



Proactive coping mediates the relationship between the narcissism phenotypes and psychological health

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Although the relationship between grandiose and vulnerable narcissism and psychological health is widely accepted, little is known about whether and how coping strategies explain this relationship. We examined the mediating role of proactive coping in this relationship, with a sample of 280 participants from five colleges in Korea. We used four parallel multiple mediation models, and controlled for the indirect effects of coping flexibility, self-esteem, and covariates (age and gender). Results show that grandiose narcissism predicted higher life satisfaction and lower perceived stress, whereas vulnerable narcissism exhibited the opposite pattern, and all of these relationships were mediated by proactive coping. Overall, our results highlight the critical role of proactive coping in the prediction of psychological health among narcissists.

Keywords

grandiose narcissism;
vulnerable narcissism;
proactive coping; life
satisfaction; perceived
stress; coping flexibility;
self-esteem; psychological
health

Recent researchers have emphasized the different roles of grandiose narcissism (GN) and vulnerable narcissism (VN) in the prediction of psychological health, including life satisfaction and perceived stress. GN has been positively linked to life satisfaction (Brailovskaia & Margraf, 2016; Giacomini & Jordan, 2016; Hanke et al., 2019; Kaufman et al., 2020; Ng et al., 2014; Rohmann et al., 2019), whereas VN has been found to predict higher perceived stress (Annen et al., 2017; Besser & Zeigler-Hill, 2011; Ng et al., 2014; Papageorgiou et al., 2019).

Researchers have identified several mediators in the relationships between each dimension of narcissism and life satisfaction and perceived stress. For example, self-compassion (Demirci et al., 2019), social media addiction (Adeeb et al., 2020), and psychological entitlement (Žemojtel-Piotrowska et al., 2017) have been found to mediate the relationship between narcissism and life satisfaction, and narcissism has been reported to predict perceived stress through the mediators of mental toughness (Papageorgiou et al., 2019) and humor style (Besser & Zeigler-Hill, 2011).

However, scholars know little about the mediating role of coping strategies despite the established association of this variable with narcissism (Coleman et al., 2019). To our knowledge, no studies have focused on coping as a mediator, except in the context of coping flexibility (Ng et al., 2014). This highlights the need for further examination of whether and if so how coping strategies explain the relationship between the narcissism dimensions and psychological health. Thus, we sought to fill the research gap.

Literature Review and Development of Hypotheses

Researchers have posited that individuals who engage in proactive coping are agentic, and not just reactive and passive (Greenglass et al., 1999). Proactive individuals expect and prepare for stressful events (Aspinwall & Taylor, 1997), which leads them to minimize the negative impact of stressors by proactively creating a coping environment (Beehr & McGrath, 1996; Billings & Moos, 1983; Schwarzer & Taubert, 2002). Thus, *proactive coping* is characterized by a perception of expected stressors as challenges and goals and not threats, resulting in successful stress management (Aspinwall & Taylor, 1997; Lazarus & Folkman, 1984; Schwarzer & Knoll, 2003; Schwarzer & Taubert, 2002).

From the perspective of the positive features of proactive coping, studies have shown that this variable predicts higher life satisfaction (Hyun & Ku, 2020; Stanojević et al., 2014) and lower perceived stress (Carlander & Johansson, 2020; Gan et al., 2010; Straud & McNaughton-Cassill, 2019). Although GN and VN have not been directly linked to proactive coping, they may play an important role in predicting the degree to which individuals use proactive coping, in the following ways: First, the central characteristic of proactive coping is *future orientation*, which promotes the ability to cope with potential stressors (Aspinwall, 2005; Sohl & Moyer, 2009). In a similar way, GN's positive prediction of entrepreneurial orientation (Wales et al., 2013) and sustainable entrepreneurial orientation (Wu et al., 2019) among chief executive officers, is characterized by future orientation. Further, Kealy and colleagues (2017) found a positive relationship between VN and impairment of future orientation, which resulted in diminished optimism and less engagement in personal growth. Given that individuals with high GN are prone to be oriented toward the future, GNs would be more likely than would VNs to use proactive coping.

Second, higher GN (vs. VN) and proactive coping share core features: high (vs. low) agency, a promotion (vs. prevention) orientation, and an approach (vs. inhibition) motivation. GN predicts high agency, whereas VN predicts low agency (A. A. Brown et al., 2016; Lobbestael et al., 2016; Seidman et al., 2020). Likewise, proactive coping has been found to be positively related to agency (Lopes & Pina e Cunha, 2008; Vernon et al., 2009). Further, GN (vs. VN) is associated with a promotion (vs. prevention) orientation and an approach (vs. inhibition) motivation (Boldero et al., 2015; Foster & Trimm, 2008; Hanke et al., 2019). For example, Zeigler-Hill et al. (2019) found that two facets of GN, narcissistic admiration and rivalry (Back et al., 2013), are associated with status seeking. Consistent with this, Hyun and Ku (2020) found that individuals with a stronger sense of power who display promotion- and approach-oriented behavior (Keltner et al., 2003) tend to engage in proactive coping.

Finally, researchers have shown that GN (vs. VN) is positively associated with adaptive (vs. maladaptive) coping strategies (Coleman et al., 2019). For example, high GN individuals are more flexible than are VN individuals in regard to stress coping (Ng et al., 2014), and they tend to use adaptive coping strategies including task-oriented coping and positive reappraisal (Birkás et al., 2016). Further, denial and behavioral disengagement are negatively predicted by GN traits and positively predicted by VN traits, which relate to individuals' sense of helplessness when dealing with stress (Fernie et al., 2016). Proactive coping shows a similar pattern with GN, being positively correlated with active coping and positive interpretation, whereas VN has a negative correlation with denial, behavioral disengagement, and passive withdrawal (Greenglass et al., 1999; K.-H. Kim, 2001). Hyun and Lee (2021) also found that individuals who cope proactively with stressors are more likely to possess greater coping flexibility than others do. Therefore, we proposed the following hypothesis:

Hypothesis 1: Individuals with higher grandiose narcissism will engage in proactive coping, whereas individuals with higher vulnerable narcissism will be less likely to use proactive coping.

As suggested by the evidence above, GN and proactive coping have a positive effect on psychological health (i.e., life satisfaction and perceived stress), and VN has a negative effect on adaptive outcomes. Therefore, we proposed the following hypothesis:

Hypothesis 2: Proactive coping will mediate the relationship between each dimension of narcissism and mental health, such that grandiose narcissism will predict more life satisfaction and less perceived stress via

more proactive coping, whereas vulnerable narcissism will predict less life satisfaction and more perceived stress via less proactive coping.

Ng and colleagues (2014) found that the effect of each of these two types of narcissism on psychological health was mediated by coping flexibility and self-esteem, both of which were positively associated with proactive coping (Aspinwall & Taylor, 1997; Griva & Anagnostopoulos, 2010; Hyun & Lee, 2021). To examine the mediating role of proactive coping, we included self-esteem and coping flexibility as additional mediators in a parallel multiple mediation model. Further, we included participants' age and gender as covariates in the model, because the level of the trait of narcissism varies with age (Cramer, 2011; Foster et al., 2009; Roberts et al., 2010) and gender (Grijalva et al., 2015).

Method

Participants

We followed the precepts of the Helsinki Declaration to carry out the research procedure, and there was no violation of research ethics. Adults in online alumni communities of five colleges in South Korea voluntarily participated in this study ($N = 280$; 79 men, 201 women; $M_{\text{age}} = 22.99$ years, $SD = 5.02$). Participants were told that we were investigating the relationship between personality and psychological health. We conducted an a priori power analysis using G*power (Faul et al., 2007) to determine the sample size for mediation analysis, as in Gentili et al. (2019). With six variables (one predictor, three mediators, and two covariates), a medium effect size of .15, alpha of .01, and a power level of .99, the power analysis indicated that a minimum of 242 participants would be required. Data were collected through the survey website Qualtrics. The procedure took about 10 minutes, and each participant was given 2,000 Korean won (approximately USD 2.00) as compensation.

Measures

The scales were presented to the respondents in the order in which they are presented in this section.

Narcissism Phenotype

We measured GN and VN using the Korean version (Yang & Kwon, 2016) of the Pathological Narcissism Inventory (Pincus et al., 2009). The inventory consists of six factors, of which three measure GN and three measure VN. We calculated the degree of GN by summing the factors of grandiose fantasy (e.g., "I often fantasize about being admired and respected"), exploitative (e.g., "I find it easy to manipulate people"), and self-sacrificing self-enhancement (e.g., "I try to show what a good person I am through my sacrifices"); and degree of VN by summing the factors of contingent self-esteem (e.g., "I need others to acknowledge me"), devaluing (e.g., "Sometimes I avoid people because I'm concerned that they'll disappoint me"), and entitlement rage (e.g., "I get angry when criticized"). Participants respond on a 6-point Likert-type scale (1 = *not at all like me*, 6 = *very much like me*).

Proactive Coping

We assessed proactive coping by adopting the Proactive Coping Inventory (Greenglass et al., 1999), which has been validated for use in Korean contexts (K.-H. Kim, 2001). The inventory consists of seven subscales designed to measure coping strategies, but participants completed only the 14-item proactive coping section (e.g., "I like challenges and beating the odds"), for which responses are rated on a 4-point Likert scale (1 = *not at all true*, 4 = *completely true*).

Coping Flexibility

We measured coping flexibility with the Korean version (Song & You, 2018) of the 12-item Coping Flexibility Questionnaire (Vriezekolk et al., 2012), which consists of three factors: perceived coping repertoires (e.g., "I have enough strategies to deal with the problem"), reflective coping (e.g., "I think about what is really

important to me”), and flexible coping behavior (e.g., “I immediately change my approach if a certain approach fails”). Participants respond on a 4-point Likert scale (1 = *seldom or never*, 4 = *almost always*).

Self-Esteem

We used the validated Korean version (Lee & Won, 1995) of the Rosenberg Self-Esteem Scale (Rosenberg, 1965) to assess self-esteem. This scale comprises 10 items (e.g., “On the whole, I am satisfied with myself”). Participants respond on a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*).

Life Satisfaction

We assessed life satisfaction with the Korean version (J.-H. Kim, 2007) of the Satisfaction with Life Scale (Diener et al., 1985). The scale consists of five items (e.g., “In most ways my life is close to my ideal”). Participants respond on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

Perceived Stress

Perceived stress was measured with the validated Korean version (Park & Seo, 2010) of the 10-item Perceived Stress Scale (Cohen et al., 1983). The scale consists of two factors (negative and positive perception), with items designed to measure the respondent’s perceived prediction and control of stressful events in daily life (e.g., “How often have you been upset because of something that happened unexpectedly?”). Responses are rated on a 4-point Likert scale (1 = *never*, 4 = *very often*).

Results

Descriptive Statistics and Bivariate Correlations

Descriptive statistics and correlations for the study variables are presented in Table 1. As expected, GN was positively correlated with life satisfaction, whereas VN was negatively correlated with life satisfaction. However, GN was not significantly correlated with perceived stress, whereas there was a significant correlation between VN and perceived stress. In addition, proactive coping was positively correlated with GN, and negative correlated with VN. Thus, Hypothesis 1 was supported. Our findings that coping flexibility was positively correlated with GN and life satisfaction, and negatively correlated with VN and perceived stress, support previous results (Ng et al., 2014). Finally, self-esteem was significantly correlated with VN, but not with GN.

Table 1. *Descriptive Statistics and Correlation Matrix for Study Variables*

	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7	8	9
1. Grandiose narcissism	3.40	0.76	.86	—								
2. Vulnerable narcissism	3.00	0.92	.94	.58**	—							
3. Proactive coping	2.71	0.44	.84	.29**	-.25**	—						
4. Coping flexibility	2.72	0.53	.88	.20**	-.16**	.67**	—					
5. Self-esteem	3.51	0.68	.89	.10	-.36**	.63**	.54**	—				
6. Life satisfaction	4.26	1.21	.86	.14*	-.22**	.53**	.42**	.65**	—			
7. Perceived stress	2.91	0.51	.79	-.05	.41**	-.57**	-.49**	-.68**	-.59**	—		
8. Gender	—	—	.09	.15*	.01	.03	-.04	.04	.12	—		
9. Age	—	—	-.19**	-.18**	-.04	-.10	.02	-.003	-.02	-.30**	—	

Note. *N* = 280.

* $p < .05$. ** $p < .01$.

We used Model 4 of the SPSS PROCESS macro (Hayes, 2013) to ascertain if proactive coping mediated the effect of each of the narcissistic traits on psychological health. Total, direct, and indirect effects were assessed via bootstrapping analysis with 10,000 resamples, and we calculated 95% confidence interval (CIs). Because GN had a significant correlation with age, and VN with gender and age, we performed the mediation analysis after controlling for age and gender.

Grandiose Narcissism

GN positively predicted life satisfaction but was not a significant predictor of perceived stress. When proactive coping was entered as a single mediator, it mediated both links: indirect effect = .25, $SE = 0.05$, 95% CI [0.15, 0.36] for life satisfaction, and indirect effect = -.12, $SE = 0.03$, 95% CI [-0.17, -0.07] for perceived stress. The parallel multiple mediation models of GN and VN are shown in Figures 1a and 1b and Figures 2a and 2b, respectively.

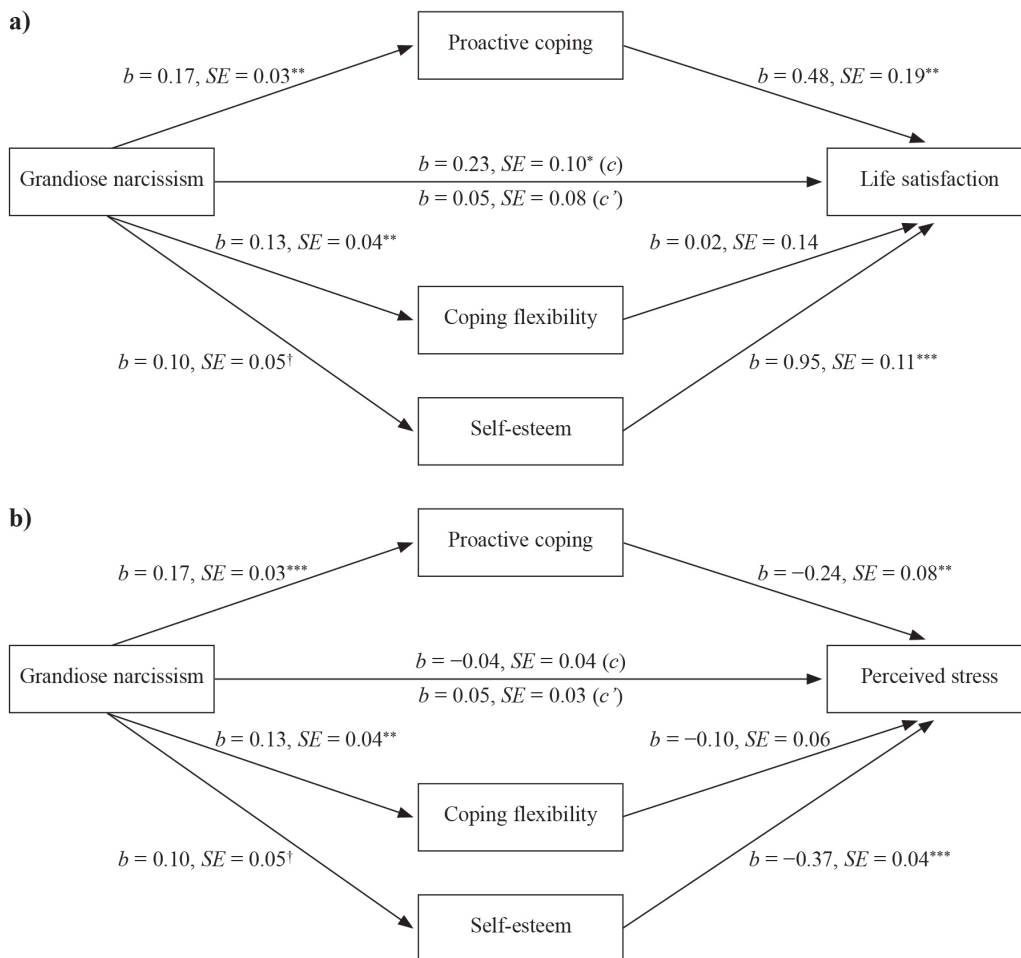


Figure 1. *Parallel Multiple Mediation Models of Grandiose Narcissism Relationships and Mediators*
 Note. Age and gender were controlled for as covariates. Path estimates are unstandardized. Path coefficient c = total effect; path coefficient c' = direct effect.

† $p < .07$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Next, we simultaneously entered proactive coping, coping flexibility, and self-esteem as mediators, and verified their indirect paths. As shown in Figure 1a, the GN–life satisfaction link was mediated by proactive coping, indirect effect = .08, $SE = 0.04$, 95% CI [0.02, 0.16], but not by either coping flexibility, indirect effect = .003, $SE = 0.02$, 95% CI [-0.04, 0.05], or self-esteem, indirect effect = .10, $SE = 0.06$, 95% CI [-0.02, 0.20]. As shown in Figure 1b, the GN–perceived stress link was mediated by proactive coping, indirect effect = -.04, $SE = 0.02$, 95% CI [-0.07, -0.01], but not by either coping flexibility, indirect effect = -.01, $SE = 0.01$, 95% CI [-0.04, 0.02], or self-esteem, indirect effect = -.04, $SE = 0.02$, 95% CI [-0.08, 0.01]. Gender ($ps > .21$) and age ($ps > .34$) did not significantly predict a variable in either model, except for the effect of gender on stress ($b = 0.11$, $SE = 0.03$, $p < .05$).

Vulnerable Narcissism

VN negatively predicted life satisfaction and positively predicted perceived stress. When proactive coping was entered as a single mediator, it mediated the indirect effects of both life satisfaction = -.17, $SE = 0.05$, 95% CI [0.27, -0.08], and perceived stress = .07, $SE = 0.02$, 95% CI [0.03, 0.12].

Next, we simultaneously entered proactive coping, coping flexibility, and self-esteem as mediators, and verified their indirect paths. As shown in Figure 2a, the VN–life satisfaction link was mediated by proactive coping, indirect effect = -.06, $SE = 0.03$, 95% CI [-0.13, -0.02], and by self-esteem, indirect effect = -.26, $SE = 0.06$, 95% CI [-0.38, -0.16], but not by coping flexibility, indirect effect = -.002, $SE = 0.02$, 95% CI [-0.04, 0.03]. As shown in Figure 2b, the VN–perceived stress link was mediated by proactive coping, indirect effect = .02, $SE = 0.01$, 95% CI [0.004, 0.05], and by self-esteem, indirect effect = .09, $SE = 0.02$, 95% CI [0.06, 0.13], but not by coping flexibility, indirect effect = .01, $SE = 0.01$, 95% CI [-0.02, 0.03]. Gender ($ps > .06$) and age ($ps > .05$) did not significantly predict any variables in either model. Thus, Hypothesis 2 was supported.

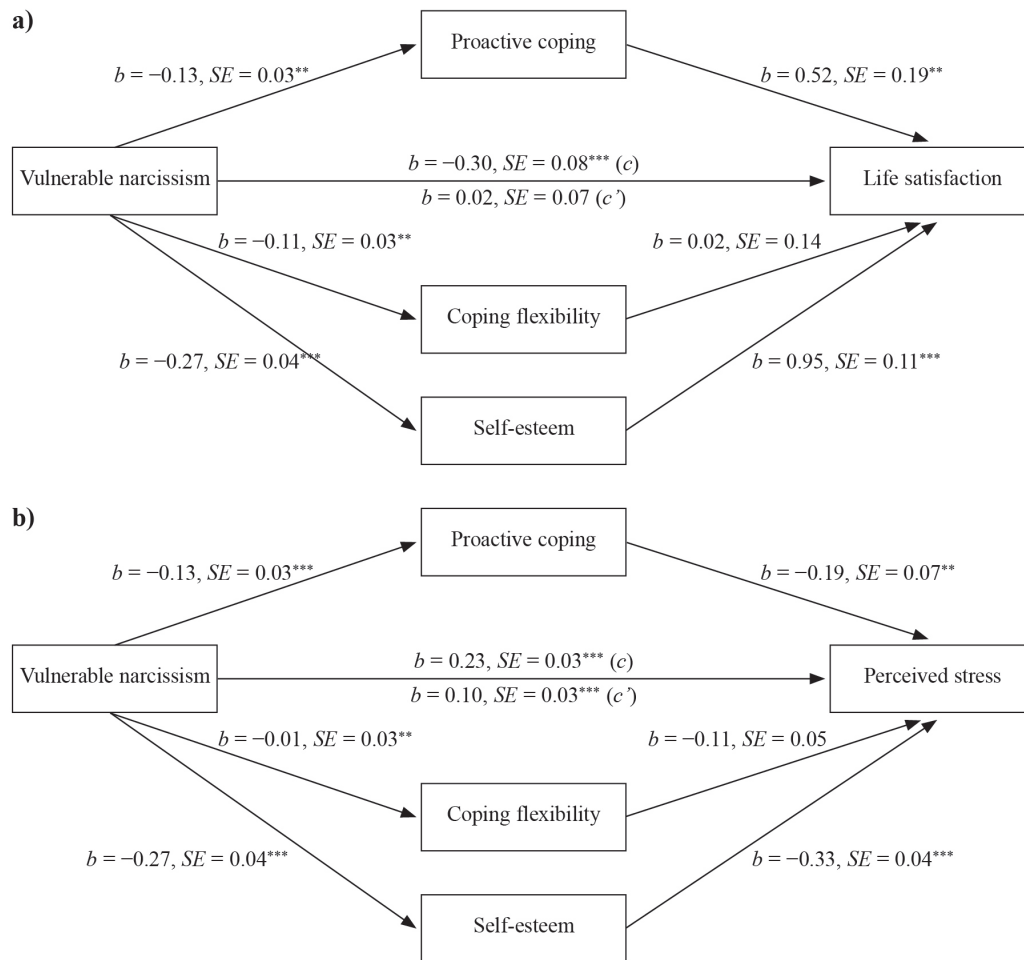


Figure 2. *Parallel Multiple Mediation Models of Vulnerable Narcissism Relationships and Mediators*
 Note. Age and gender were controlled for as covariates. Path estimates are unstandardized. Path coefficient c = total effect; path coefficient c' = direct effect.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

Different patterns in the link between each narcissism phenotype and psychological health have been found in previous studies (Hanke et al., 2019; Papageorgiou et al., 2019). Our findings show that individuals with high GN engaged in more proactive coping, resulting in greater life satisfaction and less perceived stress, whereas individuals with high VN exhibited the opposite pattern. We have broadened the literature on narcissism by showing that as those with GN manage potential stressful events differently from those with VN, which results in differences in the psychological health of these two groups.

Researchers who have studied the correlation of narcissism and stress coping have focused on reactive coping strategies involving current stressors (Birkás et al., 2016; Fernie et al., 2016; Ng et al., 2014). In contrast, we focused on proactive coping involving potential stressful events. In particular, we found that

the mediating effect of proactive coping was significant even when we controlled for the indirect effect of self-esteem and coping flexibility. Our result broadens the literature on narcissism and coping by demonstrating that future-oriented proactive coping contributes to why narcissism predicts psychological health.

The result for the total effect of GN on perceived stress was nonsignificant, which differed from the significant total effect of GN and VN on psychological health. Thus, GN indirectly predicted lower perceived stress via proactive coping. Previously, some studies found that GN was negatively correlated with perceived stress (Birkás et al., 2018; Ng et al., 2014), and others showed that GN had a positive association with perceived stress (Besser & Zeigler-Hill, 2011).

In all the parallel multiple mediation models in this study, GN (vs. VN) positively (vs. negatively), predicted proactive coping and coping flexibility. However, the consequences were different: Proactive coping predicted psychological health, whereas coping flexibility did not. This resulted in a nonsignificant mediating effect of coping flexibility, which is inconsistent with previous results (Ng et al., 2014). This result may have stemmed from the time perspective difference between proactive coping and coping flexibility. Proactive copers are future-oriented (Aspinwall, 2005; Sohl & Moyer, 2009), whereas flexible copers are present-oriented (Cheng, 2001; Kato, 2012). As narcissists with more grandiosity and less vulnerability are more future-oriented (Kealy et al., 2017; Wales et al., 2013; Wu et al., 2019), proactive coping may solely contribute to psychological health. Overall, our results show that, in regard to psychological health, how proactively narcissists cope with potential stressors is more influential than is how flexibly they cope with current stressors.

The direction and significance of the links between GN, VN, and self-esteem were in line with those of previous studies (Ng et al., 2014; Rohmann et al., 2019), except for the relationship between GN and self-esteem. We found that the effect of GN on self-esteem was positive, but marginally significant ($b = 0.10, p = .065$), which is inconsistent with previous results (R. P. Brown & Zeigler-Hill, 2004; Ng et al., 2014). The result we obtained led to a nonsignificant mediating effect of self-esteem in the relationships between GN and life satisfaction and between GN and perceived stress. Regarding the GN–self-esteem relationship that we found, self-esteem comprises two distinct constructs: self-esteem level and self-esteem stability (Kernis, 2005; Kernis et al., 1989). Self-esteem instability is defined as the magnitude of fluctuations in self-esteem (Kernis et al., 1993). In this study we focused on self-esteem level. For example, Zeigler-Hill (2006) found that GN was positively correlated with self-esteem level, but not with self-esteem instability. However, given the interactive effect of self-esteem level and stability on psychological outcomes (de Man et al., 2001; Webster et al., 2007; Zeigler-Hill et al., 2014), self-esteem instability may have resulted in the nonsignificant relationship between GN and self-esteem level that we observed. Future researchers could focus on both self-esteem level and instability to clarify the relationship between narcissism and self-esteem.

Our finding that each dimension of narcissism significantly predicted proactive coping but in different directions extends the literature on proactive coping. Past researchers have identified several predictors of proactive coping, such as future temporal orientation (Ouweland et al., 2008), meaning in life (Miao et al., 2017), personality traits (Straud et al., 2015), and sense of power (Hyun & Ku, 2020). Through our finding that each types of narcissism was an additional predictor of proactive coping, we have contributed to understanding of the individual differences that determine the degree to which individuals engage in proactive coping.

There are limitations in this study. First, we used the Pathological Narcissism Inventory (Pincus et al., 2009) to measure narcissism. However, according to Coleman et al., (2019), a substantial number of researchers have used the Narcissistic Personality Inventory (Raskin & Hall, 1979). The Pathological Narcissism Inventory captures pathological narcissism (Pincus et al., 2009), whereas the Narcissistic Personality Inventory measures adaptive and healthy narcissism (Schoenleber et al., 2015). Although, as in our study, a significant relationship has been found between GN and adaptive coping in a study in which the

Narcissistic Personality Inventory was used (Ng et al., 2014, and also in a study in which the Pathological Narcissism Inventory was used (Ferne et al., 2016, our findings should be interpreted with caution until they are replicated and extended by future researchers who examine the role of proactive coping in narcissists using the Narcissistic Personality Inventory. Second, our participants were Korean adults in an Eastern culture. However, narcissism level differs across cultures, such that people in an Eastern (vs. Western culture) have higher narcissism (Foster et al., 2003; Fukunishi et al., 1996; Kwan et al., 2009; Smith, 1990). As the collectivistic nature of the Korean culture may have influenced our results, future researchers could investigate if our findings can be generalized to individualistic Western cultural contexts. Third, as this study was cross-sectional, the causal relationships between the variables cannot be inferred. Future researchers could use longitudinal studies to verify the causality by identifying aspects of proactive coping and changes in psychological health, according to each of the two narcissism phenotypes.

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