



Commentary Regarding Wilson et al. (2018) “Effectiveness of ‘Self-Compassion’ Related Therapies: a Systematic Review and Meta-analysis.” All Is Not as It Seems

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Abstract

This commentary paper reviews the recently made claims by Wilson et al. (*Mindfulness*, 2018) from their meta-analysis of what they call self-compassion therapies. They argue that a range of different therapy modalities can be classified as self-compassion therapies, including compassion-focused therapy, dialectical behaviour therapy, acceptance and commitment therapy and mindfulness-based interventions. The results from their meta-analyses found that these self-compassion therapies were effective at increasing self-compassion and reducing depressive and anxiety symptoms. This meta-analysis also found that self-compassion-related therapies did not produce better outcomes than active control conditions. This indicates that such self-compassion therapies are unlikely to have any specific effect over and above the general benefits of any active treatment. We will indicate a number of reasons why this conclusion is not warranted. We first contextualise what is meant by compassion-focused therapies, and we then discuss four key concerns: (1) the heterogeneity and classification of the “self-compassion therapies”; (2) the measure used to assess self-compassion; (3) the comparison to the active control conditions; and (4) the inaccurate comments made about the Kirby et al. (*Behavior Therapy*, 2017b) meta-analysis. Although it is encouraging to see the increasing number of randomised controlled trials, and now meta-analyses of compassion-focused therapies, the conclusions made by Wilson et al. (*Mindfulness*, 2018) in their meta-analysis are misleading.

Keywords Compassion · Compassion-focused therapy · Self-compassion · Meta-analysis

Recently, Wilson et al. (2018) published the results of a systematic review and meta-analysis of what they called “self-compassion related therapies”. The authors concluded that their grouped body of therapies called “self-compassion therapies” did not add any benefits over and above other therapies. We would strongly urge individuals to think carefully about this conclusion and its implications, because as we will argue below, this conclusion is far from warranted.

Overall, 22 randomised controlled trials were included in their analyses ($n = 1272$), examining different (called) “self-compassion” related therapies, such as compassion-focused therapy (e.g., Kelly and Carter 2015), mindfulness-based

cognitive therapy (Kuyken et al. 2010), emotion-focussed therapy (Cornish and Wade 2015), mindfulness-based stress reduction (Jazaieri et al. 2012), loving-kindness meditations (Shahar et al. 2015), and acceptance and commitment therapy (Yadavaia et al. 2014). Many of compassion-focused therapies are not specifically *self-compassion* focused but include compassion to others and from others (Gilbert 2014; Gilbert, Catarino, Duarte et al. 2017; Gonzalez-Hernandez et al. 2018 (see their module V); Pace et al. 2013). Importantly, mindfulness-based cognitive therapy has argued against introducing specific compassion-focused trainings within the mindfulness program (Kuyken personal communication 2013).

These issues bear on the basic view of human nature that mindfulness practitioners hold, which is also reflected in old debates in Eastern and Western philosophies. For example, Jean-Jacques Rousseau (1712–1778) argued strongly that humans are basically good but are corrupted by their social contexts. This fits with the idea that the more mindful we become, the more compassion will naturally arise to become a way of living, and specific compassion trainings are not necessary. In

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direct contrast, the English philosopher Thomas Hobbes (1588–1679) argued the opposite that humans are basically selfish and aggressive and require careful regulation to ensure civil society. Evolutionary theorists argue that it is not about whether there is a *basic nature* or not but that we have a range of basic motives such as for self-protection, resource acquisition, sexuality and group belonging. These different motives can at times be in conflict within us (Huang and Bargh 2014). They evolved from the challenges of survival and reproduction and can orientate us to be helpful or the harmful according to historical and current social contexts (Gilbert 2005, 2018). Moreover, many of our motives are unconscious to us and at root may have selfish aims (Huang and Bargh 2014).

Unfortunately, the last 4000 years of human history of wars, ethnic cleansing, the Roman games, the Holocaust, torture, slavery not to mention our histories as a predator nearly wiping out other species and now engaged in the most horrendous factory farms involving many billions of animals suggests that alongside our capacity for extraordinary compassion and self-sacrifice for others, humans are also potentially one of the nastiest, callous and most dangerous of species. We are also destroying our own ecologies and that of other living things on this planet. Our brains, like the brains of other species, are full of many different conflicting potentials and motives that evolved from the challenges of reproduction and survival (Huang and Bargh 2014). But we also have a new brain which allows us to have *knowing awareness* and insight and can begin to make choices; hence the essential importance of mindfulness and developing inner awareness of the “productions” from brains and minds. In addition, it is what we deliberately and wisely cultivate individually, in our groups, communities and nations that are the crucial issues for the future well-being of us all (Ekman and Ekman 2017; Gilbert 2005, 2009, 2018). Hence, compassion-focused therapy (CFT) like other compassion-focused therapies, but perhaps for other reasons, highlights the importance of *specifically* cultivating compassion and its competencies, specific trainings such as empathy, distress tolerance, moral reasoning, and so on (Jinpa 2015; Kemeny et al. 2012; Pace et al. 2013; Ricard 2015; Valk et al. 2017; Weng et al. 2013; Weng et al. 2018).

Within the field, then there are very important differences of orientation and approach that should not be underestimated when combining quite different types of therapy with different underpinning epistemologies. Evolutionary-based compassion-focused approaches have quite different views about “the nature of human nature” with major differences about what is required to enable humans to become compassionate to themselves, to others, including those in the group that live over the hill, and the ecologies in which we live.

We also note that this meta-analysis of RCTs included a waitlist control and a range of different active control comparisons. Interventions in the active control comparison included trauma-focused cognitive-behaviour therapy (Beaumont et al.

2016); in vivo exposure (Hoffart et al. 2015); combination of cognitive-behaviour therapy and dialectical behaviour therapy (Kelly et al. 2017); mindfulness with the maintenance of medications such as anti-depressants (Kuyken et al. 2010); exercise regimes (Jazaieri et al. 2012); online self-help CBT (Armstrong and Rimes 2016); and biofeedback with abdominal breathing (de Bruin et al. 2016). The results of their meta-analysis concluded that “self-compassion” therapies produced moderate effect sizes on the three outcomes of interest: self-compassion, anxiety and depressive symptoms. However, when the RCT design included a self-compassion therapy against an active control comparison, there were no significant differences on any of the three outcomes of interest. The authors concluded that self-compassion therapies do not bring about improvements in self-compassion and psychopathology over and above other interventions.

While we are delighted that there is an increasing interest in understanding the links between compassion and mental health, and we very much want to support this, it is important to point out the serious concerns about the quality, focus and conclusions of the study. Here are our major concerns: (1) the heterogeneity and classification of the “self-compassion therapies”, and the search terms used; (2) the measure used to assess self-compassion; (3) the comparison to the active control conditions; and (4) the inaccurate comments made about the Kirby et al. (2017b) meta-analysis. We will discuss each of these concerns below. We hope this will provide clarification on the state of compassion-based interventions.

Setting the Background

Before beginning our critique, it is important to place the emergence of compassion-focused therapies in their context. In the last 20–30 years, partly linked to movements such as positive psychology (Seligman and Csikszentmihalyi 2000), interest in the contemplative traditions that places compassion central to well-being and ethics (Ekman and Ekman 2017; Jinpa 2015; Ricard 2015; Sinnott-Armstrong and Miller 2017) and the essential role that compassion and caring has on early life and how it influences human development (Siegel 2015), there has been an explosion of interest in prosocial behaviour (Bierhoff 2005; Brown and Brown 2015; Davidson 2012; Jinpa 2015; Kemeny et al. 2012; Penner et al. 2005; Ricard 2015; Weng et al. 2013). There have been a number of studies on contemplative practice and compassion-based interventions demonstrating how compassion can help others and oneself (Kemeny et al. 2012; Leaviss and Uttley 2015; Kirby 2016; Neff and Germer 2013; Poulin 2014; and for reviews, see Seppälä et al. 2017; Singer and Bolz 2012). Among the dimensions of prosocial behaviour that have been explored are altruism (Preston 2013;

Ricard 2015), empathy (Decety et al. (2016), morality and ethics (Sinnott-Armstrong and Miller 2017), cooperation (Tomasello and Vaish 2013), caring (Gilbert 1989; Maysless 2016) and compassion (Gilbert 2005, 2017a; Seppälä et al. 2017; Singer and Bolz 2012). Today, there is considerable evidence that receiving compassion and care during early life impacts epigenetic development (Cowan et al. 2016), a range of physiological and neurophysiological systems (Mascaro et al. 2015), such as the immune system (Pace et al. 2009, Pace et al. 2013), brain development (Siegel 2015) and various psychological processes including emotion regulation and self-confidence (Mikulincer and Shaver 2016). The reasons for these extraordinarily powerful impacts on this range of processes lie in the evolution of brain mechanisms underpinning caring behaviour and attachment (Carter et al. 2017; Gilbert 1989, 2015, 2017b; Maysless 2016).

In regard to compassion-focused interventions, there are many. For example, there is evidence that loving-kindness meditation, which typically focuses on directing wishes of goodwill to self and others including “difficult” people, has many beneficial effects (Mascaro et al. 2015; Weng et al. 2013). Weng et al. (2013) found that two weeks of compassion training (focusing on benevolent wishes for family, friends and difficult people) resulted in increased altruistic behaviour in a fairness giving scenarios, and changes in neurophysiological mediators. Matos et al. (2017) found that practising compassionate mind skills for two weeks resulted in a range of beneficial psychological changes, reduced fears of compassion and was associated with well-being and changes in heart rate variability. CFT and compassionate mind training (CMT) are designed to tap into the physiological and neurobiological systems that underpin evolved caring mechanisms (Gilbert 2014, 2017b); hence why changes in heart rate variability (Kirby et al. 2017a) and neurobiological changes associated with training (Vrtička et al. 2017; Valk et al. 2017; Weng et al. 2018) are of interest.

In fact, there have been numerous studies on the neurophysiological changes associated with loving-kindness and compassion meditations (a number of reviews can be found in Seppälä et al. 2017; Galante et al. 2014; Hoffmann et al. 2011). To mention just one, Vrtička et al. (2017) and Valk et al. (2017) compared three forms of training linked to (1) attention and mindfulness; (2) socio-effective (including compassion training); and (3) socio-cognitive (including metacognition, empathy and perspective training). These trainings all produced neurophysiological changes but importantly they differed according to the training type engaged in. This indicates that these different types of trainings are not neurophysiologically equivalent (Vrtička et al. 2017; Valk et al. 2017). To put this another way, trainings are subtle and need fine tuning.

Many researchers and clinicians are now trying to work out which interventions help which people in which contexts and influence which physiological processes (Gilbert 2019,

2017a, b). This is important because compassion training for non-clinical populations is likely to be different than for clinical populations. For example, clinical populations are much more likely to have a range of complex, conscious and unconscious, fears, blocks and resistances to compassion (Gilbert 2000, 2009; Gilbert et al. 2011; Gilbert and Mascaro 2017). Individuals suffering from clinical disorders are likely to have more disruptive attachment experiences, have traumatised histories, and find compassion a struggle (Lawrence and Lee 2013). Inexperienced therapists trying to instigate compassion can inadvertently activate attachment processing systems and thereby stimulate trauma memory or at times overwhelming grief (Gilbert 2009; Gilbert and Procter 2006). Other clients such as those with narcissistic disorders can be quite resistant for various reasons (e.g., compassion is not seen as useful or helpful). Some clients can be compassionate to themselves but not to others, and others can find giving compassion to others easy, but difficult to themselves (Gilbert 2009, 2019). Hence, one cannot assume that one can take an intervention that works well with a non-clinical population and transfer it into a clinical population.

Currently, the translation from understanding the processes that underpin compassion (e.g., the movies, emotions, and physiological pathways) and translating that into therapy is in its early days. In addition, some of the methodologies of research trials are poor, the training and supervision of the therapists uncertain and fidelity to the model rarely clarified (Kirby et al. 2017a, b). This is not a criticism of just compassion therapies, but also a common problem for all therapies (Cuijpers et al. 2016). Understandable enthusiasm must therefore be held in check until much more rigorous studies are forthcoming. Indeed, the conclusions of this type of meta-analysis are premature because many of the studies used are poor quality, specifically in regard to identifying and ensuring that compassion interventions were correctly conducted and the fears, blocks and resistances, so common in clinical populations, were addressed. Many of the studies are essentially small-scale proof of concept, which was also the same for the Kirby et al. (2017b) meta-analysis. These are important first steps in which much can be learned but they are really first steps. So it would be something of a tragedy if against the extraordinary developments in the science of prosocial behaviour and compassion in general this type of meta-analysis was taken to indicate that compassion is not worthy of developing as a therapy. We now turn to the more specific issues.

Heterogeneity and Classification of the “Self-Compassion Therapies” and Search Terms Used

Although the authors use the term *self-compassion* focused, we are not sure what this applies to specially. A lot of the

compassion interventions included are not specifically self-compassion focused and those that are, such as Neff and Germer's mindful self-compassion program (Neff and Germer 2013), were not included in the meta-analysis. This seems to be because MSC, despite being an internationally acclaimed intervention, was not originally defined as a therapy, but rather a program for the general public.

So let us come back to a core issue that Wilson, Mackintosh, Power and Chan's search is very wide and is not particularly compassion focused, despite being called "self-compassion therapies". For example, the following keywords were used:

"compassion focused therapy*" or "compassionate mind training" or "mindful self-compassion" or ("mindfulness based" or "MBCT" or "MBSR" or "acceptance and commitment therapy*" or "ACT" or "dialectical behaviour* therapy*" or "DBT" or "intervention" or "treatment" and "self-compassion" or "self-kindness").

At no point did the authors discuss the criteria for choosing the compassion-focused intervention in contrast to a mindfulness intervention other than a keyword search. Indeed, as noted previously, there are notable and important physiological differences in mindfulness versus compassion training (Valk et al. 2017). Many of their keywords did not actually include compassion (e.g., dialectical behaviour therapy). Problematic, therefore, as stated in the paper in Table 3 (Wilson et al., p. 11), most of the studies are actually mindfulness-based studies ($n = 13$) not compassion studies ($n = 8$). Indeed, based on reviewing the included interventions, MBCT is the most included "self-compassion therapy" with eight intervention studies, and MBSR having four studies included. We would argue that neither MBCT nor MBSR can be considered a self-compassion therapy, rather they form mindfulness-based interventions, for which there are many meta-analyses (e.g., Khoury et al. 2013). Keep in mind that mindfulness and compassion training have quite different impacts on neurobiology (Vrtička et al. 2017), and currently there are a few studies that directly compare them. Although the interventions themselves may include the Self-Compassion Scale (Neff 2003) as part of their evaluation, this does not make the intervention primarily compassion focused. Oddly, the authors state in the study characteristics section that, "Of the 22 RCTs included in the review, 13 evaluated mindfulness-based therapies, 1 a day-long ACT workshop and 8 compassion-based interventions." So this raises the question as to why these different interventions are being grouped as a "self-compassion therapies".

The authors also note the high variability in what they are calling self-compassion studies. As noted above, we are in the early stages of development and training of compassion-focused therapies; that is, compassion-focused interventions that are designed for, and with, clinical groups. Some are just a

few sessions (e.g., Kelly and Carter 2015), some are simply short-term self-help interventions (e.g., Duarte et al. 2017) whereas others are more face-to-face (Beaumont et al. 2016). In addition, the authors confound individual with group-focused therapies. Many of these interventions are proof of concept with small numbers (e.g., $n = 16$; Arimitsu 2016), along with well-developed RCTs (e.g., Eisendrath et al. 2016). As with any new intervention or therapy model, many of the published evaluation studies begin by having a waitlist or no control comparison conditions (Sanders and Kirby 2015), and that is also true for mindfulness-based interventions, as well as compassion-based interventions. This is a problem in the literature more generally (see Kazdin 2015), which the authors do not discuss.

Thus, given this great heterogeneity in the included studies of self-compassion therapies, how can one reliably state that this is an accurate reflection? To determine the effectiveness of a self-compassion therapy, we would not interpret the results from an RCT examining MBCT or MBSR to provide an indication of the state of evidence. Moreover, without providing an operational definition of what the authors mean by "self-compassion therapies", it makes it extremely difficult to determine how studies were judged. The closest operational definition we could find was, "Based on the similarity between self-compassion and the underlying constructs in MBCT, DBT and ACT, it is reasonable to view these different interventions as part of a family of self-compassion-related therapies that could be evaluated as a group." We disagree. The evidence simply does not support this. As we noted, not only are their major distinctions between interventions designed for clinical and non-clinical populations but we are learning that there are very subtle but important differences between mindfulness versus compassion versus empathy training approaches (Vrtička et al. 2017). Moreover, different client groups will respond to these interventions quite differently. Therapists will need to be skilled enough to work with those individual differences.

While DBT is an excellent therapy for people with personality difficulties (e.g., borderline personality disorder), with good data supporting it (Linehan et al. 2015) and radical acceptance has some overlap with compassion, it is mainly a skills training along four dimensions of mindfulness, interpersonal effectiveness, emotion regulation and distress tolerance (Linehan 2017). Along the course of the therapy, compassion, kindness and forgiveness will texture these processes. However, they are not *the focus* of the therapy. Similarly, Acceptance Commitment Therapy (ACT) is another excellent therapy with good data supporting it (A-Tjak et al. 2015; Ost 2014), but it is rooted in a particular contextual behavioural model of therapy not motivation theory and not compassion motivation cultivation. Rather, it is centred on concepts of relational frame theory and the hexaflex which consists of present moment awareness, acceptance, cognitive diffusion,

self as context, values and committed action (Luoma and Hayes 2017). Each of these contributes to psychological flexibility. Compassion may well be one of the values texturing ACT, and some have made efforts to enable ACT to integrate CFT and other compassion interventions (Tirch et al. 2014). However, in a recent manual (Luoma and Hayes 2017), compassion is not discussed as a central training focus and is not even entered in its extensive index.

In contrast, there are other approaches such as compassion-focused therapy (CFT) and where compassion training *is* at the very core of the therapy. CFT is derived from evolutionary models of care-giving, identifying particular physiological systems that therapy should target (Kirby et al. 2017a, b). It offers a psycho-educational evolutionary model, highlighting the nature of motivational and emotional conflict within the mind (Gilbert 2000) (as does many psychodynamic approaches). It focuses on the link between internal working models of attachment and compassion, and how and why creating compassionate mental states has such powerful emotion, physiological regulation potential (Gilbert 2010). Central is creating a compassionate mind, which is about how the mind and brain is patterned at any point in time using combinations of breathing, attention awareness and motivational focusing. Central too is cultivating the compassionate identity that is focused on *living to be helpful not harmful to self or others*, which of course is similar to the concept of Bodhicitta (Dalia Lama 1995; Tsering 2008). These two central tenants which are returned to time and time again are absent from many other therapies. Across the course of CFT, specific techniques are introduced, including empathy training, distress tolerance, interpersonal relating (including assertiveness training), body and breathing practices, mindfulness and attention training practices, behavioural exposure practices, metacognition, imagery and visualisation practices (Gilbert and Choden 2013; Kirby 2016).

Suffice it to say that to include all these very different therapies as the same therapy models of the self-compassion family is misleading and confounds too many differences among the models. Extending this logic, given that CFT includes mindfulness does that therefore mean CFT is part of the dialectic family therapies? The study by Kelly et al. (2017) is an interesting inclusion, as the active comparison control intervention was a combination of CBT/DBT, which would therefore make it a “self-compassion therapy”?

So what about the therapies and interventions that are specifically compassion focused, where the primary aim is to stimulate compassionate motivation. The authors state that “compassion-focused therapy (CFT) is the intervention that most explicitly aims to modify self-compassion”—compared to what? No other interventions are mentioned as a comparison. Cognitive-based compassion training is also a well-developed compassion-based intervention (e.g., Pace et al. 2013; Gonzalez-Hernandez et al. 2018). Moreover, many of the emerging compassion-focused

therapies are *not* specifically *self*-compassion-focused interventions (though some therapy researchers sometimes focus on just that one aspect). Rather, compassion focused therapy addresses different combinations of the triangular flows of compassion: (1) the ability to receive compassion from others, (2) give compassion to others and (3) self-compassion. Indeed, there is evidence to suggest that the ability to receive compassion is an important therapeutic process (Gilbert 2009; Gilbert and Procter 2006), with evidence suggesting that in some contexts, and for some people, it may be more important than self-compassion (Hermanto et al. 2016; Hermanto and Zuroff 2016).

Within the therapeutic relationship, therapists have always been aware that clients can struggle with the ability to experience their therapists’ compassion, sometimes feeling at their core to be unlovable or undeserving of compassion (Mearns and Coopers 2017). These fears and resistances take some time to soften and may require working with complex attachment disturbances. In addition, most compassion focused therapies focus on helping people become more empathic and compassionate to others. In fact, empathy training as in mentalising training (Bateman and Fonagy 2008) can play a fundamental role in compassion focused therapy (Gilbert 2010). This is particularly true for those individuals who have more self-centred and/or narcissistic type difficulties. So CFT focuses on compassion as a *flow* of compassion and sees compassion as a social mentality (Gilbert 2017b). Indeed, *compassion focused* therapy is not the same as “compassion therapy” because CFT is about how to focus a variety of interventions through compassion motivation. Individuals can engage in all kinds of change processes including cognitive restructuring or behavioural exposures for example, but if the underlying motivation and emotion is hostile or fearful, rather than compassion focused, it is less likely to be effective. Psychotherapies cannot afford to be one-club golfers and they must address underlying physiological change processes too.

In regard to the other therapies and interventions, mindful self-compassion (Neff and Germer 2013) is arguably the most specifically focused on self-compassion. However, as mentioned, it was never designed as a therapy, nor is it taught around the world as a therapy, and in fact was excluded from the analysis. Of the compassion training protocols, only one other specific compassion as a therapy model is cognitively based compassion training. Interestingly, the authors only included three of the 21 RCT studies included in the meta-analysis by Kirby et al. (2017b) and did not include the following compassion-based programs: mindful self-compassion, compassion cultivation training, or cognitively based compassion training, all of which have been evaluated in RCT designs. They were all excluded as the authors were only interested in samples that:

“We required the intervention to include at least one face-to-face session with a trained therapist. The study population had to consist of adults of 18 years and over who had a clinical or subclinical mental health problem, as assessed by formal clinical diagnosis or by a validated self-report measure. Self-compassion is relevant to a range of mental health problems, so this review was not restricted to any specific diagnosis.”

This is surprising because cognitively-based compassion training is designed as an intervention that has been used in studies of mental health and physical difficulties (Dodds et al. 2015; Gonzalez-Hernandez et al. 2018), with university students, and finally with adolescents in foster care—although this population was outside of the eligibility criteria (Pace et al. 2013). In addition, we would argue that one face-to-face session with a trained therapist does not constitute a therapy. It would of course be wonderful if one-session therapies had such powerful impacts, but unfortunately, we know of none.

The Measurement Used to Assess Self-Compassion

The authors seem unaware of the controversies and important discussions around the definitions of compassion and of self-compassion. Neff (2011) has pioneered her own definition based on three bipolar constructs:

“Self-compassion.....involves being touched by and open to one’s own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one’s suffering and to heal oneself with kindness. Self-compassion also involves offering non-judgmental understanding to one’s pain, inadequacies and failures, so that one’s experience is seen as part of the larger human experience (p. 87).”

Neff also went on to suggest that her model of self-compassion can be assessed using three bipolar dimensions: self-kindness (in contrast to self-judgement and self-criticism); shared common humanity (in contrast to feeling isolated and alone and the only one); and mindfulness (in contrast to self-absorption and rumination). The Self-Compassion Scale measures these six dimensions.

The authors note some of the problems with the measure when used as a total score because half of its items are known to be linked to psychopathology such as self-criticism, and therefore risks inflating the link between “compassion” and psychopathology (López et al. 2018; Muris and Petrocchi 2017). Despite these important scientific controversies, the authors use the Self-Compassion Scale as *the criteria* for deciding if self-compassion therapies are improving compassion. At best, it can

only be a measure of that particular definition of compassion. But the inclusion of three dimensions that are clearly linked to psychopathology is important for another reason. This is because clinicians have known for a long time that certain types of shame, rumination and self-criticism can be quite difficult to treat, particularly if linked with trauma. Moreover many therapies specifically target these big three (shame, rumination and self-criticism) but not necessarily by trying to generate compassion. So it would be odd indeed if other therapies weren't showing impact when using this scale. There are many forms of shame and self-criticism, many resistances within them, and any therapy that seeks to address them will need to understand these dynamics. Currently, the self-report measuring of compassion is in its infancy and different measures are appearing constantly. Some are more focused on motivation, others on various competencies of compassion such as empathy, insight, distress tolerance, breath training, attention training, and we are yet to learn which may be more useful in which context, but it is unlikely that the one size will fit all (Gilbert et al. 2017; Jazaieri et al. 2012; Kirby et al. 2017a, b).

Clinically, it is also important to recognise that clinicians are aware that as people begin to engage in therapy, their self-reported state of mind (e.g., emotions and beliefs) might start to get worse. This is partly because the individual begins to engage with things that previously they may have been in denial with or dissociated from (e.g., inner rage or grief). For example, some people will deny they are self-critical or feel lonely and it is not until they are well into therapy that these themes start to emerge (Gilbert 2010). All psychotherapies have this problem of individuals who will score in a particular way on a self-report scale but then after some duration of therapy start to reveal a different story and experience increased distress. This also raises the serious issue that therapies that are too short may start individuals off along the road to self-discovery and engaging with difficult material, but then not have the time to produce therapeutic change. Individuals with the same symptom profile may vary greatly in regard to their psychotherapeutic needs relating to trauma background, personality and current context.

The Comparison to the Active Control Conditions

Another problematic aspect of the study was interventions classified as “self-compassion therapies”, which we would not define as such. For example, one specific intervention (Cornish and Wade 2015) was focused on self-forgiveness based on emotion-focused therapy, yet is has been defined as a compassion focused therapy equivalent. The Cornish and Wade (2015) study does not reference or cite compassion focused therapy anywhere in the manuscript. In addition, there is no outline of what the core features of the compassion-

focused intervention is, for example, there is no focus on developing a compassionate mind (Cornish and Wade 2015). Forgiveness is one of the interventions for compassion but one develops compassion in order to become forgiving. How then did the authors conclude that this was a CFT equivalent therapy? This is not a criticism of Cornish and Wade (2015), but rather an inaccurate classification of an intervention as being a self-compassion-focused therapy.

Moreover, in the intervention descriptions, it becomes clear that many of the interventions classified as “self-compassion therapies” are not—indeed, the authors even state that in the study characteristics section, 13 are mindfulness-based therapies (MBCT, MBSR), thus why should there be a difference between intervention and active controls on the SCS (Neff 2003), given that neither intervention was specifically trying to enhance compassion as a core aspect. For example, the de Bruin et al. (2016) intervention was self-led mindfulness, whereas the comparison was biofeedback with abdominal breathing or an exercise regime. Why should there be differences on the SCS between these two groups? But importantly we now know that certain kinds of breathing exercises do facilitate compassion (Bornemann et al. 2016) The Falsafi (2016) study had an intervention that was focused on mindfulness and loving-kindness meditations, and the control was a yoga intervention. A again why should there be differences on the SCS comparing these two interventions? Some would argue that yoga includes compassion as a feature (according to the Yoga Sutras, one way to purify the mind and increase serenity is to practice compassion (karuna) in the face of suffering), and indeed in the cultivating emotional balance program, which aims to cultivate compassion, yoga is one of the techniques in the program (Kemeny et al. 2012). Indeed, increasingly because of our deepening understanding of the relationship between mind and body interventions, yoga is being used to develop self-compassion including in the context of trauma (Crews et al. 2016).

The study also concludes that:

“This meta-analysis also found that self-compassion related therapies did not produce better outcomes than active control conditions. This indicates that such therapies are unlikely to have any specific effect over and above the general benefits of any active treatment. We should therefore be cautious about claiming that it is possible to ‘target’ self-compassion in therapy. Instead, it would seem that self-compassion is one of the many psychological characteristics that are modifiable during the course of a range of therapies.”

We hope we have made clear that this somewhat dismissive statement is problematic and would be tragic if taken at face value. Many of the interventions included did not specifically seek to enhance self-compassion, why then should it increase significantly more compared to other active controls? In

addition, as noted, there are many neurophysiological and other studies showing that compassion has its own profiles and can be changing cultivated.

The Inaccurate Comments Made About the Kirby et al. (2017b) Study

The authors cite a meta-analysis that Kirby was the lead author on often in the manuscript, as it was one of the first examining compassion-based interventions in a meta-analysis. However, the manuscript makes inaccurate statements about this published article. For example, the author’s state, “While Kirby et al. (2017a, b) exclusively reviewed CFT, a focus on self-compassion is not restricted to one modality of therapy.” This is inaccurate. The Kirby et al. (2017a, b) meta-analysis included a range of interventions not exclusively compassion-focused therapy; it included mindful self-compassion, compassion cultivation training, cognitively based compassion training, and others. Importantly, most of these programs are not “therapies”, they are intervention programs commonly developed for self-help, self-improvement and better coping with life (MSC, CCT). And they are not all based on CFT—indeed the underpinning theory of each of these different programs is different (see Kirby 2016 or Kirby and Gilbert 2017)—thus, they are most certainly not the same homogenous group of intervention. Indeed, we think this is a good thing because it offers opportunities for scientific study of variation, discussion of differences, and opportunities to grow, develop and learn from each other. Thus, although we are critical of Wilson et al. (2018) meta-analysis for the heterogeneity of included studies, we also would level this same criticism against the Kirby et al. (2017b) meta-analysis.

Concluding Remarks

In the field of meta-analysis, it is well-known that the quality of the analysis depends upon what you include. So we have tried to outline reasons why we have concerns about the inputs to the study, and hence this meta-analysis. The selection criteria for studies are difficult to understand, the concept used to consider what compassion is and is not is not adequately discussed and the measure used was not originally developed for clinical populations, even though it is now being used in clinical populations. Given the international explosion of research into compassion, and prosocial behaviour and mind states, it would be truly tragic if this kind of meta-analysis was taken to dissuade individuals from developing and researching how to facilitate compassion as a therapeutic and healing process.

We would also suggest that, like medicine, considerable research goes into process before active therapies gradually begin to emerge. We knew a lot more about the heart before we were

able to do successful heart transplants. We are learning a lot about compassion including its genetics, epigenetics, neurobiology, psychological and motivational orientation, and contextual regulators. The translation of such knowledge into therapy will not be quick. Just one example. We know there are major differences on the oxytocin gene that are linked to prosocial behaviour and stress reactivity (Rodrigues et al. 2009). What we do not know is how different therapies may interact with different genetic profiles. Compassion focus therapies are interested in these questions because most of them seek to be a bottom-up scientific process to therapy. Kirby and Gilbert (2017) have highlighted the fact that many psychotherapies were based upon observations by charismatic therapists who then created schools around them to focus on processes they identified as being important. Research would be then directed to the processes identified. Unfortunately, this has led to considerable fragmentation and a lack of a coherent integration for psychotherapy. This is why we now have some hundreds of schools of psychotherapy. What is now required is scientific understanding of brain systems that give rise to mental phenomenology, and how we can influence and re-pattern these systems.

As noted in our introduction, there is a rapidly growing science base indicating the benefits of cultivating prosocial motivation (e.g., Seppälä et al. 2017). How these fast developing scientific insights get translated into core psychological processes and then translated into therapy is the next step. It is heartening that even though these are newly developed therapies, they are doing as well as standard therapies (e.g., CBT/DBT). Moreover, because many therapies do not measure prosociality, and other aspects of compassion including our ability to receive it, feel gratitude and be orientated to help others, we do not know the impacts these therapies are having on prosocial behaviours in general. Importantly, however, when it comes to relapse prevention, and many therapies are not great in relapse prevention (Cuijpers et al. 2016), it may well be that changes in social behaviour, so individuals are able to develop and maintain open, supportive relationship with others, turn out to be a key factor. It is not just the regulation of our own minds but recognising how we operate within social networks that is important (Siegel 2015). Increasingly, mental health workers are highlighting the fact that we are not autonomous individuals and cannot have mental health without social health. There is an increasingly urgent orientation in the field of mental health, for alleviation and prevention of suffering, to see our minds as highly socially embedded, and that right down to the epigenetic level we are being regulated through our relationships with others both consciously and unconsciously (Haslam et al. 2018). Compassion-focused therapies therefore need to address the issue that we are not autonomous individuals but as evolved to be highly socially integrated and regulated (Gilbert 2018).

So we need longer-term follow-up studies to measure their impact on mental state, relapse rates and social function. We

need therapies that are better able to focus on psychological, epigenetic and neuro-scientific findings related to how the brain evolved and functions, particularly in relationship to affiliative processing systems (Brune and Brune-Cohrs 2006; Conway and Slavich 2017; Davidson 2012; Gilbert 2014; Siegel 2015). The evidence is overwhelming that affiliative and compassion relationships both with the self and others have powerful physiological and emotion regulating effects (e.g., Singer and Bolz 2012; Seppälä et al. 2017). How this information can be translated into psychotherapies is in the early days, particularly given the fact that there can be considerable resistance to experiencing compassion. This is not surprising because compassion is about engaging within a pain.

So even though we are enthusiastic about compassion as a therapy, as an education, and as a way of helping humans behave better to each other, we acknowledge that some of the studies are early studies with limited methodologies, lack clarity and process, and with very little control over fidelity to a model. Many new therapies suffer these problems. In addition, therapies are beginning to move towards more individually tailored interventions and the sooner we get away from “one size fits all”, the better our outcomes will be. We also highlight that the compassion-focused therapies are often pluralistic; this is why they are called compassion-*focused* therapies, not compassion therapies.

Compliance with Ethical Standards

Ethical Approval This article does not contain any studies with human participants performed by any of the authors.

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References

- Arimitsu, K. (2016). The effects of a program to enhance self-compassion in Japanese individuals: a randomized controlled pilot study. *The Journal of Positive Psychology, 11*, 559–571. <https://doi.org/10.1080/17439760.2016.1152593>.
- Armstrong, L., & Rimes, K. A. (2016). Mindfulness-based cognitive therapy for neuroticism (stress vulnerability): a pilot randomized study. *Behavior Therapy, 47*, 287–298. <https://doi.org/10.1016/j.beth.2015.12.005>.
- A-tjak, J. G., Davis, M. L., Morina, N., Powers, M. B., Smits, J. A., & Emmelkamp, P. M. (2015). A meta-analysis of the efficacy of acceptance and commitment therapy for clinically relevant mental and physical health problems. *Psychotherapy and Psychosomatics, 84*, 30–36.
- Bateman, A., & Fonagy, P. (2008). 8-year follow-up of patients treated for borderline personality disorder: mentalization-based treatment versus treatment as usual. *American Journal of Psychiatry, 165*(5), 631–638.
- Beaumont, E., Durkin, M., McAndrew, S., & Martin, C. R. (2016). Using compassion focused therapy as an adjunct to trauma-focused CBT for fire service personnel suffering with trauma-related symptoms.

- The Cognitive Behaviour Therapist*, 9, e34. <https://doi.org/10.1017/S1754470X16000209>.
- Bierhoff, H.-W. (2005). The psychology of compassion and prosocial behaviour. In P. Gilbert (Ed.), *Compassion: conceptualisations, research and use in psychotherapy* (pp. 148–167). New York: Routledge.
- Bornemann, B., Kok, B. E., Böckler, A., & Singer, T. (2016). Helping from the heart: voluntary upregulation of heart rate variability predicts altruistic behavior. *Biological Psychology*, 119, 54–63. <https://doi.org/10.1016/j.biopsycho.2016.07.004>.
- Brown, S. L., & Brown, R. M. (2015). Connecting prosocial behaviour to improved physical health: contributions from the neurobiology of parenting. *Neuroscience & Biobehavioral Reviews*, 55, 1–17. <https://doi.org/10.1016/j.neubiorev.2015.04.004>.
- Brüne, M., & Brüne-Cohrs, U. (2006). Theory of mind—evolution, ontogeny, brain mechanisms and psychopathology. *Neuroscience & Biobehavioral Reviews*, 30(4), 437–455.
- Carter, S. C., Bartel, I. B. A., & Porges, E. C. (2017). The roots of compassion: an evolutionary and neurobiological perspective. In E. Seppala, E. Simon-Thomas, S. Brown, M. Worline, C. D. Cameron, & J. Doty (Eds.), *Oxford handbook of compassion science* (pp. 173–188). New York: Oxford University Press.
- Conway, C. C. & Slavich, G. M. (2017) Behavior genetics of prosocial behavior. In P. Gilbert (ed.) *Compassion: Concepts, research and applications* (pp. 151–170). London: Routledge.
- Cornish, M. A., & Wade, N. G. (2015). Working through past wrongdoing: examination of a self-forgiveness counselling intervention. *Journal of Counselling Psychology*, 62, 521–528. <https://doi.org/10.1037/cou0000080>.
- Cowan, C. S. M., Callaghan, B. L., Kan, J. M., & Richardson, R. (2016). The lasting impact of early-life adversity on individuals and their descendants: potential mechanisms and hope for intervention. *Genes, Brain and Behavior*, 15, 155–168.
- Crews, D. A., Stolz-Newton, M., & Grant, N. S. (2016). The use of yoga to build self-compassion as a healing method for survivors of sexual violence. *Journal of Religion & Spirituality in Social Work: Social Thought*, 35(3), 139–156.
- Cuijpers, P., Cristea, I. A., Karyotaki, E., Reijnders, M., & Huibers, M. J. H. (2016). How effective are cognitive behavior therapies for major depression and anxiety disorders? A meta-analytic update of the evidence. *World Psychiatry*, 15, 245–258.
- Dalai Lama. (1995). *The power of compassion*. India: Harper Collins.
- Davidson, R. J. (2012). The neurobiology of compassion. In C. Germer & D. Siegel (Eds.), *Wisdom and compassion in psychotherapy: deepening mindfulness in clinical practice* (pp. 111–118). New York: Guilford Press.
- de Bruin, E. I., van der Zwan, J. E., & Bögels, S. M. (2016). A RCT comparing daily mindfulness meditations, biofeedback exercises, and daily physical exercise on attention control, executive functioning, mindful awareness, self-compassion, and worrying in stressed young adults. *Mindfulness*, 7, 1182–1192. <https://doi.org/10.1007/s12671-016-0561-5>.
- Decety, J., Bartal, I. B.-A., Uzefovsky, F., & Knafno-Noam, A. (2016). Empathy as a driver of prosocial behaviour: highly conserved neurobehavioural mechanisms across species. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 371, 20150077. <https://doi.org/10.1098/rstb.2015.0077>.
- Dodds, S. E., Pace, T. W., Bell, M. L., et al. (2015). Feasibility of cognitively-based compassion training (CBCT) for breast cancer survivors: a randomized, wait list controlled pilot study. *Support Care Cancer*, 23, 3599–3608.
- Duarte, C., Pinto-Gouveia, J., & Stubbs, R. J. (2017). Compassionate attention and regulation of eating behaviour: a pilot study of a brief low-intensity intervention for binge eating. *Clinical Psychology & Psychotherapy*, 24, 1437–1447. <https://doi.org/10.1002/cpp.2094>.
- Eisendrath, S. J., Gillung, E., Delucchi, K. L., Segal, Z. V., Nelson, J. C., McInnes, L. A., et al. (2016). A randomized controlled trial of mindfulness-based cognitive therapy for treatment resistant depression. *Psychotherapy and Psychosomatics*, 85, 99–110. <https://doi.org/10.1159/000442260>.
- Ekman, P., & Ekman, E. (2017). Is global compassion achievable? In E. Seppala, E. Simon-Thomas, S. Brown, M. Worline, C. D. Cameron, & J. Doty (Eds.), *Oxford handbook of compassion science* (pp. 41–49). New York: Oxford University Press.
- Falsafi, N. (2016). A randomized controlled trial of mindfulness versus yoga: effects on depression and/or anxiety in college students. *Journal of the American Psychiatric Nurses Association*, 22, 483–497. <https://doi.org/10.1177/1078390316663307>.
- Galante, J., Galante, I., Bekkers, M. J., & Gallacher, J. (2014). Effect of kindness-based meditation on health and well-being: a systematic review and meta-analysis. *Journal of Consulting and Clinical Psychology*, 82, 1101–1114. <https://doi.org/10.1037/a0037249>.
- Gilbert, P. (1989/2016). *Human nature and suffering*. London: Routledge.
- Gilbert, P. (2000). Social mentalities: internal ‘social’ conflicts and the role of inner warmth and compassion in cognitive therapy. In P. Gilbert & K. G. Bailey (Eds.), *Genes on the couch: explorations in evolutionary psychotherapy* (pp. 118–150). Hove: Psychology Press.
- Gilbert, P. (2005). Compassion and cruelty: a biopsychosocial approach. In P. Gilbert (Ed.), *Compassion: conceptualisations, research and use in psychotherapy* (pp. 3–74). London: Routledge.
- Gilbert, P. (2009). Developing a compassion focused approach in cognitive behavioural therapy. In G. Simos (Ed.), *Cognitive Behaviour Therapy, a Guide to the Practicing Clinician. Volume II*. London: Routledge.
- Gilbert, P. (2010). *Compassion focused therapy: the CBT distinctive features series*. London: Routledge.
- Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, 53, 6–41. <https://doi.org/10.1111/bjc.12043>.
- Gilbert, P. (2015). Affiliative and prosocial motives and emotions in mental health. *Dialogues in Clinical Neuroscience*, 17, 381–389.
- Gilbert, P. (Ed.). (2017a). *Compassion: concepts, research and applications*. London: Routledge.
- Gilbert, P. (2017b). Compassion as a social mentality: an evolutionary approach. In P. Gilbert (Ed.), *Compassion: concepts, research and applications* (pp. 31–68). London: Routledge.
- Gilbert, P. (2018). *Living like crazy*. York: Annwyn House.
- Gilbert P. (2019). Explorations into the nature and function of compassion. *Current Opinion in Psychology*.
- Gilbert, P., Catarino, F., Duarte, C., Matos, M., Kolts, R., Stubbs, J., Ceresatto, L., Duarte, J., Pinto-Gouveia, J., & Basran, J. (2017). The development of compassionate engagement and action scales for self and others. *Journal of Compassionate Health Care*, 4(1), 1–24. <https://doi.org/10.1186/s40639-017-0033-3>.
- Gilbert, P., & Choden. (2013). *Mindful compassion*. London: Constable & Robinson.
- Gilbert, P. & Mascaró, J. (2017). Compassion: fears, blocks, and resistances: an evolutionary investigation. In E. Seppala, E. Simon-Thomas, S. Brown, M. Worline, C. D. Cameron, & J. Doty (Eds.), *Oxford handbook of compassion science* (pp. 399–418). New York: Oxford University Press.
- Gilbert, P., McEwan, K., Matos, M., & Rivas, A. (2011). Fears of compassion: development of three self-report measures. *Psychology and Psychotherapy*, 84, 239–255. <https://doi.org/10.1348/147608310X526511>.
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy*, 13, 353–379. <https://doi.org/10.1002/cpp.507>.

- Gonzalez-Hernandez, E., Romero, R., Campos, D., Burichka, D., Diego-Pedro, R., Baños, R., et al. (2018). Cognitively-based compassion training (CBCT) in breast cancer survivors: a randomized clinical trial study. *Integrative cancer therapies*, *17*, 684–696.
- Haslam, C., Jetten, J., Cruwys, T., Dingle, G. A., & Haslam, A. S. (2018). *The new psychology of health: unlocking the social cure*. London: Routledge.
- Hermanto, N., & Zuroff, D. C. (2016). The social mentality theory of self-compassion and self-reassurance: the interactive effect of care-seeking and caregiving. *Journal of Social Psychology*, *156*(5), 523–535. <https://doi.org/10.1080/00224545.2015.1135779>.
- Hermanto, N., Zuroff, D. C., Kopala-Sibley, D. C., Kelly, A. C., Matos, M., & Gilbert, P. (2016). Ability to receive compassion from others buffers the depressogenic effect of self-criticism: a cross-cultural multi-study analysis. *Personality and Individual Differences*, *98*, 324–332. <https://doi.org/10.1016/j.paid.2016.04.055>.
- Hoffart, A., Økstedalen, T., & Langkaas, T. F. (2015). Self-compassion influences PTSD symptoms in the process of change in traumafocused cognitive-behavioral therapies: a study of within-person processes. *Frontiers in Psychology*, *6*, 1273. <https://doi.org/10.3389/fpsyg.2015.01273>.
- Hoffmann, S. G., Grossman, P., & Hinton, D. E. (2011). Loving-kindness and compassion meditation: potential for psychological intervention. *Clinical Psychology Review*, *13*, 1126–1132. <https://doi.org/10.1016/j.cpr.2011.07.003>.
- Huang, J. Y., & Bargh, J. A. (2014). The selfish goal: Autonomously operating motivational structures as the proximate cause of human judgment and behavior. *Behavioral and Brain Sciences*, *37*, 121–175.
- Jazaieri, H., Goldin, P. R., Werner, K., Ziv, M., & Gross, J. J. (2012). A randomized trial of MBSR versus aerobic exercise for social anxiety disorder. *Journal of Clinical Psychology*, *68*, 715–731. <https://doi.org/10.1002/jclp.21863>.
- Jinpa, T. (2015). *A fearless heart. Why compassion is the key to greater well-being*. London: Little Brown.
- Kazdin, A. E. (2015) Treatment as usual and routine care in research and clinical practice. *Clinical Psychology Review*, *42*, 168–178.
- Kelly, A. C., & Carter, J. C. (2015). Self-compassion training for binge eating disorder: a pilot randomized controlled trial. *Psychology and psychotherapy: Theory, research and practice*, *88*(3), 285–303.
- Kelly, A. C., Wisniewski, L., Martin-Wagar, C., & Hoffman, E. (2017). Group-based compassion-focused therapy as an adjunct to outpatient treatment for eating disorders: a pilot randomized controlled trial. *Clinical Psychology and Psychotherapy*, *24*, 475–487. <https://doi.org/10.1002/cpp.2018>.
- Kemeny, M. E., Foltz, C., Cavanagh, J. F., Cullen, M., Giese-Davis, J., Jennings, P., et al. (2012). Contemplative/emotion training reduces negative emotional behavior and promotes prosocial responses. *Emotion*, *12*, 338–350. <https://doi.org/10.1037/a0026118>.
- Khoury, B., Lecomte, T., Fortin, G., Masse, M., Therien, P., Bouchard, V., et al. (2013). Mindfulness-based therapy: a comprehensive meta-analysis. *Clinical Psychology Review*, *33*(6), 763–771. <https://doi.org/10.1016/j.cpr.2013.05.005>.
- Kirby, J. N. (2016). Compassion interventions: the programmes, the evidence, and implications for research and practice. *Psychology and Psychotherapy: Theory, Research and Practice*, *90*(3), 432–455. <https://doi.org/10.1111/papt.12104>.
- Kirby, J. N., & Gilbert, P. (2017). The emergence of the compassion focused therapies. In P. Gilbert (Ed.), *Compassion: concepts, research and applications* (pp. 258–285). London: Routledge.
- Kirby, J. N., Doty, J., Petrocchi, N., & Gilbert, P. (2017a). The current and future role of heart rate variability for assessing and training compassion. *Frontiers in Public Health*, *5*, 40. <https://doi.org/10.3389/fpubh.2017.00040>.
- Kirby, J. N., Tellegen, C. L., & Steindl, S. R. (2017b). A meta-analysis of compassion-based interventions: current state of knowledge and future directions. *Behavior Therapy*, *48*, 778–792. <https://doi.org/10.1016/j.beth.2017.06.003>.
- Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R. S., Byford, S., et al. (2010). How does mindfulness-based cognitive therapy work? *Behaviour Research and Therapy*, *48*, 1105–1112. <https://doi.org/10.1016/j.brat.2010.08.003>.
- Lawrence, V. A., & Lee, D. (2013). An exploration of people's experiences of compassion-focused therapy for trauma: using interpretative phenomenological analysis. *Clinical Psychology and Psychotherapy*, *21*, 495–507. <https://doi.org/10.1002/cpp.1854>.
- Leaviss, J., & Uttley, L. (2015). Psychotherapeutic benefits of compassion-focused therapy: an early systematic review. *Psychological Medicine*, *45*, 927–945. <https://doi.org/10.1017/S0033291714002141>.
- Linehan, M. M., Korslund, K. E., Harned, M. S., Gallop, R. J., Lungu, A., Neacsiu, A. D., et al. (2015). Dialectical behavior therapy for high suicide risk in individuals with borderline personality disorder. A randomized clinical trial and component analysis. *JAMA Psychiatry*, *72*, 475–482. <https://doi.org/10.1001/jamapsychiatry.2014.3039>.
- Lopez, A., Sandermann, R., Ranchor, A. V., & Schroevers, M. J. (2018). Compassion for others and self-compassion: Levels, correlates, and relationship with psychological well-being. *Mindfulness*, *9*, 325–331. <https://doi.org/10.1007/s12671-017-0777-z>.
- Luoma, J. B., & Hayes, S. C. (2017). *Learning ACT: an acceptance & commitment therapy skills-training manual for therapists*. Oakland, CA: New Harbinger Publications.
- Mascaro, J. S., Darcher, A., Negi, L. T., & Raison, C. L. (2015). The neural mediators of kindness-based meditation: a theoretical model. *Frontiers Psychology*. <https://doi.org/10.3389/fpsyg.2015.00109>.
- Matos, M., Duarte, C., Duarte, J., Pinto-Gouveia, J., Petrocchi, N., Basran, J., & Gilbert, P. (2017). Psychological and physiological effects of Compassionate Mind Training: A pilot randomized controlled study. *Mindfulness*, *8*, 1699–1712. <https://doi.org/10.1007/s12671-017-0745-7>.
- Maysseless, O. (2016). *The caring motivation: an integrated theory*. Oxford: Oxford University Press.
- Mearns, D., & Coopers, M. (2017). *Working at relational depth in counselling & psychotherapy*. London: SAGE Publications.
- Mikulincer, M., & Shaver, P. R. (2016). *Attachment in adulthood: structure, dynamics, and change* (2nd ed.). New York: Guilford.
- Muris, P., & Petrocchi, N. (2017). Protection or vulnerability? A meta-analysis of the relations between the positive and negative components of self-compassion and psychopathology. *Clinical Psychology & Psychotherapy*, *24*, 373–383. <https://doi.org/10.1002/cpp.2005>.
- Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*, 223–250. <https://doi.org/10.1080/15298860309027>.
- Neff, K. D. (2011). *Self-compassion*. New York: Morrow.
- Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the Mindful Self-Compassion program. *Journal of Clinical Psychology*, *69*, 28–44. <https://doi.org/10.1002/jclp.21923>.
- Ost, L. (2014). The efficacy of acceptance and commitment therapy: an updated systematic review and meta-analysis. *Behaviour Research and Therapy*, *61*, 105–121. <https://doi.org/10.1016/j.brat.2014.07.018>.
- Pace, T. W. W. P., Negi, L. T., Adame, D. D., Cole, S. P., Sivilli, T. I., Brown, T. D., Issa, M. J., & Raison, C. L. (2009). Effect of compassion meditation on neuroendocrine, innate immune and behavioral responses to psychosocial stress. *Psychoneuroendocrinology*, *34*(1), 87–98.
- Pace, T. W. W., Negi, L. T., Dodson-Lavelle, B., Ozawa-de Silva, B., Reddy, S. D., Cole, S. P., et al. (2013). Engagement with cognitively-based compassion training is associated with reduced salivary C-reactive protein from before to after training in foster care

- program adolescents. *Psychoneuroendocrinology*, 38, 294–299. <https://doi.org/10.1016/j.psyneuen.2012.05.019>.
- Penner, L. A., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. (2005). Prosocial behavior: multilevel perspectives. *Annual Review of Psychology*, 56, 1–28.
- Poulin, M. J. (2014). Volunteering predicts health among those who value others: two national studies. *Health Psychology*, 33, 120–129.
- Preston, S. D. (2013). The origins of altruism in offspring care. *Psychological Bulletin*, 139, 1305–1341.
- Ricard, M. (2015). *Altruism*. London: Atlantic Books.
- Rodrigues, S. M., Saslow, L. R., Garcia, N., John, O. P., & Keltner, D. (2009). Oxytocin receptor genetic variation relates to empathy and stress reactivity in humans. *Proceedings of the National Academy of Sciences*, 106, 21,437–21,441.
- Sanders, M.R., & Kirby, J.N. (2015). Surviving or thriving: Quality assurance mechanisms to promote innovation in the development of evidence-based parenting interventions. *Prevention Science*, 16, 421–431. <https://doi.org/10.1007/s11121-014-0475-1>.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: an introduction. *American Psychologist*, 55, 5–14. <https://doi.org/10.1037/0003-066X.55.1.5>.
- Seppälä, E., Simon-Thomas, E., Brown, S. L., Worline, M. C., Cameron, C. D., & Doty, J. R. (2017). *The Oxford handbook of compassion science*. New York: Oxford University Press.
- Shahar, B., Szepeswol, O., Zilcha-Mano, S., Haim, N., Zamir, O., Levi-Yeshuvi, S., & Levit-Binnun, N. (2015). A wait-list randomized controlled trial of loving-kindness meditation programme for self-criticism. *Clinical Psychology and Psychotherapy*, 22, 346–356. <https://doi.org/10.1002/cpp.1893>.
- Siegel, D. J. (2015). *The developing mind: how relationships and the brain interact to shape who we are*. New York: Guilford Publications.
- Singer, T., & Bolz, M. (Eds.) (2012). *Compassion: bridging practice and science*. <http://www.compassion-training.org/>.
- Sinnott-Armstrong, W., & Miller, C. B. (2017). *Moral psychology*. Cambridge, MA: Massachusetts Institute of Technology.
- Tirch, D., Schoendorff, B., & Silberstein, L. R. (2014). *The ACT practitioner's guide to the science of compassion*. Oakland, CA: New Harbinger.
- Tomasello, M., & Vaish, A. (2013). Origins of human cooperation and morality. *Annual review of psychology*, 64, 231–255.
- Tsering, G. T. (2008). *The awakening mind: the foundation of Buddhist thought* (Vol. 4). London: Wisdom publications.
- Valk, S. L., Bernhardt, B. C., Trautwein, F. M., Böckler, A., Kanske, P., Guizard, N., Collins, D. L., & Singer, T. (2017). Structural plasticity of the social brain: differential change after socio-affective and cognitive mental training. *Science Advances*, 3(10), e1700489.
- Vrtička, P., Favre, P., & Singer, T. (2017). Compassion and the brain. In P. Gilbert (Ed.), *Compassion: concepts, research, and applications*. London: Routledge.
- Weng, H. Y., Fox, A. S., Shackman, A. J., Stodola, D. E., Caldwell, J. Z., Olson, M. C., et al. (2013). Compassion training alters altruism and neural responses to suffering. *Psychological Science*, 24, 1171–1180. <https://doi.org/10.1177/0956797612469537>.
- Weng, H. Y., Lapate, R. C., Stodola, D. E., Rogers, G. M., & Davidson, R. J. (2018). Visual attention to suffering after compassion training is associated with decreased amygdala responses. *Frontiers in psychology*, 9.
- Wilson, A. C., Mackintosh, K., Power, K., & Chan, S. W. Y. (2018). Effectiveness of self-compassion related therapies: a systematic review and meta-analysis. *Mindfulness*. <https://doi.org/10.1007/s12671-018-1037-6>.
- Yadavaia, J. E., Hayes, S. C., & Vilardaga, R. (2014). Using acceptance and commitment therapy to increase self-compassion: a randomized controlled trial. *Journal of Contextual Behavioral Science*, 3, 248–257. <https://doi.org/10.1016/j.jcbs.2014.09.002>.