

## **Living life well: the role of mindfulness and compassion**

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### **Abstract**

In this chapter I consider some of the experiences, attitudes and behaviours associated with the perception that life is going well, and how we can optimise this perception for both individuals and communities. I use the framework of positive mental health or flourishing to characterise individual life going well, and highlight the self-regulatory processes that are associated with positive mental health. The concept of shared humanity is employed to underpin the processes associated with life going well in organisations and communities. I propose that two mental practices are foundational to life going well – these are mindfulness and compassion. Mindfulness trains the skills of awareness, attention and self-regulation, while compassion trains the skills of empathy and kindness. I review evidence from behavioural science and neuroscience that demonstrates the individual and interpersonal benefits of these practices. Although community-level evidence is limited at present, I discuss the potential for these practices to produce wider societal benefits.

### **Introduction**

Most of us lead extraordinarily busy lives. We immerse ourselves in our work or studies, in family and social activities, we go to the gym or engage in other forms of physical activity, we may participate in community events or volunteer our time for good causes. It is common to feel we are hurtling through our lives as we strive relentlessly towards our goals, driven by expectations and social pressures. We are spurred on by our 24/7 culture and the ubiquity of mobile technology, including the social media with its addictive quality (Dunn & Dwyer, this volume). It has been said that we have become human doings not human beings. The question we need to ask is whether our obsession with doing, striving, and constant busyness, is conducive to living well.

The rising rates of stress and distress, and of mental health problems such as anxiety, depression, self-harm, and substance abuse suggest that for a large part of the population, life is not going well. Alarming, the highest prevalence of these

disorders is occurring at an increasingly young age presumably reflecting the increasing academic and social pressures experienced by young people, along with their high expectations of success, appearance, and material goods (Zisook et al., 2007). Fifty per cent of young adults with psychiatric disorders already have clinically impairing psychopathology by 15 years, 75% by aged 24 (Kessler et al., 2005). These problems, while manifesting in individual children or adults, have adverse effects on those around them. Through emotional contagion, our negative affect can spread to family members, friends, workmates or fellow commuters. High levels of stress or distress make us turn inwards, focusing on ourselves and reducing our ability to care about others. They are also associated with poor physical health and burnout, whose prevalence appears to be increasing among teachers and health care workers, as well as other high-stress occupational groups such as lawyers, social workers, and police officers (Finney et al., 2013; Khamisa, Peltzer & Oldenburg, 2013; Khan, Yusoff & Khan, 2014).

So what can we do to bring more balance and tranquillity into our lives? The simple answer is to slow down, reflect, take stock, and make more conscious choices. This view is congruent with ideas passed down from the ancient Greek philosophers, to whom we frequently turn for an authoritative account of the good life. Socrates is reported by Plato to have believed that to “know thyself” is the beginning of all wisdom, and to have said “the unexamined life is not worth living” (Plato, *Apology* 38a). A few decades later, Aristotle said “contemplation is ... the highest form of activity” (Aristotle, *Ethics*, 10.7). For these Greek philosophers, the good life was not about individual pleasure and the fulfilment of desires, but about using our uniquely human capacity for rationality to make conscious ethical choices which would benefit the whole community.

Centuries earlier, Buddhist philosophy had not only identified awareness and contemplation as necessary for living well, but also developed techniques of mental training to support these processes. One of the attractions of Buddhism for many people today is its empirical approach to the good life. In place of dogma, Buddhism invites people to explore for themselves what makes them feel good and act wisely. The essence of this mental training was distilled into a secular program by Jon Kabat-Zinn, a biomedical scientist from the University of Massachusetts Medical Centre, who founded the Mindfulness-based Stress Reduction Clinic in 1979. His program, known as Mindfulness-based Stress Reduction (MBSR) was initially developed for the alleviation of pain and other medical conditions, but over the decades, is being used increasingly to enhance the quality of people’s lives in general population settings. While clinical applications of mindfulness training continue to be prominent (e.g. the NHS National Institute for Health and Clinical Excellence recommends mindfulness training for the treatment of depression), non-clinical applications include its widespread use in education, organisations, sport, and relationship building.

**What is mindfulness and how does it promote living well?**

Mindfulness is a way of paying attention to our ongoing experience as it unfolds in the moment. We become aware of bodily sensations, of thoughts and emotions in our mind, and of the people, objects and events in our immediate environment. Being mindful is the antithesis of the state in which most people find themselves – immersed in their memories, thoughts, or plans, swept away by their emotions, barely noticing what is going on around them or inside them, and functioning on automatic pilot. In this state, we tend to react in habitual or impulsive ways rather than pausing and reflecting on the best way to respond. As a result, we may say and do things we later regret, that we would have done differently if we had stepped back and observed our experience rather than being embroiled in the drama of our lives.

Being mindful is a capability, and as with any capability there are wide individual differences in dispositional mindfulness. It has been shown that a high level of dispositional mindfulness is associated with greater well-being (e.g. Brown & Ryan, 2003). However, mindfulness can be learned and strengthened. Mindfulness training usually takes the form of longer or shorter periods of meditation, where participants are invited to adopt a comfortable and upright posture, and focus on one type of experience, such as bodily sensations or the flow of the breath. They are invited to observe their experiences with interest and curiosity, noticing large sensations as well as smaller, more subtle ones, and noticing how the sensations change even over a very short time periods. While trying to focus, they inevitably notice that their mind has wandered, and are encouraged to notice where it has wandered to, gently bringing their attention back to whatever they were focusing on. The repeated practice of focusing, becoming distracted, noticing the distraction, and returning to their focus is the most basic form of attention training. Mindfulness training may also encompass focusing attention on experiences such as sounds, thoughts, or movement, and in each case, the practice is to really notice the quality and changing nature of whatever one is experiencing, and to keep returning to it despite repeated distraction. An important part of the training is to treat all experiences with equal interest and curiosity, neither prioritising pleasant experiences nor pushing away unpleasant ones.

### ***The what and how of mindfulness***

The above description focuses on what we do when practising mindfulness. This practice leads to the development or strengthening of a number of basic cognitive, metacognitive and affective skills. These are:

- Awareness of ongoing experience
- Attention to the experience we choose to focus on
- Perceptual shift - 'stepping back' from our experience
- Non-reactivity to our experiences ('responding rather than reacting')

- Emotion regulation – managing strong emotions through the application of the above skills.

But just as important as *what* we do, is *how* we do it. We enact these skills not in a cold, harsh, disinterested manner, but with friendly curiosity and openness, accepting whatever we are experiencing in the moment, without judging it. As we will see later when we discuss the research evidence, it is in large part the curious, kind and gentle manner in which we observe and relate to our experience that leads to the mental health and well-being benefits of mindfulness training. Avoiding, suppressing, or denying difficult or painful experiences is a common symptom in mental health problems. With mindfulness training, we learn to be as curious about our negative or painful emotions and experiences as about our positive ones, and the kindly attitude we take towards all experiences helps us to manage them rather than push them away. Germer has identified four stages in managing difficult emotions: turning towards, noticing, allowing, tolerating, and finally befriending (Germer, 2009).

### ***The relationship between mindfulness and meditation***

A frequently asked question is “what is the relationship between mindfulness and meditation?” As indicated above, the mental training we call mindfulness involves periods of regular, formal practice, known as meditation. These practices are akin to the regular periods of practice required when training the body. MBSR or MBCT courses typically recommend 20 to 45 minutes of daily formal practice, but as little as 10 minutes a day has been shown to provide benefits (Creswell, 2017; Mrazek et al., 2013; Reitz & Chaskalson, 2016). In addition to these formal, meditation practices, informal mindfulness practices can be used at any time in our waking lives. For example, the “three minute briefing space” is a useful calming, grounding practice, which can be used before, during or after any challenging situation, or simply as a way of savouring our experience or moving consciously from one task to another e.g. from commuting to work, or from work to family. We can brush our teeth mindfully, walk mindfully from the parking lot to the office, or mindfully observe the voices and body language of our colleagues in a meeting. In short, we can be mindful without meditating, although the formal and regular practice of meditation is important for achieving mental training. It is also possible to meditate without being mindful. In contrast to mindfulness meditation which brings awareness to the full range of our experiences and mental contents, some meditation practices try to block out mental activity (e.g. concentrated focus on a candle flame), while others try to empty the mind. So it is possible to be mindful without meditating, and to meditate without being mindful.

### **Evidence for the well-being benefits of mindfulness**

Research and application of mindfulness training have grown exponentially over the past decade. Mindfulness programs have become particularly widespread in clinical settings for both physical and mental health problems, in schools for teachers and

students, and in business organisations where the focus is often on mindful leadership. For instance, Google has been offering a mindfulness course, “Search Inside Yourself”, since 2007 believing that it will enhance personal wellbeing, effectiveness and leadership capacity through better judgment and emotional balance, increased emotional and cognitive resilience and renewed vision to achieve goals and improving creativity and productivity (Tan, 2012). Other applications include its use in sport to enhance performance of both individuals and teams, in relationship building (e.g. couples counselling, mindful parenting), as well as its adoption in high stress environments such as prisons or the military. Indeed, as with many new ideas, mindfulness has become something of a fad, and many people are jumping on the bandwagon as mindfulness teachers, who may be ill-equipped to teach it, lacking adequate training or their own personal practice of mindfulness. Mindfulness is probably at or near the peak of inflated expectations in the ‘hype cycle’, and as always happens, is beginning to come under attack from detractors. The key to the sustainability of mindfulness training is the conduct of high-quality research, together with quality control guidelines or accreditation for mindfulness teachers.

The quality of the research has been improving steadily over recent years, with an increasing number of studies using randomised controlled trial (RCT) methodology, often with an active control group. The vast majority of research has been undertaken either in a clinical or an educational context (e.g. Weare, 2016), and there is a real need for more research on other applications of mindfulness training, particularly in business organisations where this training has become so widely adopted. A recent review of research which focused only on high quality studies has provided some very encouraging results across a variety of outcome measures, including clinical outcomes, cognitive and an effective processes, and interpersonal relationships (Creswell, 2017). The findings can be summarised as follows. There are clear and large benefits for patients with mental health problems, specifically depression, anxiety, and substance abuse. For example, a recent review finds that following MBCT, patients with a history of recurrent depression were 31% less likely to have a relapse over a 60 week period compared to usual treatment, and 21% less likely compared to an active treatment group (anti-depressant medication or psycho-education; Kuyken et al., 2016). An additional benefit mindfulness training over anti-depressant medication is that the former can create or strengthen neural pathways that are conducive to healthy behaviour, whereas medication can only facilitate changes in neural firing but not alter the structure of neural pathways (Rossouw, 2013). Mindfulness training also produces large benefits in relation to physical health problems, including chronic pain and high stress, significantly reducing both the subjective experience of pain and stress, and the physiological responses associated with them (Chiesa & Serretti, 2011; Zeidan et al., 2012).

Mindfulness training has also been shown to increase specific cognitive and affective processes for which theory predicts there should be benefit. For example, there are

improvements on behavioural measures of sustained attention and working memory (Hölzel et al., 2011b; Mrazek et al. 2013), although the evidence does not at present support improvements in other aspects of attention such as set-shifting (Jensen et al., 2012). There is evidence for improved problem-solving following MT (e.g. Ostafin & Kassman, 2012). Numerous studies have shown increases in positive affect and emotion regulation following MT (e.g. Jain et al., 2007; Lindsay & Creswell 2015).

Although MT focuses primarily on intra-personal processes, there is evidence of benefit across a range of interpersonal processes. For example, following participation in a mindfulness training program, daily diary studies show significant improvement in relationship quality (Carson et al., 2004), ability to see things from another person's perspective (Karremans et al., 2016), and the likelihood of undertaking pro-social actions such as giving up a seat in a waiting room to a person on crutches (e.g. Lim et al., 2015).

Neuroscience also supports the conclusion that mindfulness training does indeed have its desired effects. In studies of functional neuroimaging, participants experience short mindfulness-induction procedures (e.g. focusing on the breath) while undergoing magnetic resonance imaging. High levels of activation are seen in specific brain regions and networks which have previously been shown to be involved in the processes of attention control, emotion regulation, and self-awareness (Tang et al., 2015), processes which are hypothesised to change following mindfulness practice. Research has also been undertaken on how long it takes for structural changes in relevant brain regions to be observed. The surprising finding is that by the end of a standard 8-week MBSR course, there are significant increases in the density of grey matter (i.e. strengthened neuronal pathways) in virtually all of the expected regions, including networks associated with cognitive processes (attention, learning, memory), emotion regulation, self-awareness, interoception (bodily awareness), and compassion (Hölzel et al., 2011a).

Overall, the behavioural and neuroscience evidence converges to support the idea that dispositional mindfulness and mindfulness training enhance well-being through the promotion of skills and processes that enable us to live well. These include the basic skills of awareness, attention and self-regulation which help us both to savour positive experiences and manage negative experiences. It has been suggested that there are “downstream effects of mindfulness on other regulatory processes integral to successful adaptation and flourishing in the world”, including meaning making and engagement with life (Garland et al., 2015, p. 385) which are often regarded as integral to living well. Interpersonal relationships, including perspective taking and compassion are also enhanced through mindfulness practice, thereby contributing to the well-being of the wider community.

## **What is compassion and how does it promote living well?**

While mindfulness alone has been shown to produce many well-being benefits, it has long been recognised in Buddhist teaching that true well-being requires both mindfulness and compassion. The crucial role of compassion is captured in the quote: “*If you want others to be happy, practice compassion. If you want to be happy, practice compassion*” (Dalai Lama, 2010).

Modern science supports this view. Humans are fundamentally social beings, and the quality of our relationships has a profound influence on our well-being and the well-being of those around us. Neuroscience research has shown that the social pain we feel if we are ostracised produces activation in the same brain regions as physical pain (Eisenberger & Lieberman, 2004), while feelings of warmth and concern for others produce activation in brain regions associated with affiliation and positive affect, as well as the reward centres of the brain (Singer & Klimecki, 2014).

### ***Self-compassion***

Compassion encompasses caring attitudes and behaviours towards ourselves as well as others. Self-compassion is the ability to treat yourself in the same kind and caring way you would treat a dear friend who is suffering, along with the recognition that suffering and personal inadequacy is part of the shared human experience (Neff, 2003). The most widely used self-compassion program, Mindful Self-Compassion (MSC), recognises that mindfulness is crucial to the ability to give oneself compassion. It is based on the 8-week structure of the standard MBSR program and includes both formal (sitting meditation) and informal (during daily life) self-compassion practices. According to the authors, “the program makes it clear how judging oneself when things go wrong tends to exacerbate emotional pain, while self-compassion helps to alleviate that pain” (Neff & Germer, 2013, p. 31). Other approaches to self-compassion training include the practice of loving kindness towards oneself, which is included in MSC, and Compassion Focussed Therapy (Gilbert, 2014).

### ***Compassion towards others***

Compassion towards others is characterised by feelings of warmth and concern for the other, as well as a strong motivation to help. This contrasts with empathy, which is *sharing* the feelings of another. Empathic responses can be seen in very young children and appear to be hard-wired, having probably evolved to enable us to understand what is going on in someone else’s mind (e.g. de Waal, 2010). Empathy may be a prerequisite for compassion, but sharing someone’s pain can be distressing, so if a person stays in empathy this can lead to withdrawal, avoidance and burnout (Singer & Klimecki, 2014). This report also confirms that there are entirely different patterns of brain activation following empathy training compared to compassion training.

The most widely used program to enhance compassion towards others is probably loving kindness meditation (LKM), which derives from an ancient Buddhist practice that involves good will or well-wishing (Salzburg, 2011). The LKM training usually begins with wishing oneself well, then extending the practice to a loved one, to a neutral person, and finally to someone with whom one has a difficult relationship.

Many people find the practice very challenging, and experience a sense of failure (Galante et al., 2014), possibly because they are unable to *feel* love towards all these people. However, although unconditional love might be seen as the long term goal of this meditation practice, teachers often find it helpful to emphasise that loving kindness is an intention of well-wishing rather than a feeling of love.

It is interesting to consider how this view compares with Greek philosophy. In the following quote Aristotle differentiates between goodwill on the one hand, and friendship and love/affection on the other:

“Goodwill appears to be an element of friendly feeling, but it is not the same thing as friendship; for it can be felt towards strangers, and it can be unknown to its object, whereas friendship cannot ... Neither is goodwill the same as affection. For it has no intensity, nor does it include desire, but these things are necessarily involved in affection” (Aristotle, *Nicomachean Ethics*, 9.5).

## **Evidence for the well-being benefits of compassion**

The practice of self-compassion is integral to mindfulness training, as exemplified by the kindly, gentle attitude taken towards difficult experiences. There is evidence that it is the self-compassion component of mindfulness training that is the strongest predictor of relapse prevention among depressed patients (Kuyken et al., 2010). Benefits for positive well-being have also been shown. A recent systematic review and meta-analysis concluded that self-compassion training produced significant increases in happiness, life satisfaction, optimism and self-efficacy (Zessin et al., 2015). Training does not need to be prolonged. Short self-compassion exercises been shown to increase motivation to change behaviour for the better (Breines & Chen, 2012), and a one week self-compassion program increased happiness for up to six months compared to an active control group (Shapira & Mongrain, 2010).

Turning to compassion towards others, there is evidence that compassionate feelings and helping behaviour increase well-being. A systematic review of the effects of compassion meditations found significant improvements across five psychological outcomes: positive and negative affect, psychological distress, positive thinking, interpersonal relations, and empathic accuracy (Shonin et al., 2015).

There is also evidence that compassion interventions increase pro-social behaviour (Jazaieri et al., 2013; Leiberg et al., 2011), which would have the effect of increasing interpersonal and social well-being. Further, evidence suggests that pro-social behaviour such as giving help to others will further increase the well-being of the helper (Weinstein & Ryan, 2010). In other words, doing good makes us feel good.

There is a rapidly growing interest in introducing compassion programmes in schools. This may be in part a response to misconceived anti-bullying programs which have too often focused on the reduction of harm rather than the promotion of kindness. The new programs tend to combine mindfulness and compassion. For instance, a small randomised controlled trial of a Kindness Curriculum for pre-school children found significant benefits on pro-social behaviour and relationships, as well



as on cognitive flexibility and delayed gratification, a self-regulation capability (Flook et al., 2015). A randomised trial of the Call to Care program in primary schools showed significant decreases in symptoms of stress and anxiety, along with large reductions in stereotyping and prejudice, and an increased willingness to help the 'out-group' (Berger & Tarrach, 2017; Berger et al., 2017). Similar effects in both adults and children have been reported in an earlier generation of studies, which used the term 'empathy training' (e.g. Stephan & Finlay, 1999), although the earlier studies did not differentiate between empathy and compassion.

## **Conclusion: the inter-connectedness of mindfulness, compassion and living well**

Mindfulness and compassion should be viewed as complementary practices. As we have seen, self-compassion is an integral part of mindfulness training, and now an increasing number of mindfulness programs are incorporating explicit training in compassion towards others. This combined approach acknowledges that well-being arises in part from the relationship we have with our ongoing experience, and in part from the way we respond to, and act towards others. One hypothesis is that compassion meditation interventions affect outcomes primarily via positive affect mechanisms, whereas mindfulness interventions affect outcomes primarily through metacognitive awareness and decentering mechanisms (Feldman et al., 2010; Creswell 2017).

In this chapter, I have briefly explored two ancient well-being practices, mindfulness and compassion, I have shown that the skills people learn are so fundamental, and their impacts on daily life so wide-ranging, that these practices could be regarded as foundational for living life well. After all, what could be more foundational mental skills than awareness, attention, and self-regulation? And what could be more foundational to relationships than empathy and acting kindly?

Mindfulness and compassion science are relatively new endeavours, and there is much further work to be done at all levels of potential impact – individual, interpersonal, organisational and societal. Funding for larger, long-term studies should be regarded as a priority, to establish the most effective training methods and the breadth and sustainability of their effects. Nevertheless, the existing evidence of foundational benefits from mindfulness and compassion training suggests that if we genuinely desire to improve individual well-being and reduce social ills such as hatred, intolerance, violence, and greed, we would do well to embrace and extend these programs, while maintaining the quality and integrity of the training.

This paper has emphasised the contribution of psychological processes to how well our lives are going, but of course, external circumstances also play a role. None has received more attention than economic factors, and innumerable national and international studies have shown that measures of wealth, such as income and income inequality, are related to measures of well-being and life satisfaction (Huppert, 2014; Oishi & Kesebir, 2013). It is worth asking what economic policy would look like if it prioritised well-being. Singer (2015) has recently set out a vision of what life could be like if we had a caring economy, based on the principles of mindfulness and compassion. There is a real chance that the widespread adoption

of the foundational skills described in this paper could support this vision, increasing the numbers of happy, fulfilled, socially responsible individuals, and thriving, productive, inclusive organisations and communities.

## References

- Aristotle, *Aristotle in 23 Volumes*, Vol. 19, H. Rackham. Cambridge (trans.), MA, Harvard University Press; London, William Heinemann Ltd. 1934.
- Berger, R., & Tarrach, R. 2017 (under review). *Enhancing resiliency, well being and pro-social behavior among Israeli elementary school children by using a mindfulness and compassion-based program: Call to Care – Israel*.
- Berger, R., Brenick, A., & Tarrach, R. 2017 (under review). *Reducing stereotyping and prejudice among Israeli-Jewish elementary school children via a mindfulness and compassion-based program*.
- Breines, J. G., & Chen, S. (2012). Self-compassion increases self-improvement motivation. *Personality and Social Psychology Bulletin*, 38(9), 1133-1143.
- Brown, K.W. and Ryan, R.M., 2003. The benefits of being present: mindfulness and its role in psychological well-being. *Journal of personality and social psychology*, 84(4), p.822.
- Carson JW, Carson KM, Gil KM, Baucom DH. 2004. Mindfulness-based relationship enhancement. *Behav. Ther.* 35(3):471–94
- Chiesa, A. and Serretti, A., 2011. Mindfulness-based interventions for chronic pain: a systematic review of the evidence. *The Journal of Alternative and Complementary Medicine*, 17(1), pp.83-93.
- Creswell, J. D. (2017). Mindfulness interventions. *Annual Review of Psychology*, 68, 491-516.
- Dalai Lama (2010) <https://twitter.com/dalailama/status/19335233497210880>
- De Waal, F., 2010. *The age of empathy: Nature's lessons for a kinder society*. Broadway Books.
- Dunn and Dwyer (this volume)
- Eisenberger, N.I. and Lieberman, M.D., 2004. Why rejection hurts: a common neural alarm system for physical and social pain. *Trends in cognitive sciences*, 8(7), pp.294-300.
- Feldman, G., Greeson, J., & Senville, J. (2010). Differential effects of mindful breathing, progressive muscle relaxation, and loving-kindness meditation on decentering and negative reactions to repetitive thoughts. *Behaviour research and therapy*, 48(10), 1002-1011.
- Finney, C., Stergiopoulos, E., Hensel, J., Bonato, S., & Dewa, C. S. (2013). Organizational stressors associated with job stress and burnout in correctional officers: a systematic review. *BMC Public Health*, 13(1), 82.

Flook, L., Goldberg, S.B., Pinger, L. and Davidson, R.J., 2015. Promoting prosocial behavior and self-regulatory skills in preschool children through a mindfulness-based kindness curriculum. *Developmental psychology*, 51(1), p.44.

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(6), 1101.

Garland, E. L., Farb, N. A., Goldin, P. R., & Fredrickson, B. L. (2015). The mindfulness-to-meaning theory: extensions, applications, and challenges at the attention–appraisal–emotion interface. *Psychological Inquiry*, 26(4), 377-387.

Germer, C.K., 2009. *The mindful path to self-compassion: Freeing yourself from destructive thoughts and emotions*. Guilford Press.

Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, 53(1), 6-41.

Hölzel, B. K., Carmody, J., Vangel, M., Congleton, C., Yerramsetti, S. M., Gard, T., & Lazar, S. W. (2011a). Mindfulness practice leads to increases in regional brain gray matter density. *Psychiatry Research: Neuroimaging*, 191(1), 36-43.

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011b). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on psychological science*, 6(6), 537-559.

Huppert, F. A. (2014). The state of wellbeing science: concepts, measures, interventions, and policies. *Interventions and policies to enhance well-being*, 6, 1-49.

Jain S, Shapiro SL, Swanick S, Roesch SC, Mills PJ, Schwartz GE (2007). A randomized controlled trial of mindfulness meditation versus relaxation training: effects on distress, positive states of mind, rumination, and distraction. *Ann. Behav. Med.* 33(1):11–21

Jazaieri, H., Jinpa, G.T., McGonigal, K., Rosenberg, E.L., Finkelstein, J., Simon-Thomas, E., Cullen, M., Doty, J.R., Gross, J.J. and Goldin, P.R., 2013. Enhancing compassion: a randomized controlled trial of a compassion cultivation training program. *Journal of Happiness Studies*, 14(4), pp.1113-1126.

Jensen CG, Vangkilde S, Frokjaer V, Hasselbalch SG (2012). Mindfulness training affects attention—or is it attentional effort? *J. Exp. Psychol. Gen.* 141(1):106–23

Karremans JC, Schellekens MPJ, Kappen G. (2016). Bridging the sciences of mindfulness and romantic relationships: a theoretical model and research agenda. *Personal. Soc. Psychol. Rev.* In press. doi: 10.1177/1088868315615450

Kessler, R.C., Berglund, P., Demler, O., Jin, R., Merikangas, K.R. & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Co-morbidity Survey replication. *Archives of General Psychiatry*, 62, 593 – 602.

- Khamisa, N., Peltzer, K., & Oldenburg, B. (2013). Burnout in relation to specific contributing factors and health outcomes among nurses: a systematic review. *International journal of environmental research and public health*, 10(6), 2214-2240.
- Khan, F., Yusoff, R. M., & Khan, A. (2014). Job demands, burnout and resources in teaching a conceptual review. *World Applied Sciences Journal*, 30(1), 20-28.
- Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R. S., Byford, S., ... & Dalgleish, T. (2010). *How does mindfulness-based cognitive therapy work?* *Behaviour research and therapy*, 48(11), 1105-1112.
- Kuyken, W., Warren, F. C., Taylor, R. S., Whalley, B., Crane, C., Bondolfi, G., ... & Segal, Z. (2016). Efficacy of mindfulness-based cognitive therapy in prevention of depressive relapse: an individual patient data meta-analysis from randomized trials. *JAMA psychiatry*, 73(6), 565-574.
- Leiberg, S., Klimecki, O. and Singer, T., 2011. Short-term compassion training increases prosocial behavior in a newly developed prosocial game. *PloS one*, 6(3), p.e17798.
- Lim D, Condon P, DeSteno D. 2015. Mindfulness and compassion: an examination of mechanism and scalability. *PLOS ONE* 10(2):e0118221
- Lindsay, E.K. and Creswell, J.D., 2015. Back to the basics: how attention monitoring and acceptance stimulate positive growth. *Psychological Inquiry*, 26(4), pp.343-348.
- Mrazek, M. D., Franklin, M. S., Phillips, D. T., Baird, B., & Schooler, J. W. (2013). Mindfulness training improves working memory capacity and GRE performance while reducing mind wandering. *Psychological science*, 24(5), 776-781. Chicago.
- Neff, K. D. (2003). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2(2), 85-101.
- 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(1), 28-44.
- Oishi, S., & Kesebir, S. (2015). Income inequality explains why economic growth does not always translate to an increase in happiness. *Psychological science*, 0956797615596713.
- Ostafin B.D., Kassman K.T. (2012). Stepping out of history: Mindfulness improves insight problem solving. *Conscious. Cogn.* 21(2):1031–36
- Plato, *Plato in Twelve Volumes*, Vol. 1 Harold North Fowler (trans.); Introduction by W.R.M. Lamb. Cambridge, MA, Harvard University Press; London, William Heinemann Ltd. 1966.
- Reitz, M. & Chaskalson, M. (2016). How to bring mindfulness to your company's leadership. *Harvard Business Review*. Retrieved from: <https://hbr.org/2016/12/how-to-bring-mindfulness-to-your-companys-leadership>

- Rossouw, P. J. (2013). The end of the medical model? Recent findings in neuroscience regarding antidepressant medication: implications for Neuropsychotherapy. *Neuropsychotherapy in Australia*, (19), 3-10.
- Salzberg, S. (2011). Mindfulness and loving-kindness. *Contemporary Buddhism*, 12(01), 177-182.
- Shapira, L. B., & Mongrain, M. (2010). The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *The Journal of Positive Psychology*, 5(5), 377-389.
- Shonin, E., Van Gordon, W., Compare, A., Zangeneh, M., & Griffiths, M. D. (2015). Buddhist-derived loving-kindness and compassion meditation for the treatment of psychopathology: a systematic review. *Mindfulness*, 6(5), 1161-1180.
- Singer, P. (2015) *How to build a caring economy*. World Economic Forum. <https://www.weforum.org/agenda/2015/01/how-to-build-a-caring-economy/>
- Singer, T., & Klimecki, O. M. (2014). Empathy and compassion. *Current Biology*, 24(18), R875-R878.
- Stephan, W.G. and Finlay, K., (1999). The role of empathy in improving intergroup relations. *Journal of Social issues*, 55(4), pp.729-743.
- Tan, C. M. (2012). *Search inside yourself*. Harper Collins USA.
- Tang, Y. Y., Hölzel, B. K., & Posner, M. I. (2015). The neuroscience of mindfulness meditation. *Nature Reviews Neuroscience*, 16(4), 213-225.
- Weare, K. (2016) Mindfulness in education. In M.A. West (ed) *The Psychology of Meditation: Research and Practice*. Oxford University Press. p259-281.
- Weinstein, N., & Ryan, R. M. (2010). When helping helps: autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of personality and social psychology*, 98(2), 222.
- Zeidan, F., Grant, J.A., Brown, C.A., McHaffie, J.G. and Coghill, R.C., 2012. Mindfulness meditation-related pain relief: evidence for unique brain mechanisms in the regulation of pain. *Neuroscience letters*, 520(2), pp.165-173.
- Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-Being*, 7(3), 340-364.
- Zisook, S., Lesser, I., Stewart, J.W., Wisniewski, S.R., Balasubramani, G.K., Fava, M., Gilmer, W.S., Dresselhaus, T.R., Thase, M.E., Nierenberg, A.A. and Trivedi, M.H., 2007. Effect of age at onset on the course of major depressive disorder. *American Journal of Psychiatry*, 164(10), pp.1539-1546.