

Effets de la méditation de bienveillance : 34 résumés d'articles de recherche (1993-août 2013)

1. Brain Behav Immun. 2013 Aug;32:159-63. doi: 10.1016/j.bbi.2013.04.005. Epub 2013 Apr 19.

Loving-Kindness Meditation practice associated with longer telomeres in women.

Hoge EA, Chen MM, Orr E, Metcalf CA, Fischer LE, Pollack MH, Devivo I, Simon NM.

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Relatively short telomere length may serve as a marker of accelerated aging, and shorter telomeres have been linked to chronic stress. Specific lifestyle behaviors that can mitigate the effects of stress might be associated with longer telomere lengths. Previous research suggests a link between behaviors that focus on the well-being of others, such as volunteering and caregiving, and overall health and longevity. We examined relative telomere length in a group of individuals experienced in Loving-Kindness Meditation (LKM), a practice derived from the Buddhist tradition which utilizes a focus on unselfish kindness and warmth towards all people, and control participants who had done no meditation. Blood was collected by venipuncture, and Genomic DNA was extracted from peripheral blood leukocytes. Quantitative real time PCR was used to measure relative telomere length (RTL) (Cawthon, 2002) in fifteen LKM practitioners and 22 control participants. There were no significant differences in age, gender, race, education, or exposure to trauma, but the control group had a higher mean body mass index (BMI) and lower rates of past depression. The LKM practitioners had longer RTL than controls at the trend level ($p=.083$); among women, the LKM practitioners had significantly longer RTL than controls, ($p=.007$), which remained significant even after controlling for BMI and past depression. Although limited by small sample size, these results offer **the intriguing possibility that LKM practice, especially in women, might alter RTL, a biomarker associated with longevity.**

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PMID: 23602876 [PubMed - in process]

2. J Clin Psychol. 2013 Jun 19. doi: 10.1002/jclp.22017. [Epub ahead of print]

Loving-Kindness in the Treatment of Traumatized Refugees and Minority Groups: A Typology of Mindfulness and the Nodal Network Model of Affect and Affect Regulation.

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This article discusses how loving-kindness can be used to treat traumatized

refugees and minority groups, focusing on examples from our treatment, culturally adapted cognitive-behavioral therapy (CA-CBT). To show how we integrate loving-kindness with other mindfulness interventions and **why loving-kindness should be an effective therapeutic technique**, we present a typology of mindfulness states and the Nodal Network Model (NNM) of Affect and Affect Regulation. We argue that mindfulness techniques such as loving-kindness are therapeutic for refugees and minority populations because of their potential for **increasing emotional flexibility, decreasing rumination, serving as emotional regulation techniques, and forming part of a new adaptive processing mode centered on psychological flexibility**. We present a case to illustrate the clinical use of loving-kindness within the context of CA-CBT.

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PMID: 23784718 [PubMed - as supplied by publisher]

3. J Clin Psychol. 2013 Jun 17. doi: 10.1002/jclp.22021. [Epub ahead of print]

Self-Compassion in Clinical Practice.

Germer CK, Neff KD.

Harvard Medical School/Cambridge Health Alliance.

Self-compassion is conceptualized as containing 3 core components: **self-kindness versus self-judgment**, common humanity versus isolation, and mindfulness versus overidentification, when relating to painful experiences. Research evidence demonstrates that **self-compassion is related to psychological flourishing and reduced psychopathology**. Mindful Self-Compassion (MSC) is an 8-week training program, meeting 2.5 hours each week, designed to help participants cultivate self-compassion. MSC contains a variety of meditations (e.g., loving-kindness, affectionate breathing) as well as informal practices for use in daily life (e.g., soothing touch, self-compassionate letter writing). A detailed clinical case illustrates the journey of a client through the 8 weeks of MSC training, describing the key features of each session and the client's response.

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4. J Clin Psychol. 2013 Jun 17. doi: 10.1002/jclp.22015. [Epub ahead of print]

The Sisters of Mindfulness.

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This article introduces the issue of Journal of Clinical Psychology: In Session entitled "Beyond Meditation: Mindfulness-Related Clinical Practices." In the article, I describe how **the "sisters of mindfulness"-forgiveness, gratitude, loving-kindness, compassion, acceptance, and best-self visualization**-are each interconnected and important forms of mindfulness as well as tenets of Buddhist psychology. Each of these practices reflect mental strengths that are being integrated into the brain's neuroplastic development as a function of modern day

psychotherapy.

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5. Psychol Sci. 2013 May 6. [Epub ahead of print]

How Positive Emotions Build Physical Health: Perceived Positive Social Connections Account for the Upward Spiral Between Positive Emotions and Vagal Tone.

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The mechanisms underlying the association between positive emotions and physical health remain a mystery. We hypothesize that an upward-spiral dynamic continually reinforces the tie between positive emotions and physical health and that this spiral is mediated by people's perceptions of their positive social connections. We tested this overarching hypothesis in a longitudinal field experiment in which participants were randomly assigned to an intervention group that self-generated positive emotions via loving-kindness meditation or to a waiting-list control group. Participants in the intervention group increased in positive emotions relative to those in the control group, an effect moderated by baseline vagal tone, a proxy index of physical health. Increased positive emotions, in turn, produced increases in vagal tone, an effect mediated by increased perceptions of social connections. This experimental evidence identifies one mechanism-perceptions of social connections-through which positive emotions build physical health, indexed as vagal tone. Results suggest that positive emotions, positive social connections, and physical health influence one another in a self-sustaining upward-spiral dynamic.

PMID: 23649562 [PubMed - as supplied by publisher]

6. Aust Psychol. 2013 Apr 1;48(2):94-97.

The Pursuit of Happiness and Its Relationship to the Meta-experience of Emotions and Culture.

Hofmann SG.

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In this commentary, I provide a brief background of the meta-experience of emotions, the philosophical and psychological literature on happiness, and further discuss the influence of culture on happiness. The meta-experience of emotions implies that there are primary and secondary emotions (i.e., emotions about emotions), similar to the concept of meta-cognitions. Primary and secondary emotions are closely associated with one's cultural background and happiness. Most scholars throughout history believe that happiness per se cannot be taught. However, it is possible to teach practices that lead to the path toward happiness. Promising strategies include loving-kindness and compassion meditation. These strategies are based on Buddhist teachings, which are deeply

rooted in a collectivistic culture. This illustrates the close association between emotions, approaches towards happiness, and cultural background.

PMCID: PMC3685423 [Available on 2014/4/1]

PMID: 23794745 [PubMed]

7. Soc Cogn Affect Neurosci. 2013 Jan;8(1):34-9. doi: 10.1093/scan/nss076. Epub 2012 Jul 18.

Increased gray matter volume in the right angular and posterior parahippocampal gyri in loving-kindness meditators.

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Previous voxel-based morphometry (VBM) studies have revealed that meditation is associated with structural brain changes in regions underlying cognitive processes that are required for attention or mindfulness during meditation. This VBM study examined brain changes related to the practice of an emotion-oriented meditation: loving-kindness meditation (LKM). A 3 T magnetic resonance imaging (MRI) scanner captured images of the brain structures of 25 men, 10 of whom had practiced LKM in the Theravada tradition for at least 5 years. Compared with novices, more gray matter volume was detected in the right angular and posterior parahippocampal gyri in LKM experts. The right angular gyrus has not been previously reported to have structural differences associated with meditation, and its specific role in mind and cognitive empathy theory suggests the uniqueness of this finding for LKM practice. These regions are important for affective regulation associated with empathic response, anxiety and mood. At the same time, gray matter volume in the left temporal lobe in the LKM experts appeared to be greater, an observation that has also been reported in previous MRI meditation studies on meditation styles other than LKM. Overall, the findings of our study suggest that experience in LKM may influence brain structures associated with affective regulation.

PMCID: PMC3541494

PMID: 22814662 [PubMed - in process]

8. Psychon Bull Rev. 2012 Jun;19(3):541-5. doi: 10.3758/s13423-012-0241-y.

Loving-kindness brings loving-kindness: the impact of Buddhism on cognitive self-other integration.

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Common wisdom has it that Buddhism enhances compassion and self-other integration. We put this assumption to empirical test by comparing practicing Taiwanese Buddhists with well-matched atheists. Buddhists showed more evidence of self-other integration in the social Simon task, which assesses the degree to which people co-represent the actions of a coactor. This suggests that self-other integration and task co-representation vary as a function of religious practice.

PMID: 22427265 [PubMed - indexed for MEDLINE]

9. Explore (NY). 2012 May-Jun;8(3):177-84. doi: 10.1016/j.explore.2012.02.001.

Time, touch, and compassion: effects on autonomic nervous system and well-being.

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OBJECTIVE: Compassion is critical for complementary and conventional care, but little is known about its direct physiologic effects. This study tested the feasibility of delivering two lengths of time (10 and 20 minutes) and two strategies (tactile and nontactile) for a practitioner to nonverbally communicate compassion to subjects who were blind to the interventions.

METHODS: Healthy volunteers were informed that we were testing the effects of time and touch on the autonomic nervous system. Each subject underwent five sequential study periods in one study session: (1) warm-up; (2) control-with the practitioner while both read neutral material; (3) rest; (4) intervention-with practitioner meditating on loving-kindness toward the subject; and (5) rest. Subjects were randomized to receive one of four interventions: (1) 10 minutes tactile; (2) 20 minutes tactile; (3) 10 minutes nontactile; or (4) 20 minutes nontactile. During all interventions, the practitioner meditated on loving-kindness toward the subject. For tactile interventions, the practitioner touched subjects on arms, legs, and hands; for nontactile interventions, the practitioner pretended to read. Subjects' autonomic activity, including heart rate, was measured continuously. Subjects completed visual analog scales for well-being, including relaxation and peacefulness, at warm-up; postcontrol; immediately postintervention; and after the postintervention rest and were asked about what they and the practitioner had done during each study period.

RESULTS: The 20 subjects' mean age was 24.3 ± 4 years; 16 were women. The practitioner maintained a meditative state during all interventions as reflected in lower respiratory rate, and subjects remained blind to the practitioner's meditative activity. Overall, interventions significantly decreased heart rate ($P < .01$), and although other changes did not reach statistical significance, they were in the expected direction, with generally greater effects for the tactile than nontactile strategies and for 20-minute than 10-minute doses.

CONCLUSIONS: Two strategies are feasible for blinding subjects to nonverbal communication of compassion; even with blinding, nonverbal communication of compassion affects subjects' autonomic nervous system. These results should be replicated in larger samples, including patient populations, and mechanisms sought to explain observed effects. Compassion is not only good care; it may also be good medicine.

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PMID: 22560756 [PubMed - indexed for MEDLINE]

10. J Altern Complement Med. 2012 Apr;18(4):379-81. doi: 10.1089/acm.2011.0817.

The Buddha relics and evidence of physical space conditioning with unimprinted intention host devices.

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OBJECTIVES: The objective of this study was to experimentally determine whether an unimprinted intention host device (IHD), electrically activated in the near presence of the Maitreya Buddhist relics for about 72 hours (3 nights), could be imprinted by its loving kindness essence into the IHD. This will be referred to as a "first-degree relic IHD."

DESIGN: This first-degree relic IHD was placed in an unused, unconditioned room in a Scottsdale, AZ home in the presence of a water vessel (pH ~ 5.6) being continuously monitored via a pH-sensor system that was computer recorded. This particular IHD was electrically switched on. Initially, no intention instructions were given to the system. After about 2200 hours, an intention statement was written to respectfully ask the first-degree relic IHD that the excess thermodynamic free energy aspect of this loving kindness essence be made manifest in this space so that its thermodynamic magnitude could be experimentally measured via the pH-sensor reading.

RESULTS: It was shown that during the first 3 months, only a small increase in water pH was recorded. However, during the postintention period, the pH increased by about +2.5 pH units or ~ 60 meV increase in the thermodynamic free energy of the physical space, a very significant change. The excess thermodynamic free energy suggests that a fundamental change of the gauge symmetry state of the unconditioned room had occurred to a higher state.

CONCLUSIONS: The following were concluded in this study: (1) Imprinting meaningful information onto a simple unimprinted IHD via passive exposure to the Buddha relics is possible. (2) Activating this IHD information to, in turn, imprint itself onto the space of a particular room so that a quantitative thermodynamic measure of its energetic essence can be physically realized is also possible. (3) Crucially, a verbal request from a deep meditative state by four humans appeared to be a necessary condition for this "imbedded loving kindness essence" to manifest itself in this way.

PMID: 22515797 [PubMed - indexed for MEDLINE]

11. PLoS One. 2012;7(8):e40054. doi: 10.1371/journal.pone.0040054. Epub 2012 Aug 15.

Distinct neural activity associated with focused-attention meditation and loving-kindness meditation.

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This study examined the dissociable neural effects of ānāpānasati (focused-attention meditation, FAM) and mettā (loving-kindness meditation, LKM) on BOLD signals during cognitive (continuous performance test, CPT) and affective (emotion-processing task, EPT, in which participants viewed affective pictures) processing. Twenty-two male Chinese expert meditators (11 FAM experts, 11 LKM experts) and 22 male Chinese novice meditators (11 FAM novices, 11 LKM novices) had their brain activity monitored by a 3T MRI scanner while performing the cognitive and affective tasks in both meditation and baseline states. We examined the interaction between state (meditation vs. baseline) and expertise (expert vs. novice) separately during LKM and FAM, using a conjunction approach to reveal common regions sensitive to the expert meditative state. Additionally, exclusive masking techniques revealed distinct interactions between state and group during

LKM and FAM. Specifically, we demonstrated that the practice of FAM was associated with expertise-related behavioral improvements and neural activation differences in attention task performance. However, the effect of state LKM meditation did not carry over to attention task performance. On the other hand, both FAM and LKM practice appeared to affect the neural responses to affective pictures. For viewing sad faces, the regions activated for FAM practitioners were consistent with attention-related processing; whereas responses of LKM experts to sad pictures were more in line with differentiating emotional contagion from compassion/emotional regulation processes. Our findings provide the first report of distinct neural activity associated with forms of meditation during sustained attention and emotion processing.

PMCID: PMC3419705

PMID: 22905090 [PubMed - indexed for MEDLINE]

12. BMC Complement Altern Med. 2011 Dec 20;11:132. doi: 10.1186/1472-6882-11-132.

Non-verbal communication of compassion: measuring psychophysiological effects.

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BACKGROUND: Calm, compassionate clinicians comfort others. To evaluate the direct psychophysiological benefits of non-verbal communication of compassion (NVCC), it is important to minimize the effect of subjects' expectation. This preliminary study was designed to a) test the feasibility of two strategies for maintaining subject blinding to non-verbal communication of compassion (NVCC), and b) determine whether blinded subjects would experience psychophysiological effects from NVCC.

METHODS: Subjects were healthy volunteers who were told the study was evaluating the effect of time and touch on the autonomic nervous system. The practitioner had more than 10 years' experience with loving-kindness meditation (LKM), a form of NVCC. Subjects completed 10-point visual analog scales (VAS) for stress, relaxation, and peacefulness before and after LKM. To assess physiologic effects, practitioners and subjects wore cardiorespiratory monitors to assess respiratory rate (RR), heart rate (HR) and heart rate variability (HRV) throughout the 4 10-minute study periods: Baseline (both practitioner and subjects read neutral material); non-tactile-LKM (subjects read while the practitioner practiced LKM while pretending to read); tactile-LKM (subjects rested while the practitioner practiced LKM while lightly touching the subject on arms, shoulders, hands, feet, and legs); Post-Intervention Rest (subjects rested; the practitioner read). To assess blinding, subjects were asked after the interventions what the practitioner was doing during each period (reading, touch, or something else).

RESULTS: Subjects' mean age was 43.6 years; all were women. Blinding was maintained and the practitioner was able to maintain meditation for both tactile and non-tactile LKM interventions as reflected in significantly reduced RR.

Despite blinding, subjects' VAS scores improved from baseline to post-intervention for stress (5.5 vs. 2.2), relaxation (3.8 vs. 8.8) and peacefulness (3.8 vs. 9.0, $P < 0.05$ for all comparisons). Subjects also had significant reductions in RR ($P < 0.0001$) and improved HRV ($P < 0.05$) with both tactile and non-tactile LKM.

CONCLUSION: It is possible to test the effects of LKM with tactile and non-tactile blinding strategies; even with blinding in this small preliminary

study, subjects reported significant improvements in well-being which were reflected in objective physiologic measures of autonomic activity. Extending compassion is not only good care; it may also be good medicine.
TRIAL REGISTRATION NUMBER: US National ClinicalTrials.gov registration number, NCT01428674.

PMCID: PMC3260157

PMID: 22185349 [PubMed - indexed for MEDLINE]

13. Proc Natl Acad Sci U S A. 2011 Dec 13;108(50):20254-9. doi: 10.1073/pnas.1112029108. Epub 2011 Nov 23.

Meditation experience is associated with differences in default mode network activity and connectivity.

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Many philosophical and contemplative traditions teach that "living in the moment" increases happiness. However, the default mode of humans appears to be that of mind-wandering, which correlates with unhappiness, and with activation in a network of brain areas associated with self-referential processing. We investigated brain activity in experienced meditators and matched meditation-naïve controls as they performed several different meditations (Concentration, Loving-Kindness, Choiceless Awareness). We found that the main nodes of the default-mode network (medial prefrontal and posterior cingulate cortices) were relatively deactivated in experienced meditators across all meditation types. Furthermore, functional connectivity analysis revealed stronger coupling in experienced meditators between the posterior cingulate, dorsal anterior cingulate, and dorsolateral prefrontal cortices (regions previously implicated in self-monitoring and cognitive control), both at baseline and during meditation. Our findings demonstrate differences in the default-mode network that are consistent with decreased mind-wandering. As such, these provide a unique understanding of possible neural mechanisms of meditation.

PMCID: PMC3250176

PMID: 22114193 [PubMed - indexed for MEDLINE]

14. Clin Psychol Rev. 2011 Nov;31(7):1126-32. doi: 10.1016/j.cpr.2011.07.003. Epub 2011 Jul 26.

Loving-kindness and compassion meditation: potential for psychological interventions.

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Mindfulness-based meditation interventions have become increasingly popular in contemporary psychology. Other closely related meditation practices include loving-kindness meditation (LKM) and compassion meditation (CM), exercises oriented toward enhancing unconditional, positive emotional states of kindness

and compassion. This article provides a review of the background, the techniques, and the empirical contemporary literature of LKM and CM. The literature suggests that LKM and CM are associated with an increase in positive affect and a decrease in negative affect. Preliminary findings from neuroendocrine studies indicate that CM may reduce stress-induced subjective distress and immune response. Neuroimaging studies suggest that LKM and CM may enhance activation of brain areas that are involved in emotional processing and empathy. Finally, preliminary intervention studies support application of these strategies in clinical populations. It is concluded that, when combined with empirically supported treatments, such as cognitive-behavioral therapy, LKM and CM may provide potentially useful strategies for targeting a variety of different psychological problems that involve interpersonal processes, such as depression, social anxiety, marital conflict, anger, and coping with the strains of long-term caregiving.

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PMCID: PMC3176989

PMID: 21840289 [PubMed - indexed for MEDLINE]

15. Schizophr Res. 2011 Jul;129(2-3):137-40. doi: 10.1016/j.schres.2011.02.015. Epub 2011 Mar 8.

A pilot study of loving-kindness meditation for the negative symptoms of schizophrenia.

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This pilot study examined loving-kindness meditation (LKM) with 18 participants with schizophrenia-spectrum disorders and significant negative symptoms. Findings indicate that the intervention was feasible and associated with decreased negative symptoms and increased positive emotions and psychological recovery.

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16. Complement Health Pract Rev. 2010 Dec 14;15(3):115-131.

Mind-Body Interventions to Reduce Risk for Health Disparities Related to Stress and Strength Among African American Women: The Potential of Mindfulness-Based Stress Reduction, Loving-Kindness, and the NTU Therapeutic Framework.

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In the current article, the authors examine the potential role of mind-body interventions for preventing or reducing health disparities in a specific group-African American women. The authors first discuss how health disparities affect this group, including empirical evidence regarding the influence of

biopsychosocial processes (e.g., psychological stress and social context) on disparate health outcomes. They also detail how African American women's unique stress experiences as a result of distinct sociohistorical and cultural experiences related to race and gender potentially widen exposure to stressors and influence stress responses and coping behaviors. Using two independent, but related, frameworks (Superwoman Schema [SWS] and the Strong Black Woman Script [SBW-S]), they discuss how, for African American women, stress is affected by "strength" (vis-à-vis resilience, fortitude, and self-sufficiency) and the emergent health-compromising behaviors related to strength (e.g., emotional suppression, extraordinary caregiving, and self-care postponement). The authors then describe the potential utility of three mind-body interventions—mindfulness-based stress reduction (MBSR), loving-kindness meditation (LKM), and NTU psychotherapy—for specifically targeting the stress-, strength-, and contextually related factors that are thought to influence disparate outcomes for African American women. Self-awareness, self-care, inter- and intrapersonal restorative healing and a redefinition of inner strength may manifest through developing a mindfulness practice to decrease stress-related responses; using LKM to cultivate compassion and forgiveness for self and others; and the balance of independence and interdependence as a grounding NTU principle for redefining strength. The authors conclude with a discussion of potential benefits for integrating key aspects of the interventions with recommendations for future research.

PMCID: PMC3071547

PMID: 21479157 [PubMed]

17. Mindfulness (N Y). 2010 Dec;1(4):204-214. Epub 2010 Sep 17.

Dispositional Mindfulness, Meditation, and Conditional Goal Setting.

Crane C, Jandric D, Barnhofer T, Williams JM.

Conditional goal setting (CGS, the tendency to regard high order goals such as happiness, as conditional upon the achievement of lower order goals) is observed in individuals with depression and recent research has suggested a link between levels of dispositional mindfulness and conditional goal setting in depressed patients. Since interventions which aim to increase mindfulness through training in meditation are used with patients suffering from depression it is of interest to examine whether such interventions might alter CGS. Study 1 examined the correlation between changes in dispositional mindfulness and changes in CGS over a 3-4 month period in patients participating in a pilot randomised controlled trial of Mindfulness-Based Cognitive Therapy (MBCT). Results indicated that increases in dispositional mindfulness were significantly associated with decreases in CGS, although this effect could not be attributed specifically to the group who had received training in meditation. Study 2 explored the impact of brief periods of either breathing or loving kindness meditation on CGS in 55 healthy participants. Contrary to expectation, a brief period of meditation increased CGS. Further analyses indicated that this effect was restricted to participants low in goal re-engagement ability who were allocated to loving kindness meditation. Longer term changes in dispositional mindfulness are associated with reductions in CGS in patients with depressed mood. However initial reactions to meditation, and in particular loving kindness meditation, may be counterintuitive and further research is required in order to determine the relationship between initial reactions and longer-term benefits of meditation practice.

PMCID: PMC3002397
PMID: 21258432 [PubMed]

18. Clin Psychol Rev. 2010 Nov;30(7):849-64. doi: 10.1016/j.cpr.2010.03.002. Epub 2010 Mar 12.

Upward spirals of positive emotions counter downward spirals of negativity: insights from the broaden-and-build theory and affective neuroscience on the treatment of emotion dysfunctions and deficits in psychopathology.

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This review integrates Fredrickson's broaden-and-build theory of positive emotions with advances in affective neuroscience regarding plasticity in the neural circuitry of emotions to inform the treatment of emotion deficits within psychopathology. We first present a body of research showing that positive emotions broaden cognition and behavioral repertoires, and in so doing, build durable biopsychosocial resources that support coping and flourishing mental health. Next, by explicating the processes through which momentary experiences of emotions may accrue into self-perpetuating emotional systems, the current review proposes an underlying architecture of state-trait interactions that engenders lasting affective dispositions. This theoretical framework is then used to elucidate the cognitive-emotional mechanisms underpinning three disorders of affect regulation: depression, anxiety, and schizophrenia. In turn, two mind training interventions, mindfulness and loving-kindness meditation, are highlighted as means of generating positive emotions that may counter the negative affective processes implicated in these disorders. We conclude with the proposition that positive emotions may exert a countervailing force on the dysphoric, fearful, or anhedonic states characteristic of psychopathologies typified by emotional dysfunctions.

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PMCID: PMC2908186
PMID: 20363063 [PubMed - indexed for MEDLINE]

19. Behav Res Ther. 2010 Oct;48(10):1002-11. doi: 10.1016/j.brat.2010.06.006. Epub 2010 Jun 23.

Differential effects of mindful breathing, progressive muscle relaxation, and loving-kindness meditation on decentering and negative reactions to repetitive thoughts.

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Decentering has been proposed as a potential mechanism of mindfulness-based interventions but has received limited empirical examination to date in experimental studies comparing mindfulness meditation to active comparison conditions. In the present study, we compared the immediate effects of mindful

breathing (MB) to two alternative stress-management techniques: progressive muscle relaxation (PMR) and loving-kindness meditation (LKM) to test whether decentering is unique to mindfulness meditation or common across approaches. Novice meditators (190 female undergraduates) were randomly assigned to complete one of three 15-min stress-management exercises (MB, PMR, or LKM) presented by audio recording. Immediately after the exercise, participants completed measures of decentering, frequency of repetitive thoughts during the exercise, and degree of negative reaction to thoughts. As predicted, participants in the MB condition reported greater decentering relative to the other two conditions. The association between frequency of repetitive thought and negative reactions to thoughts was relatively weaker in the MB condition than in the PMR and LKM conditions, in which these two variables were strongly and positively correlated. Consistent with the construct of decentering, the relative independence between these two variables in the MB condition suggests that mindful breathing may help to reduce reactivity to repetitive thoughts. Taken together, results help to provide further evidence of decentering as a potential mechanism that distinguishes mindfulness practice from other credible stress-management approaches.

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PMCID: PMC2932656

PMID: 20633873 [PubMed - indexed for MEDLINE]

20. J Posit Psychol. 2010 Sep 1;5(5):355-366.

In search of durable positive psychology interventions: Predictors and consequences of long-term positive behavior change.

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A number of positive psychology interventions have successfully helped people learn skills for improving mood and building personal resources (e.g., psychological resilience and social support). However, little is known about whether intervention activities remain effective in the long term, or whether new resources are maintained after the intervention ends. We address these issues in a 15-month follow-up survey of participants from a loving-kindness meditation intervention. Many participants continued to practice meditation, and they reported more positive emotions (PEs) than those who had stopped meditating or had never meditated. All participants maintained gains in resources made during the initial intervention, whether or not they continued meditating. Continuing meditators did not differ on resources at baseline, but they did show more PE and a more rapid PE response to the intervention. Overall, our results suggest that positive psychology interventions are not just efficacious but of significant value in participants' real lives.

PMCID: PMC3122474

PMID: 21709728 [PubMed]

21. Mindfulness (N Y). 2010 Mar;1(1):21-27. Epub 2010 Mar 18.

State Effects of Two Forms of Meditation on Prefrontal EEG Asymmetry in

Previously Depressed Individuals.

Barnhofer T, Chittka T, Nightingale H, Visser C, Crane C.

We investigated state effects of two forms of meditation on electroencephalography prefrontal α -asymmetry, a global indicator of approach versus withdrawal motivation and related affective state. A clinical series of previously depressed individuals were guided to practice either mindfulness breathing meditation (N = 8) or a form of meditation directly aimed at cultivating positive affect, loving kindness or metta meditation (N = 7). Prefrontal asymmetry was assessed directly before and after the 15-min meditation period. Results showed changes in asymmetry towards stronger relative left prefrontal activation, i.e., stronger approach tendencies, regardless of condition. Further explorations of these findings suggested that responses were moderated by participants' tendencies to engage in ruminative brooding. Individuals high in brooding tended to respond to breathing meditation but not loving kindness meditation, while those low in brooding showed the opposite pattern. Comparisons with an additionally recruited "rest" group provided evidence suggesting that changes seen were not simply attributable to habituation. The results indicate that both forms of meditation practice can have beneficial state effects on prefrontal α -asymmetry and point towards differential indications for offering them in the treatment of previously depressed patients.

PMCID: PMC2987525

PMID: 21125024 [PubMed]

22. J Clin Psychol. 2009 Jun;65(6):561-73. doi: 10.1002/jclp.20543.

I think therefore I am: cognitive distortions and coping style as mediators for the effects of mindfulness meditation on anxiety, positive and negative affect, and hope.

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This study examined cognitive distortions and coping styles as potential mediators for the effects of mindfulness meditation on anxiety, negative affect, positive affect, and hope in college students. Our pre- and postintervention design had four conditions: control, brief meditation focused on attention, brief meditation focused on loving kindness, and longer meditation combining both attentional and loving kindness aspects of mindfulness. Each group met weekly over the course of a semester. Longer combined meditation significantly reduced anxiety and negative affect and increased hope. Changes in cognitive distortions mediated intervention effects for anxiety, negative affect, and hope. Further research is needed to determine differential effects of types of meditation.

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PMID: 19241400 [PubMed - indexed for MEDLINE]

23. J Clin Psychol. 2009 May;65(5):499-509. doi: 10.1002/jclp.20591.

Loving-kindness meditation to enhance recovery from negative symptoms of schizophrenia.

Compilé par le Centre de Pleine Conscience (Fabien Devaugermé)

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In this article, we describe the clinical applicability of loving-kindness meditation (LKM) to individuals suffering from schizophrenia-spectrum disorders with persistent negative symptoms. LKM may have potential for reducing negative symptoms such as anhedonia, avolition, and asociality while enhancing factors consistent with psychological recovery such as hope and purpose in life. Case studies will illustrate how to conduct this group treatment with clients with negative symptoms, the potential benefits to the client, and difficulties that may arise. Although LKM requires further empirical support, it promises to be an important intervention since there are few treatments for clients afflicted with negative symptoms.

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PMID: 19267396 [PubMed - indexed for MEDLINE]

24. J Pers Soc Psychol. 2008 Nov;95(5):1045-62. doi: 10.1037/a0013262.

Open hearts build lives: positive emotions, induced through loving-kindness meditation, build consequential personal resources.

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B. L. Fredrickson's (1998, 2001) broaden-and-build theory of positive emotions asserts that people's daily experiences of positive emotions compound over time to build a variety of consequential personal resources. The authors tested this build hypothesis in a field experiment with working adults (n = 139), half of whom were randomly-assigned to begin a practice of loving-kindness meditation. Results showed that this meditation practice produced increases over time in daily experiences of positive emotions, which, in turn, produced increases in a wide range of personal resources (e.g., increased mindfulness, purpose in life, social support, decreased illness symptoms). In turn, these increments in personal resources predicted increased life satisfaction and reduced depressive symptoms. Discussion centers on how positive emotions are the mechanism of change for the type of mind-training practice studied here and how loving-kindness meditation is an intervention strategy that produces positive emotions in a way that outpaces the hedonic treadmill effect.

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PMCID: PMC3156028

PMID: 18954193 [PubMed - indexed for MEDLINE]

25. Emotion. 2008 Oct;8(5):720-4. doi: 10.1037/a0013237.

Loving-kindness meditation increases social connectedness.

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The need for social connection is a fundamental human motive, and it is increasingly clear that feeling socially connected confers mental and physical health benefits. However, in many cultures, societal changes are leading to growing social distrust and alienation. Can feelings of social connection and positivity toward others be increased? Is it possible to self-generate these feelings? In this study, the authors used a brief loving-kindness meditation exercise to examine whether social connection could be created toward strangers in a controlled laboratory context. Compared with a closely matched control task, even just a few minutes of loving-kindness meditation increased feelings of social connection and positivity toward novel individuals on both explicit and implicit levels. These results suggest that this easily implemented technique may help to increase positive social emotions and decrease social isolation.

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PMID: 18837623 [PubMed - indexed for MEDLINE]

26. J Child Orthop. 2008 Aug;2(4):247-9. doi: 10.1007/s11832-008-0115-z. Epub 2008 Jul 26.

Acts of loving kindness.

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PMCID: PMC2656827

PMID: 19308550 [PubMed]

27. PLoS One. 2008 Mar 26;3(3):e1897. doi: 10.1371/journal.pone.0001897.

Regulation of the neural circuitry of emotion by compassion meditation: effects of meditative expertise.

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Recent brain imaging studies using functional magnetic resonance imaging (fMRI) have implicated insula and anterior cingulate cortices in the empathic response to another's pain. However, virtually nothing is known about the impact of the voluntary generation of compassion on this network. To investigate these questions we assessed brain activity using fMRI while novice and expert meditation practitioners generated a loving-kindness-compassion meditation state. To probe affective reactivity, we presented emotional and neutral sounds during the meditation and comparison periods. Our main hypothesis was that the concern for others cultivated during this form of meditation enhances affective processing, in particular in response to sounds of distress, and that this

response to emotional sounds is modulated by the degree of meditation training. The presentation of the emotional sounds was associated with increased pupil diameter and activation of limbic regions (insula and cingulate cortices) during meditation (versus rest). During meditation, activation in insula was greater during presentation of negative sounds than positive or neutral sounds in expert than it was in novice meditators. The strength of activation in insula was also associated with self-reported intensity of the meditation for both groups. These results support the role of the limbic circuitry in emotion sharing. The comparison between meditation vs. rest states between experts and novices also showed increased activation in amygdala, right temporo-parietal junction (TPJ), and right posterior superior temporal sulcus (pSTS) in response to all sounds, suggesting, greater detection of the emotional sounds, and enhanced mentation in response to emotional human vocalizations for experts than novices during meditation. Together these data indicate that the mental expertise to cultivate positive emotion alters the activation of circuitries previously linked to empathy and theory of mind in response to emotional stimuli.

PMCID: PMC2267490

PMID: 18365029 [PubMed - indexed for MEDLINE]

28. J Holist Nurs. 2006 Mar;24(1):5-6.

Loving-kindness meditation findings not related to baseline differences.

Carson JW.

Comment on

J Holist Nurs. 2005 Sep;23(3):305-9.

J Holist Nurs. 2005 Sep;23(3):287-304.

PMID: 16449738 [PubMed - indexed for MEDLINE]

29. Nurs Ethics. 2005 Nov;12(6):582-94.

Moral competence in nursing practice.

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This article presents the derivation of moral competence in nursing practice by identifying its attributes founded on Thai culture. In this process moral competence is formed and based on the Thai nursing value system, including personal, social and professional values. It is then defined and its three dimensions (moral perception, judgment and behavior) are also identified. Additionally, eight attributes as indicators of moral competence are identified and selected from three basic values. The eight attributes are loving kindness, compassion, sympathetic joy, equanimity, responsibility, discipline, honesty, and respect for human values, dignity and rights. All attributes are discussed by addressing the three moral dimensions in order to present how to deal with ethical issues in nursing practice. As a summary, a model of moral competence is presented to demonstrate moral competence in nursing practice in Thailand.

PMID: 16312087 [PubMed - indexed for MEDLINE]

30. J Holist Nurs. 2005 Sep;23(3):305-9.

Commentary on "Loving-kindness meditation for chronic low back pain".

Bowman K.

The University of Texas at Austin, USA.

Comment in

J Holist Nurs. 2006 Mar;24(1):5-6.

Comment on

J Holist Nurs. 2005 Sep;23(3):287-304.

PMID: 16049119 [PubMed - indexed for MEDLINE]

31. J Holist Nurs. 2005 Sep;23(3):287-304.

Loving-kindness meditation for chronic low back pain: results from a pilot trial.

Carson JW, Keefe FJ, Lynch TR, Carson KM, Goli V, Fras AM, Thorp SR.

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Comment in

J Holist Nurs. 2006 Mar;24(1):5-6.

J Holist Nurs. 2005 Sep;23(3):305-9.

PURPOSE: Loving-kindness meditation has been used for centuries in the Buddhist tradition to develop love and transform anger into compassion. This pilot study tested an 8-week loving-kindness program for chronic low back pain patients.
METHOD: Patients (N = 43) were randomly assigned to the intervention or standard care. Standardized measures assessed patients' pain, anger, and psychological distress.

FINDINGS: Post and follow-up analyses showed significant improvements in pain and psychological distress in the loving-kindness group, but no changes in the usual care group. Multilevel analyses of daily data showed that more loving-kindness practice on a given day was related to lower pain that day and lower anger the next day.

CONCLUSIONS: Preliminary results suggest that the loving-kindness program can be beneficial in reducing pain, anger, and psychological distress in patients with persistent low back pain.

IMPLICATIONS: Clinicians may find loving-kindness meditation helpful in the treatment of patients with persistent pain.

PMID: 16049118 [PubMed - indexed for MEDLINE]

32. Prax Kinderpsychol Kinderpsychiatr. 1999 Oct;48(8):602-10.

[Brief report of the working group OPD-CA (children and adolescents) Axis II: interpersonal relations].

[Article in German]

Bürgin D, Bogyi G, Karle M, Simoni H, von Klitzing K, Weber M, Zeller-Steinbrich G, Zimmermann R.

Kinder- und Jugendpsychiatrische Universitätsklinik und -Poliklinik, Basel.

Operationalization of relations is tried out following an interpersonal circular model (SASB) using observation and description of behavior in dyadic and triadic relationship configurations. On a vertical and on a horizontal axis the amount of loving kindness versus hostile aggressivity and of independence versus control is determined. Different dyadic and triadic relationship configurations (e.g. child to mother or researcher to child) and also the emotional resonance of the investigating person will be rated according to anamnestic data, observed and videotaped sequences of interaction, play episodes or symbolic relationships in projective tests. Such ratings can be performed in a module like form and will be used not only in clinical practice but also in settings of scientific research. The minimal standard for a clinical examination consists of the evaluation of the child with his parents.

PMID: 10582446 [PubMed - indexed for MEDLINE]

33. Hum Health Care Int. 1996 Apr;12(2):E12..

Loving kindness: the essential Buddhist contribution to primary care.

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Loving kindness (metta), a traditional Buddhist concept, implies acting with compassion toward all sentient beings, with an awareness and appreciation of the natural world. The giving of metta, an integral part of Buddhist medicine, has the potential to enhance modern primary health care. Metta must be given with selflessness (saydana), compassion (karuna), and sympathetic joy (mudita). For the believer, Gautama Siddhartha, the Buddha, is the Supreme Healer. His ancient but timeless message of metta is alive and well today, The Dalai Lama being its key proponent. The Buddhist system features several techniques, such as the Noble Eight-Fold-Path and the metta meditations, to keep physicians moving toward metta. One does not have to be a Buddhist to practice metta, or more humane medicine, and the notion of "tender loving care" is spreading in biomedical circles.

PMID: 14986605 [PubMed - indexed for MEDLINE]

34. Psychother Psychosom Med Psychol. 1993 Jul;43(7):254-61.

[Eros therapeutikós. Love and ethics in psychotherapy].

[Article in German]

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Love in the deepest and highest level, as conceived by Platon in his symposium,

Compilé par le Centre de Pleine Conscience (Fabien Devaugermé)

is considered in the context of occidental philosophy's "feelings of sympathy" (Max Scheler), empathy and the mystic feeling of cosmic oneness. The buddhistic concepts of loving kindness (metta) reaches its highest level in the Bodhisattva of Mahayana. Love is an essential element of the development of knowledge. Love and knowledge increase the awareness of a universal responsibility. Therapeutic love is an essential medium of any humane therapy and can be cultivated in the mental personal development of the therapist.

PMID: 8337354 [PubMed - indexed for MEDLINE]