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Mediating role of self-compassion in the association between moral injury and depression among Korean youths



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ABSTRACT

Background: Beyond the trauma research, it was assumed that ordinary younger people can experience moral injury, leading to depression. Based on this assumption, this study investigated the mediating pathways by which moral injury, caused by oneself, others, and by betrayal of others, impacts depression through self-compassion. Methods: Overall, 1,567 South Korean youths responded to an online survey that employed three scales: the Moral Injury Experience Scale, the Korean version of the Self-Compassion Scale, and the Korean version of the Center for Epidemiologic Studies Depression Scale. A mediation analysis was used to examine whether moral injury predicted depression through positive (self-kindness, mindfulness, and common humanity) and negative components (self-judgment, isolation, and over-identification).

Results: The results showed that the three types of moral injury (by oneself, by others, and by betrayal of others) had a significant direct effect on depression and a significant indirect effect via the negative components, while the three positive components did not have any significant mediating effect.

Conclusions: Overall, a sociocultural explanation, in addition to the existing theoretical frameworks, is required to understand the depression occurring in the current young generation in South Korea.

1. Introduction

1.1. Moral injury and depression

Litz et al. (2009) studied the moral injury of veterans and proposed the most widely known model for explaining moral injury. They found that discrepancies may arise between one's experiences and one's schemas (e.g., the self is good, the world is good) when performing duties in a battlefield or during a war, violating one's personal belief system. Witnessing or engaging in behaviors that lead to such discrepancies causes cognitive dissonance, activating a process of reconciliation that can at times cause distress. Like this, the incident that violates the moral standards that one has is called a moral injury event, and the resulting suffering or distress is called a moral injury or moral injury experience. The resulting signs of moral injury in veterans include a loss of trust and sense of betrayal, spiritual and existential issues, psychological symptoms, social problems, and self-deprecation (Drescher et al., 2011). Moral injury can also lead to depression and anxiety, anger, hostility, post-traumatic stress disorder (PTSD), suicidality, drug abuse, and sleep

problems (Battles et al., 2018; Bravo et al., 2020; Currier et al., 2014; Jordan et al., 2017).

Recently, a study of moral injury was conducted on highly diverse samples. A recent systematic review (Williamson et al., 2018) confirmed that moral injury will lead to mental health problems irrespective of occupation or generation. Also, Jang (2021) confirmed that experiencing moral injury correlates with depression, shame, guilt, anger, and mental health in South Korean population.

Therefore, this study assumed that ordinary people, regardless of the occupational feature or the background, can experience moral injury and focused on moral injury of Korean youths. One prominent characteristic of the South Korean youth is their demand for fairness, holding it in high regard when it comes to opportunities, procedures, and outcomes, which they believe can be ensured by free competition (SISAIN, 2019). It has often been recognized that the younger generation prefers progressive tendencies and has a strong urge for social change and improvement in Korean society. However, the Korean society is currently facing the awareness and demands of the younger generation that have never been experienced before. Unlike progressive values, which focus on the protection of the weak, the distribution of social resources, and equality, the

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current young generation prefers unlimited free competition and argues that they can accept the results if the competition process is fair (ASIAECONOMY, 2020). This demand for fairness can lead them to experience negative reactions when others' actions are deviated from moral standards in their daily lives and induce negative effect on their mental health. As such, this study specifically focused on confirming the relationship between moral injury and depression in South Korean youth, and determining the components of self-compassion that play a mediating role when the three types of moral injury affect depression levels.

1.2. Role of self-compassion in the relationship between moral injury and depression

Neff (2003b) defined the concept of compassion, determined the components (self-kindness, self-judgment, mindfulness, over-identification, common humanity, and isolation) of self-compassion, and developed the Self-Compassion Scale (SCS). She also proposed the role of SCS, which is protection against the negative consequences of depression and maintain self-esteem. Studies examining the function of composite score of self-compassion revealed the association between psychological well-being and psychopathology (Zessin et al., 2015). Similarly, a meta-analysis of 14 studies with 4,007 participants from 20 samples revealed a correlation of -.52 for composite score of self-compassion and depression (MacBeth and Gumley, 2012).

The studies on the relationship between the components of selfcompassion and depression showed that positive components lowered depression and negative components increased depression. Hall, Row, Wuensch, and Godley (2013) showed that self-kindness, a positive component of self-compassion, is predictive of alleviating depressive symptoms, while another study found a positive correlation between self-judgment, a negative component of self-compassion and depressive symptoms in a sample of patients with a major depressive disorder (Luyten et al., 2007). This association was also supported in another study conducted with college students (Joeng and Turner, 2015). Moreover, higher levels of isolation and over-identification, and lower levels of self-kindness were related to higher levels of depressive symptoms in community adults one-year later (López et al., 2018). However, the correlations between the positive components of SCS and depression were relatively small among non-clinical samples. Specifically, Körner et al. (2015) and Brophy et al. (2020) discovered that self-kindness, mindfulness, and common humanity in adults accounted for a smaller variance in depression, compared to self-judgment, isolation, and over-identification. In the non-clinical group, the level of depression was generally low, so the positive components showed a weak effect.

Self-compassion also played a significant role in the effect of moral injury. The positive components of self-compassion (e.g., mindfulness) alleviate the negative effects of moral injury, while its negative components (e.g., over-identification) worsens the effects (Kelley et al., 2019). When examining the effect of self-compassion, previous studies regarded this as a moderating factor reflecting intervention or treatment, primarily supported by manipulating or measuring its level (Leary et al., 2007; Neff et al., 2005). Recently, its mediating effect has been continuously supported and expanded for non-clinical adults or college students. Studies suggest that self-compassion mediated the effect of psychosocial stress, which was similar to moral injury event, on behavioral responses (Pace et al., 2009) and the effect of attachment on depression and quality of life (Brophy et al., 2020). Also, among veterans, self-compassion mediated the effects of PTSD symptoms on alcohol use (Forkus et al., 2020). Although it did not deal with moral injury, recent studies by Kim et al. (2021) directly proved that self-compassion is not a moderator but a significant mediator in the relationship between self-control and help-seeking attitudes among Asian American college students.

These results suggest that if self-compassion is measured as one of the individual difference variables without inducing or manipulating it, the effect of moral injury on depression can be expected to be mediated. Therefore, this study assumed a pathway from moral injury to depression through

higher level of negative components and lower level of positive components and tested the mediational model targeted to South Korean youths.

1.3. The present study

Based on the previous literature and beyond the trauma research, this study aimed to explore the level of moral injury in South Korean youth. It also aimed to determine the effect of experiences of moral injury on depression in South Korean youth and investigate whether self-compassion alleviates or worsens these experiences to help mental health professionals facilitate changes among them. Finally, the present study explored whether the mediating effects of the components of self-compassion differed.

2. Method

2.1. Participants and procedures

In December 2020, an online survey was created and performed. Specifically, a link to the survey was sent to South Korean youths aged between 20 and 29 years through a registered online survey company (see Appendix A). The participants provided their consent via an online consent form, and then responded to the items. As there was a high possibility that the term "morality" would induce socially desirable responses, this study's title was "Mental Health and Life Events of the Young Generation in South Korea."

As compensation for their participation, they received points that corresponded to 5,000 Korean won by the online survey company. The data of 1,567 (males, n=791; females, n=776) participants were collected through the above procedure while retaining the anonymity of the participants. The following personal data were collected: consent, gender, age, education levels, item responses, and time spent to complete the items. The time data were used to exclude cases when the time spent was more or less than twice the standard deviation (SD) of the mean time. As there were no outliers, all 1,567 responses were accepted as valid.

2.2. Ethical considerations

This Study was approved by the Institutional Review Board of Honam University (approval number: 1041223-202011-HR-25). As data collection was performed through an online survey, a written consent form was displayed on the screen and participants agreed to participate by ticking the relevant assent box. Participants were assured of confidentiality and anonymity.

2.3. Measures

2.3.1. Moral Injury Experience Scale (MIES)

The MIES was developed to measure the level of subjective responses to moral injurious events in general population of South Korea (Jang, 2021). The scale consists of 15 items of six types of responses (perception, guilt, shame, anger, inability to forgive, and social withdrawal) to unethical behavior of oneself and the betrayal of others and three types of responses (perception, anger, inability to forgive) to unethical behavior of others. The participants answered the items using a six-point scale, ranging from "not experienced at all" (1) to "experienced very strongly" (6). Cronbach's \(\alpha \) of moral injury by oneself (e.g., I have experienced guilt due to my violation of the moral codes or values), moral injury by others (e.g., I have found it difficult to forgive others for their transgressions.), and moral injury by the betrayal of others (e.g., I have found out that someone betrayed me.) were .93, .84, and .95, respectively. Three means of the subscales were calculated and used in the analyses.

2.3.2. Korean version of the Self-Compassion Scale (K-SCS)

The K-SCS consisted of 26 items developed by Kim et al. (2008) after standardizing Neff's (2003b) SCS into Korean. The participants answered

the items using a five-point scale, ranging from "almost never" (1) to "almost always" (5). The scale contains six subscales, and its composition and content are consistent with those of the original scale. Cronbach's α s of self-kindness, common humanity, mindfulness, self-judgment, isolation, and over-identification were .82, .81, .81, .86, .86, and .86, respectively. Six means of the subscales were calculated without reversing and used in the analyses.

2.3.3. Korean version of Center for Epidemiologic Studies Depression Scale-Revised (K-CESD-R)

The K-CESD-R's 20 items, re-standardized by Lee et al. (2016) was used. The items were answered on a four-point scale, ranging from "Rarely or none of the time (less than 1 day)" (1) to "Most or all of the time (5–7 days)" (4), addressing how frequently participants experienced the described content during the past week. The total score of the 20 items was calculated and used in the analyses (Cronbach's $\alpha=.90$).

2.4. Analyses

The data analysis was conducted using the SPSS software (version 24.0; IBM Corp., 2016). Means, SDs, and internal consistency reliability estimates were calculated for all the variables, and the relationships between all the variables were examined using a correlational analysis. Owing to the large sample size, only p-values of less than 0.01 were reported to avoid Type I errors.

The correlational analyses between age, gender, education, and the study variables were performed to identify potential covariates. Then multiple or parallel mediation was used to allow self-judgment, isolation, and over-identification to be included simultaneously as potential mediators in each model. Three mediation models were tested with depression as a dependent variable, three types of moral injuries as the independent variables, and self-judgment, isolation, and over-identification as simultaneous mediators.

Hayes' PROCESS macro (v3.5) for SPSS was employed to conduct mediation analyses (model 4), using 10,000 bootstrapping resamples to generate 95% bias-corrected confidence intervals for the indirect effect (Preacher and Hayes, 2008). Bootstrapping is a nonparametric method used to estimate the independent variable's indirect effects (ab) on the dependent variable through the proposed mediators. The indirect effect is considered significantly different from zero when zero is not included within the 95% confidence interval (Preacher and Hayes, 2008).

3. Results

3.1. Sample characteristics

Table 1 provides details on the sample's characteristics. Overall, there was an approximately equal distribution of gender; the majority completed university or higher degree, and for the MIES, the mean scores of moral injuries caused by others was the highest. Overall, participants reported the values lower than 3.0, which was the midpoint of the SCS scale.

3.2. Correlations between predictor, mediator, and dependent variables

The intercorrelations for all the variables are presented in Table 2. Moral injury by oneself, by others, and by the betrayal of others showed a significant correlation with depression levels $(.30 \le r \le .47, p < .01)$. Experiencing a greater degree of moral injury by oneself $(.33 \le r \le .39, p < .01)$, others $(.26 \le r \le .32, p < .01)$, and by the betrayal of others $(.29 \le r \le .37, p < .01)$ was associated with higher self-judgment, isolation, and over-identification levels. The correlation between three positive self-compassion subscales and depression levels was close to zero, while the negative self-compassion subscales displayed the significant and positive correlation. The relationship between variables like gender, age, and education level, revealed that age and education level had a

Table 1. Sample characteristics (N = 1,567).

| | M (SD) | N (%) |
|----------------------------------|----------------------|--------------|
| Age | 25.42 (2.60) | |
| Gender | | |
| female | | 791 (50.5) |
| male | | 776 (49.5) |
| Education level | | |
| under university | | 450 (28.7) |
| Four or more years of university | | 1,117 (71.3) |
| CES-D | 40.24 (10.20), 20-73 | |
| MI self | 2.42 (1.04), 1-6 | |
| MI other | 3.22 (1.21), 1-6 | |
| MI betrayal | 2.24 (1.24), 1-6 | |
| SCS self-kindness | 2.53 (.80), 1-5 | |
| SCS common humanity | 2.72 (.86), 1-5 | |
| SCS mindfulness | 2.75 (.86), 1-5 | |
| SCS self-judgment | 2.53 (.92), 1-5 | |
| SCS isolation | 2.49 (.99), 1-5 | |
| SCS over-identification | 2.74 (.94), 1-5 | |

Note. MI self: Moral injury by oneself; MI other: Moral injury by other(s); MI betrayal: Moral injury by betrayal of other(s); Age (years). p < .01.

correlation close to zero with the main variables. Therefore, the mediational models in which moral injury causes depression via self-compassion included negative components as mediating factors and gender as a covariate.

3.3. Moral injury and depression

Three multi-mediation models were tested in this study (see Figure 1). The first analyzed moral injury by oneself as the independent variable, depression as the dependent variable, self-judgement, isolation, and over-identification as potential mediators, and gender as a covariate. This independent variable had a significant direct effect on depression and a significant indirect effect via self-coldness, isolation, and overidentification (see Table 3). When these mediators were included in the mediational model, the total effect of moral injury was reduced and remained significant. In the second model, moral injury by others had a significant direct effect on depression and a significant indirect effect via self-coldness, isolation, and over-identification, which reduced the total effect of moral injury and remained significant in the mediational model. Finally, in the third model, moral injury by the betrayal of others showed a significant direct effect on depression and a significant Indirect effect via self-coldness, isolation, and over-identification. When the latter factors were included in the mediational model, the total effect of moral injury was reduced and remained significant.

4. Discussion

4.1. Moral injury, depression, and self-compassion

The results of the present study were as follows. First, South Korean youths were likely to experience moral injury in their daily lives. Second, moral injury as an independent variable had an impact on self-compassion as a mediator. Third, positive and negative components of self-compassion did not work in a single dimension and the six components had a differential mediating effect.

This study showed that South Korean youths were likely to experience moral injury events, which can be associated with depression while previous studies have determined the effects of moral injury by studying veterans or people working in law enforcement. The findings provide implications related to the understanding of the younger generation and find intervention strategies that could be used in response to the

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Table 2. Zero-order correlations between predictors, mediators, and dependent variables.

| | variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|----|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | . CES-D | 1.00 | | | | | | | | | | | | |
| 2 | . MI self | .44* | 1.00 | | | | | | | | | | | |
| 3 | . MI other | .30* | .39* | 1.00 | | | | | | | | | | |
| 4 | . MI betrayal | .47* | .55* | .45* | 1.00 | | | | | | | | | |
| 5 | . SCS self-kindness | 01 | .07* | .08* | .10* | 1.00 | | | | | | | | |
| 6 | . SCS common humanity | .12* | .09* | .15* | .10* | .62* | 1.00 | | | | | | | |
| 7 | . SCS mindfulness | 01 | .03 | .08* | .05 | .72* | .66* | 1.00 | | | | | | |
| 8 | . SCS self-judgment | .56* | .39* | .32* | .35* | .01 | 23* | 12* | 1.00 | | | | | |
| 9 | . SCS isolation | .62* | .38* | .26* | .37* | .02 | 14* | .00 | .74* | 1.00 | | | | |
| 10 | . SCA over-identification | .56* | .33* | .32* | .29* | 02 | 16* | 01 | .79* | .77* | 1.00 | | | |
| 11 | . gender | .12* | 08* | .07* | 05 | 14* | .06 | 07* | .08* | 20* | .19* | 1.00 | | |
| 12 | . education | 02 | 05 | 02 | 05 | .04 | 02 | .07* | .02 | .03 | .01 | .11* | 1.00 | |
| 13 | . age | .04 | .00 | 02 | 01 | .01 | .01 | .02 | .04 | 01 | .03 | .00 | .50* | 1.00 |

Note. MI self; Moral injury by oneself; MI other: Moral injury by other(s); MI betrayal: Moral injury by betrayal of other(s); Age (years); Gender (1 = male, 2 = female). *p < .01.

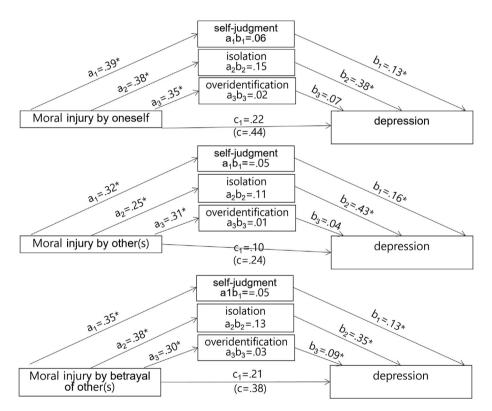


Figure 1. Mediational analyses to examine the role of the negative components of self-compassion in the relationship between moral injury and depression.

emotional difficulties they experience. Jang (2021) found that the correlation between moral injury caused by oneself, others, and the betrayal of others and depression was .43, .27, and .40, respectively, in the adult population in South Korea. However, the correlation of this study was .44, .30, and .47 respectively. Based on r to z transformation, the correlation coefficient difference was significant only in the case of the betrayal of others (z = 1.72, p = 0.043), suggesting that the younger generation feels greater pain when they experience direct acts of betrayal or observe rules being violated by betrayal.

Also, the pain of moral injury among youths was mediated by self-compassion. However, mediating effect differed by the components of self-compassion. Contrary to common humanity, overidentification showed the weakest mediating effect among the negative components. Wrosch and Heckhausen (2002) found that among younger adults, internal-control attributions of regrettable behavior were associated with

low intensity of regret and low levels of intrusive rumination. It might be possible to assume that intrusive rumination is associated with depression, and internal attribution is the opposite form of overidentification. Therefore, by confronting to negative events such as unethical behaviors, their lower tendency of internalization failed in explaining the variance of depression. Since the mediating effects of isolation were the strongest, it is most urgent to help youths avoid isolation to prevent worsening depression when they experience moral injury, including by betrayal of others.

This study showed that self-compassion's positive and negative subscales differ in their effects as mechanisms through which moral injury relates to depression studied in South Korean youths. Higher levels of moral injury, regardless of origin, predicted higher depression levels directly and indirectly via higher levels of self-judgment, isolation, and over-identification. The significant indirect effects of negative components of self-compassion on depression are consistent with previous

Table 3. Mediation of the effect of moral injury on depression through selfjudgment, isolation, and overidentification.

| std. β | t | p | 95% CI |
|--------|---|--|--|
| | | | |
| .44 | 20.23 | <.001 | [4.00,4.86] |
| .22 | 11.27 | <.001 | [1.87,2.66] |
| .06 | - | - | [.02,.08] |
| .15 | - | - | [.12,.18] |
| .02 | - | - | [.00,.05] |
| | | | |
| .24 | 12.23 | <.001 | [2.08,2.87] |
| .10 | 5.90 | <.001 | [.67,1.34] |
| .05 | - | - | [.02,.07] |
| .11 | - | - | [.10,.16] |
| .01 | - | - | [.00,.05] |
| | | | |
| .38 | 21.37 | <.001 | [3.53,4.24] |
| .21 | 13.35 | <.001 | [1.87,2.51] |
| .05 | - | - | [.02,.07] |
| .13 | - | - | [.10,.16] |
| .03 | - | - | [.01,.05] |
| | .44 .22 .06 .15 .02 .24 .10 .05 .11 .01 .38 .21 .05 .13 | .44 20.23 .22 11.27 .06150224 12.23 .10 5.90 .05110138 21.37 .21 13.35 .0513 - | .44 20.23 <.001 .22 11.27 <.001 .06150224 12.23 <.001 .10 5.90 <.001 .05110138 21.37 <.001 .21 13.35 <.001 .0513 |

Note. $Total(c) = Direct(c_1) + indirect self-judgment(a_1b_1) + indirect isolation(a_2b_2) + indirect overidentification(a_3b_3) 95\% confident interval with 10,000 bootstrap samples.$

research (Körner et al., 2015). Based on the fact that the depression level of youths who lead ordinary lives is generally low, positive components are expected to have a weak effect on depression. The results of this study support this prediction and the weak association is thought to have a non-significant mediating effect.

The result of zero-order correlation between moral injury and self-compassion in young people is also noteworthy. A higher level of moral injury was associated with higher positive and negative components of self-compassion in the non-clinical group, whereas the moral injury events experienced by the clinical group with mental health difficulties lowered the influence of positive components. This discrepancy is interpreted as being due to the psychological mechanisms that Neff (2011) considered to be expressed in self-compassion, which operates to maintain emotional well-being or psychological health in healthy young people. The higher they experienced moral injury, the higher they criticized themselves and experienced distance from others; however, they also appeared to be greater generous toward themselves and others, without avoiding failure or pain.

Among the positive components of self-compassion, the correlation between common humanity and depression was different from the others. Self-kindness and mindfulness were negatively and not significantly correlated with depression, but common humanity was positively and significantly correlated with depression. The association of selfkindness and mindfulness with depression is not contradictory to previous studies (Forkus et al., 2020; Kelley et al., 2019; MacBeth and Gumley, 2012). The relationship between common humanity and depression should be interpreted considering the characteristics of the sample. Young people in their twenties tend to recognize that they are better than average and have a uniqueness. A previous study in social psychology showed that college students believed their names to be unique than those really were (Kulig, 2013). In other words, young people pursue uniqueness even in the characteristics given by others, such as names. Self-image that is unique is connected to positive self-evaluation and lowers depression. Thus, the common humanity that everyone has shortcomings and weaknesses, which is difficult to be compatible with the self-image of uniqueness, may have been associated with depression.

Significant gender differences were also found in all the variables of this study. Specifically, females showed higher depression, moral injury by others, isolation, and over-identification levels. Otherwise, males showed higher moral injury by oneself, self-kindness, mindfulness, and common humanity levels. In the previous studies, females were less self-compassionate (Neff, 2003a; Neff et al., 2005), as Neff (2011) suggested, which can be attributed to females greater negative evaluation of themselves and higher tendency of depression or rubmination. However, the mechanism that males experienced greater moral injury by themselves than females is unclear. Females may be less immoral than men, and males may be higher introspective. The gender difference and its mechanism of moral injury experience needs to be further explored.

4.2. Limitations and future research

This study has a few limitations. First, this study used a convenience sampling method that caused limitations in the sample's representativeness. Although the availability and use of smartphones and the internet is widespread in South Korea, it is difficult to guarantee accurate participation to represent the total population. While this study sample was composed of a nearly equal ratio of male and female participants, there was a limitation due to the over-extraction of data from individuals who had a college or higher education level. Second, all the data were collected using a cross-sectional design. Therefore, to confirm the causal relationships, they must be verified using a longitudinal data collection design. Third, Muris and Petrocchi (2017), and Brophy et al. (2020) mentioned the possibility that the negative indicators of self-compassion are stronger associated with psychopathology, owing to the similarity of the concepts. Therefore, as the effects of self-warmth and self-coldness as mediators remain unclear, they must be replicated. Fourth, the tendency of youths to pursue uniqueness and to find the cause of the problem from the outside was used to explain the results of common humanity and overidentification in this study. This possibility must be verified with an empirical study that includes measures that reflect the discriminatory needs or characteristics of this population. The findings could provide implications regarding the ways in which the components of self-compassion that correspond to self-warmth could be used to intervene youth depression. Finally, since results of correlation analysis on the three types of moral injury seem to be similar, it is possible to point out that there is no need to classify the moral injury scale into three sub-factor. The final three-factor model was supported in the confirmatory factor analysis conducted at the time of the first development of the scale (Jang, 2021). It is also necessary to study whether it is reasonable to combine the three subscales into one total score in the future study.

5. Conclusion

Korean youths are experiencing moderate level of three types of moral injury (by oneself, by others, and by betrayal of others), which were associated with depression. Also, the distress from their moral injury were positively associated with positive and negative subscales of self-compassion. Finally, the three types of moral injury had a significant direct effect on depression and a significant indirect effect via the negative components, while the three positive components did not have any significant mediating effect.

Declarations

Author contribution statement

Eunyoung Jang: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

Data will be made available on request.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

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