

The Foundations of Well-being: Evidence from Behavioural Science and Neuroscience

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Mindfulness practice

Practising mindfulness can create a peaceful space in our busy lives.

- Allows us to pause and reflect on our thoughts, feelings, bodily sensations, and surrounding environment, rather than reacting to them in a habitual manner.
- Enables us to make wiser choices about how to respond.



Mindfulness as mental training

Training covers some very basic skills

Awareness

ATTENTION

Non-reactivity

Emotion regulation

Choice and Freedom

“Between stimulus and response is our greatest power - the freedom to choose.”

Covey, 1989, based on the experiences of Austrian psychiatrist Viktor Frankl who decided for himself how his experience was going to affect him, even in a Nazi concentration camp.

Mindfulness has two components

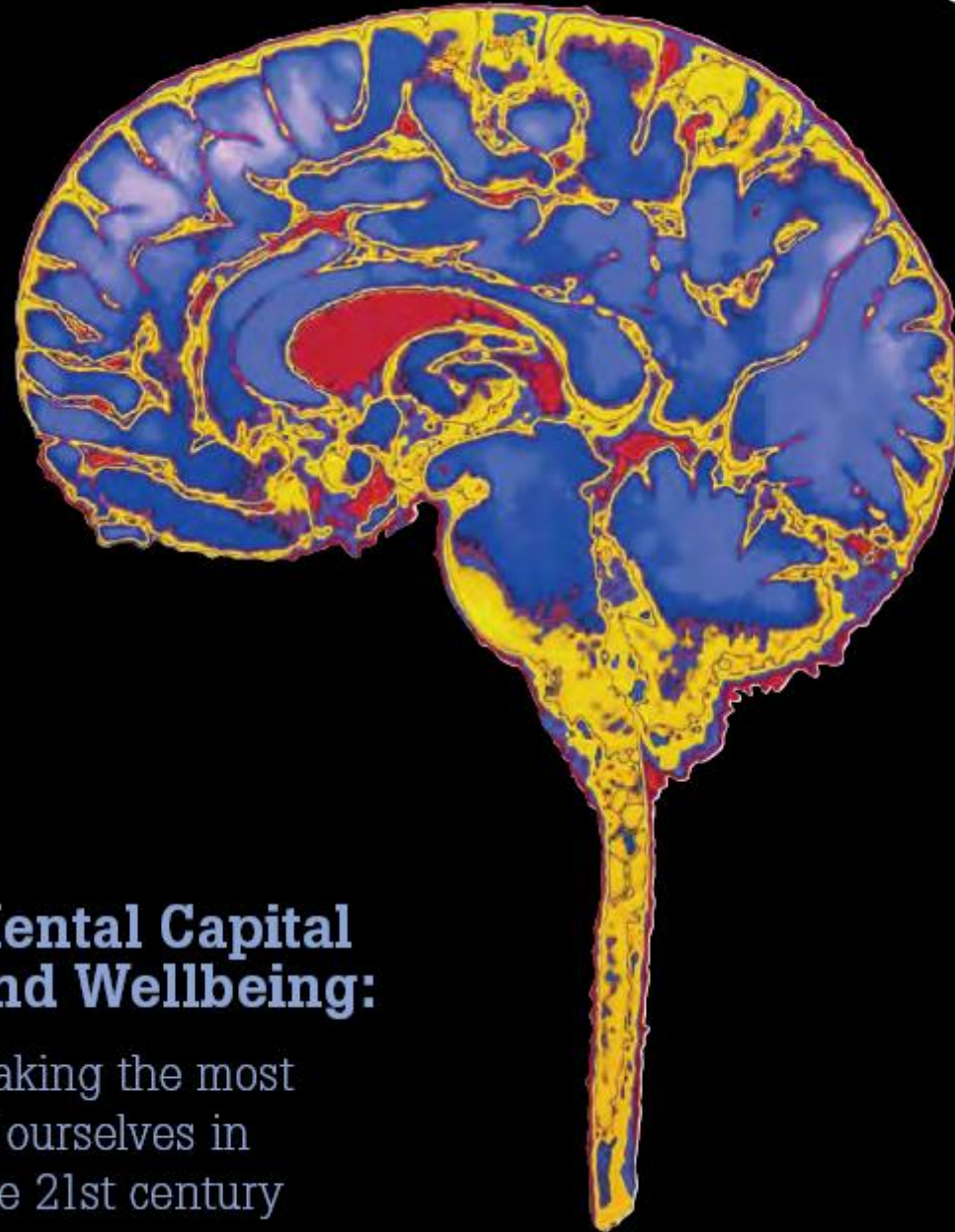
What to do

Pay attention
Notice
Observe
Be aware

How to do it

With friendly curiosity,
Openness, acceptance
Non-judgement
Kindness

The science of mindfulness



Mental Capital and Wellbeing:

Making the most
of ourselves in
the 21st century

Five ways to well-being

UK Government Office for Science

Five ways
to wellbeing

Connect

With family, friends,
community

Five ways
to wellbeing

Be active

Exercise, dance, play

Five ways
to wellbeing

Take notice

Be curious, be aware of
your experience

Five ways
to wellbeing

Give

Your time, your
presence, your
appreciation

Keep learning

Try something new,
set new challenges

Benefits of Mindfulness Training

Review of high quality research – Creswell, Annual Reviews of Psychology, 2017

Mental and physical health

- depression, anxiety
- substance abuse
- chronic pain
- stress response

Cognitive and affective processes

- sustained attention, working memory
- problem solving
- positive mood
- emotion regulation

Interpersonal outcomes

- relationship quality
- perspective taking
- pro-social behaviour

“Mindfulness works but only if you work at it.”

Reitz & Chaskalson, 4 November 2016

57 senior business leaders randomised to MBSR or control group

Mindfulness training produced significant improvements in:

- resilience
- the capacity for collaboration
- ability to lead in complex conditions – focus, calm, adaptability
- empathy – perspective taking, less personal distress

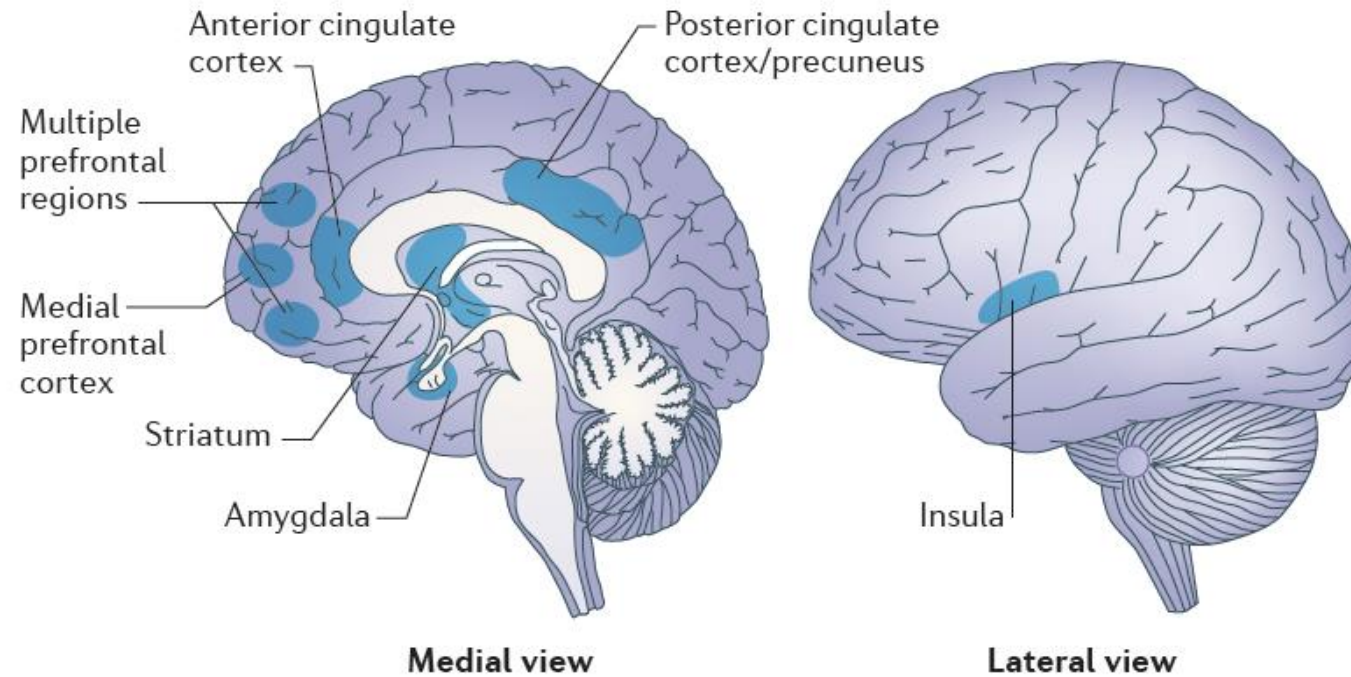
The impact lasted beyond the training period.

Improvements occurred when practice was at least 10 min a day.

Physiological benefits of mindfulness

- Immune function
- Inflammation
- Stress hormones
- Parasympathetic nervous system
- Telomere length

Brain regions that show the greatest activity during mindfulness practice



attention control

emotion regulation

self-awareness

Structural brain changes after mindfulness training



A standard 8 week MBSR course lead to increased grey matter density in brain regions associated with:

- **attention, learning and memory**
- **emotion regulation**
- **self-awareness**
- **bodily awareness**
- **compassion**

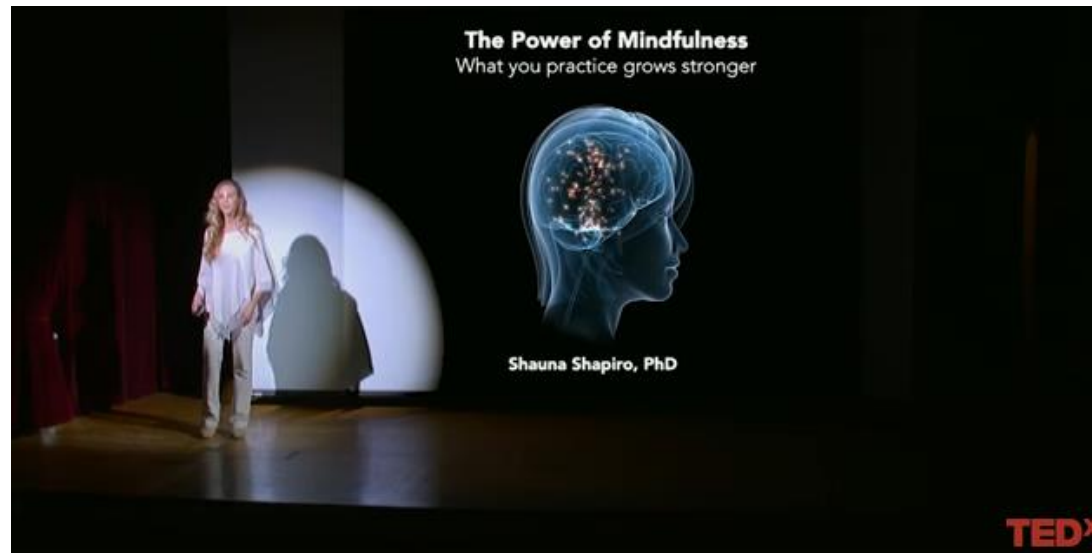
What we nurture will grow

TED Talk

What you practice grows stronger

Professor Shauna Shapiro – Neuroscientist

<https://www.youtube.com/watch?v=leblJdB2-Vo>



What role does compassion play in well-being?

The role of self-compassion

Effects of self-compassion training or brief induction

- Prevents depression relapse

Kuyken et al., Behaviour Research & Therapy, 2010

- Increased happiness

Shapiro & Mongrain, Journal of Positive Psychology, 2010

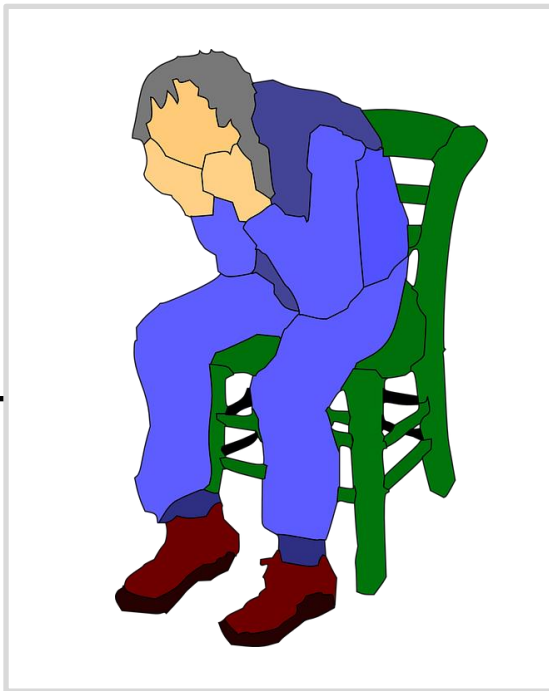
- Increased motivation to change for the better

Breins & Chen, Personality and Social Psychology Bulletin, 2012

Compassion towards others

Stages of compassionate responding

- Noticing
- Feeling
- Acting



Empathic concern

Other-focused feeling (empathy, sympathy, tenderness)

Prompts action to alleviate another's suffering

Personal distress

Self-focused, aversive reaction to vicarious experience of another's emotion

Prompts action to minimise one's own distress

Effects of compassion training

Compassion training

Systematic review and meta-analysis by Shonin et al., Mindfulness, 2015

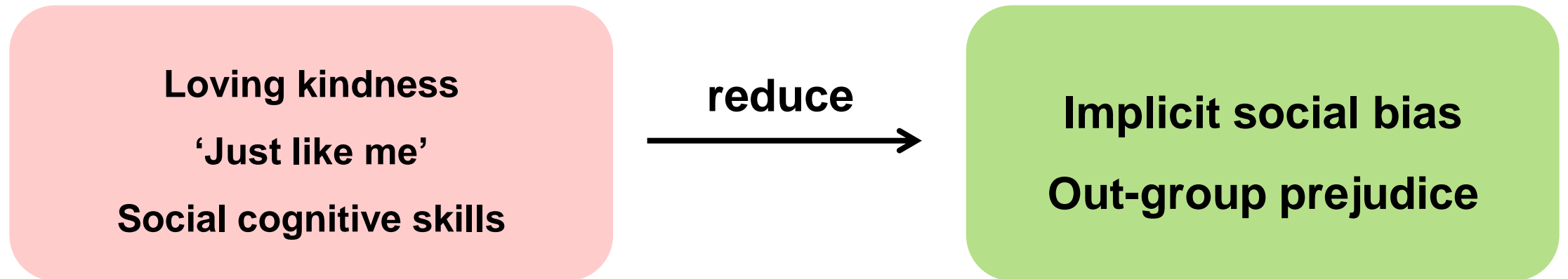
Better mood,
less distress

Positive
thinking

Interpersonal
relationships

Empathic
accuracy

Compassion training reduces discrimination towards out-groups

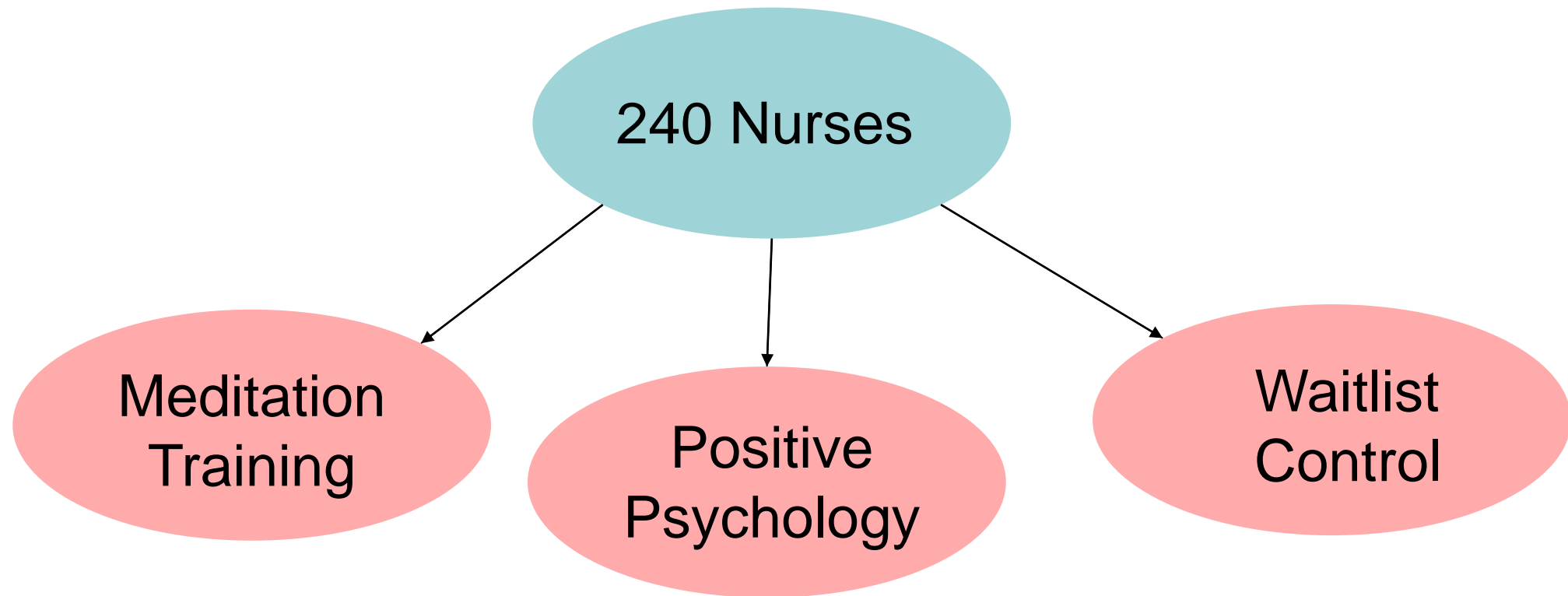


Berger et al., Mindfulness, 2018.

Kang et al., J. Experimental Psychology: General, 2014.

Study of compassion training to improve well-being and performance in a healthcare organisation

RCT with 52 wards as sampling unit, Sydney Local Health District



Compassion study in a business organisation

Fredrickson et al, Journal of Personality and Social Psychology 2008

139 employees from large software company were randomly assigned to 7-week meditation workshop during lunch hour or waitlist control

Significant improvements on measures of:

- positive emotions
- self-acceptance
- self-efficacy
- mindful attention
- positive relations with others
- purpose in life
- physical health
- social support received

Findings from studies of social emotions

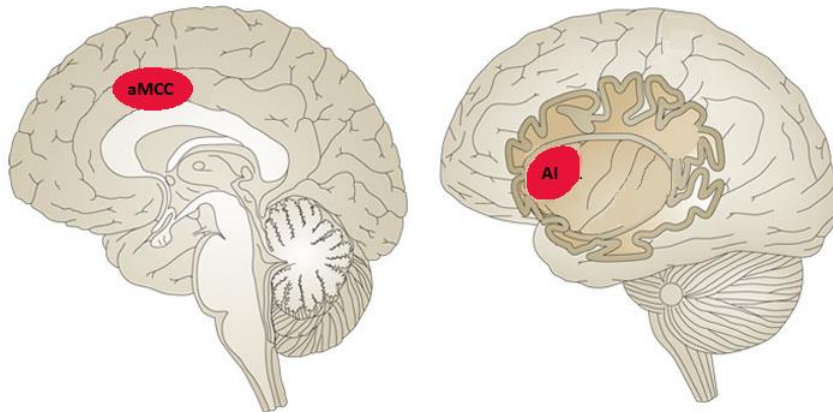
Empathy	Compassion
Negative feelings e.g. stress	Positive feelings e.g. love
Self-oriented responses	Other-orientated responses
Withdrawal	Approach, helping behaviour
Poor health, burnout	Good health

Neuroscience of social emotions

Empathy

Activation of:

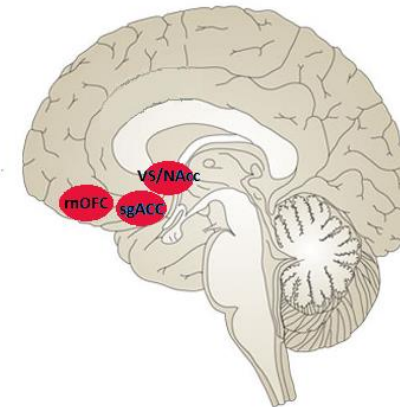
- mirror neurons and networks involved in theory of mind
- Areas associated with negative affect
- Areas associated with the integration of bodily awareness, affect and cognition



Compassion

Activation of regions associated with:

- Affiliation
- positive affect
- reward processing



The twin foundations of well-being



