Research Article

Soft is Hard: Building Resilience with Loving Kindness Meditation at Work

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Abstract

Stress remains a common factor in modern work life, and resilience building strategies have been shown to support and enhance natural human adaptability in overcoming workplace stress. This study examines the resilience and well-being building efficacy of Loving-Kindness Meditation (LKM). Following initial training with employees of Microsoft Corporation in the United Kingdom, through a seven-week intervention, participants (N = 13) regularly practiced LKM, comparing results with a wait-list control group (N = 15). The study showed significant increases in psychological resilience in the experimental group, along with reduced depression, anxiety and stress; while the control group changes remained insignificant. Overall, the results and prior literature suggest that LKM practice is an effective strategy for building resilience, improving employee adaptability to stress at work and so increasing employee value.

Introduction

In the realm of the workplace, one of the approaches to personal development might be described as 'No pain, no gain' (Spreitzer, 2006). Often with good intention, a stretch assignment or promotion for example, may push an individual out of their comfort zone in the name of personal development and opportunity. As Spreitzer (2006) concedes, sometimes this approach works, with stress theory suggesting that some individuals may respond to elements of an opportunity finding it positively stimulating, generating positive stress or eustress (Lepine, Podsakoff, & Lepine, 2005; Selye, 1976). Though others with similar job skills, may respond with negative stress, or distress. The latter is associated with both sub-optimal performance, over time as chronic stress, negative mental and physical health outcomes including, depression, anxiety, headaches, diabetes, ulcers, and heart disease (Allen, Kennedy, Cryan, Dinan, & Clarke, 2014; Colligan & Higgins, 2006; Mark & Smith, 2008). The ability to cope well under pressure is important to our well-being, and has

been described as a function of resilience which is defined by Luthans (2002) as "The developable capacity to rebound or bounce back from adversity, conflict, and failure or even positive events, progress, and increased responsibility" (p. 702).

Resilience

The field of resilience started out as a study of individuals with special or remarkable trait capabilities, making them invulnerable in the face of stress (Masten, 2001). This changed in the 1970's with research conducted with at risk children, identifying the ordinary, or at least common, adaptation processes of all humans - processes that Masten (2001) summarises as, ordinary magic. From this vantage point, the definition and work on interventions was able to flourish.

Several decades on from the work with at-risk children, research has identified a broad range of factors involved in resilience, including psychological, neurochemical, epigenetic, genetic, and developmental factors (Fletcher & Sarkar, 2013). Even narrowing down to one of these areas, the psychological elements that contribute to resilience are themselves broad ranging, including: positive emotion (Folkman & Moskowitz,

2000; Tugade & Fredrickson, 2004); optimism (Fox, 2013; Smith, Epstein, Ortiz, Christopher, & Tooley, 2013), cognitive reappraisal or cognitive flexibility - approaches that change the way an individual perceives a negative stimulus, including emotional regulation (McRae, Ciesielski, & Gross, 2012; Ochsner & Gross, 2005); and using active techniques to face or deal with a stressor rather than avoiding it (Feder, Nestler, & Charney, 2009).

This range of factors is perhaps part explanation for the large number of instruments contending to measure resilience. For example, Windle, Bennett, & Noyes (2011) reviewed 15 scales, for psychometric rigour. They concluded that there is no 'Gold standard' among the instruments they reviewed, with their top three measures all designed with clinical populations in mind; and the next three in their ranking all designed for general populations. One of those latter three is the Resilience Scale (RS; Wagnild, 2009), used in this study.

Resilience Interventions

Given the range of factors related to resilience, there may be some benefit to interventions that impact multiple factors. Starting then with an offshoot of the original work on the broaden and build theory of positive emotion (Fredrickson, 1998, 2001), that of the undo effect (Fredrickson & Levenson, 1998; Fredrickson, 2013b). In the initial 1998 experiment, the subjective and physiological effects of fear were induced in participants using an 83 second video clip that had been confirmed to elicit a fear response. Then, whilst recording cardiovascular recovery time, one of four video clips were played, having been previously confirmed to induce either contentment, amusement, sadness or a neutral state. The recovery time to baseline differed, with the contentment and amusement videos taking about 20 seconds; the neutral video taking about 40 seconds; and the sadness video, about 60 seconds.

The relationship of the undo effect to resilience initially demonstrated that those higher in psychological resiliency more readily used positive emotion during an anxiety inducing task, and recovered from that anxiety more quickly (Tugade & Fredrickson, 2004). The question then became, can this work the other way around, can positive emotion build resilience?

The build hypothesis does support this claim - suggesting that over time positive emotions build cognitive, psychological, physical, and personal resources, including psychological resilience (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). One way to enhance resilience then, may be to increase enduring positive emotion. The initial work on the undo effect led Fredrickson and her colleagues (2008) to a meditation based intervention. The meditation featured the positive emotions of love and kindness, a practice often called Loving-Kindness Meditation (LKM), or by its original name Metta Bhavana. Previous work had shown that meditative practices can have an enduring effect on personality traits (Davidson et al., 2003), and the Fredrickson et al (2008)

study supported this, along with the theory behind broaden-and-build.

Further exploration of meditation reveals an intervention with a broad range of beneficial psychological effects. According to a recent mindfulness review (Davis & Hayes, 2011), among others these include positive affect, cognitive flexibility, and emotional regulation. In addition, meditative approaches commonly provide mechanisms for facing or approaching, rather than avoiding difficulty (Teasdale & Chaskalson, 2011; Williams & Penman, 2011). That is, the effects of meditative approaches appear to overlap with those that contribute to resilience and overall well-being; and have been used successfully to build those benefits in a number of studies (Aikens et al., 2014; Fredrickson et al., 2008; Pidgeon, Ford, & Klaassen, 2014; Rees, 2011; Sivilli & Pace, 2014; Wolever et al., 2012).

Stress and the Workplace

The psychological construct of workplace stress is a complex one, a contextual specialisation of the broader concept of stress itself. Stress can be summarised as a change in an individual's physical or mental state in response to a particular situation or stressor that poses threat or challenge (Colligan & Higgins, 2006). Though, it is not simply a case of a challenge being objectively described as distressful or eustressful, an interaction between an employee and any demand may lead to stress (Long, 1995). Generally, Lazarus (2000, p. 2) suggest "Stress comes from any situation or circumstance that requires behavioural adjustment. Any change, either good or bad, is stressful, and whether it's a positive or negative change, the physiological response is the same."

The impact of the challenge then is based on the employee's perceived abilities to cope well with it. A negative cognitive appraisal of this ability leading to what Kobel (1995) describes as a "Disturbance to his or her physiological and psychological equilibrium." Infrequent, short lived instances of disturbance are of less concern. As described in the opening paragraph, once stress becomes chronic, the negative health impacts may be serious. But even before those health effects become prevalent, it has been connected with absenteeism, dysfunction, and lower productivity at work (Colligan & Higgins, 2006).

Resilience and the Workplace

The resilient employee is one more likely to productively learn and grow following the conquering of challenges - initially resilience supports being able to recognise a challenge arising with its potential for overwhelm, and setting up the individual ready for proactive measures to take in response (Youssef & Luthans, 2007). Once an individual is on the front foot, able to take proactive measures, their resilience capacity helps them maintain an equilibrium in the face of challenges, and as such those challenges can more readily be used as springboards for development and

growth (Bonanno, 2004; Youssef & Luthans, 2007).

Resilience then changes the approach to challenges, providing preparation where even the 'No pain, no gain' approach may have some value - that is resilience may place a positive value on risks, increasing the opportunity for positive outcomes (Masten, 2001). This value exists uniquely for those resilient employees, able to recognise challenges for their potential negative consequence, and proactively respond and flexibly adapt to their situation. Youssef and Luthans (2007) suggest that this makes resilience a unique proposition, when compared to other positive traits such as hope and optimism. The latter two works well in a planned situation, whereas resilience provides a capacity for dealing with the unexpected, and unplanned. In other words, resilience may be considered a necessity in the ever changing and dynamic world of modern business.

From Mindfulness to Loving-Kindness Meditation

Looking in more detail at meditation practice, it is worth highlighting the popularity of a specific approach, that of mindfulness (Hart, Ivtzan, & Hart, 2013). Black (2014) charts the growth of mindfulness publications with a trickling start in 1980, through to exponential growth starting in the late 1990's. In 2010 for example, there were 353 new publications, and in 2013, there were 549. But mindfulness is just one of an integrated range of practices (Grossman & Van Dam, 2011), others of which are also starting to make their way into western psychology.

One of these is commonly described as loving-kindness meditation. The name comes from the original Pali, Mettā Bhāvanā, where mettā is translated as 'Love', 'Loving-Kindness' (Salzberg, 1995, p. 18); and bhāvanā can be translated as 'Development through mental training,' or as the word we usually use, 'Meditation' (Kabat-Zinn, 1994, p. 81). Kamalashila (2012, p. 20) offers a literal translation, and a useful basic definition, 'The meditation that cultivates a quality of goodwill.'

In defining LKM, it may be useful to see it in comparison to that of mindfulness, both because of the contrast, and because the practices are often combined. Although much has been written about the challenge of agreeing on a mindfulness definition, the most frequently cited definition is: 'Paying attention in a particular way: on purpose, in the present moment, and non-judgmentally' (Kabat-Zinn, 1994, p. 4).

Mindfulness is an important practice in its own right, but used also as the basis for further meditative practices (Chiesa, Calati, & Serretti, 2011; Kamalashila, 2012). The LKM is primarily an active or focused meditation practice, which often starts with a preparation bringing mindful awareness to the body and mind, before moving to active cultivation of love and positive affect through a sequence of usually six stages, focusing on one or more people (Hofmann,

Grossman, & Hinton, 2011; Kamalashila, 2012). At each stage, love and positive affect are cultivated using consideration of one or more statements directed towards the person or persons being held in mind. For example, during the first stage, (1) the focus is on the participant themselves, and they may direct statements such as, 'May I be safe and protected', 'May I feel happy and content', 'May I be healthy and well', and 'May I live with ease', toward themselves. The subject is changed to 'You', 'We' or 'They', during the focus of the subsequent stages, expanding out from self, (2) to a friend, (3) then to a neutral person (one whom the participant is aware of, but does not know - perhaps a person that served them in a shop, or that they passed in the street), (4) a difficult person (such as a person the participant does not get on with, or who has upset them), (5) then to all of the previous people together, and finally (6) to all beings everywhere.

Resilience and Well-Being Benefits of LKM

Although LKM has been practiced for many hundreds of years, there is only a small research literature examining its effects. In examining that literature though, Hofmann et al. (2011) suggest it offers great potential as a complimentary therapy. For example, an 8-week trial conducted for back pain suffers (Carson, 2006; Carson et al., 2005), found the experimental group had reduced overall pain, anger, and psychological distress, including anxiety, as compared with a treatment as usual group. They also found that measures of daily anger were reduced in association with the time spent in meditation the day before, with longer meditation time leading to reduced anger. These physical and psychological well-being improvements continued to hold in a three-month follow-up of those who continued treatment. An earlier study (Carson et al., 2004), also found improvement in psychological well-being, along with relationship satisfaction, through an intervention program for couples.

Pidgeon, Ford, and Klaassen (2014) experimented with LKM in a retreat model. Here, participants attended a residential meditation retreat for 2.5 days, where they practiced LKM, with follow-up booster sessions at one and fourth months. They found no difference between resilience measured in the control and experimental groups immediately after the retreat. But they did find significantly improved resilience in the LKM group at the one month, and further increases at the four-month follow-ups.

This impact over time, was also supported in the Fredrickson et al. (2008) LKM study. They found that an increased dose of LKM (more time spent in meditation) further increased the positive effects, which continued to increase over the seven-week study. In a follow-up 15 months later, 34.7% of participants continued to meditate, and they continued to show higher positive affect (a measure of 9 positive emotions, for example, joy, love, and gratitude) than those who did not continue (Cohn & Fredrickson, 2010).

Meditation, Resilience, Well-Being and the Workplace

Even with the popularity of mindfulness as a research topic, empirical studies that take place in a real-world, organisational context number relatively few (Dane & Brummel, 2013). Two recent examples include, a seven-week mindfulness program run at The Dow Chemical Company, where researchers used a primarily online approach to deliver an adapted version of the Mindfulness Based Stress Reduction (MBSR) program (Aikens et al., 2014). The study showed improved resilience and overall well-being of employees against a wait-list control group, both on completion of the intervention period, and during a six-month follow-up. In the retreat model briefly described above, Pidgeon et al. (2014) were also able to demonstrate enhanced resilience of human service professionals in their work with disadvantaged young people, using a combined mindfulness and LKM program, in one and four-month follow-ups.

Given the small number of mindfulness and resilience studies in the workplace, and the smaller number of studies that examine LKM, it is perhaps surprising that any of the latter exist related to the workplace at all. Fredrickson et al. (2008) appears to be the first, providing empirical support for the building of psychological resources, including benefits in overall well-being. The links with mindfulness meditation and resilience, and the early promise of LKM suggest meditative approaches are a viable option for building resilience and well-being in the workplace. Though the paucity of empirical workplace studies leaves a gap that deserves to be filled.

Aims of this study

The present study aims to contribute to the empirical, real-world evidence for the efficacy or otherwise, of LKM in the workplace. It will test the psychological resource building capability of LKM, in particular that of resilience, using the common seven-week intervention approach, with regular participant practice. The primary hypothesis of the study is that learning and practicing loving-kindness meditation over time, will significantly increase levels of psychological resilience compared with those participants who do not.

Also, as described, resilience provides a capacity and process for overcoming stress, and so its aversive effects, such as anxiety and depressive symptoms. The second hypothesis is that the building of resilience through the experience of loving-kindness meditation will lead to a significant decrease in stress, anxiety and depressive symptoms.

Method

Participants

The participants all worked in the same role discipline, for the global software company Microsoft Corporation, in the United Kingdom (UK). Following agreement and support for carrying out the study from the department head, a 75-minute recruitment presentation was delivered as the last item on the agenda of a group meeting. The presentation described the process of meditation in general and the LKM in particular. The flow of the study, how the data would be collected, and a walk-through of the information sheet and consent form were also presented. The final recruitment stage was to collect signed consent forms from those willing to take part.

A total of 32 participants returned a signed consent form, of which 4 dropped out before the end of the study. Of the final 28 participants, 15 had been allocated to a wait list control group, and 13 were included in the experimental group. Regarding demographics: 19 (67.9%) were female; the mean age was 34.5 (SD=6.5), ranging from 23-50; 27 (96.4%) had graduate degrees or higher; 8 (28.6%) held formal managerial leadership positions, and 10 (35.8%) of the remaining participants were responsible for leading one or more virtual teams (for example, with ongoing responsibility for leading cross-group collaboration to achieve a formally measured target).

The research was approved by the institutional ethical committee, and informed consent was obtained from each participant.

Measures

Two formal questionnaires were administered during the study at pre- and post-time points, one week before the start of the intervention, and one week after the formal end of the intervention. In addition, at the end of each week participants were asked how many times they had meditated during the past week, and for an average of how many minutes.

Resilience was measured using the Resilience Scale (RS; Wagnild, 2009), with 25 items on a 7-point Likert scale (1 - strongly disagree to 7 - strongly agree). The scale has two factors: Personal Competence (PC) measured with 17-items, including independence, invincibility, self-reliance, mastery, perseverance, resourcefulness and determination; and acceptance of self and life (ASL) measured using the remaining 8 items, and representing balance, adaptability and flexibility. Internal consistency measured using Cronbach alpha coefficient (α) for the overall scale across 10 studies ranges from .85 to .94. Content validity, convergent and discriminate construct validity among known groups, are all reported and acceptable.

The shortened, 21-item version of the Depression, Anxiety and Stress Scale (DASS-21; Lovibond & Lovibond, 1995) was administered, answered using a 0-3 severity scale (0 - Did not apply to me at all, to 3 - Applied to me very much, or most of the time). The authors report strong reliability and validity.

Procedure

Training session

All experimental group participants attended one of three initial 90-minute training sessions which started by describing

the principles of mindfulness meditation, including being kind to oneself, non-judgemental, the concept of alert relaxation, mindful attention to the current moment using breathing, and mind wandering. This was followed by a description of LKM.

For the first stage, a specific approach to offering love and compassion towards oneself was explained. This suggests imagining the feelings of unconditional care that a person close to the participant feels for them, and once cultivated, turning it upon themselves. This is a common approach in western teaching of LKM (for example, see: Fredrickson, 2013a; Kabat-Zinn, 2012). There was also a short discussion of making the meditation practice a habit. For example, proactively connecting the practice with other habits, practicing at a regular time, and repeated practice, in order to promote automaticity (Lally & Gardner, 2013). Finally, the instructor took the participants through a guided LKM, closing with the opportunity for reflection, and further questions.

Regular practice

After the training, each experimental participant received an email containing a private web link to the location of a guided LKM recorded by the instructor (a qualified meditation instructor), and an alternative recording, that they could download and use for their practice. This was accompanied by a tips sheet, summarising the training. Emails were then sent before weeks two and three, adding links to the extended guided meditation practices.

The participants were asked to meditate four or more times per week, for between 11 and 20 minutes. The guided meditations were 11 minutes during week one, 15 minutes during week two, and 20 minutes from week three.

All survey questions were administered using an implementation of the LimeSurvey survey software (Schmitz,

2012; version 2.05), and exported as SPSS (IBM Corp., 2011; version 20) data and syntax files. Quantitative statistical analysis was conducted using SPSS, and the Wilcoxon signed-rank test (W) was chosen to compare pre- and post-survey scores. With a small sample size, and low confidence in the normal distribution of the data, this test has the benefit of minimising type 1 error.

Results

Impact on resilience

The overall resilience measure for the control group (W = 50.5, Z = -0.541, p = .589), between pre- and post measures showed no significant change, whereas there was a significant change in the experimental group (W = 70.5, Z = -2.474, p = .013). The same pattern followed through in the two subscales. In the control group neither ASL (W = 16.5, Z = -1.786, p = .074) nor PC (W = 55.0, Z = 0.157, p = .875) showed a significant change. The experimental group results for ASL (W = 70.0, Z = 2.438, p = .015) and PC (W = 80.0, Z = 2.415, p = .016) both showed a significant increase. Thus, the primary hypothesis is fully supported, suggesting the LKM can build resilience.

Impact on Depression, Anxiety and Stress

For the three elements of DASS, the control group showed no significant decrease in depression (W = 10.5, Z = -1.449, p = .147), anxiety (W = 15.0, Z = -1.901, p = .057) and stress (W = 11.0, Z = -1.963, p = .051). All of the elements showed a significant decrease for the experimental group. Specifically, depression (W = 8.5, Z = -2.195, p = .028), anxiety (W = 4.0, Z = -2.758, p = .006); and finally, stress (W = 5.0, Z = -2.680, p = .007). This provides support for the second hypothesis, that LKM can reduce the negative effects of workplace depression, anxiety and stress.

Scale	Group	Mean Pre (SD)	Mean Post (SD)	Mean Diff	W	Z	p
The Resilience Scale	Control	135.33 (15.55)	134.27 (16.57)	-1.06	50.5	-0.541	0.589
	Experimental	127.77 (22.67)	137.23 (19.10)	9.46	70.5	-2.474	0.013*
Acceptance of self and life	Control	40.20 (6.95)	39.00 (6.80)	-1.2	16.5	-1.786	0.074
	Experimental	37.08 (9.42)	41.00 (6.65)	3.92	70	2.438	0.015*
Personal competence	Control	95.13 (9.79)	95.27 (11.56)	0.14	55	0.157	0.875
	Experimental	90.69 (14.19)	96.23 (13.33)	5.54	80	2.415	0.016*
Depression Anxiety and Stress Scale							
Depression	Control	5.73 (4.95)	4.27 (6.58)	-1.46	10.5	-1.449	0.147
	Experimental	7.38 (5.38)	2.92 (3.88)	-4.46	8.5	-2.195	0.028*
Anxiety	Control	5.87 (6.57)	3.20 (4.65)	-2.67	15	-1.901	0.057
	Experimental	6.15 (3.95)	1.69 (1.38)	-4.46	4	-2.758	0.006*
Stress	Control	12.40 (6.06)	9.47 (7.03)	-2.93	11	-1.963	0.05
	Experimental	15.38 (8.01)	7.54 (4.56)	-7.84	5	-2.68	0.007*

W = Wilcoxon signed-rank test score; *p < .05; Control group N=15, Experimental group N=13

Table 1: Results Data Summary.

Discussion

The research literature describes many studies that show the beneficial effects of meditation practice, though only a small portion of that literature is focused on its application in the workplace. This study was intended to combine the implementation of an experimental workplace intervention with the benefits of the LKM.

The study results support the primary and secondary hypotheses suggesting that LKM helps to build resilience and reduce the negative elements of depression, anxiety and stress at work. Although, as a note of caution, Hackman (2009) points out that organisations should not use these strategies as an alternative to improving a work environment that is fundamentally flawed; used appropriately the capability of bolstering natural human adaptability has the potential to improve personal, job, and business outcomes.

With the large amount of time that many individuals spend at work, coupled with continual increases in business complexity and the rate of change, stress at work can have a significant well-being impact on individuals both in and outside of work (Carr, Kelley, Keaton, & Albrecht, 2011; Hoopes, 2012). At work for example, low well-being has been associated with poor job performance, whereas high well-being has been associated with success at work through improved job performance (see meta-analyses: Kaplan, Bradley, Luchman, & Haynes, 2009; Lyubomirsky, King, & Diener, 2005). Thus, workplace resilience and well-being development practices such as LKM have a practical role to play.

Initially, reducing the negative impact of stress, and so, for example, the prevalence of absenteeism and dysfunction (Colligan & Higgins, 2006) might be considered as helping employee's return to or maintain, normal functioning. Then there is the potential of the additive impact of the resilient employee. Now, more able to recognise an arising challenge, and turn it to their, and their employer's advantage with a proactive response, and flexible adaptability (Youssef & Luthans, 2007). Resilience is more than, even separate from recovery (Bonanno, 2004), providing the foundation for employee growth and development.

Considering primarily the financial toll on businesses, one source reports national estimates of the cost of employee stress in various countries, including: UK at $64.8-66.1bn, the United States at $200-300bn, and $232bn in Japan (Nixon, Mazzola, Bauer, Krueger, & Spector, 2011). In the UK, 40% of work related illness recorded is due to stress (HSE, 2013). Also, in a report for the UK National Health Service (NHS), sick leave is said to cost £1.66bn per year (equivalent to 44,700 full-time staff days), with staff absences further contributing to workplace stress for those left to cope with the shortages (National Health Service, 2009). The report suggests that part of the problem is the focus on dealing with sickness, rather than on promoting well-being. Further, that refocusing on preventative well-being measures would ultimately generate more money than it costs, through reduced employee absence, and improved productivity - and so should be considered an income generator rather than a cost.

Although few organisations are the size of the NHS, there does appear to be a substantial personal and business case for focusing on proactive well-being improvement measures at work. Coupled with the early evidence shown for meditative practices in the workplace literature, and the compelling evidence of this study, LKM has been shown to be a suitable candidate for that proactive investment.

Conclusion

A large and growing body of work suggests that mindfulness mediation practice leads to beneficial outcomes. Many meditation practices use mindfulness as a base from which to cultivate particular outcomes, whether full programs such as MBCT intended to reduce relapse into depression, or well-defined compassion practices such as LKM, intended to cultivate kindness or befriending to self and others. In this study, we have described an application of LKM in the workplace, and its positive impact on psychological resilience, and other well-being factors.

Peters and Waterman (1982) differentiated the hard and soft approaches to business, suggesting that a typical approach focused primarily on, for example, the tangible financial bottom line or, the hard numbers. Whereas, the authors suggest, great business benefit may be reaped from focusing on the soft, seemingly less tangible side of business, such as customer experience. This led them to describe how in business, often soft is hard - that a focus on what are perceived as the soft areas actually produced the hard results. With this study, the author suggests that the hard, 'No pain, no gain' approach to building resilience is not the only way. There is a range of approaches, including LKM, which may be successful in building the hard results of psychological resilience and its beneficial workplace outcomes, whilst also supporting overall well-being.

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