

What is Mindfulness? Theory and Practice

J Malone for Mind SIG Teleconference March 14 2018

Mindfulness: An Introduction

'All we really have in life is this moment. I mean this moment. Actually this moment. I mean this moment. This one. Moment. Moment.... Moment....

What is Mindfulness?

'Paying attention, on purpose, in the present moment, and non judgmentally'. (1)

'Mindfulness' is being in the moment, in the present, in an accepting way. Mindfulness training is training your brain to pay attention to the present moment in a non judgmental way. Human brain is a highly complex information processing machine. Left untrained, brain tends to steer itself away from the present moment, and in a judgmental way. Eastern traditions refer to the mind and its ability to jump out of the present as the 'Monkey mind'. Writer Elizabeth Gilbert: 'Mind is like a new puppy. Give it something constructive to play with, or it will quickly get destructive and play ruin the whole house.' Shakespeare Hamlet 'Nothing is either good or bad but thinking makes it so'. And Mark Twain 'I have lived through some terrible things in my life, some of which actually happened.

What Mindfulness and Mindfulness training isn't?

- It is not relaxation. For many people, there is nothing relaxing about it. Might feel relaxed afterwards, like you do after exercise, but it is effectively brain training. It's practicing paying attention to the present moment and bringing your thoughts back to that moment over and over again.
- It is not religion.
- It is not emptying the mind, or stopping thoughts. It's becoming aware of them and using the senses to bring yourself back to the present moment.

What other terms are sometimes used synonymously with 'Mindfulness' in medical literature?

- Meditation
- Mindfulness Based Stress Reduction – MBRS*
- Mind Body Awareness
- Progressive Muscle Relaxation
- Body Scan
- Creative Visualisation

What's the point of Mindfulness?

- Improves anxiety, sleep, mood disturbance
- Improves attention and concentration
- Improves relationships through improved empathy, compassion
- Reduces stress – we know from neuroplasticity harder to change stressed brains than non stressed brains.
- Enhances 'Observer self' – In elite sport, the mind often gives out before the body does and often true in rehabilitation. Mindfulness practice gives people the tool to watch their mind/thoughts and effectively creating space for the brain to choose a response, rather than being caught in a reaction.
- Changes the brain – Study in healthy participants demonstrated neuroplastic change in the brains of healthy participants following an eight week MBSR course, including an increase in size of the hippocampus, temporo-parietal junction, posterior cingulate, pons and reduction in size of amygdala (2), areas of the brain important in the regulation of anxiety, stress, concentration and memory.

Mindfulness Exercise 1

Most quoted expert in Mindfulness and the founder of MBRS, John Kabat-Zinn, sets out 7 attitudinal foundations of Mindfulness (1). These attitudes, attitudes to the present moment, are:

1. Non Judging
2. Patience
3. Beginners Mind
4. Trust
5. Non-Striving
6. Acceptance
7. Letting be

The goal of Mindfulness training is that slowly what you learn in Mindfulness practice sessions will merge into how you use your brain outside practice.

I like to think of it like someone who has poor posture. Might be causing them pain, disability, reduced endurance. Might be a problem now, or might be something that you can see will be really be a problem if left uncorrected into the future. Physiotherapy and exercises slowly creates postural change, and gradually the postural change made in regular exercise sessions become something that happens automatically outside the gym.

Practice Session Example

Review

Review the Attitudinal Foundation List:

1. Non Judging – hating it, disapproving, thinking easy, bored. Any judgment is not the practice. When you notice thoughts, bring your thinking back to present moment.
2. Patience – it is hard. Brain for some has been working in totally opposite way entire life.
3. Beginners Mind – Curiosity. Seeing things as if for first time.
4. Trust – Trust in validity of your own experience. Not comparing.
5. Non-Striving – willingness in present moment without trying to fix things
6. Acceptance – welcoming of the experience whatever it is in the present moment.
7. Letting be – moving away from human tendency of wanting to hold the pleasant and get rid of the unpleasant.

Like all sorts of training, gets easier with practice.

We know neurons that fire together wire together. But just like training muscles, sometimes other factors can impact training - stress, sleep, nutrition, substances, lack of exercise.

What is the evidence for it in Clinical Rehabilitation Spectra?

Pain - Effective (3)

Brain Injury – A pilot study examining the effect of a modified MBSR program on symptoms of chronic mild traumatic brain injury/concussive syndrome found improved self-efficacy and quality of life in individuals with brain injury.(4) A mixed methods longitudinal study is currently underway studying the impact of mindfulness in persons with mild cognitive impairment. This research aims to quantitatively investigate whether mindfulness can improve the cognitive function, psychological health, mindfulness and functional abilities in activities of daily living of the participants over time. (5) More research needed. (6)

Neurological illness – PD - Small studies show effective but larger systematic review inconclusive (7) (8). MS similar.

Cancer – Improves sleep, mood, stress. Small study of MBSR and breast/prostate cancer patients showed improvements in cortisol and immune patterns consistent with less stress and mood disturbance, and decreased blood pressure (9) (10)

Mental health studies:

PTSD

Stress
Sleep
Anxiety
Depression

Variety of population groups:
Self-Resilience
Self-Compassion
QOL
Attention
Concentration
Cognition
Memory

If Mindfulness is so good then why is there so few positive systematic reviews?

- Inconsistencies with terminology, technique and delivery - MBSR

Are there any contraindications?

- Acute severe psychiatric illness.
- Moderate cognitive impairment

How can you introduce it to your patients?

1. Trial Practice Session:

Sit in chair. Place one hand on abdomen, one hand over the heart. Notice breath. Regular breathing, either nostril or mouth. Feeling of breath on nostrils, mouth, movement of breath into the chest, feeling any movement in abdomen. Noticing flow of breath back out through mouth or nostrils. Now take some deep breaths. See if you can keep your brain focused on your breathing. Take deep breath over three seconds. Breathing in. Noticing the inhale, sensation of the breath at nostrils/ mouth, breath moving into the chest, noticing any movement, sensations at the ribs, abdomen. Notice moment at the end of inhale. The pause. Now we exhale over three seconds. And notice the movement in abdomen, the chest, noticing flow of air out nostrils and mouth, noticing final flow of air out of the body. Pause. Take three breaths in your own time, seeing if you can increase time on inhale and exhale each time, not forcing, just noticing and paying attention to what feels comfortable. Inhale. Noticing the sensations and movement of breath in the body. Noticing the pause. Noticing the sensations and movement of the breath on the exhale. If the thoughts are wandering off, totally normal and is in fact part of the curriculum. Gently and with self compassion, direct the brain to bring its attention back to the breath. Noticing the sensations again as if for the first time. All take one more inhale together, noticing the air on the skin, the nostrils/mouth, flowing into the chest, the movement of the abdomen, noticing the pause, the exhale, the abdomen, the chest, the flow of air from the body on the

skin. The pause.

2. Online Resources:

- Smiling Mind – website and app

3. What can you tell patients to motivate them?

- Reassure them it's like any sort of training.
- We know that much of rehabilitation involves neuroplasticity. Stressed brains don't change, relaxed brains do change.
- Study of the week: A 5 day course of Mindfulness Training of just 30 minutes per day showed improved cerebral blood flow in the left anterior cingulate cortex and insula, brain areas critical for self regulation. (11)

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MBSR*

MBSR is a standardized and licensed meditation program developed by Jon Kabat-Zinn.⁷ The program includes a weekly 200 min group session, daily meditation training from 20-40 min and one 4 h retreat within the study period over eight weeks. Adopted from Buddhism for western societies by Jon Kabat-Zinn, it is described as "a group program that focuses upon the progressive acquisition of mindful awareness, of mindfulness". It is taught by certified trainers and entails weekly group meetings, homework, and instruction in three formal techniques: sitting mindfulness meditation, body scanning and simple yoga postures. Sitting meditation includes concentration on the breathing while not adhering to the flow of thoughts or emotions as well as the development of empathy and loving kindness for all persons. Body scanning is the first prolonged formal mindfulness technique taught during the first four weeks of the workshop, and entails quietly lying on one's back and focusing one's attention on various regions of the body, starting with the toes and moving up slowly to the top of the head

Kabat-Zinn, J. *From Full Catastrophe Living* Delta Publishing New York 1990