REVIEW



Can Compassion Meditation Contribute to the Development of Psychotherapists' Empathy? A Review

Marc Bibeau 1 · Frederick Dionne 2 · Jeannette Leblanc 1

Published online: 4 September 2015

© Springer Science+Business Media New York 2015

Abstract Over the last three decades, a growing number of scientists and clinicians have been investigating the utility of meditative practices as attention and emotion regulation strategies. Many studies have provided evidence that mindfulness meditation can have positive effects on psychotherapists' capacity to offer presence, acceptance and empathy to their clients. More recently, loving-kindness meditation and compassion meditation have become the focus of scientific scrutiny as it has been thought that they could have even more impact on psychotherapists' empathy than mindfulness meditation. This article reviews the scientific literature on loving-kindness and compassion meditation regarding particularly the potential impact of these meditative practices on the development of psychotherapists' empathy. Studies in neuroscience have shown that loving-kindness and compassion meditation actually change the brain in areas associated with positive emotions and empathy. Loving-kindness and compassion meditation training studies have shown positive impacts on a number of empathy-related variables such as altruism, positive regard, prosocial behavior, interpersonal relationships, as well as affective empathy and empathic accuracy. Moreover, lovingkindness and compassion meditation actually reduce negative affects associated to empathy for pain, thus reducing the risk

This article is part of the doctoral thesis of the first author.

- Marc Bibeau mbibeau.psy@gmail.com
- Department of Psychology, Université de Sherbrooke, Sherbrooke, Québec, Canada
- Department of Psychology, Université du Québec à Trois-Rivières, Trois-Rivières, Québec, Canada

of psychotherapists' burnout and enhancing their self-care. It is concluded that loving-kindness and compassion meditation would constitute an important and useful addition to every counselling or psychotherapy training curriculum.

 $\label{lem:compassion} \textbf{Keywords} \ \ \textbf{Compassion} \ \cdot \textbf{Loving-kindness} \ \cdot \ \textbf{Mindfulness} \ \cdot \ \\ \textbf{Empathy} \ \cdot \ \textbf{Psychotherapist} \ \cdot \ \textbf{Counselling}$

Introduction

Over the last decades, the therapeutic relationship and personal characteristics of the therapist have been recognized as key factors in the success of psychotherapy (Norcross 2002). Taken together, variables such as therapeutic alliance and empathy are even seen as being stronger predictors of positive outcome than specific techniques or approaches to psychotherapy (Lambert and Barley 2002; Lambert and Simon 2008; Walsh 2008). Empathy and a sound therapeutic alliance thus figure as basic principles of cognitive-behavioral therapy (Beck 2011), and a relationally orientated approach to cognitivebehavior therapy is now strongly advocated (Safran and Kraus 2014). Certainly, such importance given to the therapeutic relationship and empathy will not seem over-emphasized to neuroscientists (Cozolino 2006, 2010) who also recognize the profound impact relationships have on the actual shaping of our brain and the development of our mind (Siegel 2012). Yet, quite surprisingly, after having been an important focus of research in the 1970s and 1980s, empathy was somehow put aside for almost 20 years before it once again became a topic of interest in developmental and social psychology as well as in the more recent field of social neuroscience (Elliott et al. 2011). Even more surprisingly, although empathy was pointed out by Rogers (1957/1992) as a necessary condition of therapeutic change, most training programs in psychotherapy have



256 Mindfulness (2016) 7:255–263

seemed to focus on knowledge and know-how; few programs include specific interventions aimed at developing empathy (Fulton 2005; Shapiro and Izett 2008) or "knowing-how-to-be" in therapy.

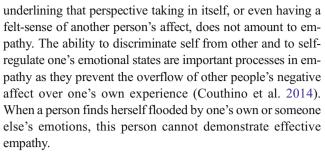
Neuroscientists have shed light on the evolutionary and developmental aspects of empathy (Decety and Jackson 2006; Decety and Meyer 2008) as well as the central role it plays in human interpersonal relationships (Couthino et al. 2014), yet the question remains: how can psychotherapists in training further develop such essential capacity for their craft? Part of the answer to the question may come from the growing interest manifested by both scholars and clinicians in mindfulness-based psychotherapy (Germer 2005; Kabat-Zinn 2005; Segal et al. 2002). There has been growing evidence now that mindfulness meditation has an impact on the development of empathy (Block-Lerner et al. 2007; Shapiro and Izett 2008). Closer to the point though, some scholars and clinicians hold that self-compassion and compassion meditation, based on loving-kindness meditation, may have an impact on the development of empathy, as well as altruism and prosocial behavior (Davidson 2012; Germer 2012; Gilbert 2005, 2009; Morgan and Morgan 2005; Neff 2012). The objective of this paper is thus to review the literature regarding the impact of compassion meditation on the empathy of psychotherapists.

Disentangling the Constructs

Empathy

Many schools of thought in psychotherapy have given a myriad of definitions to the concept of empathy. For Rogers (1957/1992), empathy means "to sense the client's private world as if it were your own, but without ever losing the "as if" quality" (p. 829). Acknowledging the many faces of empathy, Bohart et al. (2002) defined different types of therapeutic empathy according to its main focus: (1) empathic rapport, characterized by the therapist's attitude of openness and acceptance; (2) communicative attunement, characterized by the therapist's ability to be present, from moment to moment, to the client's unfolding experience and his ability to communicate to the client, frequently and appropriately, his perception and understanding of the client's experience; and (3) person empathy, characterized by an effort to understand the whole person, taking into account both the person's history and present context of living.

Decety and Jackson (2006) presented empathy as an inductive process resulting from the interaction of two elements: mirror neurons activation, allowing an internal representation of the other person's affect in the form of a feeling or *felt-sense*, and cognitive processes, allowing perspective taking, self-consciousness, and emotional regulation. It is worth



According to de Vignemont and Singer (2006), there is empathy when one person experiences a certain affective state that is isomorphic to that of another person. This affective state is provoked by the observation or the imagination of another person's affective state and involves the recognition that one's affective state is actually mirroring the other person's affective state. Such a definition helps to distinguish between different concepts that are too often mixed up. For example, perspective taking is a cognitive experience that does not necessarily involve being in any affective state. Sympathy does not involve that one person's affective state is isomorphic to that of the other person. And when a person experiences an affective state that is isomorphic to that of another person but does not acknowledge the fact that the other person is the source of this affective state, then we are talking about emotional contagion.

These definitions of empathy, whether they insist on the cognitive aspect of the experience, understanding and perspective taking, or on the affective aspect, emotional attunement and regulation, seem to leave a very important matter aside: empathy so defined does not necessarily imply a desire to help, nor does it automatically lead to action.

Compassion

The on-line Merriam-Webster Dictionary defines compassion as "a sympathetic consciousness of others' distress together with a desire to alleviate it". Siegel and Germer (2012) proposed a shorthand operational definition of compassion as "the experience of suffering with the wish to alleviate it" (p. 12). For Gilbert (2005), compassion "involves being open to the suffering of self and others, in a non-defensive and non-judgmental way. Compassion also involves a desire to relieve suffering" (p. 1). It stands out from these definitions that compassion and empathy overlap considerably and that compassion adds that crucial aspect that can make empathy truly therapeutic: the desire to alleviate suffering. Compassion and empathy both require awareness of the other's suffering. This is where mindfulness comes into play.

Mindfulness

Mindfulness has been defined as an awareness of the present moment, without judgment (Kabat-Zinn 2005). Bishop et al.



(2004) offered an operational definition of mindfulness seen as "a process of regulating attention in order to bring a quality of non-elaborative awareness to current experience and a quality of relating to one's experience within an orientation of curiosity, experiential openness, and acceptance" (p. 234). For psychotherapists, mindfulness training thus allows for the development of presence, moment-to-moment, to whatever arises in therapy, whether it be within the client, within the therapist, or within the relationship between them, with acceptance. According to Bien (2006), it is an approach to therapy that can help us deepen our presence and our listening. For Hick (2008), mindfulness can contribute to the development of different components of the therapeutic relationship, such as deep listening, empathy, and compassion. As Siegel and Germer (2012) put it, mindfulness is a foundation for wisdom and compassion, seen in Tibetan Buddhism as two wings of a bird. Acknowledging that mindfulness appears as a context for the cultivation of compassion, Tirch (2010) underlined the fact that mindfulness has often been used as an umbrella term designating a variety of meditation practices (Kabat-Zinn 2009).

Different Types of Meditation Practices

Meditation practices are actually a family of attention and emotion regulation strategies that aim to foster both physical health and emotional balance (Lutz et al. 2008a, b). Clinicians and researchers are particularly interested in the impact of three types of meditation: focused attention, open awareness, and compassion meditation. Focused attention practices are based on concentration (samatha, in Pali, an ancient Indian language). They consist mainly in focusing attention on an object (most often the act of breathing), on becoming aware of distractions (caused by thoughts, emotion, or other bodily sensations), and acknowledging such distractions while gently bringing the attention back to its initial object (the breath; Lutz et al. 2008a, b). The aim of such practices is to calm the mind, reduce the interference of distractors, and observe one's internal processes (thoughts, emotions, impulses). With time and discipline, this meditation practice leads to a second type of meditation: open awareness (vipassana, in Pali). This second type of meditation consists in adopting an observational stance, without focusing on any particular object, so as to be able to perceive and better understand the internal phenomena that arise. This kind of awareness characterizes mindfulness.

The third type of meditation practices that also drew particular attention to scientists over the last decade is compassion meditation practices. These practices aim at cultivating a kind and loving attitude towards ourselves and others particularly during difficult moments (Germer 2009; Neff 2012). Compassion meditation comprises three main practices (Shapiro and Izett 2008). In loving-kindness meditation (*metta*, in Pali), one cultivates positive emotions (wishing happiness,

peace, and harmony) towards the self, a loved one, a neutral person, someone with whom the relationship is difficult, and finally, all human beings. During compassion meditation per se (*karuna*, in Pali), the suffering of those people is consciously evocated, along with the wish that they be free from suffering. Another compassion meditation practice (*tonglen*, in Pali) consists of breathing in other people's suffering and breathing out relief and a positive, loving, healing energy towards them. With all those distinctions and interrelations in mind, let us now turn to the study of the impact of these meditative practices on empathy.

Mindfulness Meditation Training and Empathy

Over the last three decades, researchers have investigated the link between mindfulness meditation and empathy. Wang (2006) compared two groups of psychotherapists (meditators vs non-meditators) on relationship variables such as attention and empathy. Results showed no difference between the two groups on the attention measure, but meditators scored significantly higher than non-meditators on the empathy measure. In a qualitative study, Aiken (2006) interviewed psychotherapists who had more than 10 years of experience in meditation. From those interviews, Aiken concluded that through mindfulness meditation, psychotherapists appeared to develop greater receptivity, a more intense felt-sense of their clients' internal experience, as well as the capacity to be present to their clients' pain and suffering. Although they offer interesting data regarding the impact of meditation on empathy, these studies bear on experienced meditators who practice different types of meditation. The question remains whether mindfulness training per se has a significant impact on empathy.

In a study by Shapiro et al. (1998), mindfulness-based stress reduction training was offered to medical students, using the Mindfulness Based Stress Reduction program, known as MBSR (Kabat-Zinn 2005). This 8-week program comprises classical exercises such as awareness of the breath, body scan, awareness of emotions and thoughts, stretching exercises inspired from the hatha yoga, as well as loving-kindness meditation. Results showed a significant increase in empathy of medical students that completed the program, while a control group did not show any change in empathy level. Boellinghaus et al. (2012) noted that in the often-cited study by Shapiro et al. (1998), the MBSR intervention also included effective listening skills, making the conclusion that MBSR training per se increases empathy somewhat fragile.

In their literature review on the role of mindfulness and loving-kindness meditation in cultivating self-compassion and other-focused concern in health care professionals, Boellinghaus et al. (2012) reported on four studies that specifically measured the impact of a Mindfulness Based Stress Reduction (MBSR) course or a Mindfulness Based Cognitive Therapy (MBCT) course on empathy. Three studies did not



258 Mindfulness (2016) 7:255–263

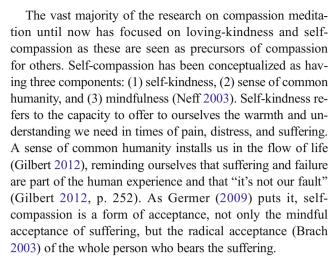
find any changes in empathy after the course, whereas the fourth study, which used a different measure of empathy, found a medium-sized increase. According to Boellinghaus et al. (2012), such results raise questions about the sensitivity of the different scales measuring empathy to change and a possible ceiling effect when those scales are used with healthcare professionals, who can be thought of as having higher baseline levels of empathy.

Research has also examined the impact of mindfulness training or practice on different aspects of the therapeutic relationship, such as therapeutic presence (Padilla 2010), counselling skills (Buser et al. 2012), the therapeutic process (Bruce et al. 2010), psychotherapist self-care (Campbell and Christopher 2012; Christopher et al. 2011; Shapiro et al. 2005; Shapiro et al. 2007), and therapeutic outcome (Grepmair et al. 2007; McCollum and Gehart 2010; Ryan et al. 2012). Throughout these studies, mindfulness sometimes refers to MBSR training, sometimes it is a self-report measure, and sometimes it is used as an umbrella term for different meditative practices (Kabat-Zinn 2009; Tirch 2010). Nevertheless, both quantitative and qualitative studies showed a general positive trend, suggesting that mindfulness would be a useful addition to any counselling or psychotherapy training curriculum (Fauth et al. 2007; Raab 2014).

Compassion Meditation Training and Empathy

According to Siegel and Germer (2012) until recently, research on meditation has mainly been concentrated on focused attention, on the breath or a mantra (as in transcendental meditation), or on open awareness, mindfulness that is. Compassion meditation practices (*metta* and *karuna*) are now drawing more and more attention from both clinicians and scientists (Germer 2009, 2012; Gilbert 2005, 2009, 2012; Klimecki et al. 2013a, b; Neff 2011, 2012; Siegel and Germer 2012).

It is worth mentioning that this trend in research seems to follow the natural unfolding of meditation in one's life and the traditional teaching of meditation practices in Buddhism. First, concentration meditation focuses our attention on one object at a time. Mindfulness meditation then moves the focus of attention from a single object to anything that is happening at the present moment, with acceptance. Finally, loving-kindness meditation "opens our hearts to loving ourselves genuinely for who we are, with all our imperfections. And that's the gateway to loving others" (Salzberg 2011, p.28). Such progression in the meditation practices helps to understand that mindfulness serves as a context for the cultivation of compassion (Tirch 2010). In traditional Buddhist teaching, meditation on the "four immeasurable minds"love, compassion, joy, and equanimity—is closely associated to mindfulness, as it is applied in relationships (Bien 2008; Salzberg 1995).



Since very few studies on loving-kindness and selfcompassion focus exclusively on healthcare professionals, and even less focus solely on psychotherapists, let us consider the impact of these meditation practices in the general population. Self-compassion has been linked to less anxiety and depression (Gilbert 2009, 2012), greater wisdom and emotional intelligence, as well as feelings of social connectedness and life satisfaction (see Neff (2009) for a review). Selfcompassion also fosters the intrinsic motivation to learn and grow, it promotes health-related behaviors, and it is beneficial for interpersonal relationships (Neff 2012; Neff and Pommier 2012). In their study examining the link between selfcompassion and concern for the well-being of others, Neff and Pommier (2012) observed a modest correlation between self-compassion and empathetic concern, but a more robust negative link between personal distress and self-compassion.

In a qualitative study on loving-kindness meditation, Corcoran (2007) showed that psychotherapists who practice loving-kindness meditation reported feeling more at ease, had more compassion towards themselves and towards others, and were more open to a variety of emotions. Moreover, even a very limited practice of a simplified version of lovingkindness meditation contributed to foster a sense of connectedness, a positive attitude towards others, and an increase in prosocial behaviors (Hutcherson et al. 2008; Leiberg et al. 2011). Fredrickson et al. (2008) trained people to use lovingkindness meditation as a means to raise positive emotions. Results showed that not only did loving-kindness meditation reliably raise a range of positive emotions, but these in turn also increased people's sense of environmental mastery, positive relations with others, and self-reported health, thus reducing depressive symptoms and improving life satisfaction (Fredrickson 2012). Although these promising results are somewhat related to our topic, as they showed that compassion meditation has some positive impact on the selfregulation of one's emotions and on important relationship variables, these studies did not specifically look at the impact of compassion meditation on empathy.



In a quantitative analysis, Fulton (2012) examined the relationships between mindful awareness, mindful compassion, empathy, and anxiety in 131 Master's level counselling students. Results of this study showed that mindful compassion had a significant impact on affective empathy, cognitive empathy, and anxiety, more than explained by mindful awareness alone. Interestingly, the greatest impact attributable to mindful compassion was on affective empathy.

Studies by Klimecki et al. (2013a, b) showed different and complementary patterns of neural activation following training in empathy and training in compassion, as well as different affective reactions. Subjects trained to feel empathy for pain reported feeling aversive affects that rapidly became difficult to bear and showed a classical pattern of neural activation involving the anterior insula/anterior median cingular cortex axis. Participants trained in compassion meditation did not feel this aversive affect and showed a different neural pattern, involving medial insula, ventral striatum, and medial orbitofrontal cortex. This neural activation pattern is mostly associated with positive affects, affiliative feelings, and maternal love. Moreover, the aversive effect of empathy training was eliminated when subjects were later trained in compassion meditation. Klimecki et al. (2013a, b) thus suggested that compassion meditation training not only increases prosocial behavior but also decreases aversive affects associated with empathy for pain as well. Such results provide support to the claim of some authors who favor the term *empathy* fatigue over compassion fatigue because true compassion does not bring such fatigue (Germer 2009, 2012; Klimecki et al. 2013a, b).

Lutz et al. (2008a, b) studied the regulation of the neural circuitry of emotion by compassion meditation by utilizing a mix of loving-kindness and compassion. They compared the activation of neural patterns associated to compassion in expert meditators, Buddhist monks averaging 10,000 hours of meditation expertise, and novice meditators who trained for a few hours in loving-kindness and compassion meditation. According to Davidson (2012), these studies showed that compassion meditation seems to change the brain by enhancing gamma oscillations and by increasing activation in a circuit important for empathy. Weng et al. (2013) examined the effect of compassion meditation training on the brain and altruistic behavior of beginner meditators. Results of this study showed that 2 weeks of 30-min daily practice had a significant impact on the activation of neural patterns associated with empathy and increased altruistic behavior compared to a control group practicing cognitive reappraisal.

Mascaro et al. (2013a) studied the impact of a cognitivebased compassion training (CBCT) on empathic accuracy and related neural activity. They devised an 8-week meditationtraining curriculum, which included two initial weeks of concentrative and mindful-awareness meditation followed by self-compassion and compassion-specific elements requiring extensive contemplation of the suffering of others (Mascaro et al. 2013b). Results of this study indicated that the majority of the participants randomly assigned to a compassion-training group increased their empathic accuracy, while participants assigned to an active control condition showed reduction in accuracy. Interestingly, Mascaro et al. (2013b) also showed that pre-existing neurobiological profiles differentially predisposed individuals to engage with disparate meditation techniques, suggesting that more empathic individuals may be able to engage more fully with compassion meditation. Based on these findings, one might hypothesize that psychotherapists, who can be thought of to be particularly empathic individuals, would be able to engage more fully in compassion meditation and possibly benefit more from it.

Boellinghaus et al. (2013) examined the impact of a loving-kindness meditation six-session course on the self-care and compassion of psychotherapists in training. The authors selected participants that had already completed a mindfulness meditation course, thus allowing for a clearer distinction between these practices and their effects. This qualitative study showed that psychotherapists in training perceived that the practice of loving-kindness meditation led to increased self-awareness, compassion for self and others, and therapeutic presence and skills. For some participants though, loving-kindness meditation was experienced as emotionally challenging.

Discussion

We started this review asking how can psychotherapists and psychotherapists in training develop their empathy as it has long been recognized as a necessary condition for effective therapy. The growing interest manifested by scientists and clinicians over the last decade for loving-kindness and compassion meditation has provided us with a number of promising answers. Loving-kindness and compassion meditation actually seem to change the brain by increasing activation in a circuit important for empathy according to neuroscientists. It increases positive emotions towards the self and others, altruistic behavior, and a sense of connectedness. Compassion meditation also increases affective empathy and empathic accuracy. Of particular relevance for psychotherapists, compassion meditation seems to alleviate the negative affects associated with empathy for pain, providing some kind of protection against empathy fatigue and burnout.

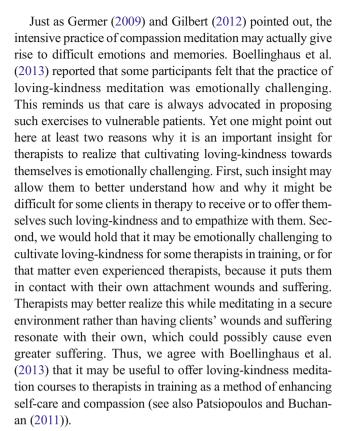
Despite the research conducted thus far, more research is still needed to explore the impact of mindfulness and compassion meditation training on the therapeutic relationship, on the empathy of psychotherapists, and on the results of psychotherapy (Hick 2008; Shapiro and Izett 2008). As Shapiro and Izett (2008) pointed out, we need to know which meditation practices have more impact on the development of empathy: mindfulness or loving-kindness meditation? Clearly, due to the



very nature of these concepts, there is considerable overlap between them. However, this question is more complicated by the fact that some MBSR courses used to study the impact of mindfulness meditation on empathy and related variables included loving-kindness meditation, whereas many did not (Baer et al. 2012). Moreover, just like mindfulness, compassion meditation has often been used as a general term regrouping different meditation techniques, referring sometimes to loving-kindness meditation (metta), sometimes to compassion meditation (karuna), and sometimes to a mix of the two (Hofmann et al. 2011). As we come to better understand the interdependency of these concepts and practices, considering mindfulness as a context for the cultivation of loving-kindness and compassion appears as the most promising line of research. Future research on the impact of compassion meditation training and loving-kindness meditation training will thus yield clearer results if participants already have some experience in mindfulness meditation (see Boellinghaus et al. (2013) and Mascaro et al. (2013a, b) for examples of such research designs).

As both types of meditation practices seem to have positive impacts on empathy, the question is not which type should prevail but rather how does each type contribute to different aspects of empathy. C. L. Fulton (2012) provided cues to answer this question. Mindful compassion has more impact on affective empathy, cognitive empathy, and anxiety than mindful awareness alone. This study paves the way for research designs examining the respective and eventually cumulative impact of mindfulness, loving-kindness, and compassion meditation training on different aspects of psychotherapists' empathy. As C. L. Fulton herself further acknowledges, it would also be useful to study whether the impact of such training in meditative practices is the same across a range of therapeutic expertise. Using longitudinal designs or comparing samples of participants with different levels of therapeutic experience would surely yield insightful information regarding the relative contribution of mindfulness and compassion meditation training on the development of empathy and how it is mediated by expertise.

As Boellinghaus et al. (2012) remarked, the use of self-report measures might not be sensitive enough to reflect actual changes in empathy following meditation training for healthcare professionals. Psychotherapists might already be in the upper range of such measures. As Patton (2002) suggested, a qualitative design is particularly relevant when one tries to circumscribe the very nature of a subjective experience. Since empathy and compassion are in essence subjective experiences, it would be useful to study the impact of compassion meditation training on the empathy of psychotherapists through the qualitative analysis of repeated semi-structured interviews with experienced psychotherapists who already have a regular mindfulness practice and who participate in a compassion meditation training protocol.



Regarding therapists' self-care and the prevention of burnout, the study of Klimecki et al. (2013a, b) clearly highlighted the potential benefit of compassion meditation for psychotherapists. Neff and Pommier (2012) also showed a strong negative relationship between personal distress and self-compassion, traditionally included as a first step in cultivating compassion for others. Psychotherapists, as well as other health care professionals, are constantly exposed to their patients' pain. Such repeated exposure to other people's pain can cause secondary trauma, empathy fatigue, and burnout. More research is needed to explore the conditions and factors mitigating the protective effect of self-compassion and compassion meditation practices, as well as their impact on empathy and burnout. A reasonable hypothesis would be that selfcompassion meditation helps psychotherapists self-regulate their emotions while they are attuned to their clients suffering, reducing the burnout linked to empathetic distress, whereas compassion for others enhances concern for others, perspective taking, and altruism, thus allowing for more genuine empathetic communication (Couthino et al. 2014).

This review suggested that loving-kindness and compassion meditation might be a useful addition to any counselling or psychotherapy training curriculum. These practices could prevent psychotherapy from becoming overly dominated by techniques and would foster the personal and professional development of compassionate mindful therapists (Bien 2006; Siegel 2010), whatever their preferred theoretical orientation. As Surrey (2005) very elegantly stated, the practice of



the four immeasurable minds—kindness, compassion, joy and equanimity—"gives our profession a chance to renew and reclaim the deepest elements of our own practice, and the deepest elements of connection and healing." (p.98)

References

- Aiken, G. A. (2006). The potential effect of mindfulness meditation on cultivation of empathy in psychotherapy. Doctoral dissertation, Saybrook Graduate School and Research Center, San Francisco. Retrieved from ProQuest dissertations and theses database, UMI 3217528.
- Baer, R. A., Lykins, E. L. B., & Peters, J. R. (2012). Mindfulness and self-compassion as predictors of psychological wellbeing in long-term meditators and matched non-meditators. The Journal of Positive Psychology: Dedicated to furthering research and promoting good practice, 7(3), 230–238.
- Beck, J. S. (2011). Cognitive–behavior therapy: Basics and beyond (2nd ed.). New York: Guilford Press.
- Bien, T. (2006). Mindful therapy: a guide for therapists and helping professionals. Boston: Wisdom Publications.
- Bien, T. (2008). The four immeasurable minds: Preparing to be present in psychotherapy. In S. F. Hick & T. Bien (Eds.), *Mindfulness and the therapeutic relationship* (pp. 37–54). New York: Guilford Press.
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: a proposed operational definition. Clinical Psychology: Science and Practice, 11, 230–241.
- Block-Lerner, J., Adair, C., Plumb, J. C., Rhatigan, D. L., & Orsillo, S. M. (2007). The case for mindfulness-based approaches in the cultivation of empathy: does nonjudgmental, present-moment awareness increase capacity for perspective-taking and empathic concern? *Journal of Marital and Family Therapy*, 33, 501–516.
- Boellinghaus, I., Jones, F. W., & Hutton, J. (2012). The role of mindfulness and loving-kindness meditation in cultivating self-compassion and other-focused concern in health care professionals. *Mindfulness*. doi:10.1007/s12671-012-0158-6.
- Boellinghaus, I., Jones, F. W., & Hutton, J. (2013). Cultivating self-care and compassion in psychological therapists in training: the experience of practicing loving-kindness meditation. *Training and Education in Professional Psychology*, 7(4), 267–277.
- Bohart, A. C., Elliott, R., Greenberg, L. S., & Watson, J. C. (2002). Empathy. In J. C. Norcross (Ed.), *Psychotherapy relationships that work* (pp. 89–108). New York: Oxford University Press.
- Brach, T. (2003). Radical acceptance: Embracing your life with the hearth of a Buddha. New York: Bantam Dell.
- Bruce, N. G., Manber, R., Shapiro, S. L., & Constantino, M. J. (2010). Psychotherapist mindfulness and the psychotherapy process. Psychotherapy: Theory, Research, Practice, Training, 47(1), 83–97.
- Buser, T. J., Buser, J. K., Peterson, C. H., & Seraydarian, D. G. (2012). Influence of mindfulness practice on counseling skills development. *Journal of Counselor Preparation and Supervision*, 4(1), 21–36.
- Campbell, J. C., & Christopher, J. C. (2012). Teaching mindfulness to create effective counselors. *Journal of Mental Health Counseling*, 34(3), 213–226.
- Christopher, J. C., Chrisman, J. A., Trotter-Mathison, M. J., Schure, M. B., Dahlen, P., & Christopher, S. E. (2011). Perceptions of the long-term influence of mindfulness training on counselors and psychotherapists: a qualitative inquiry. *Journal of Humanistic Psychology*, 51(3), 318–349.

- Corcoran, C. C. (2007). A grounded theory exploration of lovingkindness meditation: Practioner experience, report of effects and clinical relevance. Doctoral dissertation, Wright Institute Graduate School of Psychology, Berkeley. Retrieved from ProQuest dissertations and theses database, UMI 3268621.
- Couthino, J. F., Silva, P. O., & Decety, J. (2014). Neurosciences, empathy, and interpersonal relationships: recent findings and implications for counselling psychology. *Journal of Counseling Psychology*, 61(4), 541–548
- Cozolino, L. (2006). The neuroscience of human relationships: Attachment and the developing social brain. New York: W. W. Norton and Company.
- Cozolino, L. (2010). The neuroscience of psychotherapy: Healing the social brain. New York: W. W. Norton & Company.
- Davidson, R. J. (2012). The neurobiology of compassion. In C. K. Germer & R. D. Siegel (Eds.), Wisdom and compassion in psychotherapy: Deepening mindfulness in clinical practice (pp. 111–118). New York: The Guilford Press.
- de Vignemont, F., & Singer, T. (2006). The empathic brain: how, when and why? *Trends in Cognitive Sciences*, 10, 435–441.
- Decety, J., & Jackson, P. L. (2006). A social-neuroscience perspective on empathy. Current Directions in Psychological Science, 15, 54–58.
- Decety, J., & Meyer, M. (2008). From emotion resonance to empathic understanding: a social developmental neuroscience account. Development and Psychopathology, 20, 1053–1080.
- Elliott, R., Bohart, A. C., Watson, J. C., & Greenberg, L. S. (2011). Empathy. *Psychotherapy*, 4(1), 43–49.
- Fauth, J., Gates, S., Vinca, M. A., Boles, S., & Hayes, J. A. (2007). Big ideas for psychotherapy training. *Psychotherapy: Theory, Research, Practice, Training*, 44(4), 384–391.
- Fredrickson, B. L. (2012). Building lives of compassion and wisdom. In C. K. Germer & R. D. Siegel (Eds.), Wisdom and compassion in psychotherapy: Deepening mindfulness in clinical practice (pp. 48– 58). New York: Guilford Press.
- Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology*, 95(5), 1045–1062.
- Fulton, P. R. (2005). Mindfulness as clinical training. In C. K. Germer, R. D. Siegel, & P. R. Fulton (Eds.), *Mindfulness and psychotherapy* (pp. 55–72). New York: Guilford Press.
- Fulton, C. L. (2012). Mindful awareness and compassion, and empathy and anxiety in counsellor trainees. Doctoral dissertation, The University of North Carolina, Greensboro. Retrieved from ProQuest dissertations and theses database, UMI 3525758.
- Germer, C. K. (2005). Mindfulness: What is it? What does it matter? In C. K. Germer, R. D. Siegel, & P. R. Fulton (Eds.), Mindfulness and psychotherapy (pp. 3–27). New York: Guilford Press.
- Germer, C. K. (2009). The mindful path to self-compassion: Freeing yourself from destructive thoughts and emotions. New York: Guilford Press.
- Germer, C. K. (2012). Cultivating compassion in psychotherapy. In C. K. Germer & R. D. Siegel (Eds.), Wisdom and compassion in psychotherapy: Deepening mindfulness in clinical practice (pp. 93–110). New York: Guilford Press.
- Gilbert, P. (2005). Introduction and outline. In P. Gilbert (Ed.), Compassion: Conceptualisations, research and use in psychotherapy (pp. 1–5). New York: Routledge.
- Gilbert, P. (2009). *The compassionate mind: A new approach to life's challenges*. Oakland: New Harbinger Publications.
- Gilbert, P. (2012). Depression: Suffering in the flow of life. In C. K. Germer & R. D. Siegel (Eds.), Wisdom and compassion in psychotherapy: Deepening mindfulness in clinical practice (pp. 249–264). New York: Guilford Press.



262 Mindfulness (2016) 7:255–263

Grepmair, L., Mitterlehner, F., Loew, T., & Nickel, M. (2007). Promotion of mindfulness in psychotherapists in training: Preliminary study. *European Psychiatry*, 22, 485–489.

- Hick, S. F. (2008). Cultivating therapeutic relationships: The role of mindfulness. In S. F. Hick & T. Bien (Eds.), *Mindfulness and the* therapeutic relationship (pp. 161–175). New York: Guilford Press.
- Hofmann, S. G., Grosman, P., & Hinton, D. E. (2011). Loving-kindness and compassion meditation: potential for psychological interventions. Clinical Psychology Review, 31, 1126–1132.
- Hutcherson, C. A., Seppala, E. M., & Gross, J. J. (2008). Loving-kindness meditation increases social connectedness. *Emotion*, 8, 720–724.
- Kabat-Zinn, J. (2005). Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness. Fifteenth anniversary. New York: Random House.
- Kabat-Zinn, J. (2009). Foreword. In F. Didonna (Ed.), Clinical handbook of mindfulness. New York: Springer. pp. xxv-xxxiii.
- Klimecki, O. M., Leiberg, S., Ricard, M., & Singer, T. (2013a). Differential pattern of functional brain plasticity after compassion and empathy training. Social Cognitive and Affective Neuroscience. doi:10.1093/scan/nst060.
- Klimecki, O. M., Ricard, M., & Singer, T. (2013b). Empathy versus compassion—lessons from 1st and 3rd Person methods. In T. Singer & M. Bolz (Eds.), Compassion: Bridging practice and science. Munich: (E-Book) Max Plank Society. Retrieved from: www.compassion-training.org.
- Lambert, M. J., & Barley, D. E. (2002). Research summary on the therapeutic relationship and psychotherapy outcome. In J. C. Norcross (Ed.), *Psychotherapy relationships that work* (pp. 17–32). New York: Oxford University Press.
- Lambert, M. J., & Simon, W. (2008). The therapeutic relationship: Central and essential in psychotherapy outcome. In S. F. Hick & T. Bien (Eds.), *Mindfulness and the therapeutic relationship* (pp. 19–33). New York: Guilford Press.
- Leiberg, S., Klimecki, O., & Singer, T. (2011). Short-term compassion training increases prosocial behavior in a newly developed prosocial game. *PLoS ONE*, 6(3), e17798. doi:10.1371/journal.pone. 0017798
- Lutz, A., Slagter, H. A., Dunne, J. D., & Davidson, R. J. (2008a). Affective regulation and monitoring in meditation. *Trends in Cognitive Science*, 12, 163–169.
- Lutz, A., Brefczynski-Lewis, J., Johnstone, T., & Davidson, R. J. (2008b). Regulation of the neural circuitry of emotion by compassion meditation: effects of meditative expertise. *PLoS ONE*, 3(3), e1897. doi:10.1371/journal.pone.0001897.
- Mascaro, J. S., Rilling, J. K., Tenzin Negi, L., & Raison, C. L. (2013a). Pre-existing brain function predicts subsequent practice of mindfulness and compassion meditation. *NeuroImage*, 69, 35–42.
- Mascaro, J. S., Rilling, J. K., Tenzin Negi, L., & Raison, C. L. (2013b). Compassion meditation enhances empathic accuracy and related neural activity. SCAN, 8, 48–55.
- McCollum, E. E., & Gehart, D. R. (2010). Using mindfulness meditation to teach beginning therapists therapeutic presence: a qualitative study. *Journal of Marital and Family Therapy*, 36(3), 347–360.
- Morgan, W. D., & Morgan, S. T. (2005). Cultivating attention and empathy. In C. K. Germer, R. D. Siegel, & P. R. Fulton (Eds.), *Mindfulness and psychotherapy* (pp. 73–90). New York: Guilford Press.
- Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223–250.
- Neff, K. D. (2009). Self-compassion. In M. R. Leary & R. H. Hoyle (Eds.), Handbook of individual differences in social behavior (pp. 561–573). New York: Guilford Press.
- Neff, K. D. (2011). Self-compassion: Stop beating yourself up and leave insecurity behind. New York: Harper Collins Publishers.

- Neff, K. D. (2012). The science of self-compassion. In C. K. Germer & R. D. Siegel (Eds.), Wisdom and compassion in psychotherapy: Deepening mindfulness in clinical practice (pp. 79–92). New York: Guilford Press.
- Neff, K. D., & Pommier, E. (2012). The relationship between self-compassion and other-focused concern among college undergraduates, community adults, and practicing meditators. Self and Identity. doi:10.1080/15298868.2011.649546.
- Norcross, J. C. (2002). Empirically supported therapy relationships. In J. C. Norcross (Ed.), *Psychotherapy relationships that work* (pp. 3–16). New York: Oxford University Press.
- Padilla, A. (2010). Mindfulness in therapeutic presence: How mindfulness of therapists impacts treatment outcome. Doctoral dissertation, The New School for Social Research, New York. Retrieved from ProQuest dissertations and theses database. UMI number 3413183.
- Patsiopoulos, A. T., & Buchanan, M. J. (2011). The practice of self-compassion in counselling: a narrative inquiry. *Professional Psychology: Research and Practice*, 42(4), 301–307.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks: Sage Publications.
- Raab, K. (2014). Mindfulness, self-compassion, and empathy among health care professionals: a review of the literature. *Journal of Health Care Chaplaincy*, 20(3), 95–108.
- Rogers, C. (1992). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting and Clinical Psychology*, 60, 827–832. Originally published in 1957.
- Ryan, A., Safran, J. D., Doran, J. M., & Muran, J. C. (2012). Therapist mindfulness, alliance and treatment outcome. *Psychotherapy Research*, 22(3), 289–297.
- Safran, J. D., & Kraus, J. (2014). Relational techniques in a cognitive-behavioral therapy context. In N. C. Thoma & D. McKay (Eds.), Working with emotion in cognitive-beavioral therapy: Techniques for clinical practice (pp. 333–355). New York: Guilford Press.
- Salzberg, S. (1995). Lovingkindness: The revolutionary art of happiness. Boston: Shambhala Publications.
- Salzberg, S. (2011). Real happiness: The power of meditation. A 28-day program. New York: Workman Publishing.
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse. New York: Guilford Press.
- Shapiro, S. L., & Izett, C. D. (2008). Meditation: a universal tool for cultivating empathy. In S. F. Hick & T. Bien (Eds.), *Mindfulness* and the therapeutic relationship (pp. 3–18). New York: The Guilford Press.
- Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, 21, 581–599.
- Shapiro, S. L., Astin, J. A., Bishop, S. R., & Cordova, M. (2005). Mindfulness-based stress reduction for health care professionals: results from a randomized trial. *International Journal of Stress Management*, 12(2), 164–176.
- Shapiro, S. L., Brown, K. W., & Biegel, G. M. (2007). Teaching self-care to caregivers: effects of mindfulness-based stress reduction on the mental health of therapists in training. *Training and Education in Professional Psychology*, 1(2), 105–115.
- Siegel, D. J. (2010). The mindful therapist: a clinician's guide to mindsight and neural integration. New York: W.W. Norton & Co.
- Siegel, D. J. (2012). The developing mind: How relationships and the brain interact to shape who we are (2nd ed.). New York: Guilford Press.
- Siegel, R. D., & Germer, C. K. (2012). Wisdom and compassion: Two wings of a bird. In C. K. Germer & R. D. Siegel (Eds.), Wisdom and compassion in psychotherapy: Deepening mindfulness in clinical practice (pp. 9–34). New York: Guilford Press.



Mindfulness (2016) 7:255-263

- Surrey, J. L. (2005). Relational psychotherapy, relational mindfulness. In C. K. Germer, R. D. Siegel, & P. R. Fulton (Eds.), *Mindfulness and psychotherapy* (pp. 91–110). New York: Guilford Press.
- Tirch, D. D. (2010). Mindfulness as a context for the cultivation of compassion. *International Journal of Cognitive Therapy*, 3(2), 113–123.
- Walsh, R. A. (2008). Mindfulness and empathy: A hermeneutic circle. In S. F. Hick & T. Bien (Eds.), *Mindfulness and the therapeutic relationship* (pp. 72–86). New York: Guilford Press.
- Wang, S. J. (2006). Mindfulness meditation: its personal and professional impact on psychotherapists. Doctoral dissertation, Capella University, Minneapolis. Retrieved from ProQuest dissertations and theses database, UMI 3226246.
- Weng, H. Y., Fox, A. S., Shackman, A. J., Stodola, D. E., Caldwell, J. Z. K., Olson, M. C., Rogers, G. M., & Davidson, R. J. (2013). Compassion training alters altruism and neural responses to suffering. *Psychological Science*, 24, 1171–1180.

