RESEARCH PAPER

Enhancing Compassion: A Randomized Controlled Trial of a Compassion Cultivation Training Program

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Abstract Psychosocial interventions often aim to alleviate negative emotional states. However, there is growing interest in cultivating positive emotional states and qualities. One particular target is compassion, but it is not yet clear whether compassion can be trained. A community sample of 100 adults were randomly assigned to a 9-week compassion cultivation training (CCT) program (n = 60) or a waitlist control condition (n = 40). Before and after this 9-week period, participants completed self-report inventories that measured compassion for others, receiving compassion from others, and self-compassion. Compared to the waitlist control condition, CCT resulted in significant improvements in all three domains of compassion—compassion for others, receiving compassion from others, and self-compassion. The amount of formal meditation practiced during CCT was associated with increased compassion for others. Specific domains of compassion can be intentionally cultivated in a training program. These findings may have important implications for mental health and well-being.

Keywords Compassion · Self-compassion · Meditation · Training

1 Introduction

Most psychosocial intervention research has focused on the alleviation of negative emotional states. However, there is growing interest in cultivating positive emotional states and qualities. One particular target that has recently been emerging is compassion, which has long been valued by religious traditions including Christianity, Judaism, and Islam (Balslev

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and Evers 2011). Recent research has been suggesting that compassion is a predictor of psychological health and well-being. Scientifically, compassion has been associated with decreased negative affect and stress responses, and also with increased positive affect, social connectedness, and kindness towards oneself and others (Fredrickson et al. 2008; Hutcherson et al. 2008; Lutz et al. 2008; Lutz et al. 2004; Pace et al. 2009; Pace et al. 2010). Unlike other positive emotions, compassion gives rise to altruistic behavior and generosity, essentially, compassion gives rise to a powerful motivation that is by definition, focused on others, which naturally results in greater social connectedness.

While it is widely agreed that compassion is a valued capacity, it is not yet clear how best to cultivate compassion in the context of a training program. Further, it has recently been suggested that individuals may "actively resist engaging in compassionate experience or behaviours" (Gilbert et al. 2010, p. 252) and that there may in fact be a resistance to compassion that is generated by fear of it being potentially threatening. Because of the numerous benefits associated with increasing positive states such as compassion, it is important to understand whether this is a skill that can be trained and cultivated.

1.1 Defining Compassion

Originating from the Latin root *com-* + *pati* (to bear, suffer), Merriam-Webster dictionary defines compassion as a "sympathetic consciousness of others' distress together with a desire to alleviate it" (2011). Western psychological theory proposes that compassion is a complex psychological construct that involves cognitive, affective and behavioral features (see review in Goetz et al. 2010). From the Buddhist perspective, compassion (*Karuṇā*) is a basic quality of human beings rooted in the recognition of and desire to alleviate suffering, and gives rise to prosocial behaviors (Lama 1995, 2001).

1.2 Distinguishing Among Three Orientations of Compassion

Western scientific investigations of compassion have focused on three specific orientations of compassion, namely, having compassion for others, receiving compassion from others or being the object of compassion, and compassion for oneself or self-compassion (Gilbert 2009; Gilbert et al. 2010; Neff 2003a, b).

Compassion for others is a concept that is present in nearly all cultures and spiritual/contemplative traditions (Moses 2002) and is thought by most to be "easier and more palatable" than compassion for oneself (Germer 2009, p. 160). However, compassion for others is not always expressed and in fact, can be suppressed and inhibited (Gilbert et al. 2010). Some people may fail to experience compassion while others may actually experience a *fear of* compassion (for others, from others, and for self) (Gilbert et al. 2010). Specifically, one may fear that extending compassion towards another may threaten one's own self-interest or the interests of one's identified group (Gerhardt 2010). From an evolutionary perspective, compassion can be an "expensive resource" and therefore must be dispensed appropriately to one's kin (who are likely to be potential reciprocators) rather than to non-kin or those who are unfamiliar, in an effort to protect one's own self-interests (Gilbert et al. 2010). Further, it is the confusion between compassion for others and forgiving or condoning a person's harmful actions and behaviors that can lead to extending less compassion to others. For example, compassion for others may not occur if the judgment is being made that the recipient of compassion does not deserve compassion (e.g., perpetrators of violent crimes who are serving life sentences, or those who have been

infected with AIDS due to intravenous drug use rather than blood transfusion (e.g., Capitanio and Herek 1999; Weiner et al. 1988).

Receiving compassion from others is a more recent area of exploration. Fear of receiving compassion from others (e.g., feeling like one does not deserve or should not accept care and kindness from others), has been associated with self-criticism, insecure attachment, depression, anxiety, and stress (Gilbert et al. 2010). For some, being the object or recipient of compassion can create fear reactions, avoidance, or generate negative emotions such as grief or loneliness (Gilbert et al. 2010). Increasing this aspect of compassion may be beneficial in helping individuals become more comfortable being the target of another person's attention as well as assist in enhancing relationships and social connectedness. The extent to which this facet of compassion can be modified by training is still open to investigation.

Self-compassion has defined it as "being open to and moved by one's own suffering, experiencing feelings of caring and kindness toward oneself, taking an understanding, nonjudgmental attitude toward one's inadequacies and failures, and recognizing that one's own experience is part of the common human experience" (Neff 2003a, p. 224). Self-compassion has been associated with positive qualities including greater coping with adversity, life satisfaction, emotional intelligence, social connectedness, mastery of goals, personal initiative, curiosity, wisdom, happiness, optimism, and positive affect (Neff 2003b, 2009; Neff et al. 2005; Neff and Vonk 2009). Self-compassion is also associated with reductions in depression, anxiety, self-criticism, fear of failure, thought suppression, rumination, perfectionism, performance goals, and disordered eating behaviors (Neff 2003b, 2009). There is some research showing the value of training individuals in self-compassion in student (Leary et al. 2007) and clinical populations (Gilbert and Procter 2006; Mayhew and Gilbert 2008); however, studies have yet to determine to what degree self-compassion can be enhanced via a formal training program.

These three orientations of compassion are thought to be different. Gilbert et al. (2010) examined the fear of compassion: for others, from others, for self, and self-compassion within a therapist population (n = 53; Age (M) = 39.52) and a student population (n = 222; Age (M) = 22.70). The correlational findings suggested that the fear of compassion *for self* and compassion *from others* appeared to "reflect a difficulty in experiencing affiliative emotions *in general*" (p. 250). Empirically, the relations between these orientations of compassion to one another has not explicitly been tested in terms of a formal training program or within a community sample.

1.3 Enhancing Compassion

From a Buddhist perspective, compassion can be trained through mental practices, such as meditation. Only recently, however, has the cultivation of compassion been evaluated empirically. Several compassion programs now exist, including Compassion-Focused Therapy (CFT) and Compassionate Mind Training (CMT) (Gilbert 2007, 2009, 2010). CFT is the process of applying a compassion model to psychotherapy. As a group-based therapy, CMT is designed as a compassion-based therapeutic approach to help people with high shame and self-criticism (Gilbert and Irons 2005). In a pilot study of CMT, although compassion was not explicitly measured, CMT yielded significant decreases in depression, self-attacking, shame, and feelings of inferiority (Gilbert and Procter 2006).

Pace and colleagues (2009; 2010) developed a 6-week compassion meditation program and found that in an undergraduate population, the amount of compassion-focused mediation practice was related to innate immune responses (i.e., decreases in interleukin

(IL-6) and cortisol production) to a psychosocial stressor (Pace et al. 2009). In general, the amount of meditation practice in other studies has been associated with improvements on outcome measures such as happiness, coping, sleep quality, and reductions in stress levels (e.g., Carson et al. 2004; Shapiro et al. 2003). In the aforementioned studies, there were no reports of the effect of enhancing compassion. More recently, a group at Stanford University along with the Center for Compassion and Altruism Research and Education (CCARE) created a compassion cultivation training (CCT) protocol explicitly designed as a general training program to enhance compassion (Jinpa 2010). This study is the first to examine results from the CCT protocol.

Although not explicitly designed to cultivate compassion, Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn 1990) has been associated with increases in self-reported self-compassion in clinical and non-clinical populations (e.g., Birnie et al. 2010; Jazaieri et al. 2012; Shapiro et al. 2005; Shapiro et al. 2007; Shapiro et al. 2011; Werner et al. 2011). Psychologist Kristin Neff, Ph.D. and colleagues are currently developing a program called Mindful Self-Compassion (MSC), which focuses on cultivating self-compassion. To date, no research has been published on this program.

1.4 The Present Study

The goal of this study was to examine the impact of a new systematic compassion cultivation training (CCT) program on compassion for others, being the recipient of compassion from others, and self-compassion. For this preliminary study, we conducted a randomized controlled trial (RCT) of CCT versus a waitlist (WL) control condition. We expected that, compared to WL, CCT would result in an increase in: compassion for others, willingness to receive compassion from others, and compassion towards oneself. Further, we expected that within CCT participants, greater amount of time spent in formal compassion-focused meditation practice would be associated with greater improvement in all three orientations of compassion.

2 Methods

2.1 Participants

Participants in this RCT were adults from the community. From the 158 adults who contacted us, 149 met study inclusion criteria and were invited to participate, 49 potential participants discontinued *prior* to randomization because they did not complete baseline assessments. The remaining 100 participants were randomly assigned to either CCT ($n = 60$) or WL ($n = 40$) (Fig. 1). Age ranged from 21 to 68 years old. Groups did not differ in gender, age, or ethnicity (Table 1).

2.2 Procedure

Participants were recruited through web-based online community listings throughout the Palo Alto, San Francisco, and Berkeley Bay Area, email listservs, and advertisements on community bulletin boards. Potential participants had to pass a screening procedure that excluded individuals who endorsed bipolar, major depressive disorder, psychosis, or active suicidal ideation. Participants provided informed consent in accordance with Stanford
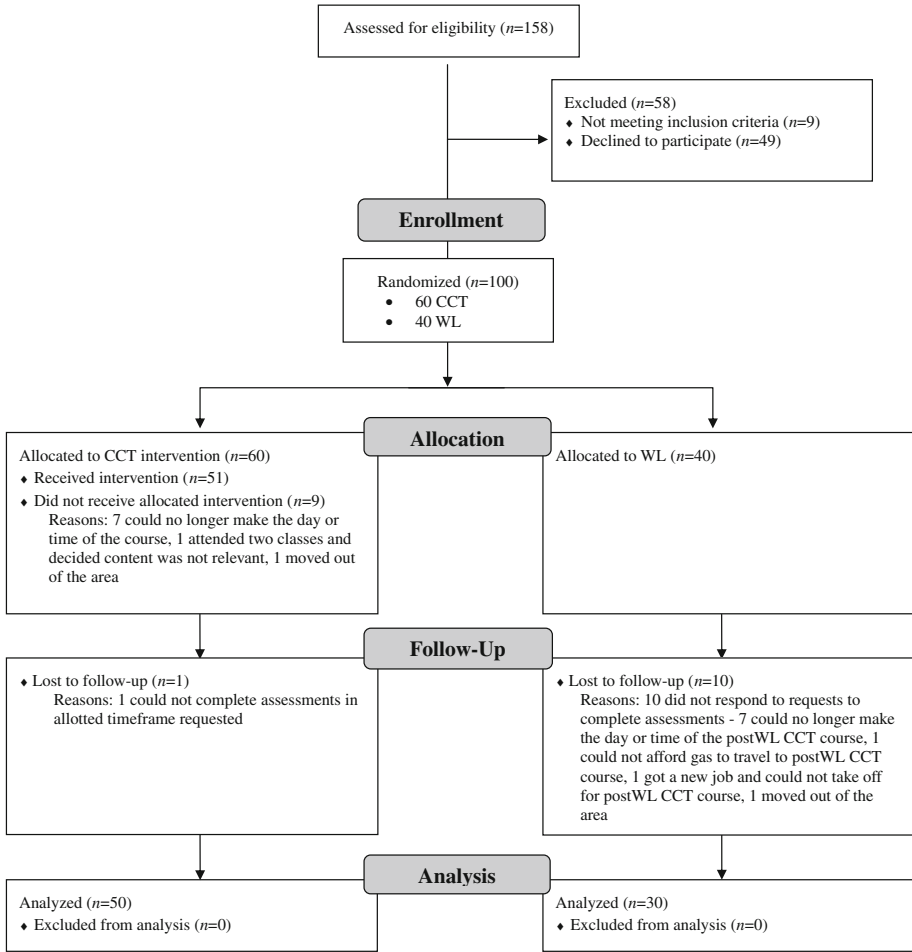
Fig. 1 Consolidated standards of reporting trials diagram for randomized controlled trial of compassion cultivation training (CCT) versus waitlist control condition (WL)

University Human Subjects Committee rules and were not paid for their participation. Participants were randomized with a 60 % probability of CCT or 40 % probability for WL using a random number generator.

2.3 Compassion Cultivation Training (CCT)

CCT was developed by Geshe Thupten Jinpa, Ph.D. in collaboration with a team of clinical psychologists, research scientists at Stanford University, and the support of the Center for Compassion and Altruism Research and Education (CCARE). CCT is a structured protocol that consists of a 2-h introductory orientation, eight once weekly 2-h classes, and daily compassion-focused meditation practice. Compassion as elucidated in the CCT protocol (Jinpa 2010), is a multidimensional process comprised of four key components: (1) an *awareness* of suffering (cognitive/empathic awareness), (2) *sympathetic* concern related

Table 1 Demographic characteristics for individuals randomized to compassion cultivation training (CCT) or waitlist (WL) control

	CCT $n = 60$	WL $n = 40$	t test or χ^2
Females, n (%)	39 (65 %)	33 (83 %)	$\chi^2 = 2.83$
Age (M years $\pm$ SD)	41.98 $\pm$ 11.48	44.68 $\pm$ 13.05	$t = -1.08$
Ethnicity n (%)			$\chi^2 = 1.93$
Caucasian	39 (65 %)	32 (80 %)	
Asian	7 (11.7 %)	5 (12.5 %)	
Hispanic	4 (6.7 %)	2 (5 %)	
African American	3 (5 %)	0 (0 %)	
Multiracial	5 (8.3 %)	1 (2.5 %)	
Marital status, n (%)			
Single, never married	23 (38 %)	11 (28 %)	
Married	21 (35 %)	14 (35 %)	
Living with a partner	2 (3.3 %)	1 (2.5 %)	
Divorced	4 (6.7 %)	4 (10 %)	
Widowed	7 (11.7 %)	9 (22.5 %)	
Separated	3 (5 %)	1 (2.5 %)	
Highest level of education, n (%)			
Completed high school	2 (3.3 %)	0 (0 %)	
Some college	2 (3.3 %)	3 (7.5 %)	
Bachelors degree	23 (38.3 %)	17 (42.5 %)	
Masters degree	25 (41.7 %)	14 (35 %)	
Doctorate or medical degree	8 (13.3 %)	6 (15 %)	

to being emotionally moved by suffering (affective component), (3) a *wish* to see the relief of that suffering (intention), and (4) a *responsiveness* or readiness to help relieve that suffering (motivational).

Each class includes: (a) pedagogical instruction with active group discussion, (b) a guided group meditation, (c) interactive practical exercises related to the specific step of the week (the six steps are described below), and (d) exercises designed to prime feelings of open-heartedness or connection to others, either through reading poetry or through reflecting on inspiring stories. Participants are encouraged and instructed to engage in daily informal and formal home meditation practice for at least 15 min (building up to 30 min) using pre-recorded guided meditations. Although the formal meditations are derived from Tibetan Buddhist contemplative practices and some of the experiential exercises from Western psychology, CCT is taught as an entirely secular approach to enhancing compassion.

The classes are designed to deliver both didactic and experiential training in compassion practices across six steps. Step 1 involves the basic skills needed for any contemplative or reflective practice, namely, learning to focus and settle the mind. Step 2 involves experiencing loving-kindness (a technique to increase feelings of caring and warmth for oneself and others (Salzberg 1995), and compassion for a loved one and, on this basis, learning to become aware of the psychosomatic experiences associated with these. Step 3 involves loving-kindness and compassion for oneself. Step 4 involves compassion towards others

through embracing our shared common humanity and appreciating the interconnectedness of self and others. Step 5 involves compassion towards *all* beings. Step 6 involves an "active compassion" practice where one imagines taking away others' pain and sorrow and offering to them one's own joy and happiness. Finally, participants are introduced to an integrated practice where all six steps are included in a complete daily compassion-focused meditation (Jinpa 2010).

CCT was taught by two instructors (KM, ER) who met the basic instructor qualifications as outlined in the CCT manual, namely, advanced training in psychology, formal meditation practice, including a variety of compassion practices, and experience teaching meditation practices. Instructors had 16 (KM) and 23 (ER) years of personal meditation experience, 12 (KM) and 13 (ER) years of experience teaching mediation, PhDs in psychology, and were further trained by Thupten Jinpa, Ph.D. CCT program adherence ratings were obtained for each class by an independent rater familiar with the CCT protocol. To ensure CCT was implemented correctly, an independent adherence rater rated each class using a CCT adherence scale developed for this study. To achieve adherence, teachers had to achieve a score of 90 % adherence. All teachers were in full adherence with the CCT protocol.

2.4 Measures

Fears of Compassion Scales (*FCS;* Gilbert et al. 2010). The FCS is comprised of 38 items and assesses three orientations of compassion: *fear of compassion for others*—compassion felt for others, *fear of compassion from others*—being the recipient of compassion, and *fear of compassion for self*—being compassionate towards oneself. Fear of compassion *for others* is comprised of 10 items (e.g., "People will take advantage of me if they see me as too compassionate"), fear of compassion *from others* is comprised of 13 items (e.g., "I often wonder whether displays of warmth and kindness from others are genuine"), and fear of compassion *for self* is comprised of 15 items (e.g., "I feel that I don't deserve to be kind and forgiving to myself"). Items are rated on a five-point Likert scale (0 = *Don't agree at all*, 4 = *Completely agree*) and each scale is individually summed. For all three subscales, lower scores indicate greater compassion (i.e., decreased fear of compassion). Within student and therapist populations, the FCS has demonstrated excellent internal consistency for all three scales (FCS; Gilbert et al. 2010). Internal consistency was good in the current samples (CCT = .82–.92; WL = .89–.95).

Self-Compassion Scale (*SCS;* Neff 2003a). The SCS is a 26-item measure rated on a 5-point Likert-type scale ranging from 1 (*almost never*) to 5 (*almost always*). Sample items include, "I try to see my failings as part of the human condition" and "When something painful happens I try to take a balanced view of the situation". The SCS has demonstrated strong convergent and discriminant validity, good test–retest reliability and internal consistency, and no correlation with social desirability (Neff 2003a; Neff et al. 2007). Internal consistency was good in the current samples (CCT = .95; WL = .96).

2.5 Statistical Analysis

Analyses were conducted using SPSS version 19. Data were checked for normality of distribution and outliers using box plots. All data were retained. A 2 (Group) × 2 (Time) repeated-measures analyses of variance (ANOVAs) on measures of compassion were conducted based on (a) program completers and (b) the intent-to-treat (ITT) sample. For the ITT analysis, we used a standard conservative method in which the participant's last

observation was carried forward to account for missing data (Schafer and Graham 2002). Because the completer and ITT analyses yielded equivalent results, here we report only the completer analyses (results of the ITT analyses are available upon request).

3 Results

3.1 Preliminary Analyses

Nine of 60 (15 %) participants assigned to CCT dropped out of the program, and 10 of 40 (25 %) participants assigned to WL dropped out—a non-significant difference (χ^2 (1, $N = 100$) = 1.56, $p = .21$) (Fig. 1) This dropout rate is a similar rate to similar group interventions with non-clinical samples of adults (e.g., Shapiro et al. 1998). CCT completion was defined as attending at least 7 of 9 classes and 98 % were classified as CCT completers. Among program completers, 1 of 51 (2 %) CCT participants did not complete post-program assessments (Fig. 1). Attendance over the 9-week course was near perfect with the average number of missed classes being less than one ($M = 0.76$, SD = 0.98).

3.1.1 Interrelations Among Compassion Scales

At baseline, the three subscales of the FCS were significantly correlated with each other in the CCT group and the WL group. There were no between-group differences in the associations of the three FCS subscales (all Fischer's r-to-Z Zdiff t tests <1.35, all ps > .18). There were no significant changes in the strength of association for any of the baseline correlations from pre-to post-CCT (all ps > .11) and from pre-to-post WL (all ps > .16) (Table 3).

3.1.2 Relationship Between Two Self-Compassion Measures

At baseline, SCS and FCS *for self* were significantly inversely correlated in the CCT ($r(59) = -.62$, $p < .001$) and WL groups ($r(39) = -.57$, $p < .001$), but the correlations did not differ ($Z_{\text{diff}} = -.36$, $p > .72$). Post-WL, the SCS and FCS *for self* were still significantly inversely correlated ($r(30) = -.70$, $p < .001$) and the degree of association did not differ from baseline ($Z_{\text{diff}} = -.86$, $p > .39$). Post-CCT, the SCS and FCS *for self* were significantly inversely correlated ($r(50) = -.49$, $p < .001$) and the degree of association did not differ from baseline ($Z_{\text{diff}} = -1.02$, $p > .31$).

3.2 Effect of CCT on Compassion

Compared to baseline, CCT group exhibited improvements on all three aspects of compassion after the 9-week CCT course (Fig. 2).

3.2.1 Compassion for Others

A 2 Group (CCT, WL) × 2 Time (baseline, post) repeated-measures ANOVA of FCS *for others* yielded a main effect of time ($F_{1,78} = 32.43$, $p < .001$, $\eta_{\text{p}}^2 = .28$), no effect of group ($p > .95$), and a significant interaction of time x group ($F_{1,78} = 9.12$, $p < .003$, $\eta_{\text{p}}^2 = .10$).

Fig. 2 Percent improvement from pre- to post-training on fear of compassion scale (FCS) and self-compassion scale (SCS) measures of compassion scale
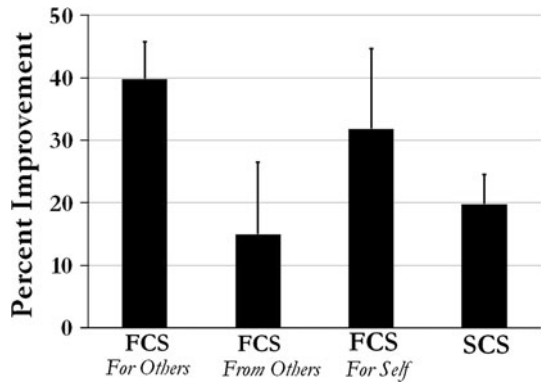

Table 2 Levels of compassion in compassion cultivation training (CCT) and waitlist (WL) control groups

Measure	N	Group	Baseline mean (SD)	Post mean (SD)	Pre versus post F, effect size	Change scores, t-test, p values
Fear of compassion scale (FCS)						
For others	50	CCT	12.36 (6.03)	7.12 (5.36)	38.55***, .44	5.42, t = 6.41***
	30	WL	10.60 (7.29)	9.50 (7.53)	2.01, .07	1.10, t = 2.02
From others	50	CCT	10.81 (8.41)	6.51 (5.32)	18.79***, .27	4.30, t = 4.12***
	30	WL	12.29 (9.24)	10.94 (9.56)	2.30, .07	1.35, t = 0.23
For self	50	CCT	13.24 (11.18)	6.06 (7.37)	25.69***, .34	7.18, t = 5.07***
	30	WL	15.55 (13.43)	14.48 (13.34)	0.98, .03	1.07, t = 1.51
Self-compassion scale (SCS)	50	CCT	2.85 (.82)	3.29 (.82)	19.91***, .29	0.44, t = 4.46***
	30	WL	2.90 (.72)	2.89 (.69)	0.02, .01	−0.01, t = .12

SD standard deviation, *effect size* partial eta squared (η_p^2)

*** $p < .001$

Follow-up within group *t* tests examining baseline to post change in the CCT and WL showed no change for WL and improvement for CCT (Table 2).

3.2.2 Compassion from Others

A 2 Group (CCT, WL) × 2 Time (baseline, post) repeated-measures ANOVA of FCS *from others* yielded a main effect of time ($F_{1,78} = 15.60, p < .001, \eta_p^2 = .16$), no effect of group ($p > .07$), and a significant interaction of time × group ($F_{1,78} = 4.24, p < .04, \eta_p^2 = .05$). Follow-up within group *t* tests examining baseline to post change in the CCT and WL showed no change for WL and improvement for CCT (Table 2).

3.2.3 Compassion for Self

A 2 Group (CCT, WL) × 2 Time (baseline, post) repeated-measures ANOVA of FCS *for self* yielded a main effect of time ($F_{1,78} = 20.64$, $p < .001$, $\eta_p^2 = .20$), a main effect of group ($F_{1,78} = 4.62$, $p < .04$, $\eta_p^2 = .05$), and a significant interaction of time x group ($F_{1,78} = 7.0$, $p < .007$, $\eta_p^2 = .09$). A 2 Group (CCT, WL) × 2 Time (baseline, post) repeated-measures ANOVA of SCS yielded a main effect of time ($F_{1,78} = 10.28$, $p < .002$, $\eta_p^2 = .12$), no effect of group ($p > .26$), and a significant interaction of time x group ($F_{1,78} = 9.44$, $p < .003$, $\eta_p^2 = .11$). Follow-up within group t tests examining baseline to post change in the CCT and WL showed no change for WL and improvement for CCT (Table 2).

3.3 Meditation Practice and Compassion

The average number of minutes of weekly formal meditation practice within the CCT group was 101.11 min (SD = 57.00). Amount of weekly formal meditation practice within this group was associated with greater compassion for others on the FCS *for others* (r = .24, p < .05; Fig. 3), but not with FCS *from others* (p > .09), FCS *for self* (p > .43), or SCS (p > .10).

4 Discussion

The goals of this study were to examine whether compassion training would influence three specific orientations of compassion: compassion for others, compassion from others, and self-compassion. For participants who remained in the CCT course (85 %), the program was well-tolerated, as indexed by near perfect attendance and amount of meditation practice.

4.1 Changing Compassion

In support of our first hypothesis, compared to WL, CCT resulted in significant improvement in all three orientations of compassion. Specifically, CCT completers reported reductions in fear of compassion (for others, from others, and for self) and an increase in self-compassion. These findings suggest that not only is the absence of compassion worth investigating but also one's *fear of* compassion. These results further suggest

Fig. 3 Scatterplot of weekly average minutes of formal/guided meditation practice and percent improvement on fear of compassion scale *for others* scale in those receiving immediate CCT
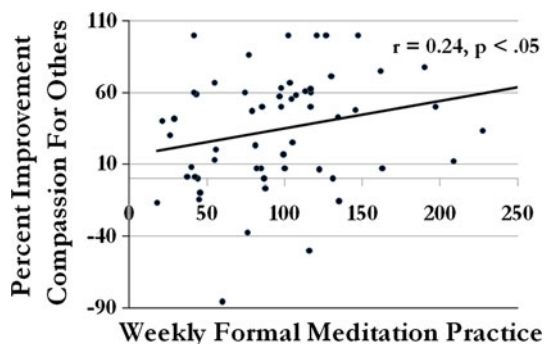
that within a community sample of adults, compassion can be taught and learned through the CCT program. In partial support of our second hypothesis, amount of formal meditation practice was associated with improvement on only compassion for others. Although not measured in this study, increasing compassion will likely have effects on prosocial behavior (e.g., Batson 1991, Eisenberg et al. 1999). It remains to be seen if there are differential effects of enhancement of different orientations of compassion on different forms of prosocial behaviors.

4.2 Toward a More Complete Account of Compassion

Compassion was conceptualized as being a multidimensional developmental process through four stages—(1) the awareness of suffering, (2) an affective concern for others, (3) a wish to relieve that suffering, and (4) a readiness to relieve that suffering (Jinpa 2010). We examined the manifestations of this process of compassion through examining self-report assessments of compassion for others, receiving compassion from others, and self-compassion.

The implications of reductions in the fear of compassion and increases in self-compassion are important. Empirically, we found that these three components of compassion (for others, from others, and for self) are intimately related with one another and to the general construct of compassion (Table 3). Although, to date, there has been no published research exploring the effect of receiving compassion from other, we believe this is an area worthy of further research. Interestingly, the smallest effect size in our findings was for receiving compassion from others ($\eta_p^2 = .27$) followed by self-compassion ($\eta_p^2 = .29$)

Table 3 Correlations and p values of compassion scales in compassion cultivation training (CCT) and waitlist (WL) control groups

	Baseline				Post			
	FCS for others	FCS from others	FCS for self	SCS	FCS for others	FCS from others	FCS for self	SCS
CCT								
FCS for others	–	.40**	.29*	−.19	–	.40**	.24	−.38**
FCS from others	.40**	–	.56***	−.37**	.40**	–	.57***	−.61***
FCS for self	.29*	.56***	–	−.62***	.24	.57***	–	−.49***
SCS	−.19	−.37**	−.62***	–	−.38**	−.61***	−.49***	–
WL								
FCS for others	–	.43**	.49**	−.46**	–	.58***	.72***	−.38*
FCS from others	.43**	–	.68***	−.48**	.58***	–	.80***	−.66***
FCS for self	.49**	.68***	–	−.57***	.72***	.80***	–	−.70***
SCS	−.46**	−.48**	−.57***	–	−.39*	−.66***	−.70***	–

* $p<.05$; ** $p<.01$; *** $p<.001$

(Table 2). As reported by Gilbert and colleagues (2010), compassion for self is often linked to receiving compassion from others and suggests "a general difficulty in dealing with self or other generative affiliative emotions" (p. 251).

4.3 Limitations and Future Directions

This study had several notable limitations which in turn provides suggestions for future research. First, although the CCT program was successful in changing multiple aspects of compassion, it did not permit an assessment of underlying mechanisms. To better understand these mechanisms, future research should explore the mediators and moderators of CCT. Understanding the mechanisms responsible for CCT-related improvements will allow us to better understand why the program yielded statistically significant changes on these three components of compassion and will help address specificity. This specificity will in turn allow for more targeted applications of the CCT protocol.

One important feature of this study was the assessment of multiple aspects of compassion—for others, from others, and for self. One limitation, however, was that the results reported here relied solely on self-report of compassion. Given the powerful role of demand characteristics that can occur in a study like this and the fact that participants just completed a course on compassion and many of the questions in the instruments used here included the word "compassion", future studies would benefit from including a measure of social desirability and more implicit measurements of compassion. These additional measures would be useful in ruling out the potential confound associated with individuals wishing to be more compassionate after taking a compassion training course. Further, future research should employ other methods of examining compassion, in addition to self-report inventories. Behavioral assessments, EEG, and fMRI may be utilized to examine objective changes in compassion. This study included pre- and post-findings from the CCT program. Future research must include prospective longitudinal study designs. Longitudinal data will assist in determining whether the beneficial effects of the compassion training are sustained over time.

This study employed a randomized controlled trial design with random assignment to compassion training or a waitlist control condition. Without an attention placebo control group, the findings cannot rule out non-specific effects (e.g., group experience) and/or other common factors. Future research will benefit from employing an attention placebo control group and also utilizing an active comparison group (e.g., Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn 1990) or another type of mental-training program. Although self-compassion has been examined through MBSR in clinical and non-clinical populations (e.g., Birnie et al. 2010; Jazaieri et al. 2012; Shapiro et al. 2005; Shapiro et al. 2007; Werner et al. 2011), the construct of fear of compassion and its related subscales has not been examined within the context of MBSR. An active comparison group such as MBSR would facilitate in more clearly interpreting the findings.

In an effort to produce the most generalizable results, which could be applied broadly, this study utilized a community sample and included broad inclusion criteria for study participation. Future research may benefit from examining compassion and its ability to be cultivated using the CCT protocol within specific populations. For example, it may be beneficial to examine cultivating compassion with CCT for military veterans who have recently returned from combat, first time expectant parents or new parents with a newborn child, men's groups, breast cancer patients, prisoners who are incarcerated for crimes, or specific clinical populations (using CCT as an adjunct to traditional psychological treatments) that are characterized by having strong negative self-beliefs and low self-worth

such as social anxiety disorder (SAD) or borderline personality disorder (BPD). Lastly, because the compassion cultivation protocol involves, in addition to cognitive approaches, a strong focus on affect inducing approaches (with the goal of developing a compassionate heart and mind), future research may benefit from examining the potential effects of the CCT program on emotion and emotion regulation.

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