

# Secular Compassion Training: An Empirical Review

## Entrenamientos Seculares en la Compasión: Una Revisión Empírica

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### Abstract

Meditation and mindfulness research has notably increased over the last 30 years and mindfulness-based interventions are now offered in health care and educational settings worldwide due to their efficacy on stress reduction, attention and affect regulation, and symptom relief. More recently, a second wave of secular contemplative trainings that include mindfulness practice but focus on the cultivation of prosocial mental states and attitudes, such as loving kindness and compassion, are attracting interest from researchers, clinicians, and the public. The emergence of these programs reflect a shift in emphasis from meditation as a stress reduction tool to meditation as a way of cultivating relational wellbeing and social transformation through training in empathy and compassion for self and others. This article reviews four contemporary secular compassion training models: the Compassionate Focused Therapy and Compassionate Mind Training developed by Paul Gilbert; the Mindful Self-Compassion program developed by Kristin Neff and Christopher Germer; the Cognitive-Based Compassion Training developed by the Emory-Tibet Partnership at Emory University; and the Compassion Cultivation Training program developed at the Center for Compassion and Altruism Research and Education at Stanford University. Relevant outcome research on the effects of each of these programs is summarized, and implications for future research are discussed.

**Keywords:** compassion training, self-compassion, compassion-based interventions, mindfulness, meditation

### Resumen

La investigación sobre la meditación y mindfulness se ha incrementado notablemente en los últimos 30 años y actualmente las intervenciones basadas en mindfulness se ofrecen regularmente en una multitud de contextos sanitarios y educativos debido a su eficacia en la reducción del estrés, la regulación emocional y atencional y el alivio sintomático. Recientemente, una segunda ola de entrenamientos contemplativos seculares que incluyen mindfulness pero que se centran en el cultivo de estados mentales y actitudes pro-sociales, tales como el amor y la compasión, están atrayendo el interés de clínicos, investigadores y el público en general. La emergencia de estos programas refleja un cambio de énfasis desde la meditación como herramienta de reducción del estrés a la meditación como un modo de cultivar el bienestar relacional y la transformación social a través del entrenamiento en la empatía y la compasión hacia uno mismo y hacia los demás. Este artículo presenta cuatro modelos contemporáneos seculares de entrenamiento en la compasión: la Terapia Focalizada en la Compasión y el Entrenamiento de la Mente Compasiva desarrollados por Paul Gilbert; el programa de Mindfulness y Auto-Compasión desarrollado por Kristin Neff y Christopher Germer; el Entrenamiento en la Compasión Basado en la Cognición de Emory University; y el Entrenamiento en el Cultivo de la Compasión desarrollado por el Centro para la Investigación y la Educación en la Compasión y el Altruismo de la Universidad de Stanford. Se sintetizan los resultados más relevantes de los estudios de las aplicaciones de estos programas y se discuten las implicaciones para investigaciones futuras.

**Palabras clave:** entrenamiento en la compasión, auto-compasión, intervenciones basadas en la compasión, mindfulness, meditación

Received: March 17, 2014

Accepted: November 29, 2014

## Introduction

Since Jon Kabat-Zinn began offering the Mindfulness-based Stress Reduction (MBSR) program in 1979, most scientific publications on the effects of contemplative practices have involved some variant of mindfulness meditation, and many of these studies have involved the effects of meditation on stress reduction, symptom relief for physical and mental health conditions, and attention and affect regulation (Baer, 2003; Brown, Ryan, & Creswell, 2007; Carlson, Speca, Faris, & Patel, 2007; Grossman, Niemann, Schmidt, & Walach, 2004). Currently, more than 2,500 articles published over the last 30 years contain the term *mindfulness* in either the abstract or keywords (Black, 2014). During the last decade, the influence of mindfulness research in mainstream psychology, healthcare, and an incipient shift in emphasis in psychology from curing psychopathology to the cultivation of flourishing and psychological well-being (Fosha, 2009; Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008) have opened space for contemplative practices that, although incorporating mindfulness, are fundamentally geared towards the generation of positive mental and emotional states and traits, such as loving-kindness and compassion (Hofmann et al., 2011; Hutcherson et al., 2008).

Loving-kindness and compassion meditation, sometimes called *generative practices*, have begun to receive attention among scientific and clinical communities (Davidson & Harrington, 2002; Gilbert, 2009; Goetz, Keltner, & Simon-Thomas, 2010; Halifax, 2010, 2012; Hofmann, Grossman, & Hinton, 2011; Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008; Lutz, Greischar, Perlman, & Davidson, 2009). The term *generative* suggests that such practices focus on developing the ability to evoke positive mental and emotional qualities, such as loving-kindness and compassion (Duerr, 2002). Generative practices within traditional Buddhist contexts are seen as major aspects of the spiritual path (Dalai Lama & Vreeland, 2001; Salzberg, 1995) constituting an important addition to *focused or concentrative* meditation and *open monitoring or mindfulness* meditation. To date, however, they have not received equally deep consideration in Western contexts, and research on generative practices is still in its early stages.

In generative practices, the main focus is not concentration on a particular object nor keeping a nonjudgmental awareness of present-moment experience, but on the cultivation of specific emotions and attitudes that ultimately lead

to individual and collective flourishing, most prominently loving-kindness and compassion. Loving-kindness meditation (LKM) consists of developing a state of unconditional kindness for all beings, and compassion meditation (CM) involves practices that foster a deep, genuine, and embodied empathic concern in the face of suffering, together with a committed intention to ease this suffering. The cultivation of loving-kindness and compassion takes place in formal sitting meditation and also in informal practices off the cushion (i.e., cultivating compassion in everyday life outside the meditation setting), and has been praised over centuries as an essential aspect of spiritual practice. The spiritual practitioner develops these attitudes as part of his training, evoking these states by using them as the meditation object, through active imagery (e.g., imagining himself as the caring mother of all beings), and also through behavioral modification in everyday life.

Incipient research in secular loving-kindness and compassion meditation training has suggested that these practices facilitate the development of positive affect and decrease negative affect, such as anxiety and mood symptoms (Hutcherson, Seppala & Gross, 2008), and that compassion meditation may reduce subjective and physiological responses to psychosocial stress (Pace et al., 2009, 2010). Furthermore, neuroimaging studies have pointed out that both LKM and CM enhance activation of brain areas involved in emotional processing and empathy, such as the insula and the anterior cingulate cortex (Lutz, Brefczynski-Lewis, et al., 2008; Lutz et al., 2009; Lutz, Slagter, et al., 2008), and brain areas related to positive emotions, care, love, and affiliation (Klimecki, Leiberg, Lamm, & Singer, 2012). Compassion and self-compassion treatments have also begun to be investigated in clinical settings, showing positive preliminary results with people with high self-criticism and shame-related problems (Gilbert & Procter, 2006), schizophrenia (Mayhew & Gilbert, 2008), and social anxiety disorder (Werner et al., 2011).

This article reviews four contemporary compassion-based interventions and educational programs that have emerged recently. These programs are based in Buddhist practices but are also informed by Western psychological research and clinical practice, using a secular approach which makes them suitable for nonreligious and intercultural settings. The programs reviewed here include: Compassionate Focused Therapy (CFT) and Compassionate Mind Training (CMT), both developed by Paul Gilbert in the United Kingdom; Mindful Self-Compassion training

(MSC) developed by Kristin Neff and Christopher Germer; Cognitive-Based Compassion Training (CBCT) from the Emory-Tibet Partnership; and Compassion Cultivation Training (CCT) at Stanford's Center for Compassion and Altruism in Research and Education (CCARE). All these programs involve an experiential approach to developing compassion and self-compassion in participants gradually through a combination of meditative practices, compassionate imagery, relational exercises, reflection on different aspects of compassion, and informal practices.

### **Compassionate Focused Therapy (CFT) and Compassionate Mind Training (CMT)**

Based on a compassion model that integrates the insights of evolutionary psychology, neurobiology, and attachment theory, Paul Gilbert has developed a psychotherapeutic model and a group-based therapeutic approach for people with shame and self-criticism (Gilbert, 2009, 2010; Gilbert & Procter, 2006). According to this model, over the course of the intervention clients develop an internal compassionate relationship with themselves to replace the blaming, condemning, and self-critical one.

Six different compassion skills are gradually developed in CFT and CMT, which involve creating feelings of warmth, kindness, and support in a range of activities (Gilbert, 2009). *Compassionate attention* involves focusing attention in a way that helps support the person - for example, focusing on positive attributes or savoring positive experiences to develop the client's appreciation and gratitude. *Compassionate reasoning* involves developing alternative thinking patterns that support a safer self-to-self relationship, thus diminishing self-criticism. *Compassionate behavior* involves engaging in concrete actions that alleviate distress and facilitate development and growth, while also taking a courageous stance to gradually being exposed to threatening stimuli, especially positive emotions. Compassionate behavior also involves becoming more process-oriented rather than goal-oriented, allowing clients to become more prone to appreciate their small efforts regardless of the specific outcome of the action. *Compassionate imagery* involves helping clients develop warm feelings and compassion for themselves through the use of images. For instance, clients are invited to imagine their *ideal* of compassion, a human or non-human image that is envisioned as sentient and endowed with wisdom, strength, warmth and

non-judgment. Sometimes clients practice exercises related to imagining themselves as a highly compassionate person, a method for embodying an alternative self-image that can slowly shape the way the person experiences herself. *Compassionate feeling* relates to experiencing compassion from others, for others, and for the self, and these feelings are evoked through the therapeutic relationship or through other skills (attention, thinking, imagery, etc.). Finally, *compassionate sensation* refers to the way the client explores the sensations in the body that are associated with compassion for others, from others, and for the self. This would involve, for example, noticing breath patterns, sensations in the chest and belly, tension or relaxation in the jaw and neck, and so forth, associated with compassionate feelings (Gilbert, 2009).

These compassionate skills are cultivated through the quality of the therapeutic relationship and also through diverse techniques and exercises, including the therapeutic relationship, guided discovery, Socratic dialogues, inference chains, function analysis, chain analysis, maturation awareness, behavioral experiments, exposure and toleration, mindfulness, guided imagery, expressive writing, and independent practice (Gilbert, 2010).

Gilbert and Procter (2006) piloted the application of a CMT program consisting of twelve 2-hour sessions of compassionate mind training with people experiencing self-criticism, shame, and self-devaluation. All the participants who volunteered for this pilot program (4 men and 5 women) were diagnosed with personality disorders and were part of a treatment program at a day hospital in the United Kingdom. The variables that were measured to assess the impact of the program included depression and anxiety, self-attacking and self-soothing, in addition to a weekly monitoring diary to record people's experiences of their self-critical and self-soothing thoughts and feelings, social comparison, and submissive behavior. Participants were assessed two times (week 1 and week 12). Three patients dropped out, leaving 6 post-test completers. The results suggested that the training had a significant effect on self-reported anxiety, depression, self-attacking, feelings of inferiority, submissive behavior, and shame. There was also a significant increase in the participants' ability to be self-soothing and focus on feelings of warmth and reassurance for the self.

In another study, Gilbert and colleagues examined the effects of this same training protocol with people who met the diagnostic criteria for paranoid schizophrenia (Mayhew & Gilbert, 2008).

Potential participants were recruited among people between ages 15 and 65 who had a diagnosis of schizophrenia, experienced hostile auditory hallucinations, and were identified from Community Mental Health Teams in the Derbyshire Mental Health NHS Trust. The researchers were particularly interested in assessing if the compassionate mind training would have an impact on the hostile auditory hallucinations. Of the seven potential participants, only three completed the CMT, and discontinuation was associated with clinical deterioration in most of the cases. Participants were outpatients, and they participated in the CMT while continuing a long-term pharmacological treatment for their psychiatric conditions. Participants were asked to complete six questionnaires which measured assessed self-attacking and self-reassuring, beliefs and intensity of voices, general symptoms, and self-compassion. Participants also kept a diary of their voice activity, self-critical and self-compassionate thoughts each week. The treatment consisted of twelve 1-hour weekly sessions offered individually to each participant. The participants showed significant decrease in depression, anxiety, and paranoia. The intervention, for those who completed the study, also had an effect on the hostile voices, making them less persecutory, less malevolent, and more reassuring. Although these two studies are suggestive of the potential of Gilbert's compassionate mind training with mentally ill populations, these results have to be interpreted with caution considering the small size of the samples, the lack of controls in both studies, and the high dropout rate.

In a more recent study, Gale, Gilbert, Read, and Gross (2012) explored the effects of introducing CFT into a standard Cognitive Behavioral Therapy treatment for eating disorders. Participants were 139 people who met the criteria for eating disorders, 101 of which completed the pre-post questionnaires. The mean age of participants was 28 years ( $SD=8.67$ ; range=17–62 years), with 95 females and 4 males, and the majority had a diagnosis of Eating Disorder Not Other Specified EDNOS (54.5%,  $n=54$ ), with 19.2% ( $n=19$ ) given a primary diagnosis of anorexia nervosa, and 26.3% ( $n=26$ ) a primary diagnosis of bulimia nervosa. The treatment involved 20 weekly sessions and included all core aspects of CFT. The instruments used in this study included The Eating Disorder Examination Questionnaire (EDE-Q), the Stirling Eating Disorder Scales (SEDS), and the Clinical Outcomes in Routine Evaluation–Outcome

Measure (CORE-OM). The authors reported significant improvements on all EDE-Q subscales (restraint, eating concern, shape concern, and weight concern; all  $ps < 0.001$ ), and on all SEDS subscales (low self-esteem, perceived external control, anorexic dietary cognitions, anorexic dietary behaviors, bulimic dietary cognitions, bulimic dietary behaviors; all  $ps < 0.004$ ) with the exception of the assertiveness subscale, which did not show a significant improvement. All subscales of the CORE-OM (well-being, problems, functioning, and risk) showed significant improvement ( $p < 0.05$ ). There was also a significant impact of diagnosis at the two time points for many of the subscales, with people with bulimia nervosa improving more than those with anorexia nervosa on measures of eating concern, shape concern, weight concern, bulimic dietary behaviors, problems and functioning. In terms of the clinical significance of the program, 73% of the people with bulimia nervosa were considered *recovered* at the end of the treatment and 4% *improved*. In regard to anorexia nervosa, 21% of the group were considered *recovered*, with another 37% either making a significant improvement or scoring below the cut-off on the EDE-Q. In regard to EDNOS, 30% was considered to be recovered, with another 30% either classed as *improved* or *undetermined*. Over all, these results suggest that the introduction of a compassionate focus in treatment for eating disorders can be a valuable addition to conventional treatment, specifically in relation to dealing with feelings of shame and guilt.

### Mindful Self-Compassion (MSC)

Neff and Germer (2013) proposed that “self-compassion involves being touched by one’s own suffering, generating the desire to alleviate one’s own suffering and treat oneself with understanding and concern” (p. 1). The cultivation of self-compassion depends, in this framework, on cultivating its three components: kindness towards oneself (the tendency to be caring and understanding with self), common humanity (seeing one’s failures and inadequacies as part of the shared human experience), and mindfulness (being aware of and present with of one’s experiences without over-identifying with them). Previous correlational studies have found that greater self-compassion predicts lower levels of anxiety and depression (Neff, 2012), decreased cortisol and increased heart-rate variability (an indicator related to the ability to self-soothe when

stressed, and that is associated with mental and physical health; Rockliff, Gilbert, McEwan, Lightman, & Glover, 2008). Self-compassion has correlated with less rumination, perfectionism, and fear of failure (Neff 2003a). Self-compassionate people are also more willing to acknowledge their negative emotions as valid and important and show less thought suppression (Leary, Tate, Adams, Allen, & Hancock, 2007).

Neff and Germer (2013) developed a workshop they called Mindful Self-Compassion (MSC) designed for clinical and nonclinical populations that consists of eight 2-hour weekly meetings in which formal (sitting meditation) and informal self-compassion exercises are taught. Each class combines experiential exercises and discussion periods, which are complemented with homework practices oriented to cultivating a self-compassionate attitude. One session in the 8-week course is exclusively devoted to teaching mindfulness skills, considered foundational.

In the first published report on a randomized controlled trial of the MSC (Neff & Germer, 2013), 54 adults were recruited from the greater Boston area. Participants were randomly assigned to the MSC ( $n=24$ ) or a Wait-List control group ( $n=27$ ). The authors hypothesized that the MSC would produce significant increases in self-compassion, mindfulness, other-focused compassion, social connectedness, happiness, and life satisfaction, as well as a decrease in depression, anxiety, stress, and avoidance. Pre-, post-, and 6-month and 1-year follow-up measures were used to assess changes in these variables. The reported results indicate that the MSC group demonstrated improvements on all the predicted outcomes ( $p < .05$ ). Compared to controls, the MSC group showed significantly greater gains in self-compassion, mindfulness, compassion for others, and life satisfaction, as well as decreases in depression, anxiety, stress, and avoidance (medium to large effects size in all variables, except from stress reduction, which showed small effect size). Group differences were not significant for social connectedness and happiness. All positive changes in the intervention group were maintained after 6 months and 1 year. Self-compassion was significantly associated with well-being gains for every outcome except avoidance, which was predicted by increased mindfulness. Finally, increases in self-compassion were significantly related to the number of days a week that participants meditated as well as the number of times per day they formally practiced self-compassion ( $p < .05$ ). Despite some important limitations in this study (e.g., use of a homogenous

sample mostly composed of middle-aged highly educated women with previous meditation experience), the reported results suggest that self-compassion is an emotional skill that can be trained over a relatively short time and can be stabilized as an attitude that is sustained over time. The increasing amount of research that points towards self-compassion as a strong predictor for individual and interpersonal well-being (for a review see Neff, 2012), and the association between self-compassion and compassion for others, confirms the theoretical assumptions about the centrality of cultivating a self-compassionate stance within the context of cultivating compassion for others.

### Cognitive-Based Compassion Training (CBCT)

CBCT was developed by the Tibetan Lama Geshe Lobsang Tenzin Negi, director of the Emory-Tibet partnership at Emory University. This program is based on traditional Buddhist methods for cultivating compassion. This program includes meditation practices adapted from mind/heart training techniques (*lojong*) largely derived from the writings of Indian Buddhist masters Shantideva (8th century) and Atisha (11th century). According to Jinpa (2011), *lojong* practices are characterized by:

the salient idea of transformation, whereby a process of training, habituation, cultivation, and cleansing induces a profound transformation—a kind of metanoesis—from the ordinary deluded state, whose modus operandi is self-centeredness, to a fundamentally changed perspective of enlightened other-centeredness. (p. 4)

The core of these practices is to transform egocentric thoughts, emotions, and behavior patterns that are harmful for self and others into thoughts, emotions, and behaviors that are beneficial (Desbordes et al., 2012). These *lojong* teachings were structured into the 8-week CBCT program that include the following weekly steps: developing attention and stability of mind; cultivating insight into the nature of mental experience; cultivating self-compassion; developing equanimity; developing appreciation and gratitude for others; developing affection and empathy; realizing wishing and aspirational compassion; and realizing active compassion for others (Ozawa-de Silva & Dodson-Lavelle, 2012).

In a series of studies, Pace et al. (2009, 2010) explored whether CBCT had an impact on immune and neuroendocrine response to social stress. In their first study, 61 college students were recruited and randomly assigned to a 6-week CBCT group ( $n=33$ ) or to a health discussion control group ( $n=28$ ). The meditation training, which consisted of a 50-minute class twice a week plus commitment to a 20-minute daily meditation practice at home, also involved concentrative (*shamatha*) and mindfulness (*vipassana*) which complemented the analytical meditations specific to compassion enhancement. Participants' behavioral and physiological response were measured via a standardized laboratory stressor (Trier Social Stress Test [TSST]), which reliably activates the hypothalamic-pituitary-adrenal (HPA) axis and sympathetic nervous system. Plasma concentrations of interleukin (IL)-6 and cortisol (both substances related to stress and inflammatory response), as well as total distress scores on the Profile of Mood States (POMS), were measured.

The results (Pace et al., 2009) showed no significant difference between meditation and control groups on TSST responses for IL-6, cortisol, or POMS scores. Nevertheless, increased meditation practice was correlated with decreased physiological and psychological activation using the same measures ( $p<0.01$ ). Participants with meditation practice times above the median exhibited lower TSST-induced IL-6 and POMS distress scores compared to individuals below the median, who did not differ from controls. Although these results suggest that cognitive-based compassion training may reduce stress-induced immune and behavioral response, this study's generalizability is limited due to the specificity of the population, and its construct validity was challenged in terms of whether a health discussion group is an adequate control for compassion cultivation training, and by the fact that the TSST was applied after and not before the compassion training. The latter allows for the possibility that participants with a lower innate stress response prior to the training might have been inclined to practice compassion meditation more intensely than those who showed a higher stress response.

To address this last possibility, a follow-up study was conducted using a different sample of 32 healthy college students (Pace et al., 2010) in an identical design, except that the TSST was applied before and not after the compassion training. This time, no association was found between stress response and subsequent amount of compassion meditation practice, which suggested that compassion training effectively reduces subjective

and physiological responses to psychosocial stress. However, the aforementioned questions regarding adequacy of the control condition were maintained. Compared with the highly structured compassion cultivation intervention, which was guided by an experienced meditation instructor, the health discussion group lacked a structured description and was taught by graduate students most likely with little expertise, which makes the control comparison questionable.

Testing the hypothesis that sustained meditative experiences translate into lasting neurological and attitudinal changes outside the meditation session, the Emory group recently designed a study on the effects of CBCT on amygdala response to emotional stimuli in an ordinary state (Desbordes et al., 2012). The amygdala is a neural structure implied in the processing of emotional stimuli of positive and negative valence, and a few previous studies had suggested that meditation had an effect in amygdala activation (Klimecki et al., 2013; Lutz et al., 2009), but those effects were measured during the meditative states. Desbordes et al. (2012) compared the effects of three different 8-week interventions (CBCT, Mindful Attention Training [MAT], and an active control intervention group consisting of a health discussion group) on 36 healthy adults who were randomized to these three groups. All subjects participated in 2 hours of class time per week, and participants in the CBCT and MAT conditions were asked to practice meditation for an average of 20 minutes a day. Before and after the intervention, participants underwent an fMRI experiment during which they were presented images with positive, negative, and neutral emotional valences from the International Affective Picture System database (IAPS) while remaining in an ordinary, non-meditative state. Along with fMRI measures, participants filled out the Beck Depression Inventory (BDI-II) and the Beck Anxiety Inventory (BAI) before and after the 8-week intervention. Those in the CBCT and MAT groups were asked to report on a daily basis the amount of time they spent practicing meditation at home.

Using a region of interest analysis, the authors found a longitudinal decrease in amygdala activation in the MAT participants in response to positive, neutral, and negative images, which can be related to the emotion-regulation effect of mindfulness training. In contrast, the CBCT group showed a trend increase in right amygdala response to negative images, which was significantly related to a decrease in depression score, and this correlation between reduced

depression and increased amygdala activation was stronger in CBCT participants who reported more minutes of practice per week. This is consistent with the hypothesis that images of suffering should inspire more compassion in the participants after compassion training, which may itself be related to an increase in amygdala activation. Previous studies had correlated compassion with amygdala activation in expert meditators (Lutz, Brefczynski-Lewis, et al., 2008). Although the effect sizes were small—which might have been influenced by the small size of the groups and the fact that brain images were taken in a normal state—these findings suggest that meditation training may affect emotional processing in everyday life, and not just during meditation.

The CBCT protocol has also recently been adapted to other populations, including elementary school children; youth in the foster care system; stress and trauma for war victims in Kosovo; and suicide attempters in a hospital in Atlanta. There are currently on-going studies investigating the effects of compassion training in these populations

### Compassion Cultivation Training (CCT)

Tuption Jinpa, a former lama and Tibetan scholar, developed Compassion Cultivation Training (CCT) in collaboration with psychologists at Stanford's Center for Compassion and Altruism in Research and Education. This program, like CBCT, is based in Tibetan Buddhist *lojong* teachings aimed at transforming the practitioners' view from a self-centered to an altruistic one. Compassion is understood in CCT as a multidimensional process whose main components are awareness of the suffering of others (cognitive aspect); empathic concern related to being moved by suffering (affective aspect); a wish to see the suffering relieved (intentional aspect); and a responsiveness or readiness to help relieve that suffering (motivational aspect; Jinpa, 2010). Consequently, the cultivation of compassion in CCT involves a multidimensional approach that uses a variety of didactic and experiential components to gradually incline the participants' minds toward compassion. The CCT structure involves six steps spread throughout 8 weeks or 9 weeks.

Step 1 involves settling the mind and learning to focus it. Steps 2 through 5 pertain to actual compassion cultivation. They are loving-kindness and compassion for a loved one (step 2); loving-kindness and compassion for oneself (step 3); establishing the basis for compassion toward

others by embracing shared common humanity and appreciating the deep interconnectedness of self and others (step 4); and compassion toward others, including all beings (step 5). These are followed by active compassion practice (step 6), which involves imagining taking away others' pain and sorrow, and offering to them one's own peace and happiness. Finally, in week 8, the course offers an integrated practice where a complete daily compassion meditation is presented. Participants meet once a week for 2 hours, and in each session the instructor introduces a new formal meditation that participants practice during the following week with the help of audio recordings. Besides the meditation practice, each session normally includes didactic on the key concepts introduced that week, relational exercises, a review of the previous week's homework, and a new home assignment, including formal (sitting meditation) and informal practices (applying the course ideas in everyday life).

A research team at Stanford has published two studies on the effects of CCT (Jazaieri et al., 2012, 2013). Both studies used the same sample and research design, which consisted of a randomized controlled trial with healthy adults from the San Francisco Bay Area (ages 21–68, mostly Caucasian, female, and with postsecondary education). Potential participants had to pass a screening procedure that excluded individuals who identified bipolar, major depressive disorder, psychosis, or active suicidal ideation. Participants were randomly assigned to an experimental group ( $n=60$ ) that went through a 9-week version of the compassion cultivation training (CCT), or to a waitlist (WL) control group ( $n=40$ ). Nine of 60 (15%) participants assigned to CCT dropped out of the program, and 10 of 40 (25%) participants assigned to WL dropped out.

In the first study (Jazaieri et al., 2012) to evaluate changes in compassion, Neff's Self-Compassion Scale (Neff, 2003b) and Gilbert's Fears of Compassion Scales (Gilbert et al., 2011) were used at baseline and after the intervention ended. Compared to baseline, the CCT group exhibited significant improvements on all three aspects of compassion measured after the CCT course ( $p < 0.001$ ). The waitlist group did not show significant improvement in any of these measures. This trial showed a significant correlation between amount of formal practice and a decrease in fears of compassion for others ( $p < 0.05$ ).

In the second study (Jazaieri et al., 2013), the researchers assessed changes in mindfulness, affect, and emotion regulation from pre- to post-intervention. For assessing changes in

mindfulness, they used the Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004) and the Experiences Questionnaire (EQ; Fresco et al., 2007); to assess affect, they used the Penn State Worry Questionnaire (Meyer et al., 1990), the Perceived Stress Scale (PSS-4; Cohen, Kamarck, & Mermelstein, 1983), and the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999); and to assess changes in emotion regulation they used the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). Compared to baseline, the CCT group showed increased mindfulness and decreased over-identification with their thoughts (KIMS and EQ:  $p < .001$ ), while the WL group did not change significantly. In terms of affect, CCT participants presented significant decreases in worry ( $p < .001$ ) but no significant changes in happiness or perceived stress. In terms of emotion regulation strategies, CCT participants significantly decreased the frequency of emotional suppression ( $p < .001$ ), whereas cognitive reappraisal frequency did not change significantly. Despite the anticipated limitations of the design (homogeneous sample, lack of active control group, exclusive use of a few self-report measures), these two studies by Jazaieri et al. (2012, 2013) offered initial evidence that compassion training can take place in a relatively short period of time, and that this training could be effective in enhancing psychological well-being and emotional regulation.

More recently, we investigated the effects of the first implementation in Spanish of CCT with a community sample in Santiago de Chile (Brito, 2014). This study involved 82 participants allocated in three different groups: A compassion cultivation training group (26 participants), a randomized waitlist control group (24 participants) and an active matched control group trained in an 8-week Mindfulness-Based Stress Reduction program (MBSR; 32 participants). The groups were assessed using measures of Psychological Wellbeing (depression, anxiety, stress, life satisfaction, and happiness), Contemplative Skills (mindfulness and self-compassion), and Altruistic Orientation (empathic concern, empathic distress, cognitive empathy, compassion for others, and identification with all humanity) at baseline, post-intervention, and 2-month follow-up.

Whereas the waitlist group did not show statistically significant pre-post changes in any outcome measure, CCT participants showed significant improvements in all three areas: Psychological Wellbeing (decreased depression and stress [ $ps < .001$ ], increases in life satisfaction

and happiness [ $ps < .05$ ], and a trend toward significance for decreased anxiety [ $p < .07$ ]); Contemplative Skills (increased mindfulness and self-compassion;  $ps < .001$ ), and Altruistic Orientation (increased cognitive empathy, empathic concern, compassion for others, and identification with all humanity; and decreased empathic distress; all  $ps < .005$ ). All positive changes were maintained 2 months after the intervention. The MBSR comparison group also presented significant enhancements in psychological well-being and contemplative skills after the training; however, this group did not significantly change in empathic concern, compassion for others, and identification with all humanity.

Taken together, these results suggest that CCT is a promising intervention that is adaptable to diverse cultural contexts, and that there are important benefits of compassion training at the individual and relational level, positively influencing the participants' social contexts.

## Discussion

This review of the available outcome research on contemporary compassion-based interventions provides a general perspective of the potential benefits of compassion training in secular settings. Although important limitations in most of the reviewed studies (e.g., use of small samples, lack of adequate controls, almost exclusive use of self-report measures, lack of qualitative data to complement quantitative data, lack of follow-up measures, and homogeneity of the samples) reflect the early stage of development of this field, emerging trends deserve attention. The reviewed studies suggest that compassion and self-compassion are attitudes that can actually be enhanced in clinical and nonclinical populations through structured interventions, and that this enhancement is correlated with increases in individual and relational well-being and mental health.

Most of the reviewed programs explicitly integrate meditation as an active part of the interventions, which suggests a growing openness to explore and utilize practices derived from contemplative traditions, especially when these practices are presented in a secular format and are associated with perceptible benefits. This is yet to be explored in the case of mentally ill populations, taking into consideration that in the research available (notably Gilbert's), samples are too small and drop-off rates too high to extract general

conclusions. Another trend in this body of research is that the amount of time dedicated to home practice is directly related with how much benefit participants get from the program. Simply participating in a compassion training program seems not to guarantee change, but when personal engagement exists, the compassion cultivation trainings seem to have enduring effects, turning the compassionate states into traits that manifest outside meditation sessions.

Compassion has been of central interest for humankind for millennia, being a key element in world religions, emerging as a recurring topic in Western and Eastern philosophy, and, most recently, entering the field of psychology and scientific inquiry. At the same time that current evolutionary psychology has offered a plausible framework within which prosocial emotions like compassion can be demystified and naturalized as constitutive aspects of the human experience, neuroimaging technology has provided the concrete opportunity to observe the neural correlates of these emotions, enhancing the legitimacy of their study. More recently, contemplative traditions and modern science have begun to co-create initiatives to make transformative practices available for wider audiences, as it is the case with the Center for Compassion and Altruism Research and Education (CCARE) at Stanford University and the Emory-Tibet Partnership.

The success and widespread popularity of the MBSR program and related meditation programs in the last 30 years have changed the territory of Western psychology and turned meditation into a mainstream practice. In the last few years, compassion-based trainings are emerging as a second wave of secular meditation trainings, which are not merely focused on stress reduction at the individual level, but on generating positive qualities of the heart and enhancing empathic, loving, and compassionate relationships, offering a concrete tool to shift social interactions in the direction of increased empathy and care. The socially transformative focus of contemporary compassion trainings does not deny but includes and transcends the mindfulness-based practices which calm the stress-reactivity at the individual level. Further research geared toward assessing the real-world impact of compassion trainings will be needed to determine if these methodologies can bring effective social transformation.

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