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The effects of a program to enhance self-compassion in Japanese individuals: A randomized controlled pilot study

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People tend to berate themselves when they make mistakes, feel inadequate, or encounter difficulties; this self-criticism has effects on social behavior and mental health. Self-criticism and the inability to be self-soothing and self-reassuring, are associated with negative social comparisons, such as shame, depression, and paranoia (Gilbert, Clarke, Hempel, Miles, & Irons, 2004; Gilbert & Miles, 2000). It is associated with various psychological disorders including social anxiety disorder (Cox, Fleet, & Stein, 2004), posttraumatic stress disorder (Cox, MacPherson, Enns, & McWilliams, 2004), mood disorders (Luyten et al., 2007), eating disorders (Dunkley & Grilo, 2007), borderline personality disorder (Kopala-Sibley, Zuroff, Russell, Moskowitz, & Paris, 2012), and psychiatric disorders (Hutton, Kelly, Lowens, Taylor, & Tai, 2013).

Compassion has received much attention as a means to counteract self-criticism and its related disorders (Goetz, Keltner, & Simon-Thomas, 2010; MacBeth & Gumley, 2012). In Buddhist tradition, compassion is defined as sensitivity to the suffering of the self and others, with a deep commitment to trying to relieve it (Dalai Lama, 1995). It is also characterized as a mental capacity that empowers all positive states of mind as we awaken to our fullest potential (Makransky, 2012). Although high self-criticizing people tend to judge themselves harshly and reflect on their inadequacy and weakness, cultivating compassion toward the self allows self-critical individuals to find compassionate voices to counteract critical voices and, therefore, reduce negative emotions (Gilbert, 2010). Self-compassion is not just the reverse of self-criticism and is defined to have three core components: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification (Neff, 2003, 2011). Self-kindness is defined as being gentle and understanding toward the self rather than harshly critical and judgmental. If individuals are compassionate toward themselves when confronting mistakes and difficulties, they can feel warmth and understanding, which can ease their pain. Recognition of common humanity is defined as feeling connected with others in the experience of life rather than feeling isolated by one’s suffering. When individuals recognize that all human being are fallible, that wrong choices and feelings of regret are inevitable, and that feelings of inadequacy are shared by all, they feel soothed and comforted (Neff, 2011). Mindfulness is defined as holding our experience in balanced awareness rather than over-identifying with it. Practices of mindfulness skills allow for a clearer understanding of such exaggerated negative thoughts regarding one’s suffering. Several studies have found that individuals who have self-compassion have better psychological adjustment than those who lack self-compassion. For example, self-compassion is positively associated with self-esteem, emotional intelligence, and life satisfaction, but negatively associated with depression, anxiety, thought suppression, and perfectionism (Barnard & Curry, 2011; Neff, 2003).

There is growing interest in the benefits of enhancing self-compassion and mindfulness to reduce negative emotions, and evidence suggests that programs to enhance self-compassion may be effective. There is growing interest in the benefits of enhancing self-compassion and mindfulness to reduce negative emotions, and evidence suggests that programs to enhance self-compassion may be effective.
emotions. Gilbert and Procter (2006) developed the compassion-focused therapy (CFT) program, which invites high self-criticizing participants to engage in compassionate, nurturing, and reassuring imagery and self-talk. The effectiveness of CFT has been reported for those who have chronic difficulties, such as anxiety and depression (Gilbert & Procter, 2006), and can reduce hostile voices, paranoia, and self-criticism (Mayhew & Gilbert, 2008). Self-soothing interventions derived from CFT can lower shame and skin complaints among acne sufferers (Kelly, Zuroff, & Shapira, 2009), and group CFT for psychosis was associated with clinical improvements and increases in compassion (Braehler et al., 2013). A one-week self-compassion intervention was more effective at increasing happiness and decreasing depression for up to three months than the control intervention (Shapira & Mongrain, 2010). In addition, many interventions based on self-compassion have enhanced well-being, mindfulness, and compassion toward others in normal population (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008; Jazaieri et al., 2012; Neff & Germer, 2013). These results show that enhancing self-compassion interventions are effective for various psychological disorders.

Despite the promise shown by these studies, the field lacks a unified protocol for enhancing self-compassion across psychological disorders. Self-criticism and perfectionism have been shown to have a transdiagnostic-maintaining mechanism for many psychological disorders, and therefore a variety of cognitive behavioral therapies have focused on it (Egan, Wade, & Shafran, 2011; Gilbert, 2010). Since negative affectivity also has been observed across clinical disorders, including depression and anxiety, mindfulness-based interventions have been applied for a variety of disorders and non-psychiatric problems (Greeson, Garland, & Black, 2014). As the unified protocol has been developed to be applicable across anxiety and mood disorders in which emotion dysregulation plays a significant role (Farchione et al., 2012), an enhancing self-compassion program (ESP) has the potential to be a coherent treatment approach across the diagnostic categories that involve perfectionism or self-criticism, such as social anxiety disorder, PTSD, mood disorders, and eating disorders. Therefore, the present study aims to treat individuals with low self-compassion who are vulnerable to psychopathology.

In addition, many of the current studies on self-criticism have had various methodological weaknesses. For example, although one study on self-critical participants used a control group (Shapira & Mongrain, 2010), it involved merely a one week self-compassion intervention, and the gains in the self-compassion group were not greater than those in the optimism group. Since compassion-based interventions involve at least six weeks of sessions (Braehler et al., 2013; Fredrickson et al., 2008; Jazaieri et al., 2012; Neff & Germer, 2013), the intervention period should be longer than six weeks. Therefore, an intervention study with a randomized controlled design is needed to fully understand the effectiveness of an intervention focused on increasing self-compassion.

Although enhancing self-compassion has been shown to be effective to reduce negative emotions in independent cultures such as in the USA and UK (Braehler et al., 2013; Fredrickson et al., 2008; Jazaieri et al., 2012; Neff & Germer, 2013), there is no evidence to date to show that an ESP is effective in interdependent cultures such as in Japan. There is some evidence of cultural differences; the Japanese tend to be less self-compassionate than the people of Thailand and the USA (Arimitsu, 2014) and more self-critical than individuals in Western cultures (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). It is not clear whether highly self-critical individuals in an interdependent culture would gain more benefits from the ESP than their counterparts. In addition, interdependent culture may influence common humanity, one of the sub-components of self-compassion, because interdependent people are often happy to maintain conformity (Hitokoto & Uchida, 2015). A previous study conducted in Hong Kong suggested that participants with a greater sense of common humanity reported a weaker association between self-criticism and depression than counterparts with a low sense of common humanity (Wong & Mak, 2013). Because Hong Kong is considered to have an interdependent culture, this study highlights the importance of investigating how the ESP is effective for each aspect of self-compassion in an interdependent culture. Moreover, it is still unclear how self-compassion interventions influence the six sub-components of self-compassion. It has also been argued that self-compassion uses a different affective system from self-criticism and that the two should be divided (Gilbert, McEwan, Gibbons, & Chotai, 2012). In an analysis of the relationship between the six facets of self-compassion and mental health measures, the self-judgment and isolation subscales were significant predictors of all mental health measures (Van Dam, Sheppard, Forsyth, & Earleywine, 2011). It is vital, and of interest, to test whether the ESP might be helpful cross-culturally for each of the components of self-compassion, especially in more interdependent and self-critical cultures such as Japan.

The aim of this study was to develop an ESP and test the potential efficacy of the program in enhancing self-compassion (primary outcomes) after seven weeks of intervention and at a three-month follow-up for low self-compassionate Japanese individuals in a randomized controlled trial. The study’s secondary aim was to assess whether the ESP would be effective to increase self-esteem and positive emotions and reduce negative automatic thoughts, anxiety, and depression (secondary
outcomes). The present study may also provide evidence that an ESP can benefit the population of more interdependent and self-critical culture than in the USA and UK and obtain information for revision from qualitative feedback on the program from participants.

Method

Participants and recruitment
The participants, Japanese individuals with low self-compassion, were recruited from June 2010 to August 2012 via the Psychology classes at a university, through a web site, and through advertisements placed in clinics. Participants signed up only for the present study. Figure 1 shows the flow of participants through the phases of the randomized trial. Of the 73 individuals applied for pre-treatment assessments, 65 completed the assessments. These individuals were asked to participate in the study if they met the following criteria: a Self-Compassion Scale (SCS) (Neff, 2003) score below 17.35, which represents the average score in a Japanese sample (Arimitsu, 2014); no prior participation in a compassion-focused program; no psychotic hospitalizations within the past six months; able to attend the ESP the designated time; and willing to commit to daily home practice of the ESP exercises. From the 65 individuals, 52 met the study inclusion criteria, and 12 declined participation. The remaining 40 participants were randomly assigned to either the treatment (N = 20) or the wait-list control group (N = 20). One participant did not complete the ESP. Three ESP group participants and eight control group participants did not respond to the request to complete follow-up assessments.

Characteristics of the sample
ESP participants (M age = 23.25, SD = 7.41) were 85% female. Control participants (M age = 19.42, SD = 1.08) were 65% female. All participants across the sample were Asian. Most of the participants were single or never married (ESP group = 90%, Control group = 100%); one (5%) of the ESP group was married and one (5%) was divorced. The majority of the both groups reported that they were university students (ESP group = 80%, Control group = 100%) and all had completed at least a high school education; one (5%) of the ESP group had a full-time job and one (5%) had a part-time job. Of the 40 participants, 16 (80%) of the ESP group completed all the assessments, compared to 12 (60%) in the control group. There were no significant differences between the two groups on demographic data (p > .05).

Description of the intervention
A new ESP was developed for Japanese low self-compassionate people based upon the approach employed by Gilbert (2010), Gilbert and Procter (2006), and Henderson (2010). This approach helps people develop a compassionate internal relationship to replace a blaming, condemning, and self-critical internal
relationship. People can be taught to engage mindfully in a range of ESP interventions; in this study, a group format program of seven weekly 1.5-h sessions was conducted. Four to six participants in each group received instruction from therapists to practice being kind to themselves. In each session, participants were given time to ask any questions and to share their experiences in session as well as during their home practice. Sharing experiences was intended to help participants not only understand the program more deeply, but to also help recognize common humanity, which is one of the main focuses of the ESP. The program included loving-kindness meditation (LKM), mindfulness training, compassionate mind training using imagery, compassionate letter writing, three-chair work, and compassionate behaviors. The program was manualized and conducted by therapists in the group format, but the number and length of sessions were reduced compared to Gilbert and Procter (2006) because the present study focused on the mental health of individuals without severe symptoms. A group format was selected because participants often identify with and support each other over self-criticizing and self-compassionate themes.

From the third to sixth sessions, participants were taught how to generate feelings of warmth and self-acceptance in response to their self-critical thoughts. The participants were instructed to imagine their perfect nurturer as being by their side, able to understand their emotions and difficulties, and accepting of and caring for them to counteract their anxiety, depression, and self-criticism. After these introductory steps, the participants were encouraged to imagine the compassionate ideal self, speaking slowly, kindly, and gently with wisdom and understanding because, by doing so, participants were assumed to be getting in touch with their soothing system and training themselves to access this system through imagination and memories of self (Gilbert, 2010). Three-chair work (Gilbert, 2010; Neff, Kirkpatrick, & Rude, 2007) in the sixth session involved having a group member sit in the third ‘compassionate chair’ and become an ideal compassionate therapist listening to the criticized—criticizing two-chair dialog. Some participants struggled to do this; however, via the ideal compassionate self, the participants were able to feel compassion for both the criticizing self and other (especially their parents or boss) and the criticized self. Table 1 provides an overview of the session structure.

**Quantitative measures**

*Acceptability*

The participants who completed the treatment were asked to evaluate the components of the program on a 10-point Likert scale, ranging from 1 (not at all) to 10 (very much).

**Outcome measures**

Participants were asked to complete seven self-report questionnaires before and after the ESP program and at a three-month follow-up: the SCS (Neff, 2003), Rosenberg Self-esteem Scale (RSS; Rosenberg, 1965), Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996), Spielberger Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970), Depression Anxiety Cognition Scale (DACS; Fukui, 1998), Multiple Mood Scale (MMS; Terasaki, Kishimoto, & Koga, 1992), and Self-Conscious Emotion Scale (SCES; Arimitsu, 2005).

**Primary outcome measure**

The SCS has 26 items and consists of 6 subscales: self-kindness, self-judgment, awareness of common humanity, isolation, mindfulness, and over-identification. Each item is rated on a five-point scale (1 = almost never to 5 = almost always). Higher scores indicate greater self-compassion. The Japanese version of the SCS (Arimitsu, 2014) was used in the present study. Internal consistency in the current sample was excellent ($\alpha = .89$).

**Secondary outcome measures**

The RSS is a 10-item measure rated on a 5-point scale (1 = strongly disagree to 5 = strongly agree). The Japanese version of the RSS (Yamamoto, Yamanari, & Matsui, 1982) was used in the present study. Good internal consistency was achieved in the current sample ($\alpha = .75$).

The DACS is a 50-item measure of negative automatic thoughts and consists of 5 subscales: future denial, threat prediction, self-criticism, past denial, and fear of rejection. Each item is rated on a five-point scale (1 = strongly disagree to 5 = strongly agree). In the present study, the five subscales were summed to create a total score. The DACS has previously shown good test–retest reliability and internal consistency in Japan; internal consistency in the current sample was $\alpha = .94$.

The STAI-T form is a 20-item measure of trait anxiety. Each item is rated on a four-point scale (1 = almost never to 4 = almost always). Higher scores are associated with higher trait anxiety. The Japanese version of the STAI-T (Koga, 1980) was used in the present study. Good internal consistency was found for the current sample ($\alpha = .72$).

The BDI-II is a well-known 21-item measure of depression. The total score ranges from 0 (low depression) to 63 (high depression). The test–retest reliability, internal consistency, and validity of the Japanese version of the BDI-II (Beck et al., 1996) are well established. Strong internal consistency was found in the current sample ($\alpha = .89$).
The MMS-Short form is a 40-item measure rated on a 4-point scale (1 = never felt to 4 = clearly felt) designed to assess emotions and moods in Japanese. The present study used the positive and negative emotion items from the subscales of the MMS; each subscale contains 15 emotion items (e.g. anxious, hostile, boring, happy, adorable, and relaxing); the total score ranges from 5 (low positive or negative emotion) to 25 (high positive or negative emotion). In the present study, participants were asked to rate how they experienced each emotion during the past week. There was good internal consistency in the current sample (positive emotions: $\alpha = .86$; negative emotions: $\alpha = .85$).

Qualitative measure

Program evaluation

A qualitative data analysis was conducted to evaluate the ESP program. Participants were asked three following questions:

(1) What aspects of the ESP program were beneficial for you?
(2) What did you learn from the ESP program and how would you cope with self-criticizing thoughts in the future?
(3) What was difficult in the ESP program?

Table 1. Outline of the ESP program.

<table>
<thead>
<tr>
<th>Session</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1: Introduction and LKM practice</td>
<td>(i) Psychoeducation: Introduction of the threat/safety strategy formulation model concerning shame and self-criticism (Gilbert &amp; Procter, 2006) (ii) Practice LKM: LKM for a loved one, themselves, a stranger, a difficult person, and all beings (Salzberg, 1995) (iii) Homework: LKM practice at least 10 min per a day as homework</td>
</tr>
<tr>
<td>Session 2: Mindfulness practice</td>
<td>(i) Review of past week and homework (ii) Instruction of mindfulness skills: Mindful breathing, standing meditation, walking meditation, and eating meditation with a Japanese instructional DVD on Tibetan meditations (Sumanasara, 2009) (iii) Homework: LKM and mindfulness practices at least 10 min per a day</td>
</tr>
<tr>
<td>Session 3: Compassionate imagery skills</td>
<td>(i) Review of past week and homework (ii) Explore and create an image of an ‘ideal’ compassionate nurturer (iii) Homework: LKM, mindfulness, and compassionate imagery practice at least 10 min per a day</td>
</tr>
<tr>
<td>Session 4: Compassionate ideal self</td>
<td>(i) Review of past week and homework (ii) Imagine the compassionate ideal self to get in touch with participants’ soothing system (iii) Homework: LKM, mindfulness, and Weekly Diary of Self-Critical and Self-Compassionate Thoughts (WDSST: Gilbert &amp; Procter, 2006)</td>
</tr>
<tr>
<td>Session 5: Compassionate letter writing</td>
<td>(i) Review of past week and homework (ii) Place themselves in the role of their ‘ideal’ compassionate nurturer writing a letter to the self (iii) Homework: LKM, mindfulness, and WDSST</td>
</tr>
<tr>
<td>Session 6: Three-chair work</td>
<td>(i) Review of past week and homework (ii) Three-chair work dialog (Gilbert, 2010; Neff et al., 2007) (iii) Homework: LKM, mindfulness, and WDSST</td>
</tr>
<tr>
<td>Session 7: Compassionate behavior</td>
<td>(i) Review of past week and homework (ii) Practice compassionate behavior in a real-life situation: exposure to a threatening event with their ideal compassionate self as a supporter, creating an understanding voice in their mind (iii) Discussion about experiences, review of progress, and future problems</td>
</tr>
</tbody>
</table>
Data were gathered from 10 random participants. The participants were queried after completing the intervention with the same written open-ended questions, and each response was recorded. Following the quantitative content analysis (Mayring, 2000), an expert of the analysis created categories to organize the responses into. Additionally, three psychology graduate students created their own response categories; afterwards, the expert and three students discussed and revised the categories using the process of analysis (i.e. feedback loops) until consensus was achieved.

**Ethical considerations**

The institutional review board reviewed and approved the protocol of this study. This study was carried out in accordance with the ethical standards outlined by the American Psychological Association and Japanese Psychological Association. Informed consent was obtained from all participants before the initial assessment and all relevant ethical safeguards were met in relation to subject rights and protection.

**Statistical analyses**

Group differences in demographic data and pre-treatment measures were analyzed using one-way analyses of variance (ANOVAs) and chi-square tests. This study assessed treatment outcomes at three time points, including two time points after the intervention. Although hierarchical linear modeling (HLM) is recommended to assess the effect of intervention versus control conditions (Raudenbush & Bryk, 2002), the sample size of the present study was too small for HLM. Therefore, a 2 Group (ESP and Control) × 3 Time (pre-treatment, post-test, and follow-up) repeated-measures ANOVAs were conducted. Changes from post-treatment to follow-up were analyzed using paired sample t-tests with Bonferroni-corrected p-values. Effect sizes were evaluated using the cut-offs suggested by Cohen (1988). Probability values < .001 or beyond are described by that value, regardless of actual effect size; values ≤ .05 are discussed in further detail. A power analysis for the present study indicated that Cohen’s d has to be above 1.03 to have the statistical power level at 80% power (α = .05) when the sample size is 16. In addition, analyses were not based on the intent to treat (ITT) principle (Friedman, Furberg, & DeMets, 2010) because the nature of the present study is preliminary, and the high dropout rates made the sample size too small to accommodate missing data.

**Results**

**Acceptability**

At the end of the intervention, the 19 participants who completed the treatment were asked to evaluate the components of the program. Participants rated the program in general to be understandable (M = 8.10, SD = .78) and helpful in improving self-compassion (M = 7.70, SD = .93). Participants also rated how helpful each program was on a five-point Likert scale, ranging from 1 (not at all) to 5 (very much). Compassionate behavior was evaluated as the most beneficial (M = 4.47, SD = .50). LKM (M = 4.40, SD = .89), mindful self-regulation (M = 3.80, SD = .75), ideal compassionate nurturer imagery (M = 4.40, SD = .49), compassionate self-imagery (M = 4.00, SD = .97), compassionate letter writing (M = 3.53, SD = 1.09), and three-chair work (M = 3.27, SD = .77) were evaluated as helpful.

**Primary outcome measure**

Participants’ results on the total and subscales of the SCS as the primary outcome measure, including effect sizes, are shown in Table 2.

**Total score**

A 2 Group (ESP and Control) × 3 Time (pre-treatment, post-treatment, and follow-up) repeated-measures ANOVA yielded a main effect of time (F(2, 25) = 20.34, p = .001, \( \eta_p^2 = .62 \)), no effect of group (F < 1, p = .186), and a significant time × group interaction (F(2, 25) = 12.95, p = .001, \( \eta_p^2 = .51 \)). The interaction occurred because the ESP group had a significantly large time effect (F(2, 25) = 38.26, p < .001, \( \eta_p^2 = .75 \)), and the control group did not (F < 1, p = .651, \( \eta_p^2 = .03 \)). Paired t-tests suggested there were significant changes in the ESP group from pre-treatment to post-treatment (Estimate = −4.73, SE = .62, t(15) = −7.60, p < .001; 95% CI [−6.32, −3.14]; d = 1.92) and at the three-month follow-up (Estimate = −4.43, SE = .72, t(15) = −6.12, p < .001; 95% CI [−5.97, −2.90]; d = 1.55).

**Self-kindness**

An ANOVA revealed a significant main effect of time (F(2, 25) = 10.97, p < .01, \( \eta_p^2 = .47 \)), but no significant time × group interaction (F(2, 25) = 2.90, p = .07, \( \eta_p^2 = .46 \)). Although the interaction was not significant, the ESP group had a significant improvement in self-kindness from pre-treatment to post-treatment (F(2, 25) = 14.38, p < .001, \( \eta_p^2 = .54 \)), while no effect was found for control group participants (F(2, 25) = 1.345, p = .28, \( \eta_p^2 = .10 \)). Paired sample t-tests suggested that there were significant changes in the ESP group from pre-treatment to post-treatment (Estimate = −.96, SE = .16, t(15) = −5.92, p < .001; 95% CI [−1.31, −.62]; d = 1.51) and at the three-month follow-up (Estimate = −.61, SE = .14, t(15) = −4.50, p < .001; 95% CI [−.90, −.32]; d = 1.13).
Table 2. Primary outcomes of ESP and control groups’ pre-treatment, post-treatment, and three-month follow-up scores and effect sizes.

<table>
<thead>
<tr>
<th></th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
<th>Three-month Follow-up</th>
<th>Cohen’s d Pre–Post</th>
<th>Cohen’s d Pre–Follow</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td><strong>ESPa</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCS</td>
<td>13.50</td>
<td>(2.81)</td>
<td>18.23</td>
<td>(2.39)</td>
<td>17.94</td>
</tr>
<tr>
<td>SK</td>
<td>2.21</td>
<td>(.61)</td>
<td>3.18</td>
<td>(.75)</td>
<td>2.83</td>
</tr>
<tr>
<td>SJ</td>
<td>4.04</td>
<td>(.58)</td>
<td>3.23</td>
<td>(.59)</td>
<td>3.26</td>
</tr>
<tr>
<td>CH</td>
<td>2.03</td>
<td>(.73)</td>
<td>3.16</td>
<td>(.70)</td>
<td>3.06</td>
</tr>
<tr>
<td>IS</td>
<td>3.50</td>
<td>(.61)</td>
<td>2.89</td>
<td>(.53)</td>
<td>2.55</td>
</tr>
<tr>
<td>MF</td>
<td>2.80</td>
<td>(.82)</td>
<td>3.16</td>
<td>(.63)</td>
<td>3.05</td>
</tr>
<tr>
<td>OI</td>
<td>4.00</td>
<td>(.47)</td>
<td>3.14</td>
<td>(.66)</td>
<td>3.19</td>
</tr>
<tr>
<td><strong>Controlb</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCS</td>
<td>14.88</td>
<td>(2.99)</td>
<td>15.27</td>
<td>(3.47)</td>
<td>15.53</td>
</tr>
<tr>
<td>SK</td>
<td>2.82</td>
<td>(.66)</td>
<td>3.05</td>
<td>(.87)</td>
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<tr>
<td>SJ</td>
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<td>(.60)</td>
<td>3.78</td>
<td>(.81)</td>
<td>3.72</td>
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<tr>
<td>CH</td>
<td>2.85</td>
<td>(.93)</td>
<td>2.42</td>
<td>(.88)</td>
<td>2.75</td>
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<tr>
<td>IS</td>
<td>3.58</td>
<td>(.83)</td>
<td>3.38</td>
<td>(.94)</td>
<td>3.46</td>
</tr>
<tr>
<td>MF</td>
<td>2.98</td>
<td>(.69)</td>
<td>2.94</td>
<td>(.76)</td>
<td>3.00</td>
</tr>
<tr>
<td>OI</td>
<td>4.19</td>
<td>(.65)</td>
<td>3.98</td>
<td>(.84)</td>
<td>4.13</td>
</tr>
</tbody>
</table>

Notes: SD = standard deviation; SK = Self-kindness; SJ = Self-judgment; CH = Common Humanity; IS = Isolation; MF = Mindfulness; OI = Over-identification; SCS = Self-Compassion Scale; Pre = Pre-treatment; Post = Post-treatment; and Follow = Three-month follow-up.

* a = 16.
* b = 12.

**Self-judgment**

An ANOVA revealed a main effect of time (F(2, 25) = 14.39, p < .001, ηp² = .54) and a significant time × group interaction (F(2, 25) = 4.51, p = .02, ηp² = .27). The interaction occurred because the ESP group had a significant improvement in self-judgment from pre-treatment to post-treatment (F(2, 25) = 20.27, p < .001, ηp² = .10), while no effect was found for control group participants (F(2, 25) = 1.34, p = .28, ηp² = .11). Paired sample t-tests suggested that there were significant changes in the ESP group from pre-treatment to post-treatment (Estimate = –.81, SE = 1.41, t(15) = 5.98, p < .001; 95% CI [–1.62, –.63]; d = 1.22) and at the three-month follow-up (Estimate = –.03, SE = .24, t(15) = –4.39, p < .001; 95% CI [–1.53, –.53]; d = 1.10).

**Common humanity**

An ANOVA revealed no significant main effect of time (F(2, 25) = 3.19, p = .06, ηp² = .20) and a significant time × group interaction (F(2, 25) = 10.57, p < .001, ηp² = .46). The interaction occurred because the ESP group had a significant improvement in common humanity from pre-treatment to post-treatment (F(2, 25) = 12.96, p < .001, ηp² = .51), while no effect was found for control group participants (F(2, 25) = 2.32, p = .12, ηp² = .16). Paired sample t-tests suggested that there were significant changes in the ESP group from pre-treatment to post-treatment (Estimate = –.61, SE = .13, t(15) = 3.64, p < .001; 95% CI [.25, .97]; d = .91) and at the three-month follow-up (Estimate = .95, SE = .17, t(15) = –5.67, p < .001; 95% CI [.60, 1.31]; d = 1.42).

**Mindfulness**

There were no significant effects.
Table 3. Secondary outcomes of ESP and control groups’ pre-treatment, post-treatment, and three-month follow-up scores and effect sizes.

<table>
<thead>
<tr>
<th></th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
<th>Three-month follow-up</th>
<th>Cohen’s $d$</th>
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<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
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<tr>
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<tr>
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<td>(4.30)</td>
</tr>
<tr>
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<td>(7.32)</td>
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<td>(9.12)</td>
</tr>
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<td>12.67</td>
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<td>12.42</td>
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</table>

Notes: $SD$ = standard deviation; RSS = Rosenberg Self-esteem Scale; STAI = State Trait Anxiety Inventory-trait form; BDI-II = Beck Depression Inventory; DACS = Depression and Anxiety Cognition Scale; PE = Positive Emotion; NE = Negative Emotion; Pre = Pre-treatment; Post = Post-treatment; Follow = Three-month follow-up.

Over-identification

An ANOVA revealed a main effect of time ($F(2, 25) = 10.02, p = .001, \eta^2 = .45$) and a significant time × group interaction ($F(2, 25) = 5.72, p = .009, \eta^2 = .31$). The interaction occurred because the ESP group had a significant improvement in over-identification from pre-treatment to post-treatment ($F(2, 25) = 17.67, p < .001, \eta^2 = .59$), while no effect was found for control group participants ($F(2, 25) = .53, p = .60, \eta^2 = .04$). Paired sample $t$-tests suggested that there were significant changes in the ESP group from pre-treatment to post-treatment (Estimate $= −.86$, SE $= .19$, $t(15) = 4.57$, $p < .001$; 95% CI [−.46, 1.26]; $d = 1.17$) and at the three-month follow-up (Estimate $= .81$, SE $= .17$, $t(15) = 4.70$, $p < .001$; 95% CI [.44, 1.18]; $d = 1.18$).

Secondary outcome measures

Table 3 displays the results of analysis of secondary outcome measures at the three time points. The ESP group demonstrated statistically significant improvement after treatment on all outcome measures, except for positive emotions, while the control group showed no significant improvements on any measure. Gains in the ESP group were sustained from post-treatment to follow-up. The within-group effect sizes from pre-treatment to follow-up on self-esteem, trait anxiety, depression, negative automatic thoughts, negative emotions, and shame were large ($d > .80$). The medium effect size for guilt was observed ($d > .50$).

Self-esteem

An ANOVA revealed a main effect of time ($F(2, 25) = 21.34, p = .001, \eta^2 = .46$) and a significant time × group interaction ($F(2, 25) = 12.70, p = .001, \eta^2 = .33$). The interaction occurred because the ESP group had a significant improvement in self-esteem from pre-treatment to post-treatment ($F(2, 25) = 32.06, p < .001, \eta^2 = .72$), while no effect was found for control group participants ($F(2, 25) = 1.55, p = .23, \eta^2 = .11$). Paired sample $t$-tests suggested that there were significant changes in the ESP group from pre-treatment to post-treatment (Estimate $= −.70$, SE $= .99$, $t(15) = −7.06$, $p < .001$; 95% CI [−9.35, −4.47]; $d = 1.85$) and at the three-month follow-up (Estimate $= −6.88$, SE $= .94$, $t(15) = −.706$, $p < .001$; 95% CI [−9.46, −6.47]; $d = 1.96$).

Anxiety

An ANOVA revealed a main effect of time ($F(2, 25) = 12.077, p < .001, \eta^2 = .32$) and a significant time × group interaction ($F(2, 25) = 3.37, p = .05, \eta^2 = .12$), which was present because the control group had an
unexpected significant effect of time \((F(2, 25) = 3.63, p = .04, \eta^2_p = .23)\), a significant change from pre-treatment to post-treatment (Estimate = 4.92, SE = 1.88, \(t(11) = -1.62, p = .04\); 95% CI [118, 9.72]; \(d = .96\)), and a non-significant change between pre-treatment and the three-month follow-up (Estimate = 1.17, SE = 1.97, \(t < 1\); 95% CI [−8.70, 1.20]; \(d = .26\)). The ESP group showed a significant time effect \((F(2, 25) = 12.80, p < .001, \eta^2 = .51)\) and a significant change in anxiety from pre-treatment to post-treatment (Estimate = 7.19, SE = 1.62, \(t(15) = 4.43, p < .001\); 95% CI [3.03, 11.34]; \(d = 1.10\)), which was maintained at the three-month follow-up (Estimate = 7.69, SE = 1.71, \(t(15) = 4.61, p < .001\); 95% CI [3.31, 12.06]; \(d = 1.02\)).

**Depression**

Although there were no significant interaction effects, the ESP group showed a significant improvement \((F(2, 25) = 4.13, p = .03, \eta^2_p = .25)\). Paired sample \(t\)-tests suggested that there were no significant decreases in depression in the ESP group from pre-treatment to post-treatment (Estimate = 5.38, \(SE = 2.14\), \(t(15) = 2.51, p = .06\); 95% CI [−10, 10.85]; \(d = .93\)), but a significant change from pre-treatment to the three-month follow-up (Estimate = 5.13, \(SE = 1.92\), \(t(15) = 2.87, p = .04\); 95% CI [224, 10.03]; \(d = 1.09\)).

**Negative automatic thoughts**

An ANOVA revealed a main effect of time \((F(2, 25) = 10.98, p = .001, \eta^2_p = .30)\). Although the interaction was not significant, those in the ESP group had a significant improvement \((F(2, 25) = 9.85, p < .001, \eta^2_p = .44)\). Paired sample \(t\)-tests suggested that there was a significant change in negative automatic thoughts for the ESP group from pre-treatment to post-treatment (Estimate = 20.13, \(SE = 6.10\), \(t(15) = 3.30, p = .01\); 95% CI [4.53, 35.72]; \(d = .79\)) and at the three-month follow-up (Estimate = 29.13, \(SE = 6.46\), \(t(15) = 5.21, p < .001\); 95% CI [12.59, 45.67]; \(d = 1.09\)).

**Positive emotions**

There were no significant effects.

**Negative emotions**

An ANOVA revealed a main effect of time \((F(2, 25) = 5.11, p = .01, \eta^2_p = .16)\). Although the interaction was not significant, the ESP group had a significant change \((F(2, 25) = 8.92, p < .001, \eta^2_p = .42)\). Paired sample \(t\)-tests indicated a significant change in negative emotions in the ESP group from pre-treatment to post-treatment (Estimate = 4.19, \(SE = 1.08\), \(t(15) = 5.65, p = .002\); 95% CI [1.42, 6.98]; \(d = 1.27\)) and at the three-month follow-up (Estimate = 5.56, \(SE = 1.46\), \(t(15) = 5.21, p = .02\); 95% CI [.70, 8.17]; \(d = 1.02\)).

**Shame**

An ANOVA showed only a trend in the interaction, which occurred because the ESP group had a significant improvement \((F(2, 25) = 7.81, p = .002, \eta^2_p = .39)\) and the control group had no significant effect \((F \leq 1, p = .89, \eta^2_p = .01)\). Paired sample \(t\)-tests indicated a significant decrease in shame in the ESP group from pre-treatment to post-treatment (Estimate = 4.50, \(SE = 1.68\), \(t(15) = 2.68, p = .04\); 95% CI [20, 8.80]; \(d = 1.00\)) and at the three-month follow-up (Estimate = 4.75, \(SE = 1.20\), \(t(15) = 3.90, p = .002\); 95% CI [1.67, 7.82]; \(d = 1.29\)).

**Guilt**

An ANOVA revealed no significant effects. However, the ESP group had a large time effect size; the results of paired sample \(t\)-tests suggested that there were no significant decreases in guilt in the ESP group from pre-treatment to post-treatment (Estimate = 1.19, \(SE = .81\), \(t(15) = 1.47, p = .46\); 95% CI [−.88, 3.25]; \(d = .35\)), but a medium effect from pre-treatment to the three-month follow-up (Estimate = 1.25, \(SE = .61\), \(t(15) = 3.19, p = .15\); 95% CI [−.31, 2.81]; \(d = .64\)).

**Qualitative evaluation**

Each response to the qualitative evaluation questions was grouped into a number of broad categories. Categories included the difficulties and the perceived benefits: compassion thinking, having a different point of view, acceptance, and motivation to change.

**Compassionate thinking**

This category refers to the perceived benefits of being compassionate to oneself. The majority of participants reported that they could feel ease or soothed by being compassionate to oneself. For example, one participant noted, ‘I found that I could feel at ease and soothed by listening to the ideal compassionate self’ (Male, 20 years). Another participant reported, ‘Being compassionate to myself soothed me. I discovered compassion toward myself by thinking about why I judged myself and felt bad moods’ (Female, 21 years). Some participants reported that a specific exercise was particularly useful. For example, one participant stated, ‘Unexpectedly, I found that I could write a compassionate letter to myself, and I felt more soothed reading it again’ (Female, 21 years).
Having different points of view

This category refers to the perceived gains from having a different point of view. Participants reported that the program helped themselves and others by adopting different points of view, which means that the program could cultivate compassion for self and others. For example, one participant reported,

I understand that it is important to look at things from the point of view of myself and others. This made me stay calm even when I felt anxious or angry. I will listen to others, try to be compassionate, and understand them (Female, 38 years).

Another participant noted, ‘I will be compassionate, rather than criticize myself, and I will be compassionate to others rather than criticize them’ (Male, 20 years).

The three-chair work seems to have effects on making participants recognize the importance to see things from a different point of view. For example, one participant noted. ‘The empty chairs technique made me find that thinking about things from various perspectives is important’ (Female, 20 years).

Acceptance

This category refers to the experience of acceptance in the program. For example, one participant reported his experience as follows: ‘I came to perceive and accept the imperfect self through this program. Now I am able to listen to myself and think about what to do next, rather than judge the bad self’ (Female, 19 years). Other participants concluded, ‘I am going to treat myself as a human being with compassion. I will accept myself and move into action without looking for the reasons that caused problems and judging myself’ (Female, 19 years) and ‘I realize that I am not the only person to feel like this and I am able to accept and reassure myself’ (Male, 19 years).

Motivation to change

This category refers to the experience of increasing motivation to change. Most participants reported that not only they could reduce negative emotions but also increase their positive motivation. For example, participants said, ‘I am going to be compassionate to myself, not criticize myself, and will be successful next time’ (Male, 20 years) and ‘I will make good use of past experiences next time around, rather than criticize myself’ (Female, 20 years).

Difficulties

Several participants described the difficulties of certain aspects of the meditation exercises: ‘I could not concentrate on breathing meditation. I was worrying about whether I do it well or not’ (Female, 20 years). However, continuous homework on practicing the exercises made them realize how to meditate: ‘I did not think that I would continue, but now I am able to practice the meditation even in a train’ (Male, 44 years).

There were two difficulties described by some participants. In LKM, three participants feared to be happy and hesitated to wish themselves positive things. For example, one participant stated, ‘I do not deserve to be happy. I really do not think that I will be happy. I cannot wish happiness for myself’ (Female, 20 years). In the compassionate ideal nurturer imagery exercise, one participant could not imagine the compassionate nurturer and actually imagined the cat he had as a compassionate animal (Male, 20 years).

The ESP was generally well accepted, but some difficulties with the program were reported, especially about the experience of meditation. These difficulties were expected to some degree because participants often experience the same difficulties in mindfulness meditation.

Discussion

The purpose of the present study was to test the effects of the ESP on self-compassion, self-esteem, negative automatic thoughts, negative emotions, positive emotions, anxiety, and depression relative to an untreated control group. The ESP had large effect sizes on several outcomes in this randomized trial; the pre- to post-treatment within-group effect sizes for total score and five sub-components of self-compassion – self-kindness, self-judgment, common humanity, isolation, and over-identification – were dramatically different in the treatment and control groups, and these effects were maintained at three months following the intervention. The same large effect sizes were obtained on self-esteem, negative thoughts, negative emotions, anxiety, depression, and shame. The within-group effect on guilt had a medium effect size. The qualitative data analysis suggests that the ESP is positively experienced and well tolerated. These results suggest that the program can be applied for low self-compassionate people in a high self-criticizing culture.

The effect sizes in the present study suggest that the contents of the seven-session program had large effects on five components of self-compassion; a greater focus on compassionate thought, including LKM practice, and a group format may result in higher self-compassion scores because the ESP contained multiple practices to cultivate loving-kindness for all beings, compassionate imagery to comfort self, and reduce negative emotions. Quantitative analysis also showed that, by cultivating compassion, participants recognized that criticizing the self and others caused a similar type of suffering. These
results demonstrated that the EPS can improve not only self-kindness (vs. self-judgment), but also common humanity (vs. isolation). Although recognition of common humanity is one of the key factors for feeling positive emotions (Neff, 2003) and serves as a mediator between self-criticism and depression (Wong & Mak, 2013), previous intervention studies have not focused on this important factor. The present study is one of the first to demonstrate the importance of the concept of self-compassion.

The ESP, however, failed to increase mindfulness. Because the ESP included only one session that taught mindfulness, mindfulness skills may not have been well practiced. In addition, participants rated the acceptability of mindfulness as 3.8 on a five-point scale, but qualitative analyses revealed that participants found it difficult to practice meditation as homework. It is also possible that mindfulness skills were improved but not detected by the SCS. The subscale focuses on limited aspects of mindfulness, including keeping emotions in balance and approaching feelings with curiosity and openness, although mindfulness is a broader concept than this.

The present study recruited low self-compassionate participants, which no other studies have done (Braehler et al., 2013; Gilbert & Procter, 2006; Jazaieri et al., 2012; Kearney et al., 2013; Mayhew & Gilbert, 2008; Neff & Germer, 2013). Thus, the present study offered the first support for the use of a treatment focused on self-compassion for low self-compassionate people and enhanced the clinical implications for those who are vulnerable to psychopathology. It is also noteworthy that the ESP was effective in increasing self-compassion in a population that tends to have lower self-compassion than Americans (Arimitsu, 2014), but it should be considered carefully because the present study has applied only for low self-compassionate individuals in a high self-criticizing culture (Kitayama et al., 1997). The ESP has a potential to be applied worldwide because it has the similar components of programs focused on compassion in high self-critical individuals (Gilbert & Procter, 2006), a normal population (Fredrickson et al., 2008; Jazaieri et al., 2012; Neff & Germer, 2013), patients with PTSD (Kearney et al., 2013), and patients with psychosis (Braehler et al., 2013; Mayhew & Gilbert, 2008). Since it is not clear yet that the ESP program would be effective for a normal population, or patients in different cultures, further research is needed to examine it.

**Limitations and future research**

There are several limitations to this study. The large and differential dropout rate (20% in the ESP group; 40% in the control group) should be considered. The control group participants may not have been motivated to complete the assessments because they were not recipients of an intervention yet. Moreover, the large dropout rate resulted in the small sample size of the present study. A larger sample size and an ITT analysis are needed to show the effectiveness of an ESP. Although there were no significant differences in pre-intervention measures between groups, some differences in the demographic data also affected the results. For example, because female participants were 85% in the ESP compared to 65% in the control, the gender difference between two groups may have influenced the results. It also can be assumed that a number of the positive outcomes were due to merely being part of a group for seven weeks, not the ESP specifically, as one of the goals of the present study research was to cultivate social belongingness. It was not possible to ascertain if the specific features of the intervention or generic group processes were responsible for the effects without a measure of intervention fidelity. As a secondary outcome and a covariate, social support should be measured to determine whether the non-specific factor influenced the results or not. Since most of the participants were in their 20s, they might be more sensitive to time effects due to their age-specific experiences, such as examinations. This bias might be the cause of an unexpected significant change from pre-treatment to post-treatment in trait anxiety in the control group. In addition, the large effect sizes in the present study may be a reflection of the initially low levels of self-compassion in participants, which might make it easier to lower their self-criticism. The placebo effect and demand characteristics may also have influenced the effects because the participants were not blind to their condition.

The ESP had significant effects on self-compassion and negative emotions, but the program still needs to be refined. The program was developed in the present study, and the qualitative data suggest that the participants had difficulties practicing mindfulness meditation, LKM, and compassionate imagery. Participants found it difficult to concentrate on any sensation, thought, and emotion in the present moment during the meditations, but this is expected and very typical when first starting meditation. Since it is common for those new to meditation to experience difficulty and blame themselves, a guided LKM includes the instruction that the wandering of the mind is not a mistake or failure, but that it is normal in every practice (Salzberg, 1995). Fear of compassion is often reported in CBT (Gilbert et al., 2012) and LKM (Salzberg, 1995), and a participant in the present study also felt fearful of being happy. In Buddhist tradition, LKM starts with loving-kindness toward the self, but some people tend to find this difficult because they think that they do not deserve to be happy. The present study followed the Buddhist tradition and taught the beauty of the wish that everyone wants and deserves to be happy. More instructions and discussion might be needed to help participants see their difficulties as normal and have...
patience until they feel familiar and comfortable with these meditations. Although the present study targeted Japanese individuals who typically come from a highly interdependent and self-critical culture, qualitative data showed that the difficulties they experienced are common throughout the world. Further research would reveal whether the ESP would have any issues being implemented across cultures.

Notwithstanding these limitations, the current study showed that enhancing self-compassion increased various markers of resilience, such as self-compassion and self-esteem, and reduced a variety of negative emotions. Research has shown that cultivating compassion toward the self and others has positive effects on people’s lives, and it deserves more attention in positive and clinical psychology. The power of compassion should be empirically demonstrated in further research.

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