

Accuracy and bias in self-perception of performance: Narcissism matters in Korea as well

Sun W. Park¹ · Stefanie M. Tignor² · Min Joo Joo¹ ·
Yong Hoe Heo¹

Received: 12 October 2016 / Accepted: 24 October 2016 / Published online: 7 November 2016
© Korean Social Science Research Council 2016

Abstract Debates regarding the nature of self-enhancement versus accurate self-assessment have been active among psychologists for decades. More recently, researchers have become interested in the panculturality of self-enhancement. Some researchers argue that self-enhancement is universal and present within all cultures. Others declare self-enhancement to be a Western tendency, with self-diminishment being the norm among East Asians. Importantly, the majority of such studies have not compared self-perceptions against objective external criteria, especially those with East Asians. Furthermore, the link between narcissism and self-enhancement has been largely overlooked within Korean samples. To address such gaps, we utilized scores on an objective test as a criterion to investigate the accuracy of Koreans' self-assessments of performance, as well as how individual differences in narcissism are related to such assessments. A sample of Korean students ($N = 146$; 71 women) completed self-report measures of narcissism and self-esteem, and took a listening comprehension quiz. Estimated and actual scores were collected and used to compute self-enhancement scores. Results demonstrated that Koreans' self-perceptions of performance on the quiz were quite accurate. As has been found in Western cultures, narcissism was related to self-enhancement.

Keywords Cultural psychology · Korean · Narcissism · Personality · Self-enhancement · Self-assessment

Introduction

Debates regarding the nature of self-enhancement versus accurate self-assessment have been active among psychologists for decades. Researchers have examined whether self-perceptions are positively distorted (Brown 1986; John and Robins 1994), whether positive

✉ Sun W. Park
sunwpark@korea.ac.kr

¹ Department of Psychology, Korea University, 145 Anam-ro, Seongbuk-gu, Seoul 02841, Republic of Korea

² Department of Psychology, Northeastern University, Boston, MA 02115, USA

self-distortions are conducive to mental health (Colvin et al. 1995; Taylor and Brown 1988), and whether self-enhancement motivations are stronger than self-assessment motivations (Gregg et al. 2011; Trope 1986).

More recently, researchers have become interested in the panculturality of self-enhancement. While some claim self-enhancement to be a universal human motive (Sedikides et al. 2003), others assert cross-cultural differences exist in the desire to self-enhance (Heine 2005). Moreover, while research clearly indicates that narcissism is a strong predictor of self-enhancement in Western cultures (John and Robins 1994), this relationship has not been clarified within Eastern cultures. The present research aimed to contribute to the literature by answering two independent, but related, questions: (1) Are Korean students' self-perceptions of performance accurate at the group level? and (2) Is narcissism related to self-enhancement bias in a collectivistic culture where self-diminishment is highly valued?

Cross-cultural perspectives on self-enhancement and relevant measurement issues

Self-enhancement refers to the motivation to view oneself in a highly positive way (Sedikides and Gregg 2008). This motivation can take many forms, including self-serving bias, the better-than-average effect, and unrealistic optimism. Numerous published studies have documented the prevalence of self-enhancement, suggesting that most people tend to self-enhance (Alicke and Govorun 2005; Guenther and Alicke 2010). Sedikides et al. (2003) have even declared self-enhancement to be so globally pervasive that it is a "pancultural" phenomenon.

Other researchers argue that self-enhancement is a cultural construction, and only pervasive among Westerners living within individualistic cultures (Heine and Lehman 1997). While Westerners are likely to self-enhance and provide unrealistically positive views of the self, collectivist East Asians are more likely to exhibit self-diminishment and self-criticism (Heine 2005; Heine et al. 1999; see: Chang et al. 2003 for Korean sample specifically). According to a recent meta-analysis comparing self-enhancement prevalence among Westerners and East Asians (Heine and Hamamura 2007), Westerners showed greater self-enhancement than East Asians in 30 of the 31 methodologies ($d = 0.84$). When separated by culture, self-enhancement was clearly present in the Western samples ($d = 0.87$), yet absent in the East Asian samples ($d = -0.01$). Some have attempted to resolve this conflict in the literature by asserting that East Asians do self-enhance, but only in specific situations and contexts (Lee et al. 2014c), such as when the need for modesty is weak (Cai et al. 2007), in private, anonymous situations (Kobayashi and Greenwald 2003), in the presence of strangers (Kim et al. 2011; Takata 2003), or regarding valued interpersonal but not personal attributes (Endo et al. 2000).

Importantly, the way in which self-enhancement is assessed can take one of two distinct forms (Krueger and Wright 2011): the social comparison approach or the social realist approach. In the social comparison approach, participants are asked to rate themselves on a number of positive traits, relative to the average person. For example, participants may be presented with a scale ranging from 1 (*much worse than average*) to 7 (*much better than average*), with the midpoint score of 4 meaning "about the same". If more than 50% of participants give themselves a score greater than 4, it can be concluded that, at the group level, self-enhancement is present (e.g., Svenson 1981). This is because it is a statistical impossibility for more than 50% of people to score above the average, provided extreme outliers are not present at the low end. Alternatively, participants can make two ratings:

one for themselves and one for the average person. If the mean difference between the two scores is positive, according to the social comparison approach, self-enhancement is present; the individual views him or herself as better than average (e.g., Klar and Giladi 1999).

In the social realist approach, researchers compare participants' self-perceptions in a specific domain with a corresponding external criterion, although they differ in the criterion they consider to be most valid. Some researchers use social consensus, comparing one's self-perceived personality with several others' aggregated ratings (Funder and Colvin 1988). Others employ scores on objective tests as their criterion. One's self-perceived academic ability, for example, can be compared with one's academic achievement (Robins and Beer 2001).

The social comparison approach poses two major disadvantages, relative to the social realist approach. First, the former may be conflated with the tendency to view everyone as better than average, not just the self (Hamamura et al. 2007). In other words, rating oneself as better than average may be the consequence of failing to consider the properties of the group, rather than the product of self-enhancement motives alone. Second, studies taking the social comparison approach cannot determine the accuracy of individuals' self-perceptions, as objective criteria are not utilized (Krueger and Wright 2011). For example, suppose Amy believes that her IQ score is 130. That is, Amy believes that she is more intelligent than the average person, given that the population mean IQ score is 100. Despite her claim to be better than average, Amy's belief alone is not enough to determine whether her self-perception is overly positive. If Amy's actual IQ is 100, we would conclude that she was self-enhancing. If her actual score is 150, we would conclude that she was self-diminishing, despite her better than average self-rating. The social realist approach utilizes such a criterion, thereby allowing researchers to determine the presence and degree of self-enhancement (or self-diminishment) for each individual. In the current research, we adopt the social realist approach.

Self-enhancement and narcissism in the individualistic culture

Culture is not the sole determinant of an individual's propensity to self-enhance; personality also plays a role. Narcissism, characterized by excessive self-admiration and feelings of superiority, has been repeatedly linked to overly positive self-views within Western cultures. Narcissistic individuals have been shown to rate their own performance (John and Robins 1994; Robins and Beer 2001), personality (Park and Colvin 2014), behavior (Gosling et al. 1998), academic achievement (Farwell and Wohlwend-Lloyd 1998), intelligence, and physical attractiveness (Gabriel et al. 1994) more highly or more positively than diverse forms of external criteria meant to capture reality.

For example, one of the aforementioned studies (John and Robins 1994) asked American students to participate in a group discussion. Participants then were asked to rank each group member's contribution, including their own. Additionally, a staff of 11 psychologists ranked each group member's contribution. Each participant's self-rated ranking was then compared against the rankings made by their group members and by the staff. On average, individuals tended to self-enhance, as would be expected within a Western culture. Importantly, self-enhancement bias over the staff and peer criteria was positively correlated with narcissism. Robins and Beer (2001) replicated these findings, again demonstrating that self-enhancement bias is positively correlated with narcissism among Western individuals.

Self-enhancement and narcissism in Korea

Although cross-cultural studies of self-enhancement are common (Heine and Hamamura 2007; Sedikides et al. 2005), few have been conducted with Korean samples. Moreover, to our knowledge, no studies to date have been published in English using the social realist approach with Koreans. Just three studies have been published in Korean, yielding inconsistent results.

Kim (2009) assessed self-enhancement in Korean students who were training to become daycare center teachers. Both the students and their supervisors completed a questionnaire, asking about the students' abilities and attitudes as future daycare center teachers, including responsibility, passion, and teaching and supervising abilities. Upon comparison, students' self-evaluations were lower than their supervisors' evaluations, suggesting self-diminishment at the group level.

Roh and Sohn (2011) found results in opposition to those above using a round-robin paradigm, similar to that employed by John and Robins (1994). Korean college students formed groups and engaged in a team-based project. Upon completion, students rated one another on their contribution. More than half (58.9%) of participants provided self-ratings higher than those of their peers, whereas just 23.4% of students provided self-ratings lower than those of their peers, suggesting self-enhancement at the group level.

Finally, Hong and Ko (2003) reported results indicative of neither self-enhancement nor self-diminishment. After completing a group problem-solving task, group members rated every member's leadership abilities, including their own. No significant difference was found between self-rated and peer-rated leadership.

Given these conflicting findings, and given the differing research designs employed in each of the above three studies, it is difficult to affirm the presence of self-enhancement or self-diminishment at the group level in Korean samples. Furthermore, as all three studies utilized others' ratings as the criterion, methodological issues may have obscured Koreans' self-enhancing (or self-diminishing) tendencies. When one person rates another, biases can come from both parties. A target may see him or herself in an overly positive or overly negative fashion. At the same time, observers may rate this target more positively or negatively (i.e., perceiver effects). In this design, if observers' ratings are overly negative, targets' self-ratings are classified as self-enhancement, even if they are in fact accurate. To avoid this criterion problem, some researchers control for the perceiver effect (Kwan et al. 2004; Kwan et al. 2008). In the present study, we minimized biases from the criterion side by utilizing performance on an objective task as a criterion (Kim and Chiu 2011; Kim et al. 2010; Park and Park 2015).

Surprisingly, the link between narcissism and self-enhancement was not examined in any of the studies reviewed above, which raises an interesting question. In an individualistic culture where self-enhancement is pervasive, it seems normative to pursue highly positive self-views. Showing off one's grandiosity is in line with cultural norms and can be an effective impression management strategy, at least in the short term (Back et al. 2010; Paulhus 1998). Yet the link between narcissism and self-enhancement may not be obvious in a collectivistic culture where grandiose self-expressions are frowned upon. For example, research has shown Koreans, Japanese, and Asian Americans hold more positive perceptions of self-effacing individuals, as compared to self-enhancing ones (Kim et al. 2003; Muramoto et al. 2009). Such findings are reflective of cultural differences in what is considered to be socially desirable behavior; self-control, restraint, and modesty are highly valued in Eastern cultures (Markus and Kitayama 1991). Due to these cultural

expectations, one might predict that narcissistic East Asians will exhibit “tactical self-enhancement” or “impression management”: expressing modesty and deemphasizing their positive attributes to appear more normatively appropriate and earn respect from others (Cai et al. 2011; Lalwani et al. 2009).

On the other hand, there is also evidence to suggest that narcissism may predict self-enhancement among East Asians. For example, Thai individuals high in narcissism show a preference for high status mates, suggesting self-enhancement motives (Tanchotsrinon et al. 2007). Similarly, in China, narcissism has been linked to self-presentation on social media (Mo and Leung 2015), self-reported use of self-enhancement strategies (Hepper et al. 2013), and self-enhancement on culturally valued personality traits, as compared to peer ratings (Zhou et al. 2015). Narcissism has not been linked to self-enhancement among Koreans specifically, although it has been associated with self-presentation motives (Lee et al. 2014a) and a need for uniqueness in purchasing behavior among consumers (Lee et al. 2013). Thus, if Korean narcissists view the cultural ideal of modesty as the paragon of socially desirable behavior, we should see self-diminishment. If they instead view superiority, grandiosity, and status as desirable, despite cultural ideals to the contrary, we should see self-enhancement.

Computation of self-enhancement

There exist several different ways to compute self-enhancement scores when using the social realist approach (for a detailed review, see Krueger and Wright 2011). The residual score method involves regressing self-perceptions on a criterion, then using the resultant residuals in all future analyses. The difference score method involves subtracting a criterion from self-perception, then using the resultant difference scores in all future analyses. In both cases, positive scores indicate self-enhancement, and negative scores indicate self-diminishment.

Statisticians have discussed advantages and disadvantages of each approach without reaching an agreement (e.g., Edwards, 2001; Rogosa and Willett 1983). As Krueger and Wright (2011) pointed out, most psychological studies argue for one method over the others, then report results based on that method (for exception, see: De Los Reyes and Kazdin 2004). In the current research, we examined the relationship between narcissism and self-enhancement using both methods.

Unskilled and unaware of it

Finally, it is worth noting that the exact motivations underlying self-enhancement are not always clear (Sedikides and Gregg 2008). It may be the case that individuals self-enhance deliberately to maintain their own self-worth, well-being, or positive affect (Taylor and Brown 1988), or to paint a flattering picture of themselves for others (Baumeister 1982). Alternatively, self-enhancement may be unintentional; individuals may be both unskilled and unaware of it (Kruger and Dunning 1999).

Dunning and colleagues (Ehrlinger et al. 2008; Kruger and Dunning 1999) investigated the root of the positively distorted self-perceptions observed among Western students. After taking a test, participants evaluated their performance in both absolute (raw score) and relative (percentile) terms. Researchers then divided them into four groups based on their actual performance. Those in the bottom-quartile showed positively distorted self-perceptions. In contrast, top-quartile participants underestimated both their absolute and relative performance, though their underestimation was more pronounced for relative

ratings. In other words, although self-enhancement was present at the group level, this effect was chiefly driven by bottom-performers. Because the analysis method used by Dunning and colleagues (Ehrlinger et al. 2008; Kruger and Dunning 1999) provides an excellent tool to investigate the nature of accuracy and bias in self-perceptions of performance among specific subgroups, we conducted a similar analysis.

The present study

We investigated (1) whether self-perceptions of performance are accurate or biased among Korean students at the group level, using a social realist approach and (2) whether narcissism is related to self-enhancement in a collectivistic culture where self-diminishment is valued. To answer such questions, we used self-estimated and actual scores on a listening comprehension quiz to compute self-enhancement scores for each participant. Due to the multifaceted nature of narcissism, Ackerman et al. (2011) have urged researchers to conduct subscale analyses in addition to the total score analyses. However, few studies have examined the link between subscales of narcissism and self-enhancement bias. In one such study, Park and Colvin (2014) reported that narcissism and its subscales were related to overly positive self-perceptions of personality, relative to friend-perceptions, except for the exploitativeness/entitlement subscale. In an effort to shed light on this topic, we conducted subscale analyses as well. Finally, although self-esteem was not of our primary interest, we additionally assessed this trait due to its commonalities with narcissism. Previous research has used self-esteem as a control variable when assessing the effects of narcissism (e.g., Bushman and Baumeister 1998; Morf and Rhodewalt 1993).

Method

The data analyzed in the present study are part of a larger dataset on personality and social perception. Participants were told that the goal of the research was to identify personality traits that predict effective communication skills, which have become highly valued among Korean students. To curtail suspicion, participants completed a battery of questionnaires ostensibly intended to assess communication skills in addition to the experimental task of interest. Only those measures and procedures pertaining to our current research goals are described.

Participants and procedure

Participants ($N = 146$; 71 women) were Koreans living in Korea, recruited via advertisements on the Korea University website. All participants were undergraduate or graduate students. The mean age was 22.49 ($SD = 2.73$), ranging from 18 to 30. After participants came to the lab, an experimenter told them the study was about factors affecting communication skills, which are critical to successful life. Participants completed a series of online questionnaires, and took a listening comprehension quiz. Following their completion of this quiz, they provided self-ratings of their estimated performance. All participants received 10,000 KRW (roughly 10 USD) in exchange for their participation.

Materials

Narcissism

Participants completed the 13-item Narcissistic Personality Inventory (NPI; Gentile et al. 2013), a brief version of the 40-item NPI (Raskin and Terry 1988). They responded on a 6-point scale to indicate how accurately each statement described them. Although the original NPI requires participants to select one of two opposing statements that best describes them, the Likert response format has been used in previous research (McGregor et al. 2005; Park et al. 2013). Responses across the 13 items were averaged (Cronbach's $\alpha = 0.85$). Additionally, the following three subscales were calculated: 4-item Leadership/Authority ($\alpha = 0.68$; e.g., "I am a born leader"), 5-item Grandiose exhibitionism ($\alpha = 0.76$; e.g., "I like to show off my body"), and 4-item Entitlement/Exploitativeness ($\alpha = 0.59$; e.g., "I insist upon getting the respect that is due me").

Self esteem

Participants completed the 10-item Rosenberg Self-Esteem Scale (Rosenberg 1965; $\alpha = 0.88$) on a 6-point Likert scale. This scale includes items such as "I take on a positive attitude toward myself," and "I feel that I am a person of worth, at least on an equal basis with others."

Estimated and actual scores on the listening comprehension quiz

Participants listened to a 4-min audio clip on Socrates and his philosophy, and answered an 8-item multiple choice listening comprehension quiz on the content of the audio clip. They then estimated how many questions they got correct out of eight. Later, the quiz was graded and each participant's actual score on the test was recorded.

Individual differences in self-enhancement

Difference and residual scores were computed to indicate individual differences in self-enhancement. For difference scores, actual scores on the listening comprehension quiz were subtracted from estimated scores. For residual scores, estimated scores were regressed on actual scores, and the residuals were retained (John and Robins 1994). In both indices, positive values indicate self-enhancement (overly positive self-perception), and negative values indicate self-diminishment (overly negative self-perception).

Results

Preliminary analyses

Descriptive statistics and correlations between variables are presented in Table 1. Narcissism and self-esteem were positively correlated ($r = 0.31$). There was also a positive relation between estimated and actual scores ($r = 0.57$), indicating that participants were relatively aware of their performance. Both narcissism and self-esteem were unrelated to estimated or actual scores. No significant gender differences were observed in narcissism,

Table 1 Descriptive Statistics and Correlations between Study Variables

	<i>M (SD)</i>	1	2	3	4	5	6	7	8
1. Narcissism total	3.25 (0.76)	–							
2. Narcissism LA	3.31 (0.92)	0.83***	–						
3. Narcissism GE	3.19 (0.92)	0.86***	0.53***	–					
4. Narcissism EE	3.27 (0.84)	0.83***	0.61***	0.57***	–				
5. Self-esteem	4.54 (0.79)	0.31***	0.22**	0.41***	0.13	–			
6. Estimated score	6.00 (1.36)	0.08	0.12	0.05	0.00	0.10	–		
7. Actual score	5.92 (1.34)	–0.10	–0.04	–0.12	–0.11	0.05	0.57***	–	
8. Difference score	0.08 (1.26)	0.19*	0.17*	0.19*	0.12	0.05	0.48***	–0.45***	–
9. Residual score	0.00 (1.12)	0.16*	0.17*	0.15	0.08	0.08	0.82***	0.00	0.89***

LA leadership/authority, GE grandiose exhibitionism, EE entitlement/exploitativeness

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

self-esteem, estimated scores, or actual scores. Accordingly, all results are presented for men and women combined.

Are Koreans self-enhancing, self-diminishing, or accurate in their self-perceptions of performance?

To investigate whether our Korean sample self-enhanced at the group level, we performed a repeated-measures *t* test. Estimated scores ($M = 6.00$, $SD = 1.36$) were not significantly higher than actual scores ($M = 5.92$, $SD = 1.34$), $t(145) = 0.79$, $p = 0.43$, indicating a lack of self-enhancement or self-diminishment at the group level. Table 2 shows more detailed information regarding the proportions of people who were accurate or biased. About 38% of participants overestimated, 33% underestimated, and 29% accurately estimated their own performance. However, 80% of estimations were within the ± 1 point range relative to the criterion on an 8-point scale, suggesting that the majority of Koreans were relatively accurate in their self-perceptions of performance.

Unskilled and unaware of it?

To further investigate the nature of students' self-perceptions, we categorized participants into four groups based on actual performance following Dunning and colleagues (Ehrlinger et al. 2008; Kruger and Dunning 1999). As shown in Fig. 1, in the bottom and second quartiles, estimated scores were significantly higher than actual scores, $t_s < 2.89$, $p_s < 0.01$. Those in the third quartile had relatively accurate perceptions, $t = 0.84$, $p = 0.41$. Top-quartile participants underestimated their performance, $t = -3.71$, $p < 0.001$. Next, we performed an analysis of variance with quartiles as the independent variable and estimated scores as the dependent variable, and the result was significant, $F(3, 142) = 21.28$, $p < 0.001$. *Tukey HSD* tests revealed that every possible pair but two significantly differed: the second and third quartiles, and third and top quartiles did not differ.

Is narcissism or self-esteem related to self-enhancement?

We correlated narcissism with the two indices of self-enhancement. As shown in Table 1, narcissism was positively related to difference and residual scores, $r_s > 0.16$, $p_s < 0.05$. Among the narcissism subscales, entitlement/exploitativeness was unrelated to these two scores, consistent with Park and Colvin (2014). Leadership/authority was positively related to both scores, while grandiose exhibitionism was positively related to difference scores,

Table 2 Percentage of participants accurately and inaccurately estimating their performance

Difference between estimated and actual scores	Frequency	Percent (%)
-3	3	2.1
-2	10	6.8
-1	35	24.0
0	43	29.5
1	39	26.7
2	11	7.5
3	5	3.4
Total	146	100

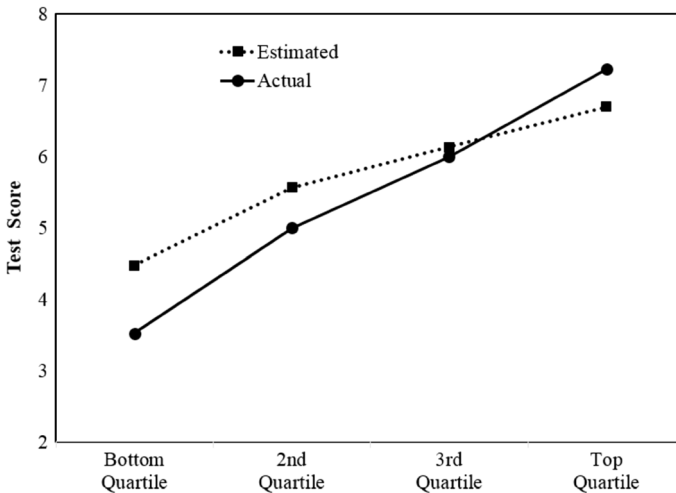


Fig. 1 Estimated and actual score on the quiz as a function of their actual performance quartile

but not to residual scores. The same pattern of results was observed when controlling for self-esteem. Self-esteem, on the other hand, was not related to difference or residual scores, $r_s < 0.08$, $p_s > 0.05$. Therefore, although both narcissism and self-esteem include a positive self-view, only narcissism is related to overly positive self-perceptions of performance, consistent with previous research (Gabriel et al. 1994).

Discussion

The purpose of this study was to examine (1) the accuracy or bias in self-perceptions of performance among Korean students, using a social realist approach and (2) whether narcissistic individuals display self-enhancement in a collectivistic culture where self-diminishment is a social norm (Heine et al. 1999). Previous studies with Koreans comparing self-perceptions with observer-perceptions have yielded inconsistent findings about the presence of self-enhancement (Hong and Ko 2003; Kim 2009; Roh and Sohn 2011). Because we used scores from an objective test as a criterion, the perceiver biases inherent in social consensus scores were not an issue. At the group level, we found no signs of self-enhancement or self-diminishment. Rather, Koreans were quite accurate. Self-perceptions were well-balanced, centering around the accuracy point (see Table 2). In addition, estimated scores did not significantly differ from actual scores.

To further investigate the nature of these relatively accurate self-perceptions observed in the present sample, we categorized participants into four groups based on their actual performance, following Dunning and colleagues (Ehrlinger et al. 2008; Kruger and Dunning 1999). The results were similar to previous research in that bottom-quartile participants overestimated, while top-quartile participants underestimated their performance. However, in Dunning's studies, miscalibration was larger in overestimation than underestimation, yielding positively distorted self-perceptions. In our Korean sample, miscalibration in overestimation and underestimation was quite balanced, yielding relatively accurate self-perceptions at the group level. Put differently, unskilled Korean participants

in this study were “less unaware” of their performance than the Western participants featured in Dunning’s studies, though their perceptions were still positively distorted.

The relation between narcissism and self-enhancement was examined using both difference and residual scores, and the results were convergent: Narcissism was positively related to self-enhancement in our sample of Korean students. This finding is particularly interesting, given that one might expect expressing narcissism via self-enhancement to be culturally discordant for Koreans. In individualistic cultures, narcissistic individuals’ desires for self-enhancement are not culturally troublesome, as self-enhancement is normative. Thus, their culture allows them to pursue grandiosity and social respect, both of which help to maintain their self-image. However, in a collectivistic culture where self-diminishment is the social norm, a choice must be made: individuals may show off their grandiosity via self-enhancement and lose social respect, or may diminish themselves to receive social respect. In our Korean sample, narcissism was expressed via the former, as has been found in Western cultures, despite the cultural conflict it stands to engender. Such findings extend previous findings from Chinese and Thai samples (Hepper et al. 2013; Tanchotsrinon et al. 2007; Zhou et al. 2015).

Nevertheless, our findings lead to an interesting question: Is pursuing a grandiose self more detrimental to narcissistic individuals in a collectivistic culture than in an individualistic culture? In other words, do narcissistic individuals face higher rates of social exclusion in collectivist cultures, given the misalignment of their behaviors with cultural norms? Future research may examine this question.

Contributions and implications

The present study is one of the rare studies to examine self-enhancement using a social realist approach with Korean samples. In addition, it is the first to demonstrate the link between narcissism and self-enhancement in Korea. Together, our findings suggest that while self-enhancement may not be pancultural, perhaps narcissistic self-enhancement is pancultural.

It is important to note that these results were true of narcissism alone. Self-esteem, despite its positive self-view, was not significantly related to self-enhancement, and the link between narcissism and self-enhancement remained significant controlling for self-esteem. These findings imply the distinct nature of each of these traits (Campbell et al. 2002; Hyun et al. 2016; Park and Colvin 2015). Still, this may partly depend on the domain being assessed. Gabriel et al. (1994) demonstrated narcissism predicted self-enhancement in the domains of intelligence and physical attractiveness for both genders, while self-esteem predicted self-enhancement among men for intelligence only. As self-esteem’s relationship with self-enhancement can vary with context, further research is needed regarding the link between the two.

It is worth discussing why neither self-enhancement nor self-diminishment was found at the group level in our Korean sample. Although our data do not speak to this directly, we offer two possible explanations. First, East Asians tend to believe that people are malleable, whereas Westerners tend to view people as fixed (Heine et al. 2001). When people believe that change is possible, they are motivated to assess themselves accurately for the purpose of self-improvement. Conversely, when there is no belief in change, people are motivated to maintain their positive self-image by focusing on their strengths, striving for a positive over accurate assessment (Dweck and Leggett 1988; Gregg et al. 2011). Thus, it may be the case that East Asians do not self-enhance due to their malleable self-theories. A second possible explanation is that East Asians may be more sensitive to their social

standing, due to their collectivist culture (Heine and Renshaw 2002). As such, it is important for them to know where they stand in a group to maintain social harmony. This sensitivity may result in a heightened self-assessment motivation, which in turn leads to more accurate self-perceptions.

Limitations and suggestions for future research

Although our research makes a significant contribution to the literature on East Asian self-enhancement, it is not without limitations. First, and perhaps most importantly, we only assessed self-enhancement in one domain: a listening comprehension quiz. Therefore, we must be cautious in generalizing our findings to other domains such as self-perceptions of behavior, abilities, and personality traits. Such caution is particularly warranted, given that some research has found self-enhancement among East Asians to be task- and context-dependent (Lee et al. 2014c). Still, although we recognize that conclusions regarding the behavior of an entire nation cannot and should not be drawn from one study alone, we believe that this research represents an important first step. We encourage other researchers to extend the current research, and to further examine if, when, how, and why Korean individuals self-enhance.

Second, we did not recruit participants from a Western culture against which to compare our Korean sample. As indexed in our literature review, a large number of studies have been published that repeatedly confirm Westerners' tendencies to self-enhance within the framework of the social realist approach. Nevertheless, a large cross-cultural study examining Koreans' and Westerners' self-enhancement, and how such self-enhancement is related to narcissism, would be of interest (Heine and Renshaw 2002).

Finally, although it is not a limitation per se, it is worth acknowledging that East Asian countries are rapidly becoming industrialized and Westernized, a process with the potential to spark changes in personality at the national level. A recent cross-temporal meta-analysis reported that narcissism among Korean college students has increased between 1999 and 2014 (Lee et al. 2014b). Thus, Koreans, especially young adults, may go through psychological turmoil (Cho et al. 2010), pursuing different goals (Park et al. 2016). On the one hand, their collectivistic upbringing is pressing them to pursue traditional values, including self-diminishment. On the other hand, young people's heightened levels of narcissism are leading them to pursue self-enhancement. This dichotomy is important to consider when conducting research on these topics, and may help to explain why we did not find self-diminishment at the group level. Future research using Korean samples should maintain awareness of the changing cultural landscape.

Conclusions

In conclusion, these results demonstrate that (1) Koreans at the group level tend to provide accurate self-assessments of performance in objective tasks and (2) narcissism at the individual level is linked with self-enhancement, even in a collectivist culture where self-diminishment is valued, which is consistent with results from the West. These results provide further information regarding Koreans' self-assessment tendencies, as well as demonstrate the cross-cultural consistency of narcissism as a construct.

Acknowledgements This work was supported by the National Research Foundation of Korea Grant funded by the Korean Government (NRF-2014S1A5A8017732).

References

- Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the Narcissistic Personality Inventory really measure? *Assessment, 18*, 67–87.
- Alicke, M. D., & Govorun, O. (2005). The better-than-average effect. In M. D. Alicke, D. A. Dunning, & J. I. Krueger (Eds.), *The self in social judgment* (pp. 85–106). New York: Psychology Press.
- Back, M. D., Schmukle, S. C., & Egloff, B. (2010). Why are narcissists so charming at first sight? Decoding the narcissism-popularity link at zero acquaintance. *Journal of Personality and Social Psychology, 98*, 132–145.
- Baumeister, R. F. (1982). A self-presentational view of social phenomena. *Psychological Bulletin, 91*, 3–26.
- Brown, J. D. (1986). Evaluations of self and others: Self-enhancement biases in social judgments. *Social Cognition, 4*, 353–376.
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology, 75*, 219–229.
- Cai, H., Brown, J. D., Deng, C., & Oakes, M. A. (2007). Self-esteem and culture: Differences in cognitive self-evaluations or affective self-regard? *Asian Journal of Social Psychology, 10*, 162–170.
- Cai, H., Sedikides, C., Gaertner, L., Wang, C., Carvallo, M., Xu, Y., et al. (2011). Tactical self-enhancement in China: Is modesty at the service of self-enhancement in East Asian culture? *Social Psychological and Personality Science, 2*, 59–64.
- Campbell, W. K., Rudich, E. A., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: Two portraits of self-love. *Personality and Social Psychology Bulletin, 28*, 358–368.
- Chang, E. C., Sanna, L. J., & Yang, K. (2003). Optimism, pessimism, affectivity, and psychological adjustment in U.S. and Korea: A test of a mediation model. *Personality and Individual Differences, 34*, 1195–1208.
- Cho, Y. J., Mallinckrodt, B., & Yune, S. K. (2010). Collectivism and individualism as bicultural values: South Korean undergraduates' adjustment to college. *Asian Journal of Counselling, 17*, 81–104.
- Colvin, C. R., Block, J., & Funder, D. C. (1995). Overly positive self-evaluations and personality: Negative implications for mental health. *Journal of Personality and Social Psychology, 68*, 1152–1162.
- De Los Reyes, A., & Kazdin, A. E. (2004). Measuring informant discrepancies in clinical child research. *Psychological Assessment, 16*, 330–334.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256–273.
- Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods, 4*, 265–287.
- Ehrlinger, J., Johnson, K., Banner, M., Dunning, D., & Kruger, J. (2008). Why the unskilled are unaware: Further explorations of (absent) self-insight among the incompetent. *Organizational Behavior and Human Decision Processes, 105*, 98–121.
- Endo, Y., Heine, S. J., & Lehman, D. R. (2000). Culture and positive illusions in close relationships: How my relationships are better than yours. *Personality and Social Psychology Bulletin, 26*, 1571–1586.
- Farwell, L., & Wohlwend-Lloyd, R. (1998). Narcissistic processes: Optimistic expectations, favorable self-evaluations, and self-enhancing attributions. *Journal of Personality, 66*, 65–83.
- Funder, D. C., & Colvin, C. R. (1988). Friends and strangers: Acquaintanceship, agreement, and the accuracy of personality judgment. *Journal of Personality and Social Psychology, 55*, 149–158.
- Gabriel, M. T., Critelli, J. W., & Ee, J. S. (1994). Narcissistic illusions in self-evaluations of intelligence and attractiveness. *Journal of Personality, 62*, 143–155.
- Gentile, B., Miller, J. D., Hoffman, B. J., Reidy, D. E., Zeichner, A., & Campbell, W. K. (2013). A test of two brief measures of grandiose narcissism: The Narcissistic Personality Inventory-13 and the Narcissistic Personality Inventory-16. *Psychological Assessment, 25*, 1120–1136.
- Gosling, S. D., John, O. P., Craik, K. H., & Robins, R. W. (1998). Do people know how they behave? Self-reported act frequencies compared with on-line codings by observers. *Journal of Personality and Social Psychology, 74*, 1337–1349.
- Gregg, A. P., Hepper, E. G., & Sedikides, C. (2011). Quantifying self-motives: Functional links between dispositional desires. *European Journal of Social Psychology, 41*, 840–852.
- Guenther, C. L., & Alicke, M. D. (2010). Social self. In I. B. Weiner & W. E. Craighead (Eds.), *The corsini encyclopedia of psychology and behavioral science* (4th ed., pp. 1645–1646). Hoboken, NJ: Wiley.
- Hamamura, T., Heine, S. J., & Takemoto, T. R. S. (2007). Why the better-than-average effect is a worse-than-average measure of self-enhancement: An investigation of conflicting findings from studies of East Asian self-evaluations. *Motivation and Emotion, 31*, 247–259.
- Heine, S. J. (2005). Where is the evidence for pancultural self-enhancement? A reply to Sedikides, Gaertner, and Toguchi (2003). *Journal of Personality and Social Psychology, 89*, 531–538.

- Heine, S. J., & Hamamura, T. (2007). In search of East Asian self-enhancement. *Personality and Social Psychology Review*, *11*, 4–27.
- Heine, S. J., Kitayama, S., Lehman, D. R., Takata, T., Ide, E., Leung, C., et al. (2001). Divergent consequences of success and failure in Japan and North America: An investigation of self-improving motivations and malleable selves. *Journal of Personality and Social Psychology*, *81*, 599–615.
- Heine, S. J., & Lehman, D. R. (1997). The cultural construction of self-enhancement: An examination of group-serving biases. *Journal of Personality and Social Psychology*, *72*, 1268–1283.
- Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review*, *106*, 766–794.
- Heine, S. J., & Renshaw, K. (2002). Interjudge agreement, self-enhancement, and liking: Cross-cultural divergences. *Personality and Social Psychology Bulletin*, *28*, 578–587.
- Hepper, E. G., Sedikides, C., & Cai, H. (2013). Self-enhancement and self-protection strategies in China: Cultural expressions of a fundamental human motive. *Journal of Cross-Cultural Psychology*, *44*, 5–23.
- Hong, K., & Ko, J. (2003). The relationships between personality and leadership perceptions in problem-solving group. *Korean Journal of Industrial and Organizational Psychology*, *16*, 107–127.
- Hyun, N. K., Park, Y., & Park, S. W. (2016). Narcissism and gift giving: Not every gift is for others. *Personality and Individual Differences*, *96*, 47–51.
- John, O. P., & Robins, R. W. (1994). Accuracy and bias in self-perception: Individual differences in self-enhancement and the role of narcissism. *Journal of Personality and Social Psychology*, *66*, 206.
- Kim, J. H. (2009). The evaluation comparative to student teachers in the field of daycare. *Journal of Young Child Studies*, *12*, 45–49.
- Kim, Y. H., & Chiu, C. Y. (2011). Emotional costs of inaccurate self-assessments: both self-effacement and self-enhancement can lead to dejection. *Emotion*, *11*, 1096–1104.
- Kim, Y. H., Chiu, C. Y., & Zou, Z. (2010). Know thyself: Misperceptions of actual performance undermine subjective well-being, future performance, and achievement motivation. *Journal of Personality and Social Psychology*, *99*, 395–409.
- Kim, J., Kim, M. S., Kam, K. Y., & Shin, H. C. (2003). Influence of self-construals on the perception of different self-presentation styles in Korea. *Asian Journal of Social Psychology*, *6*, 89–101.
- Kim, J., Lee, S., & Gim, W. (2011). Culture and self-presentation: Influence of social interactions in an expected social relationship. *Asian Journal of Social Psychology*, *14*, 63–74.
- Klar, Y., & Giladi, E. E. (1999). Are most people happier than their peers, or are they just happy? *Personality and Social Psychology Bulletin*, *25*, 586–595.
- Kobayashi, C., & Greenwald, A. G. (2003). Implicit-explicit differences in self-enhancement for Americans and Japanese. *Journal of Cross-Cultural Psychology*, *34*, 522–541.
- Krueger, J. I., & Wright, J. C. (2011). Measurement of self-enhancement (and self-protection). In M. D. Alicke & C. Sedikides (Eds.), *Handbook of self-enhancement and self-protection* (pp. 472–494). New York: Guilford.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, *77*, 1121–1134.
- Kwan, V. S., John, O. P., Kenny, D. A., Bond, M. H., & Robins, R. W. (2004). Reconceptualizing individual differences in self-enhancement bias: An interpersonal approach. *Psychological Review*, *111*, 94–110.
- Kwan, V. S., John, O., Robin, R., & Kuang, L. (2008). Conceptualizing and assessing self-enhancement bias: A componential approach. *Journal of Personality and Social Psychology*, *94*, 1062–1077.
- Lalwani, A. K., Shrum, L. J., & Chiu, C. Y. (2009). Motivated response styles: The role of cultural values, regulatory focus, and self-consciousness in socially desirable responding. *Journal of Personality and Social Psychology*, *96*, 870–882.
- Lee, E., Ahn, J., & Kim, Y. J. (2014a). Personality traits and self-presentation at Facebook. *Personality and Individual Differences*, *69*, 162–167.
- Lee, S. K., Benavides, P., Heo, Y. H., & Park, S. W. (2014b). Narcissism increase among college students in Korea: A cross-temporal meta-analysis (1999–2014). *Korean Journal of Psychology: General*, *33*, 609–625.
- Lee, S. Y., Gregg, A. P., & Park, S. H. (2013). The person in the purchase: Narcissistic consumers prefer products that positively distinguish them. *Journal of Personality and Social Psychology*, *105*, 335–352.
- Lee, H. I., Leung, A. K., & Kim, Y. H. (2014c). Unpacking East–West differences in the extent of self-enhancement from the perspective of face versus dignity culture. *Social and Personality Psychology Compass*, *8*, 314–327.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Journal of Personality and Social Psychology*, *98*, 224–253.

- McGregor, I., Nail, P. R., Marigold, D. C., & Kang, S. (2005). Defensive pride and consensus: Strength in imaginary numbers. *Journal of Personality and Social Psychology, 89*, 978–996.
- Mo, R., & Leung, L. (2015). Exploring the roles of narcissism, uses of, and gratifications from microblogs on affinity-seeking and social capital. *Asian Journal of Social Psychology, 18*, 152–162.
- Morf, C. C., & Rhodewalt, F. (1993). Narcissism and self-evaluation maintenance: Explorations in object relations. *Personality and Social Psychology Bulletin, 19*, 668–676.
- Muramoto, Y., Yamaguchi, S., & Kim, U. (2009). Perception of achievement attribution in individual and group contexts: Comparative analysis of Japanese, Korean, and Asian-American results. *Asian Journal of Social Psychology, 12*, 199–210.
- Park, S. W., & Colvin, C. R. (2014). Narcissism and discrepancy between self and friends' perceptions of personality. *Journal of Personality, 82*, 278–286.
- Park, S. W., & Colvin, C. R. (2015). Narcissism and other-derogation in the absence of ego threat. *Journal of Personality, 83*, 334–345.
- Park, S. W., Ferrero, J., Colvin, C. R., & Carney, D. R. (2013). Narcissism and negotiation: Economic gain and interpersonal loss. *Basic and Applied Social Psychology, 35*, 569–574.
- Park, Y., Kim, T. S., & Park, S. W. (2016). Change in goal orientation of Korean high school athletes: A cross-temporal meta-analysis, 1999–2014. *Personality and Individual Differences, 94*, 342–347.
- Park, Y., & Park, S. W. (2015). Self-enhancement bias and academic achievement: A negative quadratic relation. *Korean Journal of Social and Personality Psychology, 29*(3), 151–164.
- Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology, 74*, 1197–1208.
- Raskin, R. N., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of construct validity. *Journal of Personality and Social Psychology, 54*, 890–902.
- Robins, R. W., & Beer, J. S. (2001). Positive illusions about the self: Short-term benefits and long-term costs. *Journal of Personality and Social Psychology, 80*, 340–352.
- Rogosa, D. R., & Willett, J. B. (1983). Demonstrating the reliability of the difference score in the measurement of change. *Journal of Educational Measurement, 20*, 335–343.
- Roh, Y. H., & Sohn, Y. W. (2011). The self-assessment accuracy and its relationship with performance and individual characteristics. *Korean Journal of Industrial and Organizational Psychology, 24*, 103–126.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of Personality and Social Psychology, 84*, 60–79.
- Sedikides, C., Gaertner, L., & Vevea, J. L. (2005). Pancultural self-enhancement reloaded: A meta-analytic reply to Heine (2005). *Journal of Personality and Social Psychology, 89*, 539–551.
- Sedikides, C., & Gregg, A. P. (2008). Self-enhancement: Food for thought. *Perspectives on Psychological Science, 3*, 102–116.
- Svenson, O. (1981). Are we all less risky and more skillful than our fellow drivers? *Acta Psychologica, 47*, 143–148.
- Takata, T. (2003). Self-enhancement and self-criticism in Japanese culture: An experimental analysis. *Journal of Cross-Cultural Psychology, 34*, 542–551.
- Tanchotsrinon, P., Maneesri, K., & Campbell, W. K. (2007). Narcissism and romantic attraction: Evidence from a collectivist culture. *Journal of Research in Personality, 41*, 723–730.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193–210.
- Trope, Y. (1986). Self-enhancement and self-assessment in achievement behavior. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 1, pp. 350–378). New York: Guilford Press.
- Zhou, H., Zhang, B., Yang, X., & Chen, X. (2015). Are Chinese narcissists disagreeable? Evidence from self- and peer-ratings of agreeableness. *Asian Journal of Social Psychology, 18*, 163–169.