

## CS 247B: Design for Behavior Change Team 15: Mindful Movements

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# Literature Review

*Rui Ying*

## Mindfulness-Based Interventions for Chronic Pain: A Systematic Review of the Evidence

<https://doi.org/10.1089/acm.2009.0546>

**Keywords:** mindfulness-based stress reduction, chronic pain

**Description:** In the paper, the researchers conducted studies on mindfulness-based stress reduction (MBSR) and closely derived interventions (mindfulness-based interventions or MBIs) and found that MBIs could have nonspecific effects for the reduction of pain symptoms and the improvement of depressive symptoms in patients with chronic pain, while there is only limited evidence suggesting specific effects of such interventions.

## “Give me a break!” A systematic review and meta-analysis on the efficacy of micro-breaks for increasing well-being and performance

<https://doi.org/10.1371/journal.pone.0272460>

**Keywords:** micro-breaks, well-being

**Description:** The researchers searched the existent literature on the topic of efficacy of micro-breaks in enhancing well-being (vigor and fatigue) and performance, and aggregated the existing data from experimental and quasi-experimental studies. The overall data supports the role of micro-breaks for well-being improvement, whereas for performance, recovering from highly depleting tasks may need more than 10-minute breaks.

*Amantina Rossi*

## Momentary negative affect is lower during mindful movement than while sitting: An experience sampling study

<https://www-sciencedirect-com.stanford.idm.oclc.org/science/article/pii/S1469029217308178>

**Keywords:** mental health, college students, mindful movements

**Description:** College students' daily postures and movements are associated with negative mental health such as stress, anxiety, and depression. The researchers found that when college students move mindfully compared to sitting, such negative mental health issues are decreased. This implies that implementing mindfulness practices into college student's everyday lives may lower negative mental health issues.

## Mental and physical health and well-being of Canadian employees who were working from home during the COVID-19 pandemic

[https://searchworks.stanford.edu/articles/edsdoj\\_edsdoj.7a0df63d8629461aab467849486ee837](https://searchworks.stanford.edu/articles/edsdoj_edsdoj.7a0df63d8629461aab467849486ee837)

**Keywords:** work from home, mental and physical health

**Description:** In this study of Canadian employers during the fall and winter of 2020 and the spring and summer of 2021, researchers studied the mental and physical health and well-being of those working from home during the pandemic. The researchers found that in comparing the two time periods, burnout, stress, and negative mental health decreased. However, the average proportion of time sitting during work hours was more than 80% in both periods.

*Uma Phatak*

## "Awareness is the first step": An interprofessional course on mindfulness & mindful-movement for healthcare professionals and students

<https://www.sciencedirect.com/science/article/pii/S1744388116300603>

**Keywords:** stress, anxiety, burnout reduced, mindfulness

**Description:** The researchers conducted an intervention study on healthcare professionals (HCPs), who are known to undergo extreme levels of stress, anxiety, and burnout due to their

profession. In order to counter these mental health effects, the researchers had a test group of HCPs take an 8-week mindfulness course with 2 hour sessions each week. These sessions involved movement and meditation – participants were told to bring yoga mats to each session. At the end, they found that incorporating mindfulness significantly reduced stress, anxiety, and burnout. (Side note: I remember reading this paper in a mindfulness class I took at Stanford that emphasized movement, but I did not connect the dots until now!)

## Mindful movement and skilled attention

<https://www.frontiersin.org/articles/10.3389/fnhum.2015.00297/full>

**Keywords:** movement, focus

**Description:** This paper is more of a literature review on existing papers: it proposes the role of a “mindful movement practice” in treating attention deficit disorders like ADHD. To make their point, the researchers cite concepts including the “mind-body connection”, and the parallel in the ways that both attention and limbs can move and be directed. In this way, they posit a link between learning to move mindfully, and learning to pay attention mindfully. While they have not tested this out with a study, they draw upon varied sources to make their argument.

*Melody Fuentes*

The Mindful Elite: Mobilizing from the Inside Out (How mindful movements were used by those in considered “elite” groups to push mindfulness as a tool for health, happiness, and social reform)

<https://academic.oup.com/book/27354>

**Keywords:** mindful movements, benefits, health, reform

**Description:** Kucinkas explores the concept of mindfulness and its role in personal and societal change. The book argues that mindfulness practices can be used as a tool for mobilization and change, both at the individual and collective level. The author delves into the benefits of mindfulness, how it can be applied, and the potential impact it can have on individuals and society. It also explores how those deemed “the elite”, members of society of wealth, power, and influence, use mindfulness not only as a tool for themselves, but also how they profit off of appropriating and marketing practices to the masses through self-help books, pay-walled apps, and retreats.

## Acute effects of mindful interval exercise on cognitive performance in a higher education setting

<https://www-sciencedirect-com.stanford.idm.oclc.org/science/article/pii/S1469029222001947>

**Keywords:** attention, cognitive performance, interval movement

**Description:** This research aims to test how intervals of mindfulness result in cognitive abilities in college. This could involve intentional movements, such as stretching or exercise. The results found that this intentional mindful interval induced superior attention performance compared to a typical sedentary classroom experience in a higher education setting.

Highlights include:

- Classroom-based intense interval exercise (IE) has acute benefits to attention.
- Delivering mindful recovery during IE leads to less comprehensive attentional gains.
- Attentional gains from mindful IE depends on trait mindfulness.

*Nadia Wan Rosli*

## A qualitative study of older adults' perspectives on initiating exercise and mindfulness practice

<https://link.springer.com/article/10.1186/s12877-019-1375-9>

**Keywords:** exercise, mindfulness, mindfulness-based stress reduction, older adults, qualitative study

**Description:** This paper shows that older adults need more intervention to make healthy behavioral changes. And that mindfulness training and exercise improve the health and quality of life of older adults. The paper also notes that without intervention from this study and the incentives from it, the older adults generally say they would not have initiated healthy lifestyle changes for the sake of their own health. Despite the benefits from mindfulness, barriers like time management and motivation attribute to this lack of initiative.

## A Neurophysiological and Neuropsychological Consideration of Mindful Movement: Clinical and Research Implications

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4443777/>

**Keywords:** attention, default mode network, locus coeruleus/adrenaline, mindful movement, mindfulness, psychosis, tai chi, working memory

**Description:** This paper explores the additive benefits of combining mindfulness plus movement and how doing that together as a new method of mindfulness training positively affects underlying neural systems (mental and motor/physical). One way it does that is by examining how mindful movement can benefit people suffering from different kinds of disorders or disabilities, such as ADHD, Tourette, psychosis, schizophrenia, etc. Another way it does this is by examining its effects on attention and mind wandering. The paper proposes that mindful movement is an effective intervention that should be considered more often in research and clinical work.