Does Appearance-Based Self-Esteem Mediate the Associations Between Narcissism and Appearance-Related Outcomes?

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Abstract

There is an association between narcissism and perceptions of attractiveness such that individuals with narcissistic personality features tend to be viewed by others as being more physically attractive. This is consistent with an evolutionary perspective on narcissism (i.e., selection pressures of short-term mating) as well as the self-regulatory model of narcissism (i.e., narcissists engage in self-enhancement to bolster their feelings of worth). The current study investigated the possibility that appearance-based self-esteem may mediate the association between narcissism and appearance-based outcomes such as perceived attractiveness and perceived effort put into appearance. Participants (i.e., Targets) completed self-report measures of narcissism and appearance-based self-esteem before making 3-minute dating videos which were then rated by 4 naïve undergraduate research assistants (i.e., Perceivers) with regard to the physical attractiveness and appearance effort made by the Targets. Results revealed that appearance-based self-esteem mediated the relationships that narcissism had with attractiveness and appearance effort. These findings are consistent with previous research suggesting that aspects of narcissism are manifested in physical appearance and provide evidence for a possible mechanism underlying the relationship between narcissism and attractiveness (i.e., appearance-based self-esteem).

Keywords: Narcissism, appearance, self-esteem

The personality construct of narcissism has its origins in the myth of Narcissus who found himself so attractive that he fell in love with his own reflection while peering into a pond (Ovid, 1 A.C.E/2004). Today, the personality construct of narcissism is associated with vanity, grandiosity, interpersonal exploitation, exhibitionism, and arrogance (e.g., Raskin & Terry, 1988). Although there has been some debate regarding the extent to which narcissism is related to physical attractiveness (e.g., Feingold, 1992; Gabriel, Critelli, & Ee, 1994), recent studies have shown that narcissism *is* associated with certain aspects of attractiveness (e.g., Holtzman & Strube, 2010, 2012). The goal of the present study was to extend what is known about the connections between narcissism and appearance-related outcomes by investigating the role that appearance-based self-esteem may play in these associations.

Narcissism is associated with several aspects of appearance such as evaluating one's appearance, fitness, and sexuality more favorably (Jackson, Ervin, & Hodge, 1992), higher levels of body esteem (Davis, Claridge, & Brewer, 1996), wearing flashy or revealing clothing (Vazire, Naumann, Rentgrow, & Gosling, 2008), effective bodily adornment (Holtzman & Strube, 2012), and displaying attractive photos of oneself through social media (Buffardi & Campbell, 2008). Holtzman and Strube (2010) conducted a review of 18 studies in which independent

observers rated the physical attractiveness of target individuals and found that the overall mean correlation between the self-reported narcissism of the Targets and their attractiveness ratings was $r = .14$ which makes narcissism a relatively strong predictor of attractiveness compared to many other personality features. Taken together, these findings suggest that individuals with narcissistic personality features care a great deal about their physical appearance and are able to alter aspects of their appearance in order to appear more physically attractive to others. This suggests the intriguing possibility that core features of narcissism – including the desire for attention and status – are noticeably manifested in physical appearance (Vazire et al., 2008).

Two theoretical perspectives provide evidence for the association between narcissism and appearance. From an evolutionary perspective, the connection between narcissism and appearance is grounded in findings that narcissistic tendencies predict short-term mating (see Holtzman & Strube, 2011, for a review). That is, individuals who possess narcissistic tendencies are more likely to pursue brief, uncommitted sexual relationships. In addition, narcissists have been shown to be capable of attracting potential mates which is a common problem in short-term mating (Holtzman & Strube, 2011). This suggests that short-term mating approaches may select for narcissistic traits as well as attractiveness which may have led to an association between narcissism and attractiveness.

The self-regulatory model of narcissism (Morf & Rhodewalt, 2001) is another perspective that provides support for the link between narcissism and physical attractiveness. According to this model, narcissists maintain their highly positive self-views by engaging in behaviors that will maximize the amount of positive feedback they receive from others. Therefore, it may be the case that narcissists appear to be more attractive because they engage in more self-regulatory behaviors (e.g., grooming, adornment) as a means for receiving positive feedback.

Given previous research concerning the role of domain-specific self-esteem in outcomes concerning attractiveness (e.g., Valentine & DuBois, 2005), the present study examined whether appearance-based self-esteem mediated the associations that narcissism had with appearance-based outcomes such as attractiveness ratings and perceived appearance effort. Appearance-based self-esteem refers to the degree to which an individual is satisfied with his or her appearance that is independent of actual attractiveness or self-esteem in other domains (Gentile et al., 2009). The possibility that appearance-based self-esteem may mediate the associations that narcissism has with attractiveness ratings and perceived appearance effort is consistent with research suggesting that narcissism is related to appearance satisfaction regardless of actual attractiveness (Jackson et al., 1992) as well as research showing that appearance-based self-esteem is associated with engaging in activities that enhance or display this satisfaction with physical appearance (e.g., exercise; Wilson & Rodgers, 2002).

Overview and Predictions

The present study examined the possibility that appearance-based self-esteem mediates the associations that narcissism has with attractiveness ratings and perceived appearance effort. Consistent with previous research (Holtzman & Strube, 2010, 2012; Vazire et al., 2008), it was predicted that narcissism would be positively associated with attractiveness ratings and perceived appearance effort such that individuals who reported narcissistic personality features would be rated as more attractive by others and their appearance would be viewed as requiring more effort (e.g., greater use of adornment). The rationale for this prediction was that the core features of narcissism would manifest in physical appearance (e.g., greater effort put into their appearance) and that these appearance-related behaviors would be recognizable to others.

It was expected that appearance-based self-esteem would mediate the associations that narcissistic personality features had with attractiveness ratings and appearance effort. That is, the connections that narcissism had with perceived attractiveness and perceived appearance effort were thought to largely be due to narcissistic individuals developing higher levels of appearance-based self-esteem which, in turn, would be associated with higher ratings of attractiveness and greater appearance effort. This is important because appearance-based self-esteem may actually be what is recognizable to others rather than narcissism.

Method

Participants and Procedure

Participants were 155 undergraduate students (53 men, 102 women) at a university in the southern region of the United States. Participants were enrolled in psychology courses and took part in this study in order to partially fulfill a research participation requirement. The mean age of the participants was 20.07 ($SD = 3.96$) and their racial composition was 52% White, 44% Black, and 4% Other. Participants attended a laboratory session in

small groups in which they completed measures of narcissism, appearance-based self-esteem, and other measures that are not directly relevant to the present study (e.g., instruments capturing the Big Five dimensions of personality). Participants returned to the laboratory one week later for individual sessions during which each participant made a three-minute video describing themselves to potential romantic partners as part of a simulated dating service. The participants (i.e., Targets) in these videos were then rated independently by four trained female undergraduate research assistants (i.e., Perceivers) with regard to their attractiveness and the effort they put into their appearance. The research assistants were blind to the self-reported narcissism and appearance-based self-esteem levels of the participants.

Self-Report Measures Completed by the Targets

Narcissistic personality features. Narcissism was measured using the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). The NPI was developed according to DSM-III diagnostic criteria for narcissistic personality disorder but appears to assess an emotionally resilient and extraverted form of narcissism as a normally distributed personality dimension in the general population. The version of the NPI used in the present study consists of the 37 true-false items (e.g., "I really like to be the center or attention", "I like to look at my body"; Morf & Rhodewalt, 1993; Rhodewalt & Morf, 1995). These items were selected from the 54-item NPI based on a factor analysis conducted by Emmons (1987) such that only relevant and unique items with factor loadings higher than .35 were included. The NPI has been found to possess considerable evidence of construct validity, internal consistency, and test-retest reliability (for reviews see Emmons, 1987; Raskin & Terry, 1988). The internal consistency of the NPI was .86 for the present study.

Appearance-based self-esteem. Appearance-based self-esteem was captured using the Appearance subscale of the State Self-Esteem Scale (Heatherton & Polivy, 1991). This subscale consists of six items (e.g., "I feel satisfied with the way my body looks right now", "I am pleased with my appearance right now") to which responses were made using scales that ranged from 1 (*not at all*) to 5 (*extremely*). The internal consistency of this measure was .89 for the present study.

Measures Completed by the Perceivers about the Targets

Attractiveness. The attractiveness of the Targets was assessed using two 7-point semantic differential items: *unattractive – attractive* and *not physically fit – physically fit*. The intraclass correlation coefficient for the judges was .80. The internal consistency for the attractiveness items was .83.

Appearance effort. The effort that the Targets put into their appearance was assessed using eight 7-point semantic differential items: *calm – excited*, *blank facial expression – animated facial expression*, *frowning – smiling*, *non-sexualized appearance – sexualized appearance*, *messy appearance – neat appearance*, *appearance requires little effort – appearance requires much effort*, *unfashionable clothing – fashionable clothing*, and *few adornments – many adornments*. The intraclass correlation coefficient for the judges was .85. The internal consistency for the appearance effort items was .82.

Data Analytic Approach

The hypotheses of the present study were consistent with an indirect effects model such that the association between narcissism and appearance-related outcomes was due, at least in part, to the appearance-based self-esteem of the Targets. Tests of mediational hypotheses such as this are often guided by the causal steps approach that was proposed by Baron and Kenny (1986), but a number of potential problems associated with the causal steps approach have led to the development of other strategies for testing indirect effects such as a bootstrapping technique (e.g., Hayes, 2009; MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004; Williams & MacKinnon, 2008). This bootstrapping technique creates an empirical representation of the sampling distribution of the indirect association by treating the empirical sample as a representation of the population and repeatedly resampling from the empirical sample during the analysis in order to mimic the original sampling process. This resampling process was repeated 5,000 times for the current analysis with the path coefficients being recorded for each of these 5,000 samples. The 5,000 estimates of the indirect association were used to generate a 95% bias corrected confidence interval. The use of bootstrapped confidence intervals avoids some of the problems with power that are introduced by other techniques such as the Sobel test (MacKinnon et al., 2004). The simple mediation hypotheses were tested

using an SPSS macro developed by Preacher and Hayes (2004) which facilitates estimation of the indirect effect using a bootstrap approach to obtain confidence intervals.

Results

The means, standard deviations, and intercorrelations for the measures employed in the present study are displayed in Table 1. An inspection of the correlation matrix reveals that narcissism was positively correlated with appearance-based self-esteem, attractiveness ratings, and perceived appearance effort. Appearance-based self-esteem was positively correlated with attractiveness ratings and perceived appearance effort. A significant association also emerged between attractiveness ratings and perceived appearance effort. Sex differences were not observed for any of the variables included in the present study: narcissism (M_{Men} = 20.63, M_{Women} = 19.25, $t[153]$ = -1.09, p = .28), appearance-based self-esteem (M_{Men} = 3.80, M_{Women} = 3.56, $t[153]$ = -1.25, p = .21), attractiveness ratings (M_{Men} = 4.45, M_{Women} = 4.38, $t[153]$ = -0.39, p = .70), or perceived appearance effort (M_{Men} = 2.99, M_{Women} = 3.15, $t[153]$ = 1.49, p = .14).

Mediation of the Association Between Narcissism and Physical Appearance

The first set of analyses examined whether appearance-based self-esteem mediated the association between narcissism and the attractiveness ratings of the Targets provided by the Perceivers. The results of this analysis are presented in Figure 1. This approach revealed that narcissism was associated with the attractiveness ratings provided by the Perceivers (c_1 = .18, p = .03) such that Targets who possessed higher levels of narcissism were rated as more physically attractive by the Perceivers. Further, narcissism was associated with appearance-based self-esteem (a_1 = .36, p < .001) such that those who possessed higher levels of narcissism reported higher levels of appearance-based self-esteem. In turn, appearance-based self-esteem was associated with the attractiveness ratings provided by the Perceivers (b_1 = .21, p = .01) such that those who possessed higher levels of appearance-based self-esteem were rated as more attractive. The association between narcissism and attractiveness was reduced when appearance-based self-esteem was included in the model (c'_1 = .10, p = .23). The bootstrap results suggest mediation as shown by a bootstrapped 95% CI around the indirect effect that does not contain zero (CI_{Lower} = .02, CI_{Higher} = .15). The Sobel test confirmed the bootstrap results by showing that the indirect effect was significant (z = 2.24, p = .02). These results suggest that appearance-based self-esteem fully mediates the connection between narcissism and attractiveness ratings (i.e., those with high levels of narcissism are more likely to possess higher levels of appearance-based self-esteem which, in turn, is associated with being rated by others as more physically attractive).

Mediation of the Association Between Narcissism and Appearance Effort

The second set of analyses examined whether appearance-based self-esteem mediated the association between narcissism and the ratings of appearance effort provided by the Perceivers. The results of this analysis are presented in Figure 2. This approach revealed that narcissism was associated with the ratings provided by the Perceivers (c_1 = .16, p = .04) such that Targets who possessed higher levels of narcissism were rated by the Perceivers as putting more effort into their appearance. Further, narcissism was associated with appearance-based self-esteem (a_1 = .36, p < .001) and appearance-based self-esteem was, in turn, associated with appearance effort (b_1 = .20, p = .02) such that those who possessed higher levels of appearance-based self-esteem were rated as putting more effort into their appearance by the Perceivers. The association between narcissism and appearance effort was reduced when appearance-based self-esteem was included in the model (c'_1 = .09, p = .26). The bootstrap results suggest mediation as shown by a bootstrapped 95% CI around the indirect effect that does not contain zero (CI_{Lower} = .01, CI_{Higher} = .14). The Sobel test confirmed the bootstrap results by showing that the indirect effect was significant (z = 2.06, p = .04). These results suggest that appearance-based self-esteem fully mediates the connection between narcissism and appearance effort (i.e., those with high levels of narcissism are more likely to possess higher levels of appearance-based self-esteem which, in turn, is associated with being rated by others as putting more effort into their appearance).

Discussion

The current study investigated the role of appearance-based self-esteem in the associations that narcissism has with perceived attractiveness and perceived appearance effort. Results supported the hypotheses such that

appearance-based self-esteem mediated the associations that narcissism had with perceived attractiveness and perceived appearance effort. Consistent with previous research (Holtzman & Strube, 2010; Vazire et al., 2008), narcissism was positively associated with perceived attractiveness and perceived appearance effort. That is, individuals with narcissistic tendencies were perceived as more attractive and thought to invest more effort into their appearance. These findings suggest that the core features of narcissism (e.g., status, attractiveness) are manifested in physical appearance and that these features are readily observable to others. For example, narcissistic individuals may be inclined to enhance their appearance by wearing more make-up or fashionable clothing which is recognizable to others as being attractive.

In line with the predictions, appearance-based self-esteem mediated the associations that narcissism had with perceived attractiveness and perceived appearance effort. That is, the relationship between narcissism and appearance-based outcomes appears to be due, at least in part, to narcissistic individuals possessing higher levels of appearance-based self-esteem. This suggests the possibility that individuals with narcissistic tendencies may develop a high degree of appearance satisfaction which leads others to perceive these individuals as highly attractive as well as believe that these individuals invest a great deal of effort into their appearance. The present findings are consistent with previous research suggesting that narcissism is associated with vanity, exhibitionism, and status seeking (Raskin & Terry, 1988). More specifically, the present results suggest that these values (i.e., vanity, exhibitionism, status) are manifested in the appearance of individuals with narcissistic personality features. These findings may be due, at least in part, to narcissistic individuals developing a high level of satisfaction with their appearance that is expressed through self-regulatory behaviors (e.g., adornment) as a way to convey these feelings of satisfaction to others. Individuals who express feelings of satisfaction with their appearance by enhancing and displaying their bodies are more likely to draw attention to their physical appearance which may be particularly appealing to individuals with narcissistic personality features because it provides them with positive affirmation from others.

It is important to acknowledge some potential limitations of the present study. First, it should be noted that that the present study was unable to determine the causal direction of these associations due to the correlational nature of the data. For example, it is unclear whether narcissism actually precedes the development of appearance-based self-esteem. Second, the present study relied on self-report measures of narcissism and appearance-based self-esteem which makes it possible that the results were influenced by socially desirable response distortions. Future research would benefit by including indicators of narcissism and appearance-based self-esteem that are less susceptible to this type of distortion. Third, the generalizability of the current findings may be limited due to reliance on an undergraduate sample. It is important that future research on this topic explore these relationships in a more diverse sample.

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Table 1

Intercorrelations and Descriptive Statistics

	1	2	3	4
1. Narcissism	—			
2. Appearance-Based Self-Esteem	.36***	—		
3. Attractiveness	.18*	.25**	—	
4. Appearance Effort	.16*	.21**	.16*	—
Mean	19.56	3.61	4.40	3.12
Standard Deviation	6.59	0.99	0.92	0.57

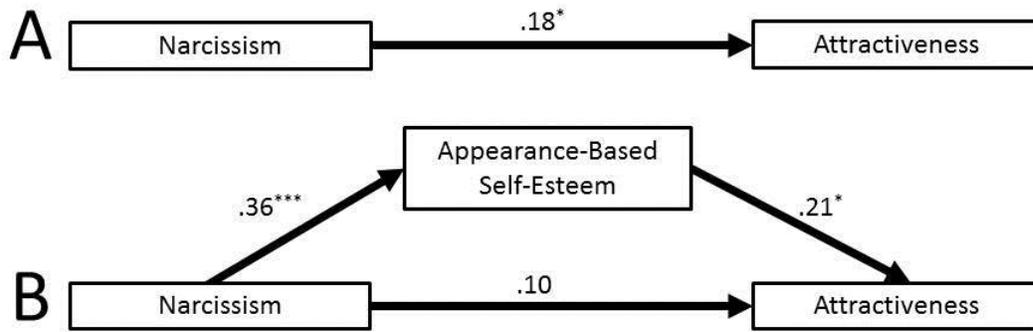*p< .05; **p< .01; ***p< .001.

Figure 1. Panel A shows the unmediated model in which narcissism was associated with the attractiveness ratings of the Targets provided by the Perceivers. Panel B shows the simple mediation model in which the association between narcissism and the attractiveness ratings were mediated by appearance-based self-esteem.
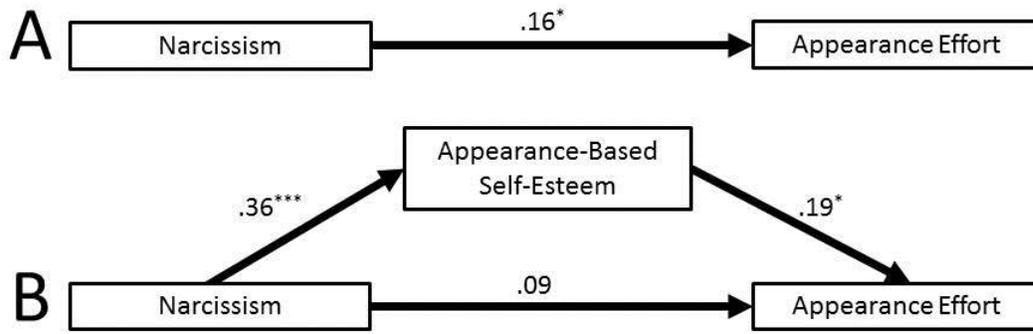$^*p < .05; ^{**}p < .01; ^{***}p < .001.$

Figure 2. Panel A shows the unmediated model in which narcissism was associated with the appearance effort ratings of the Targets provided by the Perceivers. Panel B shows the simple mediation model in which the association between narcissism and the appearance effort ratings were mediated by appearance-based self-esteem. $^{*}p < .05; ^{**}p < .01; ^{***}p < .001$.