



Short Communication

Can't take my eyes off me: Attentional bias of the vulnerable narcissist



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ABSTRACT

Body-dissatisfied individuals show attentional bias to photographs of oneself. The present study explored whether this relationship is moderated by narcissistic vulnerability. Seventy-nine female undergraduates completed questionnaires pertaining to narcissism and body satisfaction followed by a laboratory visit to engage in a dot probe task. At 175 ms exposure duration, greater narcissistic vulnerability predicted attentional bias towards oneself when participants had high body satisfaction relative to their low-satisfaction counterparts. An opposite pattern emerged at 500 ms exposure duration such that greater narcissistic vulnerability predicted attentional bias towards oneself when participants had low body satisfaction. These observations suggest that in response to stimuli that pose a threat to self-representation, narcissistically vulnerable individuals may engage in attentional processing strategies to maintain their self-representation.

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Pathological narcissism refers to the use of maladaptive regulatory strategies to cope with threats to aspects of one's self-representation (Pincus et al., 2009). There are two proposed phenotypic expressions of pathological narcissism, namely narcissistic grandiosity and narcissistic vulnerability. Narcissism is most often associated with arrogant, domineering attitudes and behaviours that enhance one's self-representation, which is captured by narcissistic grandiosity. However, little research has examined narcissistic vulnerability, which can be described as the experience of helplessness, low self-esteem, and shame in response to threats to self-representation.

One way to determine threat to self-representation is through examination of the attentional processing of threatening stimuli. Such motivationally salient information captures attention, which serves an adaptive function to initiate a defensive response (Schupp, Junghöfer, Weike, & Alfons, 2004). Body satisfaction is one aspect of self-representation that may be well suited to the examination of attentional processing in vulnerable narcissists. First, vulnerable narcissism is negatively related to body satisfaction (Swami, Cass, Waseem, & Furham, 2015). Second, body-dissatisfied individuals demonstrate an attentional bias towards their own photographic image. Blechert, Ansorge, and Tuschen-Caffier (2010) found that patients with anorexia nervosa evidenced an attentional bias—faster reaction times to self versus other photographs—compared to nonpatients. Third, vulnerable narcissists

have an attentional bias towards negative words like “stupid, weak”, implying a “hypersensitivity to negative evaluation, which in turn makes it difficult to direct attention away from potentially ego-threatening content” (Krusemark, Lee, & Newman, 2015, p. 17).

This study examined the links among the three constructs of body satisfaction, attentional bias, and vulnerable narcissism. In view of the above bivariate connections currently established in the literature, it was hypothesized that body-dissatisfied individuals would demonstrate attentional bias to self photographs. However, does this relationship depend upon one's degree of vulnerable narcissism? Given the latter's hypersensitivity to ego-threatening stimuli, exposure to self photographs might be particularly threatening for the body-dissatisfied narcissist. If correct, then perhaps narcissism serves a moderating function in the body image–attentional bias connection. Such was the purpose of this exploratory investigation.

1. Method

1.1. Participants

Female participants were recruited since body dissatisfaction is more prevalent among females compared to males. Undergraduates ($N = 79$) volunteered their participation in this study approved by the appropriate Research Ethics Board. The volunteer pool ceased at the end of term, thus ending data collection. Participants received bonus points towards their final course grade upon completion of the

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study. The age of participants ranged from 17 to 47 ($M = 20.27$, $SD = 5.73$). As part of a larger study, participants were required to be right-handed and a nonsmoker.

1.2. Measures

1.2.1. Brief-Pathological Narcissism Inventory

The Brief-Pathological Narcissism Inventory (B-PNI; Schoenleber, Roche, Wetzel, Pincus, & Roberts, 2015) is a 28-item self-report measure of pathological narcissism that produces two subscales; narcissistic grandiosity and vulnerability. Respondents rate how much they agree with each item on a 6-point scale ranging from 0 (*not at all like me*) to 5 (*very much like me*). Higher scores reflect greater narcissism. In the present study, Cronbach's alpha index of internal consistency was $\alpha = 0.85$ (item $M = 2.52$, $SD = 0.85$) for grandiosity and $\alpha = 0.89$ ($M = 1.77$, $SD = 0.88$) for vulnerability.

1.2.2. Body Image States Scale

The Body Image States Scale (BISS; Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002) is a six-item scale that measures an individual's evaluative and affective body image states, assessing domains such as physical appearance, body size and shape, weight, attractiveness, and looks. Higher scores on each of the nine-point response items reflect higher body satisfaction. In the present study, internal consistency was $\alpha = 0.80$ (item $M = 5.40$, $SD = 1.32$).

1.3. Procedure

Participants completed an online battery of questionnaires including the B-PNI and BISS followed by two separate laboratory appointments. During the first one, 30 photographs were taken from eight different angles (0° , 45° , 90° , 135° , 180° , 225° , 270° , and 315°) and three different poses: full portrait of the entire body, a seated portrait of the entire body, and head and shoulder portrait. During the second laboratory visit, participants engaged in a dot probe task during which they were exposed to three types of photographs: photographs of oneself (self), photographs of an anonymous female student (other), and blackened silhouettes of another anonymous female student (neutral). The latter served as neutral stimuli devoid of any recognizable details of the face or body. Dot probe trials began with a fixation cross in the center of the screen, followed by the onset of a "threatening" photograph (i.e., either a self or other photograph) and a neutral photograph, each aligned horizontally beside one another on a television via Inquisit v4 computer software (www.millisecond.com). The dot probe literature suggests that patterns of attentional vigilance and avoidance to threat may shift with increasing exposure duration to the stimulus of interest (Jasper & Witthoft, 2011). As an exploratory examination of this issue, photograph pairs had an equal probability of being presented for either 175 ms or 500 ms before a target probe (i.e., dot) was presented in the location of one of the former photographs. Participants were instructed to indicate the target probe's location as quickly as possible by pressing a designated key on a computer keyboard. Faster reaction times (RTs) to targets that replace a threat-related image reflect an attentional bias towards threat. The experiment order began with one practice block of 24 trials, consisting of only neutral/neutral photograph pairs, followed by two testing blocks consisting of 120 trials each and the presentation of threatening/neutral photograph pairs. Of the 240 test trials, 180 were valid (i.e., target probe appearing in the same location as the previously presented threatening photograph) and 60 were invalid (i.e., target probe appearing in the location opposite of the previously presented threatening photograph).

2. Results

Table 1 presents the descriptive statistics for the dot probe variables. A self- and other-attentional bias index (ABI) was calculated for each

Table 1
Means and standard deviations of RTs (ms) across dot probe variables.

Variables	175 ms		500 ms	
	Valid	Invalid	Valid	Invalid
Self	431.73 (68.44)	474.55 (69.57)	439.70 (64.53)	465.95 (69.82)
Other	447.70 (65.04)	466.58 (61.89)	447.69 (62.29)	449.47 (66.51)
Neutral	449.26 (62.58)	444.67 (63.15)	447.61 (59.60)	448.68 (63.21)

Note: $N = 79$. Standard deviations are in parentheses.

exposure duration of 175 ms and 500 ms as follows: [invalid threat trial RTs–valid threat trial RTs] – [invalid neutral trial RTs–valid neutral trial RTs] (Miskovic & Schmidt, 2010). In the interpretation of this metric, the assumption is made that attentional bias towards a stimulus results from an individual's attention being allocated to the location of the screen where the stimulus is presented. As such, greater attentional bias towards a stimulus is demonstrated by quicker RTs to target probes that appear in the same location as the stimulus (i.e., valid trial) and slower RTs to target probes that appear in the opposite location as the stimulus (i.e., invalid trial). Thus, larger differences between the RTs of valid and invalid trials for a stimulus indicate greater attentional bias towards the stimulus. In the case of little to no attentional bias, RTs for valid and invalid trials are similar, as attention is not allocated to any particular location on the screen. Thus, smaller differences between the RTs of valid and invalid trials for a stimulus indicate less attentional bias towards the stimulus. Conceptually, the ABI metric compares attentional bias of threatening photographs to neutral photographs. Larger ABI values represent greater attentional bias towards threatening photographs compared to neutral photographs. A self-attentional bias score (self-ABS) was then calculated for each exposure duration as follows: self-ABI – other-ABI. Larger self-ABS values represent greater attentional bias towards photographs of oneself compared to another anonymous female.

Two moderated multiple regression models were tested using the SPSS PROCESS macro for model 1 (Hayes, 2013). The first model investigated whether the regression of self-ABS at 175 ms (Y) on BISS (X) was moderated by B-PNI vulnerability (M). As revealed in Table 2, there was a significant BISS \times vulnerability interaction. In other words, the effect of

Table 2
Moderated multiple regression results of the unstandardized regression coefficients predicting self-ABS (Y) at 175 ms and 500 ms exposure duration from BISS (X) with B-PNI vulnerability (M).

Variables	b [95% CI]	$SE\ b$	t
Constant			
175 ms	26.23 [18.16, 34.30]	4.05	6.48**
500 ms	22.25 [12.28, 32.23]	5.01	4.44**
BISS			
175 ms	5.15 [0.04, 10.27]	2.57	2.01*
500 ms	–5.56 [–11.91, 0.80]	3.19	–1.74
B-PNI vulnerability			
175 ms	8.33 [0.17, 16.49]	4.10	2.03*
500 ms	2.16 [–7.22, 11.53]	4.71	0.46
BISS \times B-PNI vulnerability			
175 ms	6.63 [1.96, 11.30]	2.35	2.83**
500 ms	–6.42 [–11.77, –1.07]	2.69	–2.40*

Note: $N = 79$. $R^2 = 0.11$ at 175 ms; $R^2 = 0.08$ at 500 ms. ABS = attentional bias score; BISS = Body Image States Scale; B-PNI = Brief-Pathological Narcissism Inventory.

* $p < 0.05$.

** $p < 0.01$.

BISS on self-ABS at 175 ms exposure duration is dependent upon whether one is high or low on vulnerability. This interaction was further probed using a pick-a-point approach to simple slopes analysis of unstandardized regression coefficients for Y on X at ± 1 SDs on M. The resulting positive slope was statistically significant for participants high (+1 SD) on vulnerability, $b = 10.96$ ($SE b = 2.69$), $t = 4.07$, $p < 0.001$. Above average BISS predicts greater attentional bias to oneself at 175 ms when participants are above average on B-PNI vulnerability (see Fig. 1a). The slope of Y on X for participants low on B-PNI vulnerability was not statistically significant.

The second regression model revealed that the regression of self-ABS at 500 ms (Y) on BISS (X) was moderated by B-PNI vulnerability (M) (see Table 2). Simple slopes analysis uncovered a significant negative prediction for participants high on B-PNI vulnerability, $b = -11.18$ ($SE b = 4.00$), $t = -2.80$, $p = 0.007$. Below average BISS predicts greater attentional bias to oneself at 500 ms when participants are above average on B-PNI vulnerability (see Fig. 1b). The slope for participants low on B-PNI vulnerability was not statistically significant.

3. Discussion

Body satisfaction predicted attentional bias towards oneself only among individuals high on narcissistic vulnerability. Further, and of greater interest, is the differential direction in prediction as a function of exposure duration. At 175 ms, individuals high on narcissistic vulnerability evidenced greater attentional bias towards oneself when they had high body satisfaction relative to their low-satisfaction counterparts. An opposite pattern emerged at 500 ms such that those high on narcissistic vulnerability experienced greater attentional bias towards oneself when they reported low body satisfaction compared to their high-satisfaction counterparts. In neither case with respect to exposure duration did body satisfaction predict attentional bias among those participants low in narcissistic vulnerability.

These observations can be explained in terms of the vigilance-avoidance hypothesis which states that individuals rapidly orient their attention towards threat and then subsequently shift attention away from threat in order to facilitate escape or avoidance of potential danger (Mogg, Bradley, Miles, & Dixon, 2004). Thus, in order to determine whether an individual appraises a stimulus as threatening, one would have to examine the pattern of attentional bias towards the stimulus over varying exposure durations as in the present study. In accordance with this notion, one can assert that narcissistically vulnerable individuals with high body satisfaction detect photographs of themselves as

threatening as early as 175 ms and then subsequently avoid their photographs at the prolonged exposure of 500 ms. Conversely, narcissistically vulnerable individuals with low body satisfaction demonstrate a pattern of gradual attention towards photographs of themselves, suggesting that these individuals appraise photographs of themselves as nonthreatening.

In response to stimuli that pose a threat to self-representation, vulnerable narcissists may engage in attentional processing strategies to protect their self-representation. Classical theories contend that narcissistic vulnerability results from either parental devaluation or overvaluation early in life, which in turn leads to positively and negatively distorted self-representations (see Krusemark et al., 2015). In order to confirm their current conceptions of themselves, vulnerable narcissists may develop a strong motivational tendency to uphold and protect such distorted self-representations. For vulnerable narcissists who evaluate themselves in an overly *positive* manner, avoidance strategies are used to cope with threat when the ideal self-representation is not possible or admiration is not forthcoming (Thomaes & Sedikides, 2016). In the present study, individuals with high body satisfaction may appraise their own photographs as threatening because the photographs do not measure up to their inflated self-representation. Thus, these individuals may rapidly detect photographs of themselves as threatening and then subsequently avoid their photographs in order to mitigate potential damage to their self-representation. Conversely, individuals who evaluate themselves in an overly *negative* manner perpetuate their self-representation by seeking information that confirms their currently held negative self-views (see Kwang & Swann, 2010). In the present study, vulnerable narcissists with low body satisfaction may demonstrate a pattern of gradual attention towards their own photographs in order to confirm and maintain their self-representation of low body satisfaction.

3.1. Limitations

There are some notable limitations to this study. The small sample comprised only young, female university students. Consequently, generalizability of findings is limited. Although it is one of the most commonly used measures of attentional processing, the dot probe is not without its limitations. The paradigm, as well as the metric to measure attentional bias, has been modified considerably across many studies, making it difficult to compare results from the present study to other studies (Bantini, Stevens, Gerlach, & Hermann, 2016).

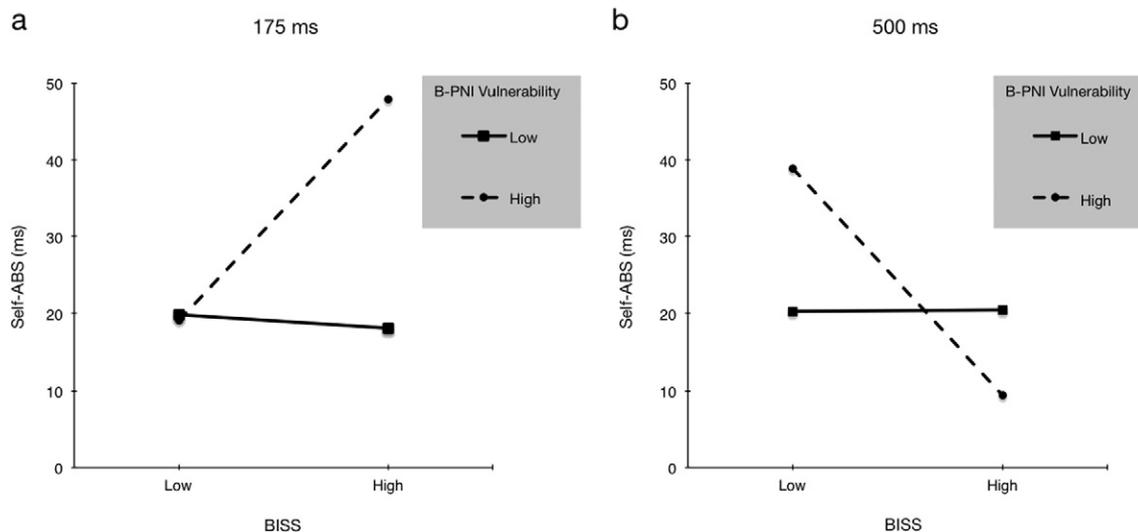


Fig. 1. Self-attentional bias score (ABS) plotted as a function of the Body Image States Scale (BISS) by the Brief-Pathological Narcissism Inventory (B-PNI) vulnerability subscale at 175 ms (a) and 500 ms (b) exposure duration. Scores for low and high BISS and B-PNI were ± 1 SDs from the mean.

4. Conclusions

Body satisfaction appears to predict attentional bias towards oneself in vulnerable narcissists. Those with high body satisfaction appraised photographs of themselves as threatening while those with low body satisfaction appraised photographs of themselves as nonthreatening. These findings suggest that vulnerable narcissists adopt attentional processing strategies in order to maintain their self-representation, regardless of whether aspects of self-representation are inherently positive or negative. Such attentional processing strategies have implications for maintaining body satisfaction or dissatisfaction, depending on one's own narcissistic propensity. To our knowledge, this is the first study to examine body-related threat detection in vulnerable narcissists. Future research is needed in order to corroborate and extend the findings from the present study to determine what drives this attentional processing strategy.

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