

Emotion Regulation as a Pathway Through Which Personality Affects Psychological Well-being: A Preliminary Study in Korea and the United States

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Abstract

Emotion regulation has been suggested as a pathway through which personality traits (e.g., extraversion or neuroticism) affect psychological well-being. However, the pathway needs further investigation across cultures due to variations in parts of the relationship reported in recent culture research. With an aim of improving current understanding of the pathway, we investigated the role of emotion regulation mediating the link between personality traits and well-being across two college samples from different cultural backgrounds: Korea and the United States (US). Results of mediation analysis revealed that the extraversion—well-being relationship was fully mediated by the degree to which individuals regulate negative emotions in both Korean and US samples. However, the neuroticism—well-being relationship was partially mediated by emotion regulation in the US sample, while it was fully mediated in the Korean sample. The role of emotion regulation differently functioning across cultures suggests the importance of investigating cultural-specific mechanism of psychological processes.

Key words : Emotion, Emotion regulation, Personality, Psychological well-being, Life satisfaction, Culture

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1. Introduction

Personality is linked to well-being (Lucas & Diener, 2008; Steel, Schmidt, & Shultz, 2008). One mechanism that explains this link is emotion regulation (ER), which involves attempts to maintain, increase, or decrease the experience and expression of unpleasant or pleasant emotions (Gross, 1999). Research on ER suggests that neuroticism is associated with depressive symptoms through the mediation of rumination (i.e., repetitively thinking about the symptoms of one's distress, and on its possible causes and consequences; Muris, Roelofs, Rassin, Franken, & Mayer, 2005). Similarly, research also suggests that extraversion and neuroticism are associated with the affective components of psychological well-being through the mediation of cognitive reappraisal (i.e., the evaluation and replacing of negative thoughts with more positive ones; Wang, Shi, & Li, 2009).

However, the mediation model that explains the relationships among personality, psychological well-being, and ER, requires further investigation for at least two reasons. First, cross-cultural research highlights variations in parts of these associations across cultures. For instance, suppressing emotional expressions strongly correlates with depressive symptoms and lower levels of life satisfaction among Americans, but not among Asians (Soto, Perez, Kim, Lee, & Minnick, 2011). Suppressing emotional expressions also strongly correlates with increased negative emotions and poorer interpersonal responsiveness among Americans upholding Western values, but this relationship was reported to be weaker among Americans subscribing to Asian values (Butler, Lee, & Gross, 2007). The inconsistent findings on suppressing emotional processes across cultures suggest that active emotional processing could also differ across cultures.

In addition, statistical limitations in the mediation analyses used in previous studies suggest the need to reinvestigate the mediating effect of ER using new analytical techniques. Some studies used Baron and

Kenny's approach to investigate mediation (e.g., Muris et al., 2005), but this approach has been reported to produce low power and inflated Type I error (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). In addition, one of the four requirements for mediation (i.e., significant correlation between the predictor and the outcome) suggested by Baron and Kenny was found to be unnecessary (Shrout & Bolger, 2002). Inability to test the significance of indirect effects is another limitation. In order to overcome these limitations, new approaches, such as the Sobel test or the bootstrap method, which allow for significance testing of mediation based on estimations of the sampling distribution, have been developed (Shrout & Bolger, 2002).

2. The Present Study

The present study examined the mediating role of ER on the relationship between personality and psychological well-being in two cultural samples using the bootstrap method. We hypothesized that ER would mediate the relationship between personality and well-being, and that this effect would differ across cultures. In particular, we expected that ER would play a more important role in the relationship with well-being based on cross-cultural studies reporting the benefits of ER in social relationships that Asians value. To test this hypothetical path, we recruited college students from universities in the United States (US) and Korea, which are considered highly individualistic and collectivistic countries, respectively (Hofstede, 1991). Personality was assessed in terms of extraversion and neuroticism, and psychological well-being was indexed as the level of life satisfaction (LS).

2.1. Method

2.1.1. Participants and Procedure

A total of 182 students from the United States ($n = 90$; 33 men, 21 women, and 36 unspecified) and South

Korea ($n = 92$; 20 men, 51 women, and 21 unspecified) with ages ranging from 18 to 29 years ($M = 21.5$, $SD = 2.40$) participated in the study on a voluntary basis. The participants at both sites completed a paper-and-pencil questionnaire and were compensated with course credits.

2.1.2 Measures

2.1.2.1. Psychological well-being

The 5-item Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) was used to assess participants' overall life satisfaction judgments, a significant part of psychological well-being. The psychometric properties and research findings of the Korean version of the scale were reviewed by Lim, Lee, and Suh (2010). Cronbach's alpha coefficients in our study were .90 and .80 for the US and Korean samples, respectively.

2.1.2.2. Emotion Regulation

Four items in the mood repair subscale of the Trait Meta-Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) were adopted as the ER index in this study. The validity and reliability of the TMMS

are supported for both US and Korean samples (e.g., I try to think good thoughts no matter how badly I feel; Lee & Lee, 1997). In addition, two locally developed items were used to assess ER (e.g., When I'm in a bad mood, I try to get out of the feelings as soon as possible; see the Appendix for both English and Korean version of the items). Internal consistency reliability was .79 in both samples.

2.1.2.3. Personality

The Revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992; NEO-PI-R translated into Korean; Yoo & Min, 2001) with 25 items was used to assess the Big Five personality factors. Internal consistency reliabilities ranged from .63 to .80 across the two samples for the five factors.

2.2. Results

2.2.1. Descriptive Statistics and Correlations

Descriptive statistics are summarized in Table 1. Consistent with previous research, neuroticism was higher in the Korean sample ($t(178) = 12.99$, $p < .001$), while

Table 1. Descriptive Statistics and Correlations of Core Variables

| | | <i>M</i> | <i>SD</i> | Extraversion | Neuroticism | LS | ER |
|--------------|-------|----------|-----------|--------------|-------------------|-------|----|
| Extraversion | Korea | 18.99 | 3.17 | - | | | |
| | US | 19.03 | 3.45 | - | | | |
| Neuroticism | Korea | 16.97 | 3.64 | -.19 | - | | |
| | US | 14.81 | 4.29 | -.26* | - | | |
| LS | Korea | 15.33 | 3.66 | .24* | -.21 [†] | - | |
| | US | 17.79 | 4.30 | .33* | -.36** | - | |
| ER | Korea | 20.66 | 4.44 | .42** | -.28** | .56** | - |
| | US | 21.06 | 4.60 | .44** | -.38** | .40** | - |

Note. LS=life satisfaction, ER=emotion regulation. * $p < .05$, ** $p < .001$, [†] $p = .052$.

LS was higher in the US sample ($t = 16.84, p < .001$). No group differences were found in the levels of extraversion or ER. As expected, personality traits were significantly associated with LS in both samples. In the US sample, extraversion ($r = .33, p < .001$) and neuroticism ($r = -.36, p < .001$) were significantly correlated with LS. In the Korean sample, extraversion was significantly correlated with LS ($r = .24, p < .05$), while neuroticism was correlated with LS with marginal significance ($r = .24, p = .052$).

2.2.2. Testing of Mediation

The pathway of personality to LS via ER was tested using mediation analysis. To determine the significance of the indirect effect, we took the 95% confidence interval (CI) of the estimates obtained from bootstrap analysis (1,000 replicates). The 95% CI of the bootstrap estimates indicates the range of indirect effects that would be obtained if we were to repeat the analysis 1,000 times. If the 95% CI does not include zero, the indirect effect is statistically significant at the .05 level.

The results of the indirect effects are summarized in

Table 2. In both sample, the 95% CI of the indirect effect did not include zero, which indicates that ER significantly mediated the effect of personality on LS.

When we further tested whether ER was fully or partially mediated the association between personality and LS, we found that the pattern of mediation was slightly different across the groups. As illustrated in Figure 1, the path coefficients and significance levels for each effect was tested in the model consisted of the following: (a) the direct effect of personality on ER (Path-a); (b) the direct effect of ER on LS after personality is held constant (Path-b); (c) the overall total effect (Path-c) of the predictor (i.e., personality) and the mediator variable (i.e., ER) on the criterion (LS); (d) the indirect effect of personality on LS through the mediator ER, as calculated by multiplying Path a by Path b (ab); and (e) the remaining direct effect of personality (Path c-prime: c') on LS after the mediator was held constant. If the indirect effect (ab) equals the total effect (Path-c), and the direct effect of c' is zero, then we can infer full mediation. If, however, the indirect effect (ab) is smaller than the total effect (Path-c) and c' does not equal zero, then we can infer partial mediation (Shrout &

Table 2. Bootstrap Analysis of the Statistical Significance of Indirect Effects

(a) Korean sample ($N=92$)

| Independent variables | Standardized indirect effect (β) | SE for β | Bootstrap estimates | | Significance |
|-----------------------|--|----------------|----------------------------|----------------------------|--------------|
| | | | 95% CI for β (lower) | 95% CI for β (upper) | |
| Neuroticism | -.151 | .061 | -.290 | -.050 | $p < .05^*$ |
| Extraversion | .255 | .092 | .119 | .504 | $p < .05^*$ |

(b) US sample ($N=90$)

| Independent variables | Standardized indirect effect (β) | SE for β | Bootstrap estimates | | Significance |
|-----------------------|--|----------------|----------------------------|----------------------------|--------------|
| | | | 95% CI for β (lower) | 95% CI for β (upper) | |
| Neuroticism | -.103 | .052 | -.249 | -.019 | $p < .05^*$ |
| Extraversion | .171 | .101 | .022 | .446 | $p < .05^*$ |

Note. LS=life satisfaction, ER=emotion regulation. * $p < .05$, ** $p < .001$

Bolger, 2002).

The differences we found were the mediating role of neuroticism across the samples. Although the total effect of neuroticism on LS was significant at least in the marginal level in both samples, in the Korean sample, the indirect effect (c-prime) of neuroticism on LS was not significant. In contrast, in the US sample, the indirect effect (c-prime) of neuroticism on LS was significant. The findings indicated that ER fully mediated the relationships between neuroticism and LS in the Korean sample (c-prime path coefficient = .01, $p = n.s.$), while ER partially mediated the relationships in the US sample (c-prime path coefficient = -.23, $p < .05$).

3. Discussion

The aim of this study was to reexamine a mediation model for the relationships among personality, ER, and psychological well-being across two cultures. Consistent with previous research, cultural differences were found in neuroticism and psychological well-being assessed by LS. Interestingly, however, although the ER means did not differ between groups, the mediating effect of ER did. In particular, ER fully mediated the association between neuroticism and psychological well-being in the Korean sample, while ER partially mediated the same association in the US sample.

We suggest that the dissimilar levels of mediation can be explained by differences in the relative importance of ER between collectivistic and individualistic cultures. In collectivism-oriented cultures, such as the Korean society, harmonious interpersonal relationships are emphasized more than individual emotional experiences; thus, adjustment of one's own emotion to social-emotional norms is an essential psychological process for the maintenance of harmonious relationships. In individualism-oriented cultures, however, where uniqueness or independence from others is generally preferred over harmony, individual emotional satisfaction and autonomy of emotional experiences are regarded as the predominant

avenues to a happy life (Matsumoto et al., 2008). Such dissimilar sociocultural atmospheres might affect the importance of ER influencing psychological well-being, which in turn resulted in differential mediating roles of ER across cultures.

3.1. Limitations and Future Work

This study represented a preliminary step toward tackling the issue of cross-cultural variations in the mediating role of ER. As this was designed as a preliminary study, we employed samples from only two countries. Thus, we cannot yet generalize our findings to all collectivistic and individualistic cultures. In order to generalize the present findings, future research should recruit larger samples from multiple countries with collectivistic and individualistic cultural orientations.

To further support the present findings, future research should investigate various types of ER strategies. For example, including regulation of positive emotions would provide a more holistic picture of the role of ER in the personality-psychological well-being relationship. In the current study, we focused on the regulation of negative emotions and found the results on cross-cultural differences in the role of ER that mediate the association between neuroticism and psychological well-being. However, we did not find such results in the association between extraversion and psychological well-being. As extraversion is more strongly associated with positive emotions (Watson & Clark, 1997), it is possible that regulation of positive emotions is more apt to capture the cross-cultural differences in ER that mediates the relationship between extraversion and psychological well-being. Future research could test the possibility.

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Appendix

A. Emotion regulation items in English

(Items adapted from the TMMS)

I try to think good thoughts no matter how badly I feel.

When I am upset, I realize that the “good things in life are illusions.” (R)

When I become upset, I remind myself of all the pleasures in life.

No matter how badly I feel, I try to think about pleasant.

(Items locally developed)

When I'm in a bad mood, I try to get out of the feelings as soon as possible.

When I'm in a bad mood, I don't feel the necessity to make myself get out of the mood in such a hurry. (R)

*R=Reverse scored

B. Emotion regulation items in Korean

나는 기분이 나쁘더라도 좋은 생각을 하려고 노력한다.

나는 속상할 때면 ‘인생에서 좋은 것은 하나도 없다.’라는 생각한다. (R)

나는 속상할 때면 내 인생에 있어 즐거웠던 모든 일들을 떠올린다.

나는 기분이 나쁘더라도 즐거운 일을 생각하려고 노력한다.

나는 기분이 나쁘면, 그 상태를 빨리 벗어나려 한다.

나는 기분이 나쁠 때, 그 상태를 빨리 벗어나고자 굳이 노력하지는 않는 편이다. (R)

*R=역코딩