.04$, $p = .482$). This null total effect was composed of a null direct effect ($\beta = -0.10$, $p = .079$) and a significant total indirect effect via the three goals ($\beta = 0.13$, $p < .001$). This total indirect effect was composed of two significant paths: Vulnerable narcissism related positively to high-approach positive affect via hostile goals ($\beta = 0.18$, $p < .001$) but negatively to high-approach positive affect via affiliation goals ($\beta = -0.05$, $p = .010$). The path from vulnerable narcissism to high-approach positive affect via self-relevant goals was non-significant ($\beta = -0.00$, $p = .752$). The non-significant invariance test ($\Delta CFI = 0.001$) indicated that the pathways in the model were invariant across provocation extent.[5,6]

4. Discussion

Consistent with the positive-passion hypothesis, when provoked in trivial or non-trivial ways, grandiose-narcissistic individuals indicated feeling more high-approach positive affects (but not negative affects) that co-occurred with greater aggression. This is consistent with the idea that grandiose-narcissistic individuals feel assured they can win a battle, so they relish the opportunity to fight back (Bushman & Baumeister, 1998). Interestingly, mediation evidence suggested the relation between grandiose narcissism and high-approach positive affect was based in an enhanced adoption of hostile goals but not self-relevant goals. This is consistent with Chester's (2017) proposal that, in aggression contexts, high-approach positive affect reflects the pursuit of "predatory goals," such as revenge. Hostile goals might reflect appetitive motives to inflict harm, but self-relevant goals might reflect appetitive and/or avoidance motives. For example, a provoked person that adopts self-relevant goals might be motivated to self-enhance (appetitive) and/or self-protect (avoidance; Sedikides & Alicke, 2012).

Vulnerable narcissism related to negative affect and aggression, but it did not relate to high-approach positive affect. Although vulnerable narcissism related to the adoption of hostile goals (that enhanced high-approach positive affect), it also related to reduced adoption of affiliation goals (that enhanced high-approach positive affect). The latter goal adoption outcome is consistent with the idea that vulnerable-narcissistic individuals avoid affiliative strategies, such as productive communication, in interpersonal conflict (Hart et al., 2018). Vulnerable-narcissistic individuals might feel a lack of efficacy in accomplishing affiliation goals, so they myopically focus on revenge (Kernberg, 1975; Kohut, 1972).

Broadly, the findings are in line with models presuming that grandiose and vulnerable narcissism *converge* on aggression responses to ego-threat but can *diverge* on affective reactions to the threat (Hart, Adams, & Tortoriello, 2017; Krizan & Johar, 2015). However, whereas these previous models focused on divergences between the narcissism forms on negative affect, the positive-passion hypothesis focused on divergences between the forms on high-approach positive affect. By tentatively supporting the positive-passion hypothesis, the present data suggest the novel possibility that both grandiose- and vulnerable-narcissistic individuals are more impassioned when provoked. Grandiose-narcissistic individuals are more impassioned by high-approach positive affect; vulnerable-narcissistic individuals are more impassioned by negative affects. As affect features prominently in theories of narcissistic behavior (Bushman & Baumeister, 1998; Kernberg, 1975; Kohut, 1972; Rasmussen, 2016), we hope the positive-passion framework provides an accurate understanding of the nuanced affective experiences of narcissistic individuals.

That said, the present evidence is limited in various ways that suggest needs for future testing of the positive-passion hypothesis. The present sample was composed of college students that were mostly female and White. It remains unclear whether the present support is applicable to the general population or certain population segments (e.g., a clinical sample). Also, because the study involved hypothetical provocations, future research should test the positive-passion hypothesis with real provocations. Finally, tests of the positive-passion hypothesis should consider alternative assessments of high-approach positive affect, such as asymmetrical frontal brain activity (Gable & Harmon-Jones, 2010).

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CRediT authorship contribution statement

William Hart: Conceptualization, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Charlotte Kinrade:** Formal analysis, Writing – original draft, Writing – review & editing, Visualization. **Mengya Xia:** Formal analysis, Writing – review & editing. **Joshua T. Lambert:** Writing – original draft, Writing – review & editing.

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[2] Ackerman et al. (2011) identified a three-factor structure of entitlement/exploitativeness (E/E), grandiose exhibitionism (GE), and leadership/authority (L/A) underlying the NPI. Are these facets generally yielding similar effects as the composite grandiose narcissism score? To check, we re-ran model in Fig. 5 three times, with grandiose narcissism being replaced for E/E, GE, and L/A in the three separate models. These models are provided and discussed at: https://osf.io/5qkvx/?view_only=b4d3ecb6412744f683a0e53f48c271b2. The models for each facet were generally highly similar to the model displayed in Fig. 5; specifically, each facet showed a significant total effect and a significant indirect effect via hostile goals on high-approach positive affect.

[3] A reviewer questioned whether conclusions about mediation would change if the three goals (mediators) were modeled separately. Models that address this question are available at: https://osf.io/5qkvx/?view_only = b4d3ecb6412744f683a0e53f48c271b2. No mediation conclusions change.

[4] A reviewer questioned whether conclusions about mediation would change if calm and surprise were removed from the model. We removed calm and surprise from the model in Fig. 5. This model is available on https://osf.io/5qkvx/?view_only = b4d3ecb6412744f683a0e53f48c271b2. The total effect of grandiose narcissism remained and none of the mediation conclusions changed.

[5] We also modeled the goals (mediators) separately. These three models are available at https://osf.io/5qkvx/?view_only = b4d3ecb6412744f683a0e53f48c271b2. These models, together, provided directionally-similar effects as the model in Fig. 6, but the negative indirect effect via affiliation changed to non-significant.

[6] We re-ran the model in Fig. 6 without calm and surprise included. This model is available at https://osf.io/5qkvx/?view_only = b4d3ecb6412744f683a0e53f48c271b2. The total effect of vulnerable narcissism was directionally-similar (negative) and no mediation conclusions changed.

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