

# Writing Can Heal: Effects of Self-Compassion Writing Among Hong Kong Chinese College Students

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Self-compassion has been repeatedly shown to be associated with mental and physical well-being. Recent studies showed that self-compassion writing can promote mental well-being, but this has not been examined among Chinese populations. The present study examined the effectiveness of self-compassion writing among Chinese students. One hundred and twelve university students were recruited and randomly assigned into 1 of the following 2 writing conditions: self-compassion writing and control writing. Participants were asked to write according to the instruction for 3 times in a week and report their levels of positive and negative affect immediately after writing. Self-reported depressive symptoms and physical symptoms, as well as self-compassion (i.e., self-kindness, common humanity, and mindfulness) and emotion regulation capacities (i.e., attention, clarity, and repair) were assessed at baseline and 2 follow-ups (1-month, 3-month). Results showed the self-compassion writing group reported more negative affect across the 3 days of writing than the control group. No significant group differences were found in depressive symptoms, self-compassion components, or emotion regulation capacities, but the self-compassion writing group reported a significant drop in physical symptoms at the 1- and 3-month follow-up whereas the control writing group reported no significant change in physical symptoms across time. The findings suggested that self-compassion writing may benefit physical health, but further studies should be conducted to examine its underlying mechanism.

*Keywords:* self-compassion, expressive writing, emotion regulation, Chinese

*Supplemental materials:* <http://dx.doi.org/10.1037/aap0000041.supp>

Self-compassion is a construct from Buddhist philosophy (Neff, 2003a) in which compassion is defined as being aware of and having a concern to alleviate both suffering of the self and of others (Goetz, Keltner, & Simon-Thomas, 2010). It is a self-caring attitude in the face of hardship or perceived inadequacy (Bennett-Goleman, 2001). Consistent with the concept of “discriminating wisdom” in the Buddhist philosophy that asserts that all actions are experienced with a compassionate understanding (Goldstein & Kornfield, 1987), self-compassion circumvents the entire self-evaluation process in the face of hardship or perceived inadequacy and disregards the positive or negative aspects of the self (Neff, Hsieh, & Dejitterat, 2005). Drawing on the writing of various Buddhist teachers (e.g., Salzberg, 1997), Neff (2003a, 2008) defined self-compassion with three components: self-kindness, common humanity, and mindfulness. Self-kindness refers to being warm and understanding toward the self when one is suffering or encountering inadequacy or failure. Instead of passing harsh criticism and judgment on oneself, individuals with self-kindness treat themselves gently, accept reality with concern and kindness, and

experience emotional equanimity. Common humanity refers to recognizing one’s suffering and personal failure as a shared human experience instead of an isolated experience that happens to one alone. The last component, mindfulness, refers to maintaining a nonjudgmental and receptive mind state, putting their aversive situation into a larger perspective, and observing own thoughts and feelings with openness and clarity at times of adversities and hardships. The mindfulness component in self-compassion differs from the general concept of mindfulness by focusing on individuals’ state of mind during difficult and aversive situations rather than being a mindset toward life in general (Neff & Dahm, 2015).

Self-compassion is similar to but broader than other positive aspects of the self that were previously studied in literature related to self-esteem and humanistic psychology (Barnard & Curry, 2011). Although both self-esteem and self-compassion represent positive attitudes toward the self, they are not equivalent but only moderately associated (Neff, 2003a). One major difference is that self-esteem is contingent on social comparison (Tesser, 1999) and meeting standards (Kernis, 2003), which tends to separate the self from others, whereas self-compassion is not contingent on social comparison and it emphasizes the sense of relatedness instead of separation (Neff & Vonk, 2009). Moreover, research showed that self-compassion could provide and explain additional variance of healthy functioning over and beyond those explained by self-esteem (Neff & Vonk, 2009), suggesting the two self-concepts are distinct from each other. Humanistic themes such as “unconditional positive regard” (Rogers, 1961) and “unconditional self-acceptance” (Ellis, 1973), which emphasize acknowledging and

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This article was published Online First February 15, 2016.

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accepting personal weakness and adopting an unconditionally caring stance toward oneself, are largely consistent with the self-kindness dimension of self-compassion. However, self-compassion extends beyond humanistic themes of focusing on the individuals by incorporating a sense of shared humanity (i.e., common humanity) and a broad and balanced perspective (i.e., mindfulness) into its conceptualization.

Self-compassion is closely related to physical and mental health. Accumulating research has showed its significant and positive associations with physical health (Raque-Bogdan, Ericson, Jackson, Martin, & Bryan, 2011), life satisfaction, and positive affect and negative associations with negative affect, depression, and anxiety (Neff, 2003a; Neff, Kirkpatrick, & Rude, 2007; Neff & Vonk, 2009). Self-compassion was also found to provide significant additional variance on well-being above and beyond that provided by social support (Neely, Schallert, Mohammed, Roberts, & Chen, 2009). Such findings suggested that self-compassion may play a distinct role in self-help intervention and promotes health independently from social resources.

### Self-Compassion and Emotion Regulation

Self-compassion has been regarded as a useful emotion regulation strategy when encountering difficulties (Neff, 2003b). Possessing self-compassionate attitudes allows individuals to bring awareness to their emotions, approach distress with kindness and understanding, and have a sense of shared humanity. With a more adaptive approach to their distress, individuals may gradually transform their negative emotions into more positive ones, have a better understanding of situations, adopt more effective coping strategies to deal with their stressors (Neff, 2003a, 2003b), and hence experience better outcomes.

Findings from empirical research supported the mediating role of emotion regulation in the association between self-compassion and well-being. Correlational studies showed significant and positive associations of self-compassion with emotional intelligence and adaptive emotional processing (Heffernan, Griffin, McNulty, & Fitzpatrick, 2010; Neff, 2003a; Neff et al., 2005), and a study found that emotion regulation mediated the association between self-compassion and stress (Finlay-Jones, Rees, & Kane, 2015). Experimental data also showed self-compassion cultivating exercises (e.g., the “Gestalt two-chair” exercise, compassionate mind training exercise, and mindful self-compassion program) could serve as effective emotion regulation strategies, which led to significant increases in happiness; reductions in emotional distress, depression, and anxiety; and an enhanced ability to soothe and reassure the self (Diedrich, Grant, Hofmann, Hiller, & Berking, 2014; Gilbert & Procter, 2006; Kelly, Zuroff, & Shapira, 2009; Neff & Germer, 2013; Neff et al., 2007). All of these findings suggested that emotion regulation may be the mechanism underlying the health benefits of self-compassion.

### Writing Intervention

Writing may be a cost-effective way to promote well-being among the Chinese by facilitating self-compassion and emotional regulation capacities. Most of the aforementioned self-compassion interventions require professional assistance and guidelines to implement (e.g., Gilbert & Procter, 2006; Kelly et al., 2009; Neff et

al., 2007), which make them less feasible to serve as self-help tools. Expressive writing is a widely examined self-help intervention (Frattaroli, 2006) that allows individuals a safe context to acknowledge their feelings and gradually understand, validate, and accept them (Greenberg & Lepore, 2004; Lepore, Greenberg, Bruno, & Smyth, 2002). Through writing, individuals experience an increase in emotional intelligence and emotional self-efficacy (Kirk, Schutte, & Hine, 2011), especially when they are explicitly asked to reflect on emotion regulation in their writing (Wing, Schutte, & Byrne, 2006). Previous studies showed that expressive writing is particularly helpful for Chinese and Asian Americans (Lu & Stanton, 2010; Lu, Zheng, Young, Kagawa-Singer, & Loh, 2012), probably because these ethnic groups have a low tendency to seek mental health services (Chu, Hsieh, & Tokars, 2011; Nguyen & Lee, 2012) and preference for self-help intervention over external professional help (Han & Pong, 2015) due to stigmatization of mental illnesses in lay cultures (Lee, Lei, & Sue, 2000; Mak & Chen, 2010).

Therefore, adopting the methodology of expressive writing, self-compassion writing may be a cost-effective way to promote self-compassion, emotion regulation, and well-being among Chinese. Thus far, only limited studies have examined the benefits of self-compassion writing (e.g., Baum & Rude, 2013; Imrie & Troop, 2012; Leary, Tate, Adams, Batts Allen, & Hancock, 2007; Odou & Brinker, 2014). Among them, only two experimental studies have explicitly induced all three components of self-compassion in the writing paradigm (Leary et al., 2007; Johnson & O'Brien, 2013), and none of them were conducted with Chinese or Asian participants. In the first self-compassion writing study, participants were asked to identify a personally experienced negative event that made them feel bad about themselves (Leary et al., 2007). Three prompts were given to the self-compassion writing group with each prompt focused on one component of self-compassion (i.e., self-kindness, common humanity, and mindfulness). Specifically, participants were asked to list ways in which other people also experience similar events (to promote common humanity); to express understanding, kindness, and concern to themselves in the same way that they might comfort to a friend who had undergone the same experience (to promote self-kindness); and to describe their feelings about the experience in an objective and unemotional fashion (to promote mindfulness). Results showed that the self-compassion writing group reported significantly lower levels of postwriting negative affect than the typical expressive writing group. These results were replicated by Odou and Brinker (2014), which suggested that guiding individuals to adopt a self-compassionate attitude soon after a distressing event may provide them timely relief from negative emotions and hence promote adaptive emotional processing. Johnson and O'Brien (2013) adopted the writing prompts developed by Leary et al. (2007) and replicated the study to examine the effect of repeated self-compassion writing (3 times a week). They found participants in the self-compassion writing group reported significant reduction in shame-proneness and depressive symptoms at the 2-week follow-up whereas no significant changes were reported by the typical expressive writing group or the control group. These findings suggested that self-compassion writing had a stronger effect in eliminating the negative mood associated with distressing events and facilitating emotion regulation than typical expressive writing.

Nevertheless, it should be noted that the self-compassion writing paradigm used in these two studies may not exactly resemble the conceptualizations of self-compassion components defined by Neff (2003a, 2003b); specifically, the writing prompts seem to oversimplify the concepts of common humanity and mindfulness. Common humanity is not limited to reflecting on how others may experience similar events, but it also acknowledges suffering and failures as a shared part of the human experience. Although mindfulness involves a balanced approach to individuals' thoughts and feelings, it is not tantamount to processing the events in an unemotional way, which can lead to emotion suppression. Instead of ignoring the emotional aspects of a distressing experience, mindfulness is about bringing awareness to emotions in an accepting and nonjudgmental manner, without suppression or exaggeration. Although the three self-compassion components were not specified in the writing paradigm used in their study, Baum and Rude (2013) developed writing instructions adapted from self-compassion and mindfulness interventions (Leary et al., 2007; Segal, Williams, & Teasdale, 2002) that implicitly capture the concepts of self-kindness (e.g., express the same sort of kindness, understanding, and compassion toward yourself as you would toward someone you really care about), common humanity (e.g., remember that part of the human experience includes experiencing difficult feelings about distressing events), and mindfulness (e.g., try to bring curiosity to your experience and be accepting of any emotions or thoughts that arise). Results showed that depression-prone individuals in the self-compassion writing group tended to report less depressive symptoms than those in the control condition who wrote objectively (i.e., without emotion) about how they spent their time, suggesting self-compassion writing may be beneficial to well-being.

Neff (2009), the developer of the Self-Compassion Scale (SCS), also created a self-compassion journal exercise with a more comprehensive writing paradigm on the three self-compassion components than the one used by Baum and Rude (2013). However, as far as research that can be accessed, this writing paradigm has not been tested in any empirical studies; thus, its effectiveness on health improvement is yet to be examined. Further research is needed to investigate the health benefits of self-compassion writing, which provides a comprehensive writing instruction that could thoroughly illustrate and guide individuals to write on the three components of self-compassion and facilitate emotion regulation. In addition, the self-compassion writing paradigm has never been examined among Asians, who tend to have a higher level of emotion suppression (Butler, Lee, & Gross, 2007; Soto, Perez, Kim, Lee, & Minnick, 2011) and a lower level of self-compassion (Neff, Pisitsungkagarn, & Hsieh, 2008) than their Caucasian counterparts. Therefore, it is worthwhile to further explore whether the benefits of repeated self-compassion writing can be extended to promote psychological and physical well-being among Chinese individuals.

### Aims of the Present Study

The present study attempted to test the effectiveness of self-compassion writing and its potential driving mechanisms (i.e., self-compassion and emotion regulation). The two aims of the present study were (a) to examine the effect of self-compassion writing on postwriting mood as well as psychological and physical

health among Hong Kong Chinese, and (b) to examine the underlying mechanism of self-compassion writing.

Writing about negative experiences may cause temporary emotional disturbances and short-term emotional costs, but later health benefits were expected (Pennebaker & Beall, 1986). Therefore, it was hypothesized that group differences would be observed in positive and negative affect across the 3 days of writing, psychological and physical health at follow-up assessments. In particular, lower levels of positive affect and higher levels of negative affect were expected in the self-compassion writing group than the control writing group immediately after writing but more reduction of depressive and physical symptoms for the self-compassion group than the control group at the 1- and 3-month follow-ups. Furthermore, in line with the literature and empirical findings that suggest emotion regulation is the mechanism underlying the health benefits of self-compassion (Finlay-Jones et al., 2015; Neff, 2003a, 2003b), we expected that the self-compassion writing group would experience more improvements in self-compassion components and emotion regulation capacities at follow-ups than the control writing group. In addition, we expected that these improvements in self-compassion components and emotion regulation capacities would mediate the condition effect on reducing depressive and physical symptoms.

## Method

### Participants

One-hundred and twelve university students were recruited from the Chinese University of Hong Kong via mass mailing in two cohorts (one in the spring semester, the other in the summer semester). Data from 47 participants were excluded: 5 dropped out after baseline assessment and did not participate in the writing intervention, 2 were outliers with multiple scores beyond 3 *SD*, and 40 participants dropped out at 3-month follow-up assessment (20 from the self-compassion writing group and 20 from the control writing group). No participants dropped out at 1-month follow-up assessment. As a result, the data of 65 participants (30 men and 35 women; mean age = 20.5, *SD* = 1.43) were retained for analysis. There were 33 participants in the self-compassion writing condition (mean age = 20.70 years, *SD* = 1.43; 17 men and 16 women) and 32 participants in the control writing condition (mean age = 20.31 years, *SD* = 1.42; 13 men and 19 women). Among the participants, 35.6% were freshmen, 26% were sophomores, 20.2% were juniors, 6.8% were seniors, and 11.5% were graduate students; most were social sciences (26.9%) and sciences (20.2%) students, followed by arts (15.4%), engineering (12.5%), and business (11.5%) students. Most students did not have a religion (78.8%), and some of them self-identified as Christians or Catholics (17.3%).

### Procedures

The present study adopted a mixed research design, with writing condition as the between-subject variable and time of assessments as the within-subject variable. The entire study was implemented on the Internet platform. Participants completed the baseline assessment 1 week before the writing sessions. Then, stratified by gender, participants were randomly assigned to one of the two

conditions: self-compassion writing and control writing. Both experimenter and participants were blind to the condition assignment.

The first writing session took place in the laboratory. A briefing session was given to the participants in which the experimenter explained the study procedure and provided a list of suicide prevention hotlines and contact information of counseling centers. Participants then entered into an individual room and logged into websites that contained writing instructions specified for their assigned conditions. Participants were asked to follow the writing instructions and type in the textbox(es) in their native Chinese language (three designated textboxes in the self-compassion writing condition; one textbox for each self-compassion component in the order of mindfulness, common humanity, and self-kindness; one designated textbox in the control writing condition; Andersson & Conley, 2013; Seih, Chung, & Pennebaker, 2011). Sessions were timed such that a pop-up screen would appear when time was up, and participants were automatically logged off from the website. A restriction was also set such that participants could not submit their text until 20 min had passed. Disclosing negative events can be a difficult and upsetting process that typically results in short-term distress (Smyth, 1998). Therefore, it is a common practice to assess the short-term emotional cost of emotional disclosure in expressive writing research (Pennebaker & Beall, 1986; Smyth, 1998). In this study, immediately after the writing session, participants were asked to complete a brief measurement on mood (i.e., Positive and Negative Affect Schedule [PANAS]). Participants completed their writing and mood assessment in 3 consecutive days. After the first laboratory writing session, they completed the second and the third online writing sessions at home or any private space as they preferred. One month and 3 months after the final writing session, participants completed the follow-up assessments. The study has been approved by the Survey and Behavioral Research Ethics Committee of the Chinese University of Hong Kong and the Joint CUHK-NTEC Clinical Research Ethics Committee.

### Writing Conditions and Instructions

**Self-compassion writing.** Participants followed the same writing instruction each day. A modified writing instruction was created based on the self-compassion journal exercise developed by Neff (2009) and the self-compassion induction exercise developed by Leary et al. (2007) and it was used in the present study. Participants were asked to write about a recent event that was painful or about which they felt bad, or any time that they had judged themselves, and then to use an accepting and self-compassionate attitude to process the experience. Three prompts, each centered on the concept of mindfulness, common humanity, and self-kindness, were given to participants (see Appendix in supplemental materials).

**Control writing.** Previous research suggested that asking control participants to write on neutral and trivial topics (e.g., description of your living room) may cause a control group deterioration effect, and that having participants write about their daily activities in a factual and unemotional manner may be a more appropriate control (Radcliffe, Lumley, Kendall, Stevenson, & Beltran, 2007). As such, control participants in the present study were asked to write about their daily activities in a factual and unemotional

manner: Day 1, what they did over the last week; Day 2, what they did over the last 24 hr; and Day 3, what they plan to do over the coming 24 hr.

### Measures

All measures used in this study are Chinese. When available, the Chinese version of measures was used. Measures lacking an available Chinese version in current literature, namely the Cohen-Hoberman Inventory of Physical Symptoms (CHIPS; Cohen & Hoberman, 1983) and the Trait Meta-Mood Scale (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), were translated into Chinese using the backward translation method (Brislin, 1970) by two independent translators who are bilingual in Chinese and English. Discrepancies were reconciled before the translation was used.

**Mood.** The 20-item PANAS (Watson, Clark, & Tellegen, 1988) was used to measure individuals' levels of positive and negative mood states immediately after each day of writing to capture participants' momentary changes of mood due to writing. Participants rated themselves on a 5-point scale from 1 (*very slightly or not at all*) to 5 (*very much*). In the present study, Cronbach's  $\alpha$ s of positive affect across the 3 days of writing ranged from .84 to .90, and Cronbach's  $\alpha$ s of negative affect across the 3 days of writing ranged from .88 to .91.

**Depressive symptoms.** The 10-item Center for Epidemiological Studies Depression Scale (CES-D; Irwin, Artin, & Oxman, 1999) was used to measure individuals' level of depression. Participants rated themselves on a 4-point scale from 0 (*rarely or none of the time*) to 3 (*most or all of the time*). In the present study, Cronbach's  $\alpha$ s at the baseline and the follow-up assessments ranged from .81 to .85.

**Physical symptoms.** The 33-item CHIPS (Cohen & Hoberman, 1983) was used to measure individuals' level of common physical symptoms including sleep problems, constant fatigue, stuffy head or nose, acid stomach or indigestion, and poor appetite. Participants used a 5-point scale ranging from 0 (*not at all*) to 4 (*extremely*) to indicate the degree to which the symptom has bothered them in the past week. In the present study, Cronbach's  $\alpha$ s at the baseline and the follow-up assessments ranged from .85 to .93.

**Self-compassion.** The SCS (Neff, 2003a) was used to assess self-compassion in three dimensions, including self-kindness (vs. self-judgment), common humanity (vs. isolation), and mindfulness (vs. overidentification). Given that our interest was to examine how self-compassion writing may promote self-compassion qualities that facilitate emotion regulation, only the positive subscales of SCS were analyzed in the present study. The 13 items assessed individuals' acts toward themselves at difficult times; participants indicated how often they behave in the stated manner on a 5-point scale ranging from 1 (*almost never*) to 5 (*almost always*). In the present study, Cronbach's  $\alpha$ s of the subscales at the baseline and 1-month follow-up assessment ranged from .72 to .87.

**Emotion regulation.** The 30-item Trait Meta-Mood Scale (Salovey et al., 1995) was used to measure individuals' ability to reflect upon and manage their emotions. It consists of three subscales to measure different aspects of emotion regulation: (a) attention—the degree of attention devoted to personal feelings; (b) clarity—the clarity of feelings experienced; and (c) repair—the



ability to regulate mood states. Participants rated themselves on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating better emotion regulation skills. In the present study, Cronbach's  $\alpha$ s of subscales at the baseline and 1-month follow-up assessment ranged from .71 to .84.

**Demographic information.** Participants provided demographic information including age, gender, and level of education.

**Manipulation check.** To determine whether participants in the self-compassion writing group had engaged in the condition-specific writing instruction, the writing content was analyzed with the Linguistic Inquiry and Word Count program (LIWC2007; Pennebaker, Chung, Ireland, Gonzales, & Booth, 2007). Related word categories were examined, including positive and negative emotion words, causation words, and insight words. Text analysis is a standard procedure to show that emotional and cognitive processing was involved during writing, and it is a method commonly adopted by expressive writing researchers (e.g., Guastella & Dadds, 2006; Warner et al., 2006).

## Data Analysis

Analyses were performed in several stages. First, tests of baseline equivalence and attrition analysis were performed. Second, as a manipulation check, the self-compassion writing and the control group were compared on their average use of words across the 3 days of writing. Third, the immediate effect of self-compassion writing and control writing on mood, and their effect on psychological and physical health at follow-ups, were examined. Finally, to explain the potential mechanisms of self-compassion writing, the effect of self-compassion writing on self-compassion components and emotion regulation capacities were examined to evaluate the mediating roles of self-compassion and emotion regulation in the effect of self-compassion writing on depressive and physical symptoms.

## Results

### Baseline Equivalence

The completers in the self-compassion writing group and the control writing group were compared to determine the success of randomization. Independent-sample  $t$  tests and a  $\chi^2$  test were conducted. Given that the scores of physical symptoms were positively skewed (skewness ranged from 1.43 to 2.26), log transformation was applied to the scores, and the transformed scores were then used in analysis. The two groups did not differ on demographic information (all  $ps > .28$ ) or variables of interest (i.e., depressive symptoms, physical symptoms, self-compassion components, and emotion regulation capacities) at baseline ( $ps > .09$ ).

### Attrition Analysis

The completers and noncompleters of writing were compared. Independent-sample  $t$  tests and a  $\chi^2$  test were conducted. The two groups did not differ on demographic information ( $ps > .06$ ) and variables of interest at baseline ( $ps > .09$ ).

## Manipulation Check

The writing content of the self-compassion writing group and the control group was compared by examining the average percentage use of words across the 3 days of writing. Results of independent-sample  $t$  tests showed significant group differences in the pattern of word use. The self-compassion writing group wrote significantly more positive emotion words (e.g., love, nice, sweet), negative emotion words (e.g., hurt, ugly, nasty), causation words (e.g., because, effect, hence), and insight words (e.g., think, know, consider) than the control group (see Table 1).

## Immediate Effects of Writing on Mood

Repeated measure analyses of variance (ANOVAs) by mood (positive vs. negative), time (D1, D2, vs. D3), and condition (self-compassion writing vs. control) were conducted to examine the between-group differences in positive affect and negative affect immediately after each writing session. Cohort of participant recruitment (spring semester vs. summer semester) was added as a covariate in the analysis because a previous study showed that baseline stress would influence the effectiveness of writing intervention (Arigo & Smyth, 2012), and participants recruited in the spring semester may have more academic stressors and workload than those in the summer semester and thus respond differently to the writing intervention.

The three-way interaction of Mood  $\times$  Time  $\times$  Condition was not significant,  $F(2, 124) = 0.37, p = .69$ , but a significant interaction effect was found between mood and condition,  $F(2, 62) = 9.54, p < .001$ . Participants in the self-compassion writing condition tended to report lower levels of positive affect and higher levels of negative affect than the control group (see Table 2).

## Effects of Writing on Psychological and Physical Health

**Depressive symptoms.** Repeated measure ANOVA by time (baseline, 1-month follow-up, 3-month follow-up) and condition (self-compassion writing vs. control) was conducted to examine the between-group differences in depressive symptoms across time with the cohort of participant recruitment controlled. Results showed that the interaction effect between time and condition was not significant,  $F(2, 124) = 0.94, p = .39$  (see Table 3).

**Physical symptoms.** Repeated measure ANOVA by time (baseline, 1-month follow-up, 3-month follow-up) and condition (self-compassion writing vs. control) was conducted to examine

Table 1  
Group Comparison of Writing Content

Word category	Self-compassion writing, $M$ ( $SD$ )	Controlling writing, $M$ ( $SD$ )	$t$	$df$
Positive emotion	3.29 (1.39)	1.30 (0.91)	6.78**	63
Negative emotion	3.10 (1.25)	0.21 (0.35)	12.74**	37.2
Causation	2.05 (.81)	0.55 (0.81)	7.40**	63
Insights	5.02 (1.50)	2.29 (1.64)	7.02**	63

\*\*  $p < .01$ .

Table 2  
*Self-Reported Mood Across 3 Days of Writing (Unadjusted Means and Standard Deviations)*

Mood	Day 1, <i>M (SD)</i>	Day 2, <i>M (SD)</i>	Day 3, <i>M (SD)</i>	Overall, <i>M (SD)</i>
Positive affect				
Self-compassion writing	2.44 (.67)	2.27 (.76)	2.13 (.68)	2.28 (.62)
Control	2.39 (.66)	2.43 (.73)	2.42 (.74)	2.42 (.62)
Negative affect				
Self-compassion writing	1.99 (.70)	1.92 (.68)	1.85 (.66)	1.92 (.59)
Control	1.58 (.49)	1.56 (.55)	1.59 (.57)	1.58 (.39)

the between-group differences in physical symptoms across time, with the cohort of participant recruitment controlled. The interaction effect between time and condition was marginally significant,  $F(2, 113.09) = 2.81, p = .07, \eta_p^2 = .04$ . Specifically, the interaction effect between time and condition was significant at 3-month follow-up,  $F(1, 62) = 4.03, p < .05, \eta_p^2 = .06$ , but not significant at 1-month follow-up,  $F(1, 62) = 3.03, p = .09, \eta_p^2 = .05$ . To follow-up the interaction effect between time and condition, repeated measure ANOVA was conducted separately in each condition. A significant main effect of time was found in the self-compassion writing condition,  $F(2, 30) = 4.89, p < .05, \eta_p^2 = 0.25$ . Participants reported a significant drop in physical symptoms from baseline to 1-month follow-up,  $F(1, 31) = 9.88, p < .01, \eta_p^2 = .24$ , and 3-month follow-up,  $F(1, 31) = 6.86, p < .05, \eta_p^2 = .18$ . However, the time effect was not significant in the control writing condition,  $F(2, 29) = 1.43, p = .26$ . Participants reported no significant decrease in physical symptoms from baseline to 1-month follow-up,  $F(1, 30) = 0.81, p = .38$ , and 3-month follow-up,  $F(1, 30) = 2.91, p = .10$  (see Table 3).

To determine whether the participant dropout at 3-month follow-up may contaminate the findings, a repeated measure ANOVA by time (baseline vs. 1-month follow-up) and condition (self-compassion writing vs. control) was also conducted only with baseline and 1-month data (including data from participants who dropped out at the 3-month follow-up assessment). Similar to the findings with 3-month data, results showed the interaction effects between time and condition on depressive symptoms,  $F(1, 102) = 0.00, p = .95$ , and physical symptoms,  $F(1, 102) = 1.39, p = .24$ , were not significant, but the trend of reduced physical symptoms in the self-compassion writing group at 1-month follow-up,  $F(1, 51) = 10.61, p < .01$ , was similar to the findings with 3-month data that participants in the self-compassion writing condition reported.

### Effects of Writing on Self-Compassion and Emotion Regulation

**Self-compassion.** A repeated measure multivariate analysis of variance (MANOVA) by time (baseline, 1-month follow-up, 3-month follow-up) and condition (self-compassion writing vs. control) was conducted to examine the between-group differences in self-compassion components (i.e., self-kindness, common humanity, and mindfulness) across time, with the cohort of participant recruitment controlled. Results showed the interaction effect between time and condition on self-compassion components was not significant,  $F(6, 252) = 0.41, p = .87$  (see Table 3).

**Emotion regulation.** A repeated measure MANOVA by time (baseline, 1-month follow-up, 3-month follow-up) and condition (self-compassion writing vs. control) was conducted to examine the between-group differences in emotion regulation capacity (i.e., attention, clarity, and repair) across time, with the cohort of participant recruitment controlled. Results showed that the interaction effect between time and condition on emotion regulation capacity was not significant,  $F(6, 248) = 0.52, p = .79$  (see Table 3).

To examine whether the participant dropout at the 3-month follow-up assessment may change the findings, repeated measure MANOVA by time and condition was also conducted only with baseline and 1-month data. Similar to the findings with 3-month data, results showed the interaction effects between time and condition on self-compassion components,  $F(3, 101) = 0.20, p = .90$ , and emotion regulation capacities,  $F(3, 101) = 0.57, p = .64$ , were not significant. On the other hand, because no significant improvement in self-compassion components and emotion regulation capacities at the 1-month and 3-month follow-ups was shown in the self-compassion writing group, no further analysis was performed to examine the potential mediating roles of self-compassion components and emotion regulation capacities in the effect of self-compassion writing on physical symptoms.

### Discussion

The present study extended previous research by examining the effectiveness of self-compassion writing among Chinese. It was expected that the self-compassion writing could facilitate self-

Table 3  
*Self-Reported Psychological and Physical Health (Composite Score), Self-Compassion, and Emotion Regulation Capacities Across Time (Unadjusted Means and Standard Deviations)*

Health outcomes	Baseline, <i>M (SD)</i>	1 month, <i>M (SD)</i>	3 month, <i>M (SD)</i>
Depressive symptoms			
Self-compassion writing	10.09 (5.30)	11.24 (4.67)	9.24 (4.78)
Control	9.08 (4.95)	9.38 (4.84)	9.19 (4.85)
Physical symptoms			
Self-compassion writing	15.97 (11.43)	11.30 (11.53)	10.15 (13.17)
Control	12.20 (8.80)	10.44 (8.44)	9.13 (7.67)
Self-kindness <sup>a</sup>			
Self-compassion writing	2.74 (0.71)	2.78 (0.75)	2.78 (0.72)
Control	2.82 (0.77)	2.86 (0.81)	2.82 (0.75)
Common humanity <sup>a</sup>			
Self-compassion writing	3.09 (0.68)	3.06 (0.76)	3.21 (0.90)
Control	3.00 (0.89)	3.01 (0.91)	2.98 (0.87)
Mindfulness <sup>a</sup>			
Self-compassion writing	2.85 (0.66)	2.90 (0.62)	2.88 (0.69)
Control	2.93 (0.64)	2.88 (0.73)	2.94 (0.70)
Attention <sup>b</sup>			
Self-compassion writing	3.66 (0.37)	3.62 (0.42)	3.65 (0.51)
Control	3.62 (0.40)	3.59 (0.43)	3.63 (0.43)
Clarity <sup>b</sup>			
Self-compassion writing	3.66 (0.37)	3.62 (0.42)	3.65 (0.51)
Control	3.62 (0.40)	3.59 (0.43)	3.63 (0.43)
Repair <sup>b</sup>			
Self-compassion writing	3.66 (0.37)	3.62 (0.42)	3.65 (0.51)
Control	3.62 (0.40)	3.59 (0.43)	3.63 (0.43)

<sup>a</sup> SCS. <sup>b</sup> Trait Meta-Mood Scale.

compassion and emotion regulation, which in turn could lead to health benefits.

The findings of the present study were in line with the hypotheses and previous research that expressive writing resulted in emotional cost immediately after writing but health benefits at later follow-ups (Pennebaker & Beall, 1986). The self-compassion writing group reported a significantly higher level of postwriting negative affect than the control writing group. Nevertheless, a significant reduction in physical symptoms at the 1-month and 3-month follow-up assessments was reported in the self-compassion writing group whereas no change in physical symptoms was reported in the control writing group. Although no significant improvements in depressive symptoms were observed in the self-compassion writing group or the control writing group, these results were consistent with previous meta-analysis results that expressive writing has a weak impact on depression ( $r = .04$ ,  $p < .05$ ; Frattaroli, 2006). In addition, in line with previous research that suggested that Asians tend not to report affective complaints because of the stigmatization of mental illness in Asian cultures (for a review, see Lee, Lei, & Sue, 2000; Mak & Chen, 2010), the mean score of baseline depressive symptoms in the present study was very low (approximately 10 of 30). The low score suggested that the majority of the participants reported they did not have frequent depressive symptoms ("some or little of the time," or "1-2 days during the week," referring to the anchors of the CES-D) before the writing intervention. Hence, there was a potential floor effect, which made reduction in depressive symptoms by self-compassion writing less feasible.

Self-compassion has been conceptualized as an emotion regulation strategy (Neff, 2003b; Odou & Brinker, 2014); therefore, the present study examined self-compassion and emotion regulation as the underlying mechanism of self-compassion writing. However, inconsistent with the hypothesis, the results showed no significant improvement in self-compassion components and emotion regulation capacities at 1-month or 3-month follow-up assessments. Future study may consider including a postintervention assessment on self-compassion to examine a potential short-term effect of writing on promoting self-compassion, if not long-term. Other research suggested that self-compassion is a process that requires more time to occur (Shahar et al., 2012), and writing once each week over a month may be more effective than writing 4 times within a single week (Pennebaker, 1997). It is possible that 3-day self-compassion writing may not be sufficient in promoting self-compassion and emotion regulation capacities at follow-up, and longer writing practice is required. Moreover, it is possible that the small changes in self-compassion and emotion regulation capacities may be better captured with a more sensitive measure, such as the Self-Compassion and Self-Criticism Scales (Falconer, King, & Brewin, 2015), the Assessing Emotions Scale (Schutte et al., 1998), or the Emotional Self-Efficacy Scale (Kirk, Schutte, & Hine, 2008). It is also possible that self-compassion writing promotes physical health with alternative mechanisms, such as reducing self-criticism and promoting adaptive coping strategies, and further research is needed to examine this speculation.

### Limitations and Future Research Directions

There were several limitations in the present study. First, because of convenience sampling, only Hong Kong Chinese college

students were recruited in the present study. The writing task may elicit events that widely vary in psychological significance across individuals. A meta-analysis found that a larger effect of expressive writing was revealed in community samples and samples with existing physical health problems or trauma or stress history than in university student samples (Frattaroli, 2006); future studies should extend the present study to a greater diversity of samples, especially those who have adjustment difficulties or distress. Second, some researchers suggested that having the ability to regulate emotions is not equivalent to actual utilization of emotion regulation ability when facing problems, and emotional self-efficacy may better reflect actual utilization of emotion regulation than trait emotional intelligence (Kirk et al., 2011). Only the measurement of emotional intelligence was included in the present study, which may limit our understanding of emotion regulation as the mechanism of self-compassion writing. Future studies should consider including a measurement of emotional self-efficacy to reexamine how self-compassion writing may benefit health through enhancing individuals' efficacy in regulating emotions. Lastly, the present study did not examine possible moderators of self-compassion writing. It was suggested that people with fear of emotions, impaired affect tolerance, and alexithymia may benefit from emotion disclosure more than others (Greenberg & Lepore, 2004). Thus, the health benefits of self-compassion writing may be more pronounced among these individuals. Future studies may investigate whom self-compassion writing benefits most. Notwithstanding these limitations, the findings of the present study are inspiring. It is one of the first attempts to investigate the health benefits and mechanisms of self-compassion writing among Chinese.

### Conclusion

The present study was one of the few studies that attempted to examine the potential health benefits of self-compassion writing among Chinese. It is premature to conclude that self-compassion writing is an effective approach to promote well-being among Asians/Asian Americans, and further research is needed to support this argument. However, not requiring any trained professionals, extensive knowledge, techniques, or equipment, self-compassion writing may be utilized as a cost-effective self-help intervention in promoting health among the general public, especially for populations who do not have access to professional care services (Kazdin & Blase, 2011), and those reluctant to seek mental health services, such as Asian Americans (Chu et al., 2011).

With the prevalent cultural belief that any psychological problem is a result of personality weakness or a lack of self-control and willpower (Kung, 2004), and the resulting stigmatization of mental health problems in Asian societies, Asians and Asian Americans tend not to express their emotional problems, and they find expression of psychological distress through the body (i.e., somatization) more acceptable (Lee et al., 2000; Mak & Chen, 2010). Instead of seeking mental health services to deal with their problems, they would prefer using self-help methods (Han & Pong, 2015). Self-compassion writing, a self-help method that allows individuals to receive intervention (i.e., write about their distressing experience) at their personal time and space and without the disclosure of personal identity and hence potential risk of stigmatization, may be an alternative approach to reach out to Asians and Asian Americans.



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Received June 2, 2015

Revision received November 18, 2015

Accepted December 15, 2015 ■