Study Examines Difference between Communal Narcissism and Altruism in Korean College Students Using Close-Other Reports

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This study aimed to examine the difference between communal narcissism and altruism using close-other reports, especially in collectivistic cultures (e.g., Korea). There may be differences between individualistic and collectivistic cultures in the evaluation of communality. However, research on acquaintance evaluations of the difference between communal narcissism and altruism has never been conducted in a collectivistic culture. Accordingly, 179 Korean college students (115 females) completed self-report questionnaires to assess communal narcissism and altruism, selecting three close others who rated the psychological adjustment of the participants in terms of communality, altruism, and well-being. We found that self-reported communal narcissism was positively correlated with self-reported altruism but not significantly correlated with close-other-reported altruism. Additionally, the effect of self-reported communal narcissism on psychological adjustment as evaluated by close others was not significant after controlling for the effect of self-reported altruism. However, after controlling for the effect of self-reported communal narcissism, the effect of self-reported altruism on psychological adjustment as evaluated by close others was significant. Although communal narcissism and altruism are closely related in self-reports, findings based on reports of close others provide empirical evidence that they are distinguishable personality traits.

Keywords: grandiose narcissism, communal narcissism, altruism, close-other reports, biased self-perception, cultural difference

Introduction

According to the agentic-communal model of grandiose narcissism, the latter can be categorized into two types: agentic and communal narcissism (Gebauer et al., 2012). Agentic narcissism mani-

fests as grandiose self-views in agentic domains, such as academic achievement and creativity, whereas communal narcissism manifests as grandiose self-views in communal domains, such as amiability and faithfulness (Gebauer et al., 2012).

Communal narcissists tend to perceive themselves as highly altruistic and deeply dedicated to their communities and natural environment (Barry et al., 2017; Fatfouta & Schröder-Abé, 2018; Gebauer & Sedikides, 2018; Naderi, 2018; Yang et al., 2018). Previous studies have shown that communal narcissism and altruism have different motivations for helping others. Altruistic behavior is the motivation to contribute to others' welfare (Bar-Tal, 1982; Batson, 2011; Eisenberg, 1986; MacIntyre, 1967). Meanwhile, communal narcissists are motivated by the goals of authority and grandiosity (Gebauer et al., 2012). It has also been reported that if communal

narcissists are told that they will attain a superior position in the future, the greater their communal narcissism, the lower their willingness to help others (Giacomin & Jordan, 2015). They are comparatively reticent in making personal sacrifices for the benefit of society and the environment (Naderi, 2018).

Previous studies have found that both altruism and communal narcissism are positively correlated with psychological adjustment. Altruism is positively associated with common bond, life satisfaction and positive affect (Dulin & Hill, 2003; Kahana et al., 2013; Kim et al., 2016; Post, 2005). Communal narcissism also positively correlates with life satisfaction, positive affect, and self-esteem (Żemojtel-Piotrowska et al., 2014; Żemojtel-Piotrowska et al., 2017). However, these findings were based on self-reported measures. Relying solely on self-reported information in psychological assessments can be problematic (see Achenbach et al., 2005; Meyer et al., 2001). In particular, because narcissistic individuals tend to have an inflated view of themselves and their abilities, obtaining information from acquaintances may minimize the limitations of self-reported measures (Cooper et al., 2012).

Communal narcissism is not related to objective prosociality (i.e., actual behavior and informant-reports), but to subjective prosociality (i.e., self-perceptions) (Nehrlich et al., 2019). Barry et al. (2017) reported that adolescent participants who were communally narcissistic self-reported that they frequently helped others, while other students reported that they engaged in violent and ostracizing behavior. On the contrary, communal narcissists may act altruistically toward peers or seem pro-social because they are primarily interested in the communal domain (Barry et al., 2021).

However, previous studies on communal narcissism involved participants who were enrolled in the same course or program but did not evaluate how well others knew the participants (Barry et al., 2017; Gebauer et al., 2012; Nehrlich et al., 2019). Studies of acquaintance evaluations of personality traits demonstrated that close-other reports were more accurate if the respondent knew more about the participant (Funder et al., 1995; Paulhus & Reynolds, 1995; Vazire, 2010; Vazire & Carlson, 2011). Prolonged interaction with the same individual increases the quantity of behavioral data accessible as well as the quality of data upon which we can make judgments (Funder, 1999; Letzring et al., 2006). Therefore, the reliability of close-other reports can be maximized by in-cluding respondents who know the participant well and are selected by the participant, and by assessing how well the respondent knows the participant.

Prior studies on communal narcissism have mainly been conducted in individualistic cultures, such as Germany (Kesenheimer & Greitemeyer, 2021; Nehrlich et al., 2019), Poland (Nowak et al., 2022; Żemojtel-Piotrowska et al., 2021), the United Kingdom (Gebauer et al., 2012), and the United States (Barry et al., 2021; Fennimore, 2021). To the best of our knowledge, no empirical study has examined the relationship between communal narcissism and altruism in a collectivistic culture by incorporating close other reports.

There may be differences in self-enhancement, such as grandiose narcissism, between individualistic and collectivistic cultures. Individualistic cultures may value agentic traits (e.g., intelligence), whereas collectivistic cultures may value communal traits (e.g., agreeableness) (Sedikides et al., 2003; Swann & Bosson, 2010). Individualistic cultures amplify individual attributes, whereas collectivistic cultures exaggerate collectivistic attributes (Sedikides et al., 2007a, 2007b). However, according to Yang et al. (2018), also in collectivistic cultures, communal narcissism did not correlate with actual altruistic behavior. How do people in close proximity assess the psychological adjustment of individuals with communal narcissism in Eastern cultures?

When one gets to know them better, grandiose becomes increasingly unpopular (Colvin et al., 1995; Paulhus, 1998). With zero familiarity (i.e., informants had no prior knowledge of the targets), the grandiose were rated favorably; but, after extended acquaintance (i.e., informants have previously been aware of the targets), they were not rated positively (Dufner et al., 2019). Even in collectivist cultures, close acquaintances can distinguish between communal narcissism and altruism.

Therefore, in this study, we examined the differences between communal narcissism and altruism through evaluation of close others. According to Barry et al. (2021), there were significant correlations among peer-reported prosociality, self-reported communal narcissism, and self-reported communalism (i.e., without grandiose self-views in communal domains); However, only communalism significantly explained peer-reported prosociality when simultaneous regression analyses were performed. Our hy-
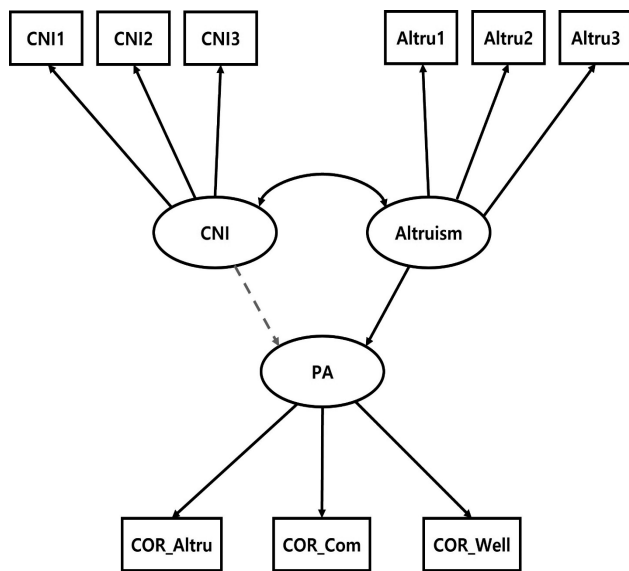
Figure 1. Research model of the effect of communal narcissism and altruism on psychological adjustment. CNI = Communal Narcissism Inventory; PA = Psychological Adjustment; COR_Altru = Close-Other-Reported Altruism; COR_Com = Close-Other-Reported Communality; COR_Well = Close-Other-Reported Well-being.

potheses are as follows: First, when we examined communal narcissism, altruism, and psychological adjustment as reported by close others using a structural equation model, only altruism significantly explained psychological adjustment, as evaluated by an acquaintance (Figure 1). Second, the relationship between communal narcissism and close-other-reported psychological adjustment would be weaker than that between altruism and close-other-reported psychological adjustment.

Methods

Participants and Procedure

Participants were recruited through an online post on a college website. We conducted an orientation where each participant was asked to select three individuals with whom they had a close relationship to complete the close other reports. Accordingly, 179 participants (115 females, mean age = 19.46, and 64 males, mean age = 20.21), and each of their three close others who completed a set of questionnaires, were included in the analysis. All self-reported and close-other-reported responses were recorded online. This study was approved by our Institutional Review Board (IRB), and all participants

were compensated.

Measures

The assessment scales were the Communal Narcissism Inventory (CNI) and an altruism scale in a self-report format. To assess close others' evaluations of the participants, we administered the Close-Other-Reported Communality (CORC), Close-Other-Reported Altruism (CORA), and Close-Other-Reported Well-Being (CORW) instruments.

Communal Narcissism Inventory (CNI)

Gebauer et al. (2012) developed and validated a scale for assessing the degree of communal narcissism. The Korean version of the questionnaire was first translated by a bilingual user majoring in clinical psychology. The translated questionnaire was then back translated into English by an independent bilingual user majoring in clinical psychology. Sixteen items were included on a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree), including statements such as "I will be well-known for my good deeds." Internal consistency (Cronbach's alpha) was .92. We conducted confirmatory factor analysis using the maximum likelihood method to confirm the factor structure of the CNI. The results showed that the structure of communal narcissism was bifactorial, with two factor grouping items related to the present and future with an adequate model fit, χ^2 [88] = 187.131; $p < 0.001$; CFI = 0.935; RMSEA = 0.079; 90% CI [0.064-0.095]; SRMR = 0.060. Our results replicated the findings of previous studies (e.g., Rogoza & Fatfouta, 2019; Żemojtel-Piotrowska et al., 2016).

Altruism scale

We used the Korean version by Ahn and Chae (1997) of NEO-PI-R (Costa & McCrae, 1992) to assess altruism. We used only eight items of the Altruism subscale of the Agreeableness Scale, and each statement was answered using a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), including statements such as "If possible, I assist others even risking difficulties." Internal consistency (Cronbach's alpha) was .82.

Close−Other−Reported Well−Being (CORW)

We used eight close other items reported by Kim and Ko (2018) that

were significantly correlated with defense mechanism maturity using Vaillant's (1971, 1976, 1977) defense mechanism rating interview. The eight items assess depression, anxiety, emotional stability, well-being, interpersonal relationships, psychological maturity, coping skills, and happiness. Statements included "I believe that this person is good at adaptation." The items were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Internal consistency (Cronbach's alpha) was .87.

Close−Other−Reported Communality (CORC)

We used the method described by Rammstedt and John (2007) to adjust the CNI to match the usual other-reported formats. For example, "I am generally the most understanding person" was amended to "This person is generally the most understanding person." However, because the meaning of CNI is changed in the form of acquaintance evaluation, the meaning of the question changes; therefore, we named it CORC. Specifically, CORC provides information on how much the participant helps others and is dedicated to the community. It uses a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Internal consistency (Cronbach's alpha) was .94.

Close−Other−Reported Altruism (CORA)

We also adjusted the altruism scale to match the usual other-reported format, using the same means. For example, the statement "I try to be kind to everyone I meet" was amended to "This person tries to be kind to everyone that this person meets." CORA is rated on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Internal consistency (Cronbach's alpha) was .87.

Statistical Analyses

We analyzed the data using SPSS 24.0 and R programming. Descriptive statistics were used to summarize the demographic characteristics of participants. We analyzed Pearson's correlation coefficients to explore the relationships between the variables, and calculated Cronbach's alpha for each scale to verify internal consistency. The intraclass correlation coefficients (ICCs) for communal narcissism, altruism, and well-being were .30, .44, and .47, respectively. Assuming that the mean score of multiple respondents' reports is a reliable indicator (Clifton et al., 2005; Jackson et al., 2015),

we used the mean score of the three close other reports for analyses. Finally, we compared the variance in communal narcissism and altruism after combining the three other reported measures into one latent variable, psychological adjustment, using structural equation modeling.

Considering that both communal narcissism and altruism consist of a single factor, we created three parcels for each factor, as recommended by both Little et al. (2013) and Matsunaga (2008). We used a factor algorithm or single-factor analysis parceling (Little et al., 2002; Matsunaga, 2008; Rogers & Schmitt, 2004) and set item parceling to be equivalent across parcels in terms of average factor loading. The parcels were named CNI1-CNI3 and Altru1-Altru3. We used χ^2, CFI, SRMR, and RMSEA to assess the goodness-of-fit indices in structural equation modeling (Boomsma, 2000; Kline, 2011; McDonald & Ho, 2002; West et al., 2012).

According to Hu and Bentler (1999), a CFI greater than .95 and an SRMR lower than 0.08 indicates a good fit. An RMSEA value lesser than or equal to .05 is a close fit, lesser than .08 is a fair fit, and lesser than .10 is considered a mediocre fit (Browne & Cudeck, 1993; MacCallum et al., 1996). We retested 5,000 bootstrap samples to calculate 95% confidence intervals when comparing the variance in communal narcissism and altruism regarding psychological adjustment. This result was statistically significant at a level of .05 when the 95% confidence interval did not include 0 (Bollen & Stine, 1992).

Results

Demographic Characteristics

Participants were included in the study if all measures were answered and all three close others completed their evaluations. The participants included 64 males and 115 females. The mean age of males was 20.21 ($SD = 1.80$), and the mean age of females was 19.46 ($SD = 1.24$). Demographic characteristics are shown in Table 1.

Descriptive Statistics and Correlations

We calculated the mean and standard deviation of each variable and the correlations between the variables. The results are summarized in Table 2. Self-reported communal narcissism was positively correlated with altruism ($r = .47$, $p < .001$). It was also positively correlated with communality ($r = .19$, $p < .05$) and well-being

Table 1. *Demographic Characteristics of Participants and Their Close Others*

Category		n = 179
Sex	Male	64 (36%)[a]
	Female	115 (64%)[a]
Grade level	Freshman	121 (68%)[a]
	Sophomore	40 (22%)[a]
	Junior	12 (7%)[a]
	Senior	6 (3%)[a]
Relationship to close other	Family	106 (20%)[a]
	Significant other	37 (7%)[a]
	Friend	373 (69%)[a]
	Senior/Colleague	14 (3%)[a]
	Teacher	3 (1%)[a]
	Not Answered	4 (1%)[a]
How well I am known to the close other as answered by the participants		5.88[c] (.95)[b]
How well I know the participant as answered by close others		5.73[c] (.92)[b]

Note. [a] = frequency (percentage), [b] = 'mean (SD)', [c] = rating scale for how well the participant is known (1 = hardly know, 7 = know very well).

Table 2. *Means, Standard Deviation, and Correlations*

Variable	1	2	3	4	5
1. CNI[a]	—				
2. Altruism[a]	.47***	—			
3. CORC[b]	.19*	.27***	—		
4. CORA[b]	.13	.42***	.67***	—	
5. CORW[b]	.26***	.25**	.58***	.46	—
M	69.77	39.73	84.20	42.69	44.72
SD	15.08	6.60	8.96	4.86	4.71

Note. [a] = participant (n = 179). [b] = close others (n = 537). CNI = Communal Narcissism Inventory; CORC = Close-Other-Reported Communality; CORA = Close-Other-Reported Altruism; CPRW = Close-Other-Reported Well-being.
*p < .05, **p < .01, ***p < .001.

Table 3. *Goodness-of-fit Index of Models 1, 2, and 3*

n = 179	χ^2	Df	CFI	SRMR	RMSEA (90% Confidence Interval)
Model 1	9.824	8	.997	.047	.036 (.000-.099)
Model 2	19.028	8	.975	.050	.088 (.037-.139)
Model 3	52.289	24	.970	.056	.081 (.051-.111)

($r = .26$, $p < .001$) as assessed by close others, but did not have a statistically significant relationship with altruism as assessed by close others. Self-reported altruism was positively correlated with close-other-reported communality ($r = .27$, $p < .001$), well-being ($r = .25$, $p < .01$), and altruism ($r = .42$, $p < .001$). Communality assessed by close others was positively correlated with close-other-reported altruism ($r = .67$, $p < .001$) and well-being ($r = .58$, $p < .001$), whereas close-other-reported altruism was positively correlated with close-other-reported well-being ($r = .46$, $p < .001$).

Result of Structural Equation Validation

Structural equation modeling

We combined close-other-reported communality, altruism, and well-being into a single latent variable, "psychological adjustment," because it refers to altruistic and highly dedicated behavior to the community and a high level of well-being. The internal consistency (Cronbach's alpha) of the statements measuring psychological adjustment was .95. We compared the individual effects of communal narcissism (Model 1), altruism (Model 2), and their combined effects (Model 3) on psychological adjustment using structural equation modeling. We validated each model for goodness-of-fit and accurate reflection of the measured variables in the latent variables

using confirmatory factor analysis. The results are summarized in Table 3. The goodness-of-fit results were: model 1, $\chi^2 = 9.824$ ($df = 8$, $p > .05$), CFI = .997, SRMR = .047, RMSEA = .036 (90% confidence interval = .000-.099), AIC = 6,129.33; model 2, $\chi^2 = 19.028$ ($df = 8$, $p < .05$), CFI = .975, SRMR = .050, RMSEA = .088 (90% confidence interval = .037-.139), AIC = 5,512.03; and model 3, $\chi^2 = 52.289$ ($df = 24$, $p < .05$), CFI = .970, SRMR = .056, RMSEA = .081 (90% confidence interval = .051-.111), AIC value = 8,350.83.

We found that Models 1, 2, and 3 were all appropriate for the study analyses after taking into consideration: (1) the χ^2 test for model fit has a problem of excessively rejecting the zero hypothesis (Kim, 2016), (2) RMSEA is statistically positively biased in smaller sample sizes ($n < 200$) (Curran et al., 2003), (3) SRMR is a useful indicator of model fit, compared to RMSEA, for structural equation models (Maydeu-Olivares et al., 2018; Shi et al., 2020), (4) When evaluating models with small degrees of freedom, it is important to be cautious in interpreting RMSEA values and to rely more on SRMR and CFI (Shi et al., 2022), (5) As suggested by Hu and Bentler (1999), we used the combination of CFI (greater than .95) and SRMR (less than 0.08) to assess the goodness of fit of structural equation modeling (Hu & Bentler, 1999), and (6) both factor loadings of observed and latent variables are statistically significant ($p < .05$).

Comparison of the effects of communal narcissism and altruism on psychological adjustment as assessed by close others

We compared the individual effects of communal narcissism (Model 1) and altruism (Model 2) with their combined effects (Model 3) on psychological adjustment, as assessed by close others, using structural equation modeling. The path coefficients and path models are presented in Table 4 and Figures 1, 2 and 3. Communal narcissism and altruism significantly predicted close-other-reported psychological adjustments ($\beta = .22$, $p < .01$) and ($\beta = .42$, $p < .001$), respectively. Altruism independently and significantly predicted psychological adjustment when the effect of communal narcissism was controlled for ($\beta = .41$, $p < .001$). Communal narcissism, however, did not predict close-other-reported psychological adjustment when the effect of altruism was controlled for ($\beta = .02$, ns). Therefore, at a constant altruism level, close-other-reported psychological adjustment did not increase, even when communal narcissism increased. However, close-other-reported psychological adjustment increased with altruism, regardless of the level of communal narcissism.

Validation of the difference of variance of communal narcissism and altruism on close−other−assessed psychological adjustment
Calculation of the statistical difference between the regression coefficients of communal narcissism and altruism on psychological adjustment showed a statistically significant difference between the two regression coefficients ($p < .01$). Additionally, we extracted 5,000 bootstrap samples from the original data ($n = 179$) to vali-

Table 4. Path Coefficients of Models 1, 2, and 3

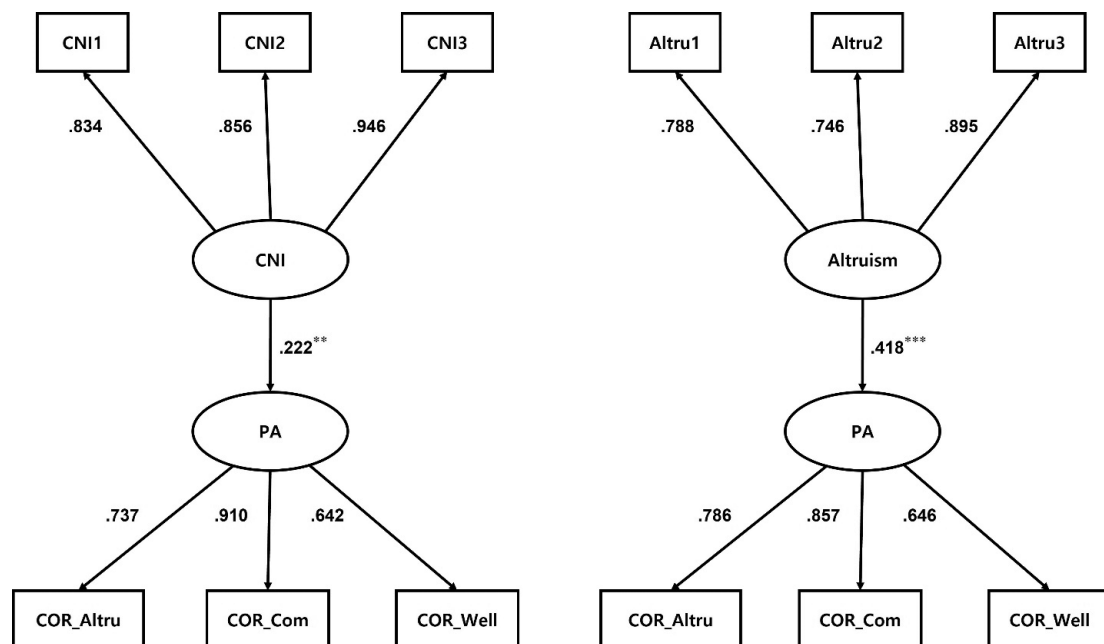| Model	Path	B	SE	β
Model 1	Communal narcissism → Close-other-reported psychological adjustment	.184	.068	.227**
Model 2	Altruism → Close-other-reported psychological adjustment	.764	.165	.418***
Model 3	Communal narcissism → Close-other-reported psychological adjustment	.014	.082	.016
	Altruism → Close-other-reported psychological adjustment	.723	.188	.410***

**p < .01, ***p < .001.

Figure 2. Path models of the effect of communal narcissism and altruism on psychological adjustment (Models 1 and 2). n = 179. CNI = Communal Narcissism Inventory; PA = Psychological Adjustment; COR_Altru = Close-Other-Reported Altruism; COR_Com = Close-Other-Reported Communality; COR_Well = Close-Other-Reported Well-being. The standardized regression coefficients of all paths are statistically significant at a level of .001 except for the path from communal narcissism (CNI) to psychological adjustment (PSM) (at .01). Error terms omitted for diagram simplification.
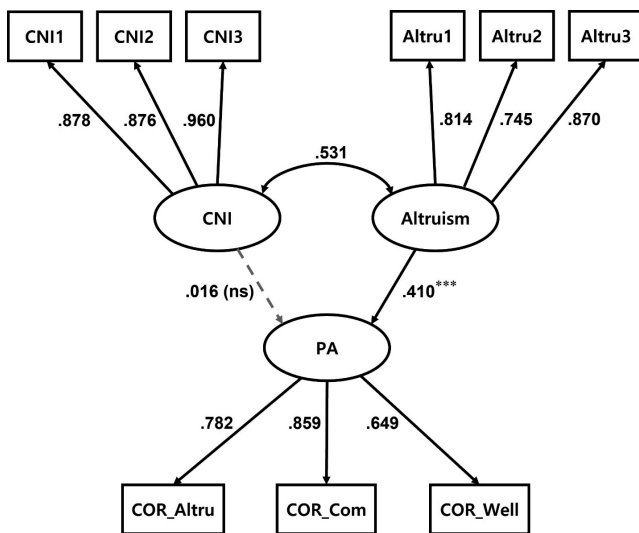
Figure 3. Path model of the effect of communal narcissism and altruism on psychological adjustment (Model 3). n = 179. CNI = Communal Narcissism Inventory; PA = Psychological Adjustment; COR_Altru = Close-Other-Reported Altruism; COR_Com = Close-Other-Reported Communality; COR_Well = Close-Other-Reported Well-being. The standardized regression coefficients of all paths are statistically significant at a level of .001 except for the path from communal narcissism (CNI) to psychological adjustment (PSM). Error terms omitted for diagram simplification.

date significant differences in the regression coefficients. We tested statistical significance at a level of .05 to determine whether 0 was included in the 95% confidence interval. We found that the difference between the regression coefficients of communal narcissism and altruism on psychological adjustment did not include 0 in its 95% confidence interval [.272, 1.149].

Discussion

This study examined the differences between communal narcissism and altruism using close other reports, especially in a collectivistic culture (i.e., Korea). Communal narcissism was positively correlated with self-reported altruism, but not with close-other-reported altruism. This suggests that close others tend to perceive communally-narcissistic participants as less altruistic than they perceive themselves. As in individualistic cultures, in collective cultures, communal narcissists were more likely to report better altruistic attributes, although they were not perceived as altruistic from the perspective of close others.

We found that self-reported communal narcissism was positive-

ly correlated with close-other-reported communality. Essentially, communal narcissists are perceived as communalistic not only for themselves but also for their close others. This finding is inconsistent with several previous studies on individualistic cultures (Barry et al., 2017; Nehrlic et al., 2019). Communal narcissists tend to focus on the communal domain, which could lead to altruistic behavior toward others and are sometimes viewed as prosocial by others (Barry et al., 2021). Nonetheless, we suspect that these findings may have been influenced by differences between individualistic and collectivistic cultures.

Regarding the cultural orientation between individualism and collectivism, some studies have found that the binary orientation of culture is inaccurate (Vignoles et al., 2016; Santos et al., 2017) whereas others have found this classification to be valid (Yi, 2018). In response to the COVID-19 pandemic, researchers reported empirical support for categorizing cultural orientations (Chang et al., 2021; Festing et al., 2020; Lu et al., 2021). People with a collectivistic cultural orientation tend to have a stronger association with interdependence and shared goals, whereas those with an individualistic cultural orientation are more likely to emphasize personal choice and autonomy. Therefore, we speculate that this classification is meaningful.

Moreover, Asian Americans tend to report their peers' communal traits (e.g., agreeableness) more positively than European Americans (Church et al., 2006). Considering these results, acquaintances may value communal narcissism in collectivistic cultures more than they do in individualistic ones. Collective cultures are more likely than individualistic cultures to define relationships with ingroup members as communal (Triandis, 2001). Especially, one of the most important goals of personal relationships for a Korean is to create and maintain a form of collectivism, also referred to as "we-ness" (Choi & Choi, 2002; Yang, 2019; Yoo et al., 2007). Therefore, this "we-ness" tendency may have caused the close others to evaluate the participants positively. Therefore, evaluations in other closely-related reports may reflect a positive bias inherent in Korean culture. In the distribution of the mean scores of the three close others, the skewness of all assessments showed a negativity bias of less than 0 (communality = -.533, altruism = -.351, well-being = -.877), although it was less than its absolute value (Curran et al., 1996), indicating a tendency to respond positively. Furthermore, in this study,

participants and close acquaintances were selected as evaluators. Brown and Kobayashi (2002) suggested that in Japan, a collectivistic culture like that of Korea, people rated their close acquaintances more positively than others.

We speculate that altruism may also explain the inconsistent results regarding communal narcissism in different cultures. When we controlled for altruism in the structural equation modeling, communal narcissism did not predict close-other-reported communality. Conversely, altruism significantly predicted close-other-reported communality, even when communal narcissism was controlled for. These results suggest that communal narcissism alone does not ensure recognition of communal behaviors by close others in a collectivistic culture.

Communal narcissism predicts other-reported psychological adjustments. However, when altruism was controlled for, communal narcissism did not predict close-other-reported psychological adjustments. In contrast, altruism significantly predicted close-other-reported psychological adjustment, even after controlling for communal narcissism. In a collectivistic society, communal narcissists without altruism do not receive the recognition of well-being and are psychologically mature from those close to them. In line with our hypothesis, the relationship between communal narcissism and close-other-reported psychological adjustment was weaker than that between altruism and close-other-reported psychological adjustment.

We empirically demonstrated communal narcissists' tendency toward grandiose self-perception by comparing self- and close-other-reported assessments in collectivistic cultures. Furthermore, we tested the unique cultural meaning of communal narcissism in a Korean sample. Future research should consider ingroup favoritism, we-ness, and altruism in Korea as important aspects for assessing communal narcissism in collectivistic cultures.

However, this study has several limitations. The CNI scale has not been fully validated for use in Korea, and this lack of validation includes the absence of information regarding test-retest reliability. Building on prior studies (Żemojtel-Piotrowska et al., 2014; Żemojtel-Piotrowska et al., 2017), we defined psychological adjustment as the dependent variable and communal narcissism as the independent variable. However, as it can be difficult to distinguish between cause and effect using these constructs, we acknowledge

the importance of future research, including mediators, in addressing this issue.

As the participants in this study were college students in their 20s, further studies should be conducted with other age groups to generalize the findings. A previous study that primarily recruited young adults who were high school dropouts reported physical aggression and acts of retaliation against others in the same program by students who were communally narcissistic (Barry et al., 2017). However, to the best of our knowledge, there is no evidence that communally narcissistic adults show violent tendencies. High levels of communal narcissism may manifest differently in different populations. Therefore, future studies should be conducted to better understand the characteristics of communal narcissism in diverse age groups and clinical populations.

Most participants in this study were women (64%). In a meta-analysis, narcissism (agentic narcissism) was found to be more prevalent in men than in women (Grijalva et al., 2015). Therefore, it is reasonable to expect differences in communal narcissism between men and women. However, in this study, although the CNI scores of women were higher than those of men, the difference was not statistically significant. In the future, it will be necessary to study the differences in communal narcissism between men and women.

Author contributions statement

HK and YK conceived and designed the study. HK, JK, and KM performed the study, analyzed the data, interpreted the results, and drafted the manuscript. YK and JJ interpreted the results, and edited the manuscript. All the authors have read and approved the final version of the manuscript.

Ethical Approval

All procedures performed in this study involving human participants were in accordance with the ethical standards of the Institutional Research Committee and/or National Research Committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study protocol was approved by the Institutional Review Board of Korea University (1040548-

KU-IRB-17-274-A-1).

Informed Consent

Informed consent was obtained from all individual participants included in the study.

Data Availability

Data supporting the findings of this study are available from the corresponding author upon request.

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