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Leading the world
to better health

FROM BURNOUT TO RESILIENCE

Dr Pádraic Dunne

RCSI Centre for Positive Psychology & Health



BURNOUT: A DEFINITION

Feeling of physical and emotional exhaustion, due to stress from working with people under difficult or demanding conditions.

Freudenberger, Herbert; Richelson Geraldine (1980). burnout: The High Cost of High Achievement. What it is and how to survive it. Bantam Books.

BURNOUT CAN CREEP UP ON YOU



BURNOUT: THE PSYCHOLOGICAL SIGNS

- ↑ Increased **emotional exhaustion**
- ↑ Increased **depersonalisation**
- ↓ Decreased **personal achievement**

EMOTIONAL EXHAUSTION



severe
mental
fatigue



profound
physical
tiredness



emotional
exhaustion

DEPERSONALISATION



Increased hostility toward patients



Reduced compassion for self, colleagues & patients

PERSONAL ACCOMPLISHMENT



- Not usually an issue for healthcare professionals who have generally achieved academically
- Career progression issues can become a problem as time progresses

BURNOUT:

WHAT'S THE IMPACT?

BURNOUT:

ORGANISATIONAL IMPACT

Absenteeism

Presenteeism

Early retirement

Accelerated staff turnover

BURNOUT:

PATIENT IMPACT

Increase in medical errors
Problems with patient safety
Decreased patient satisfaction

BURNOUT: THE FINANCIAL IMPACT

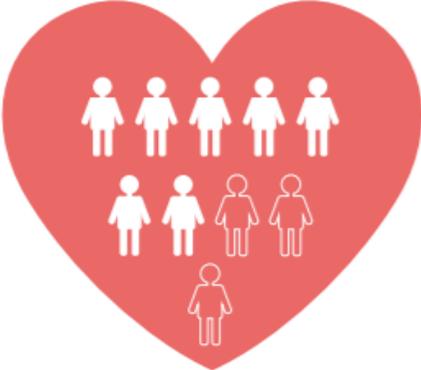
Cost of physician burn-out in Canada: **\$213m**

Cost of physician burnout in the US approx. **\$3.1bn**

BURNOUT: PSYCHOLOGICAL IMPACT

Anxiety
Depression
Suicidal ideation

(Hayes, Prihodova et al. 2017)

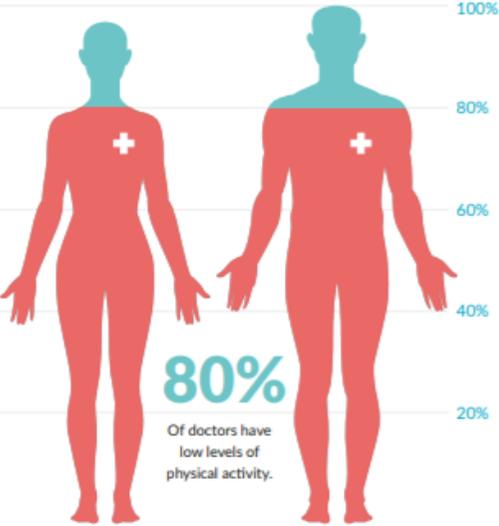


7/10

Seven out of ten doctors love what they do and have a strong desire to practise medicine.

1/2

Only half of all doctors report normal psychological wellbeing.



80%

Of doctors have low levels of physical activity.

4 in 5



Four in five doctors do not have enough time for family or personal life due to work commitments.

WELLBEING OF HOSPITAL DOCTORS IN THE WORKPLACE

Welfare of staff in the health services must be prioritised



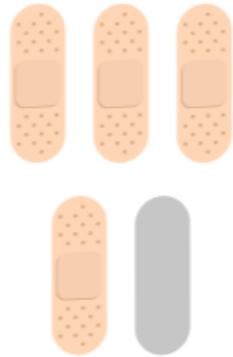
1 in 3

One in three doctors suffer burnout.



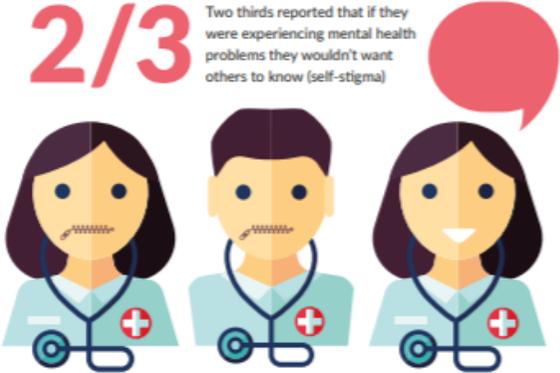
4 out of 5

Doctors reported working at a time when they were ill or injured.

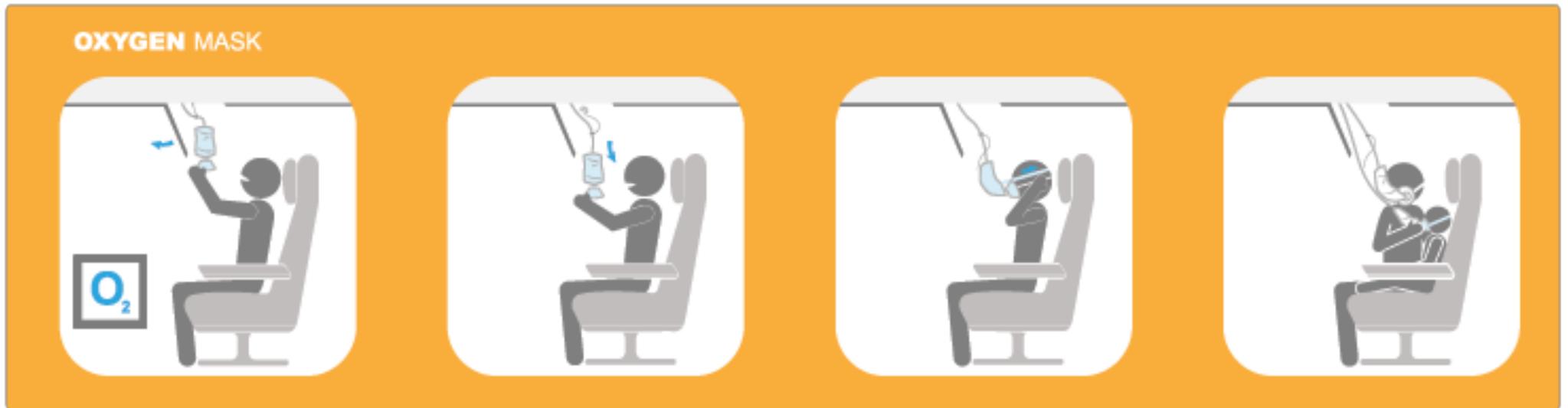


2/3

Two thirds reported that if they were experiencing mental health problems they wouldn't want others to know (self-stigma)



How can you be an effective leader if you are burned out?



Put on your own oxygen mask first



Are you **burned out**?

Take some time to complete the Maslach Burnout Inventory online (alternatives include the Copenhagen Burnout Scale)

You should take this survey at least once per year.

If you are in the intermediate or high zone for either emotional exhaustion or depersonalisation, then you need to take steps to reduce your levels of burnout.

What is the root cause of burnout on a personal level?

- Too much work?
- Lack of acknowledgement?
- Poor sleep?
- Low pay?
- Thoughts?
- Leadership group?
- Policy makers?
- Patients?
- Impaired work/life balance?
- None of the above?
- All of the above?

Nothing is perfect

- We know that the health service is far from perfect
- We know that some colleagues take more responsibility than others
- We know that some patients can be challenging; colleagues might be challenging

If we can't fix these problems or change them, then the only option we have left is to change how resilient we are in the face of these difficulties

However, this doesn't mean that we don't try to fix the systems we work in (within reason) or tolerate unreasonable behaviour

What is the root cause of burnout on a personal level?

- Ultimately, its your thinking process
- It's not what's happening around or to you that causes the greatest internal upheaval
- Instead, it is your response to these external events that enhances suffering and leads to burnout over time

THE TWIN ARROWS OF SUFFERING

Primary and secondary pain

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THE FIRST ARROW – PRIMARY SUFFERING

- The first arrow hits you
- The resultant pain is beyond your control and unavoidable

THE SECOND ARROW – SECONDARY SUFFERING

- You shoot yourself with the second arrow
- The resultant pain is within your control and is avoidable

THE QUESTIONS AND STATEMENTS OF SECONDARY SUFFERING

- Who shot me?
- Why do I always get shot?
- It isn't fair that people shoot me!
- When will my pain ever end?
- I don't want to be in pain!
- Nobody understands my pain!

- Thinking like this on a long-term basis, sows the seeds for mental and emotional burnout
- Limiting secondary suffering can help you to develop resilience in the face of adversity

RESILIENCE: ANTIDOTE TO BURNOUT

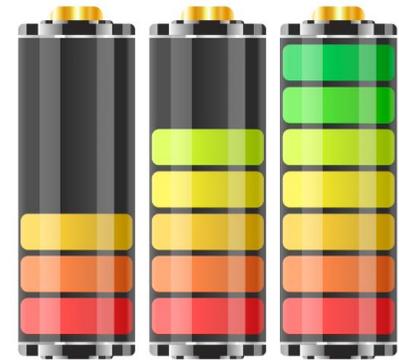


Resilience

The capacity to:

- prepare for
- recover from
- adapt

in the face of stress, challenge or adversity.



It is possible to learn how to build your resilience capacity and sustain your energy.

Domains of Resilience

HEALTHY EATING



SLEEP



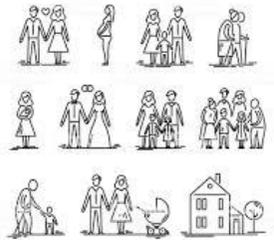
TOBACCO & ALCOHOL CONTROL



PURPOSE



RELATIONSHIPS



PHYSICAL EXERCISE



MENTAL HEALTH



Cognitive function,
focus, attention



Emotional regulation

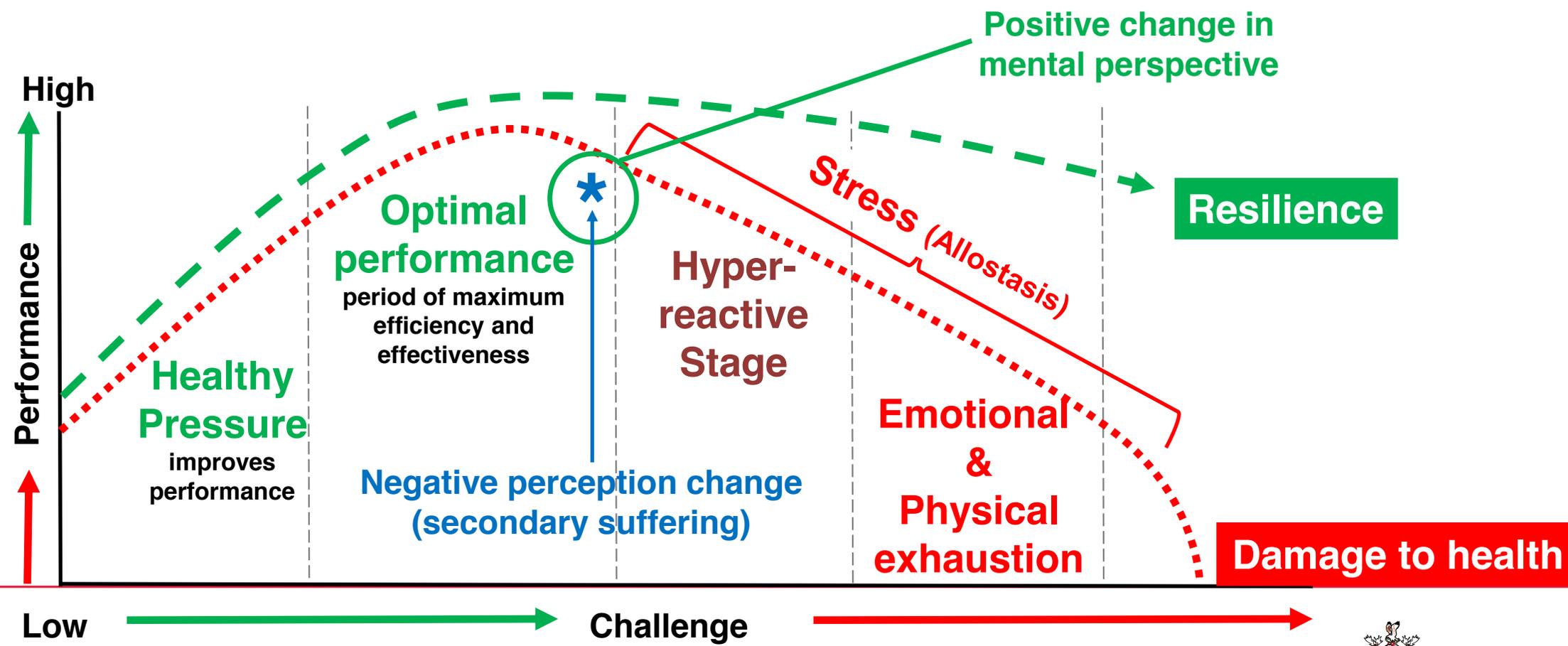
Are you depleted in any of these areas? All seven are required to develop resilience. What can you do to strengthen or replenish a depleted domain?



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In order to find solutions to limit burnout and promote resilience, it is important to understand the physiology of stress

Challenge, stress and performance



Source: Adapted from Yerkes & Dodson

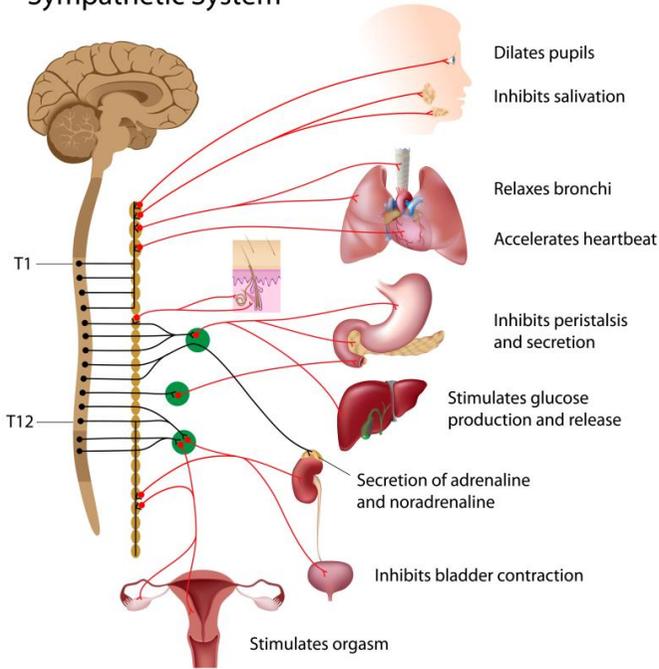


BURNOUT:

the link between the autonomic nervous system, the hormone system & behavioural/emotional responses

“fight or flight”

Sympathetic System



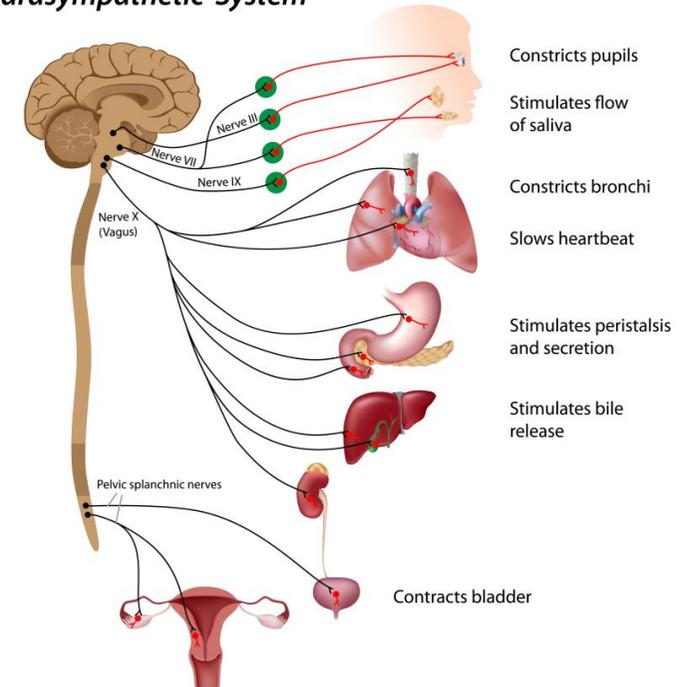
Sympathetic pathway
High heart rate/excitement
(adrenaline)



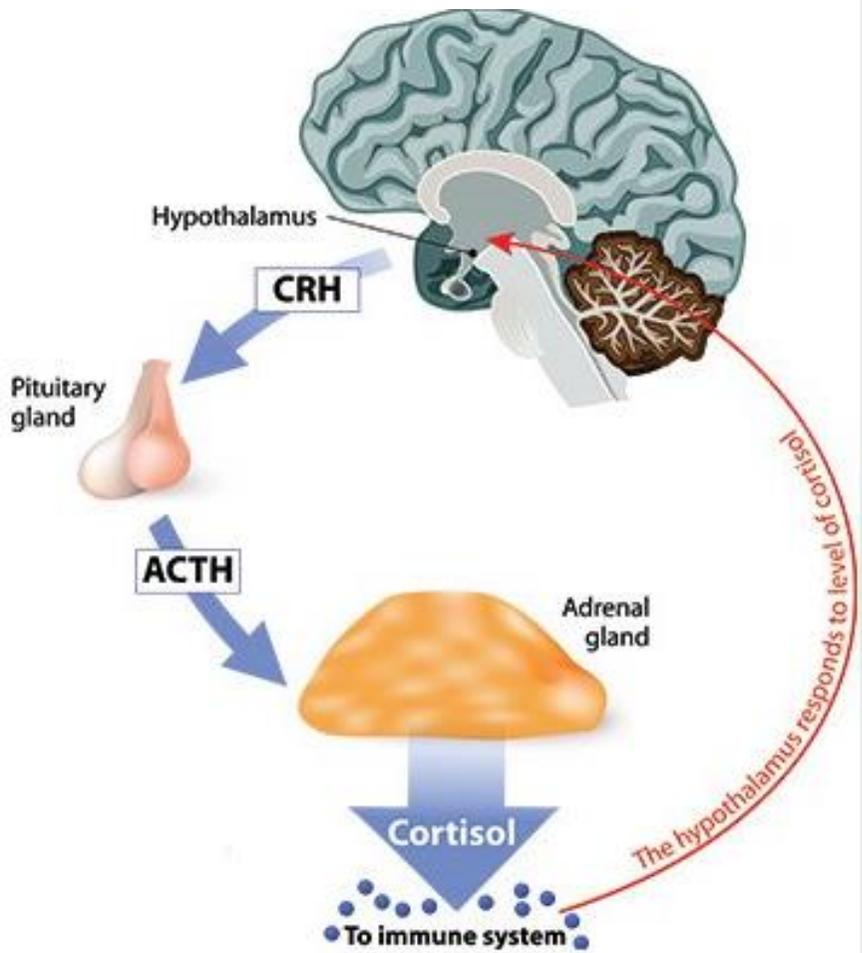
Parasympathetic pathway
Low heart rate/relaxation
(acetylcholine)

“rest & digest”

Parasympathetic System

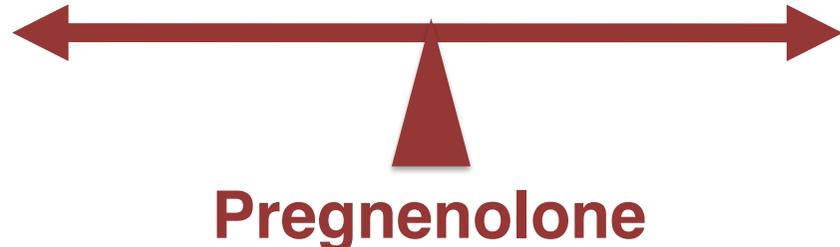


Burnout: autonomic nervous system (ANS)



Cortisol
(catabolic – breaks down)

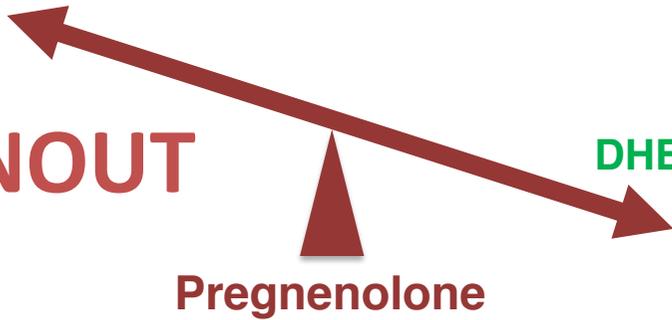
DHEA
(anabolic – builds up)



Cortisol

BURNOUT

DHEA

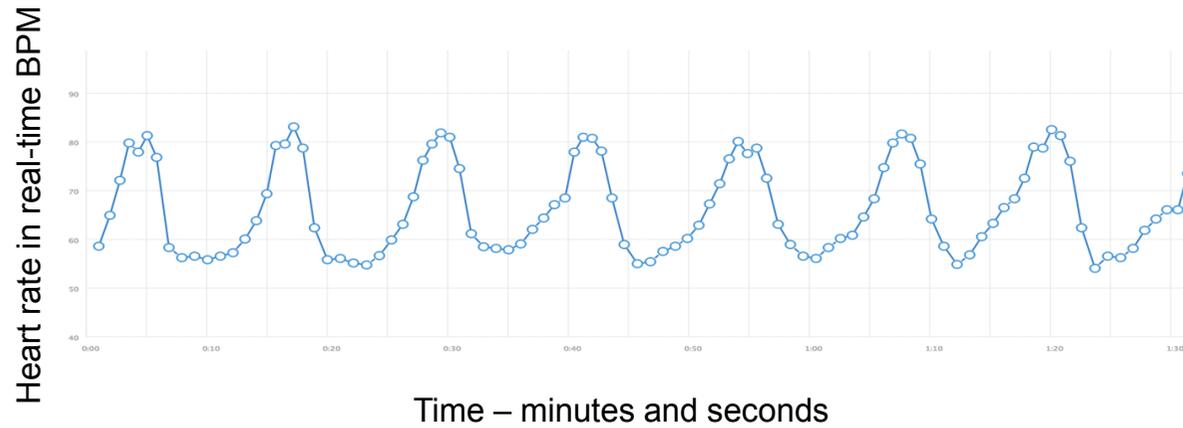


Burnout: hormone system

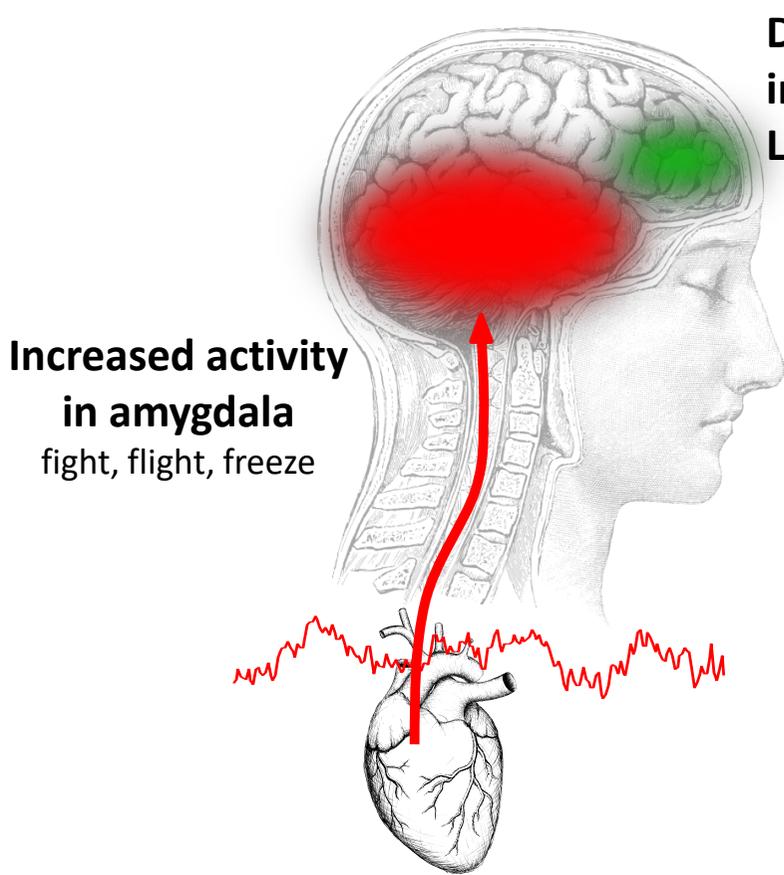


BURNOUT:

heart rate variability, the limbic system & cognitive control

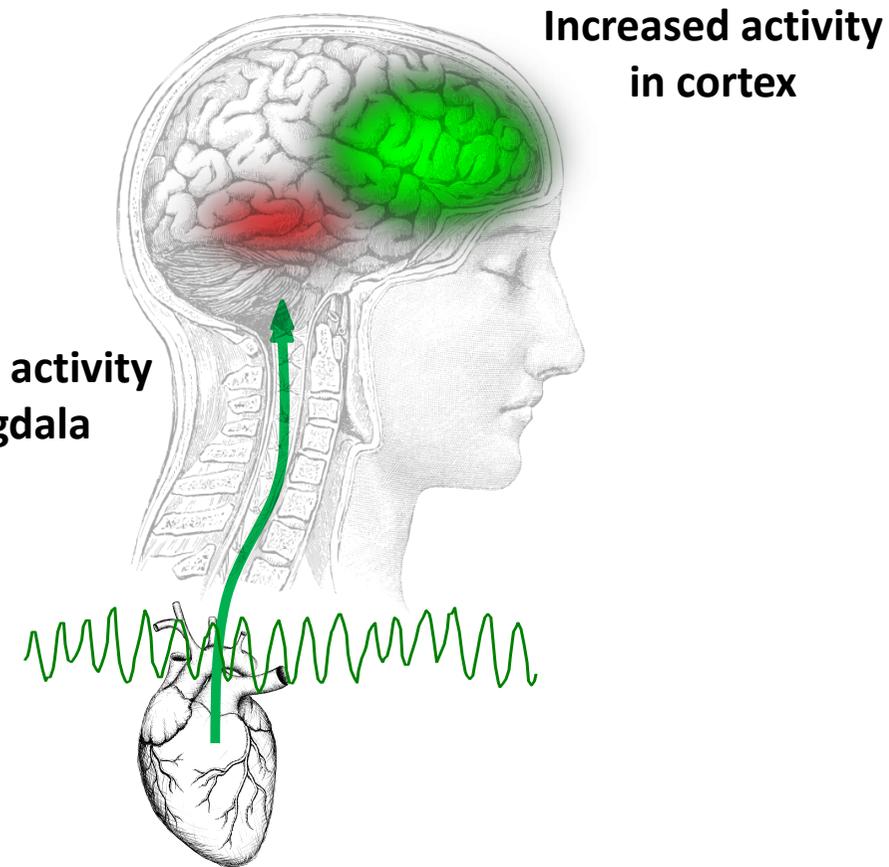


Burnout: HRV, coherent bpm patterns & emotional response



**Decreased activity
in cortex**
Loss of focus & attention

Burnout, stress and dysregulated emotion



Resilience and emotional regulation

Burnout: heart rhythms and cognitive function



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YOUR RESILIENCE TOOLKIT

Clinically tested, evidence-based tools and practices to help you build resilience.

Which of the following practices have you used to build resilience in the workplace?

- Cognitive-based Therapy (CBT)
- Exercise (running, swimming, yoga, cycling etc.)
- Apps (like headspace; BrainFM)
- Mindfulness-based stress reduction
- Other meditative techniques
- Attention-based training
- Self-help books
- Counselling and psychotherapy
- Healthy diet
- Sleep hygiene
- Community engagement
- Meaning & purpose



Domains of Resilience

HEALTH EATING



SLEEP



TOBACCO &
ALCOHOL
CONTROL



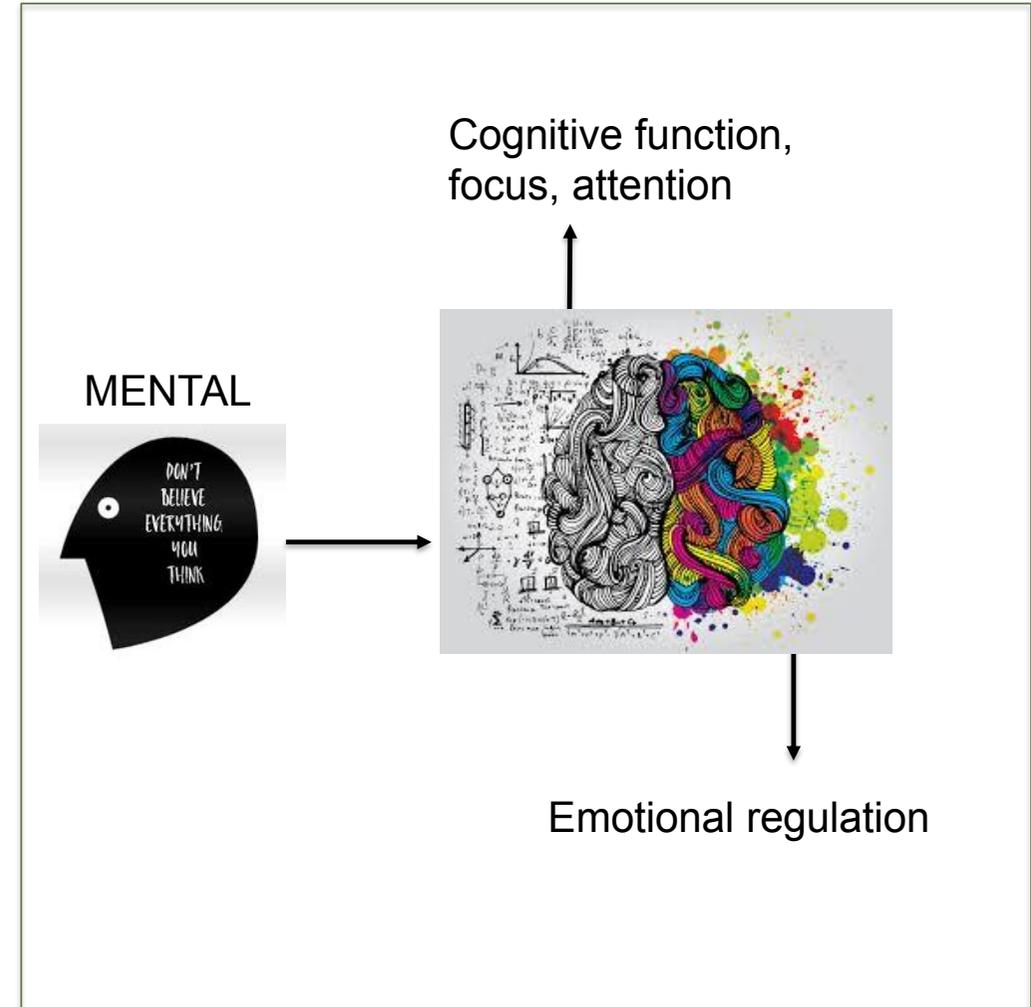
PURPOSE
E
「GIVE LIFE」
a
「MEANING」



RELATIONSHIPS



PHYSICAL
EXERCISE



BENEFITS OF MEDITATIVE-LIKE PRACTICES TO REGULATE COGNITIVE AND EMOTIONAL FUNCTION

Clinically proven benefits include:

- Increased telomere length and telomerase activity within peripheral blood mononuclear cells
- Reduces salivary cortisol
- Improves cardiac health
- Improves endocrine function
- Epigenetic regulation of pro-inflammatory genes (COX-1/2)
- Enhanced decision making and memory
- Reduced reactive behaviour

BENEFITS OF MEDITATION

For more information, check out the spring issue of *Scientific American 2018*. This edition brings together the very latest in evidence-based best practices to help you build resilience via sleep, exercise, meditation, and nutrition.



PROFESSIONAL GROUPS THAT USE MEDITATIVE-LIKE TECHNIQUES TO REDUCES STRESS AND ENHANCE PERFORMANCE DURING STRESSFUL EVENTS:

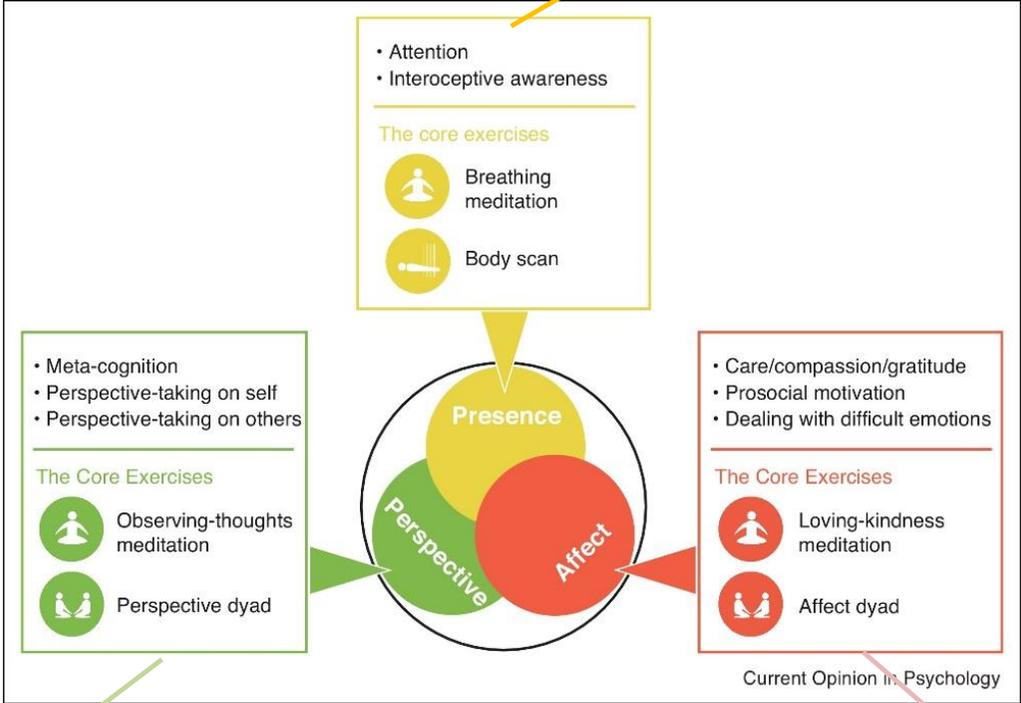


Are all meditation-like techniques the same?

RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE



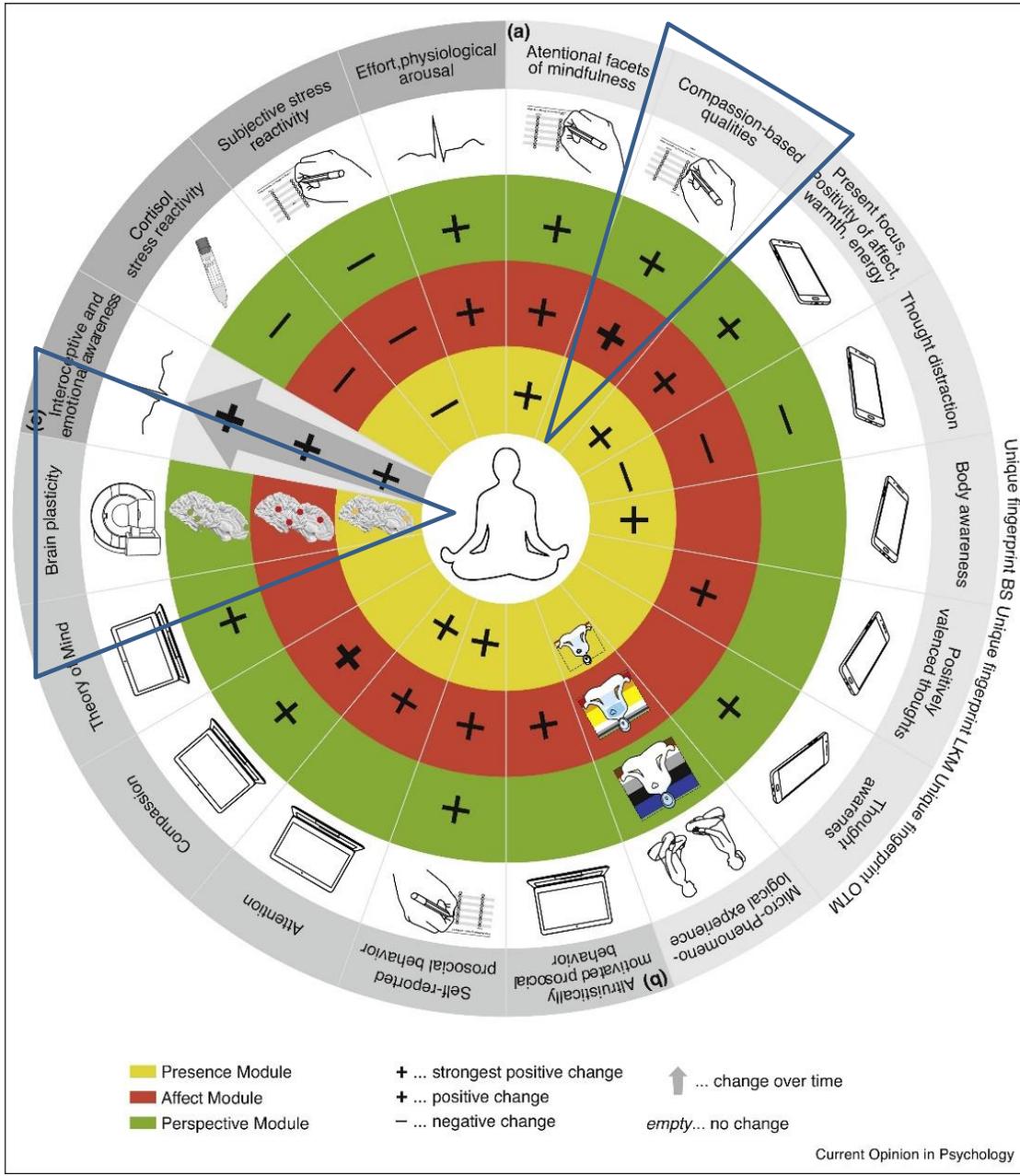
Attention-based Training (ABT)
Mantra meditation



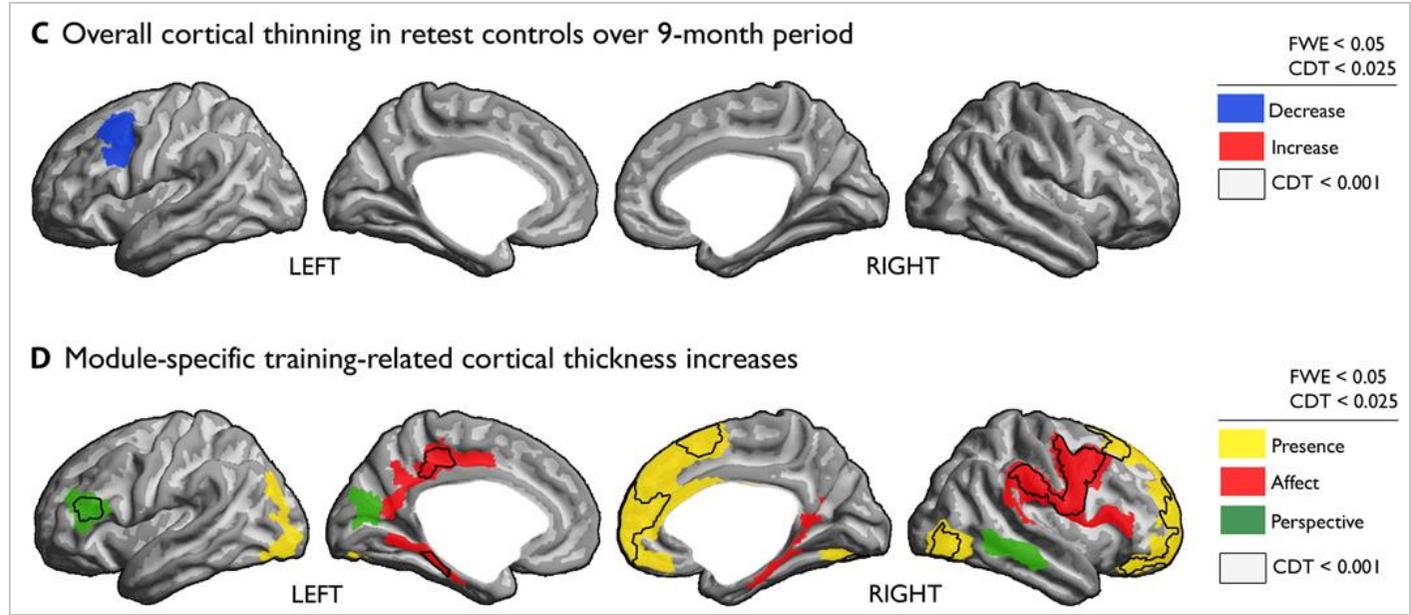
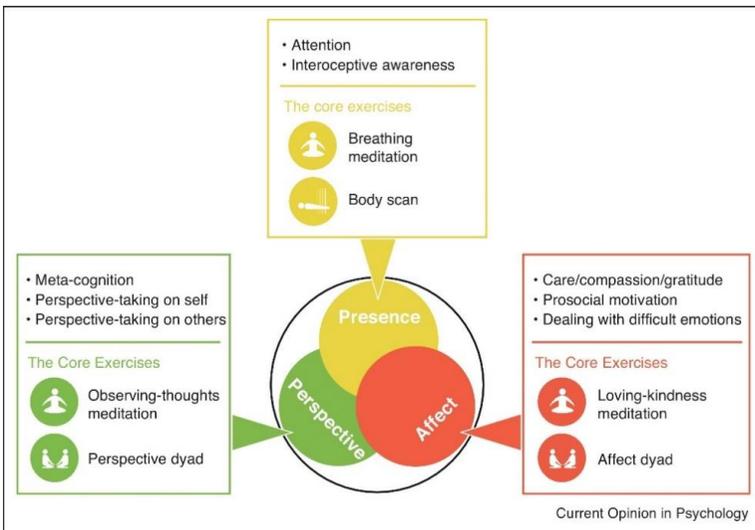
Mindfulness

Emotional regulation

FROM: Singer & Engert. Current Opinion in Psychology. Volume 28 (August 2019)



Different practices – different effects on the brain



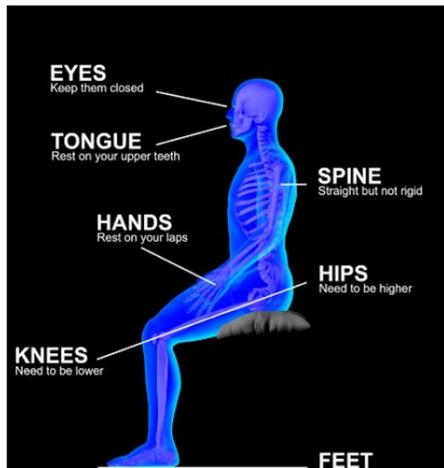
RESILIENCE THROUGH ATTENTION-BASED TRAINING (ABT)

Can ABT Enhance focus, attention and reduce burnout in healthcare professionals? – a randomised controlled trial

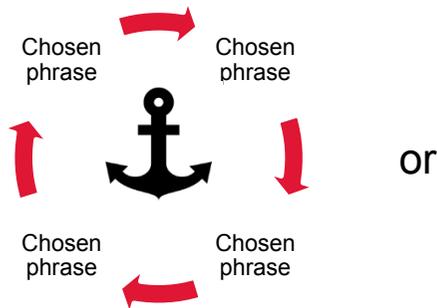
RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE



MEDITATION POSTURE



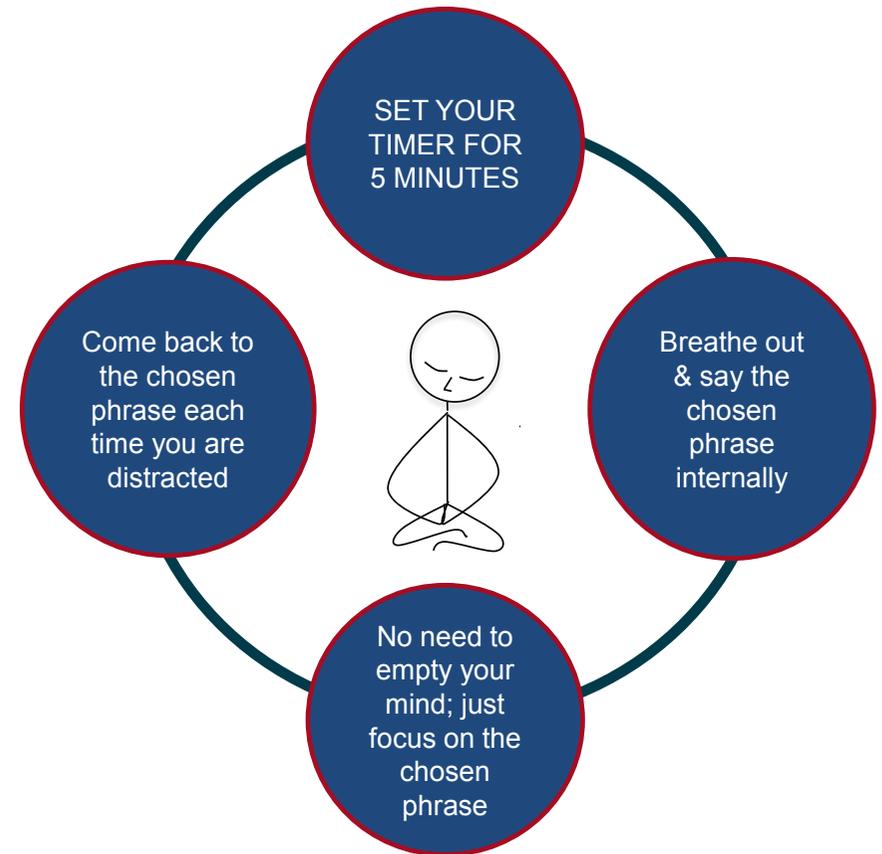
CHOOSE AND ANCHOR



CHOSEN PHRASES CAN INCLUDE:

- “I Am Here Now”
- “Maranatha”
- “Om Mani Padme Hung”

“Disengage from thought, emotions, sensations & memories by simply returning to your anchor, on a moment by moment basis”

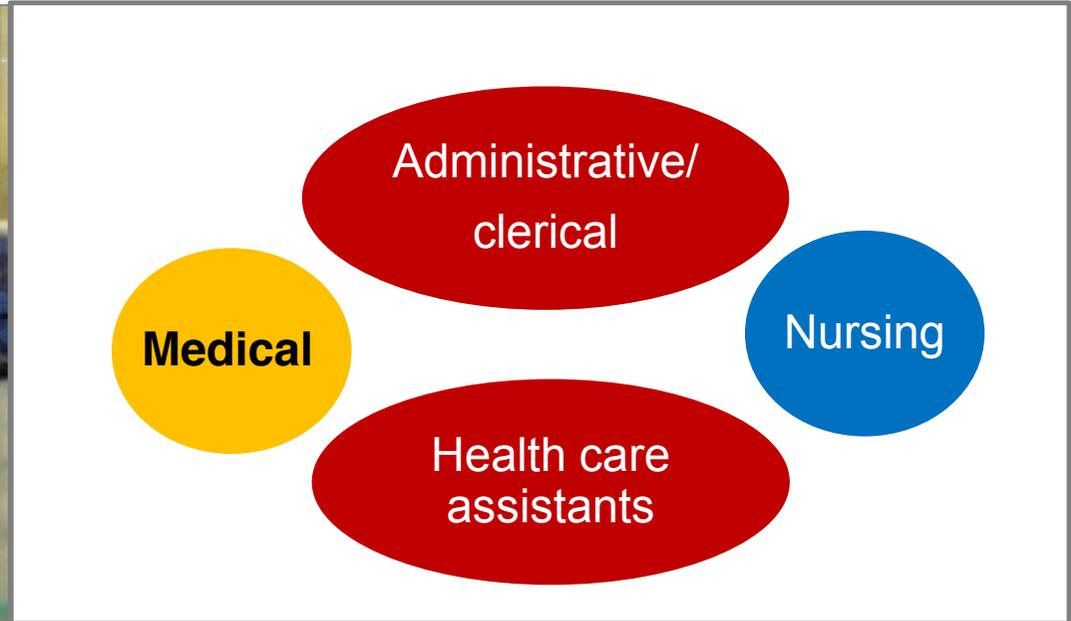


ATTENTION-BASED TRAINING (ABT)



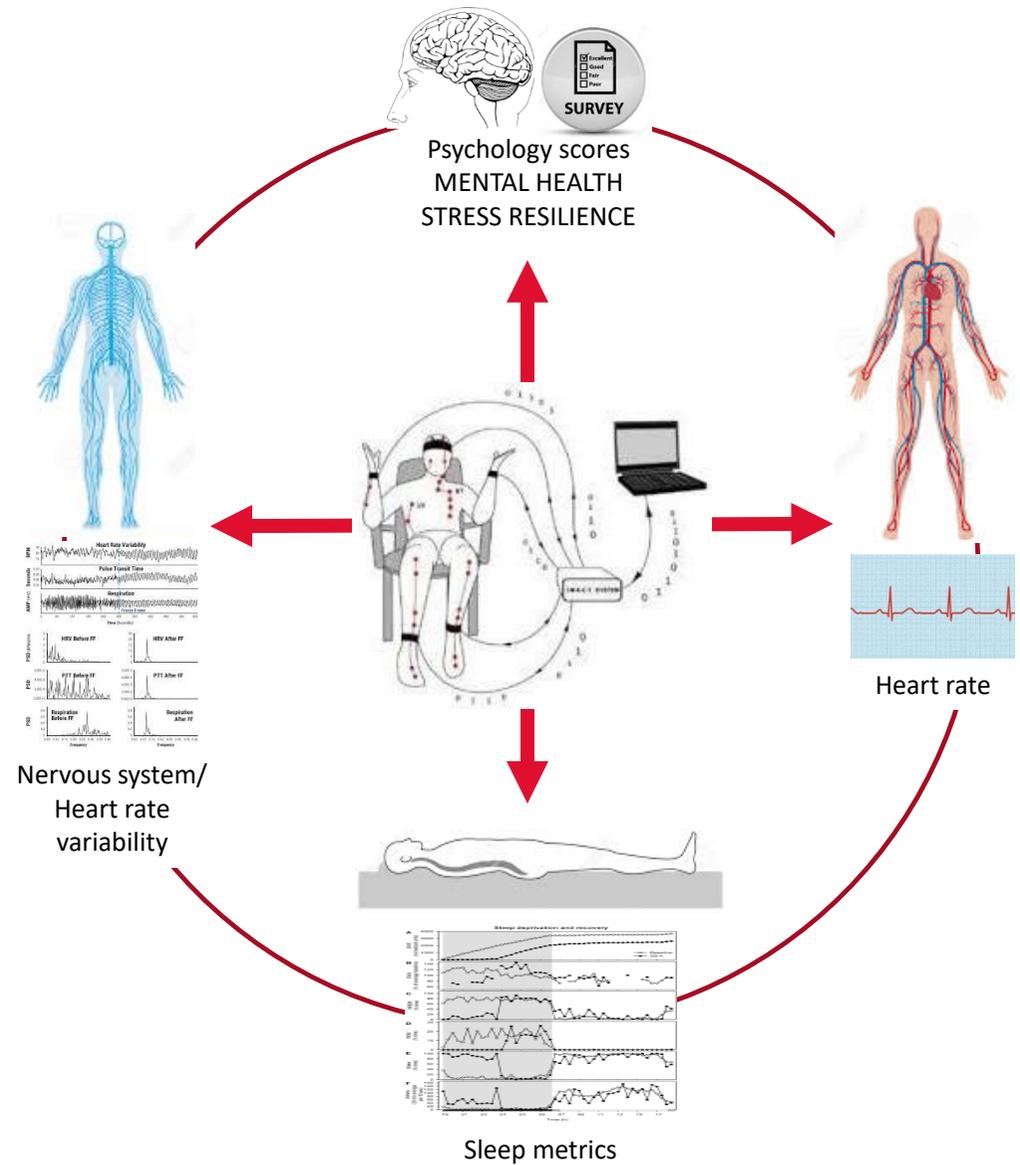
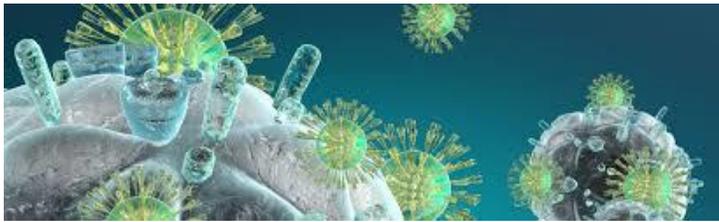
ST. JAMES'S
HOSPITAL

Target population –
Staff from the Emergency Department (ED) at St. James's Hospital,
Dublin



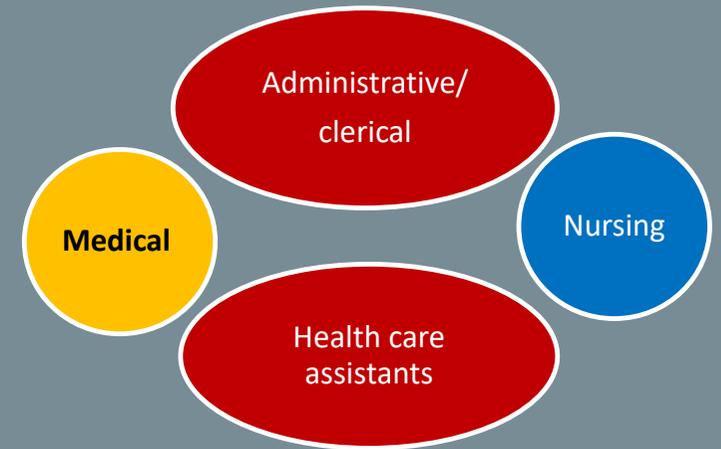
INSTRUMENTS USED TO MEASURE OUTCOMES

- Survey questionnaires
- Physiological through Fitbit Charge 2 devices
- Immune system and stress hormones – lab investigation



Baseline data and ED role

How stressed were they?



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9 X Clerical/
Admin



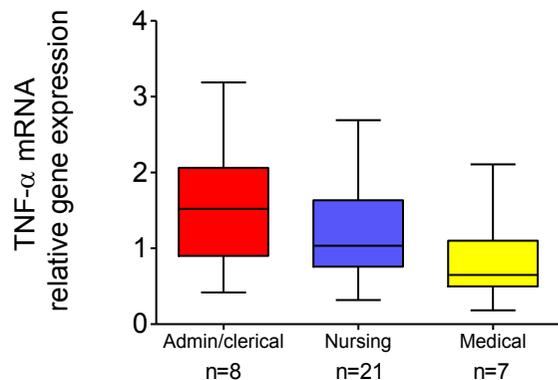
25X
Nursing



9 X
Medical

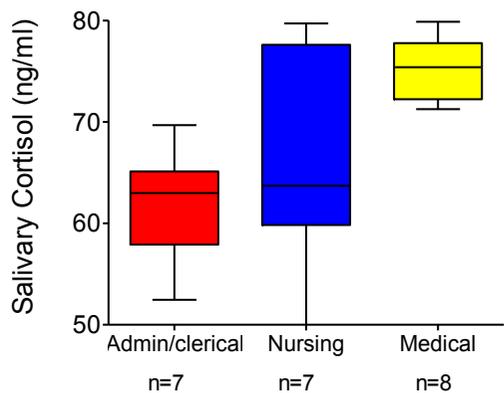
TNF- α

Baseline TNF- α relative mRNA expression (T1)

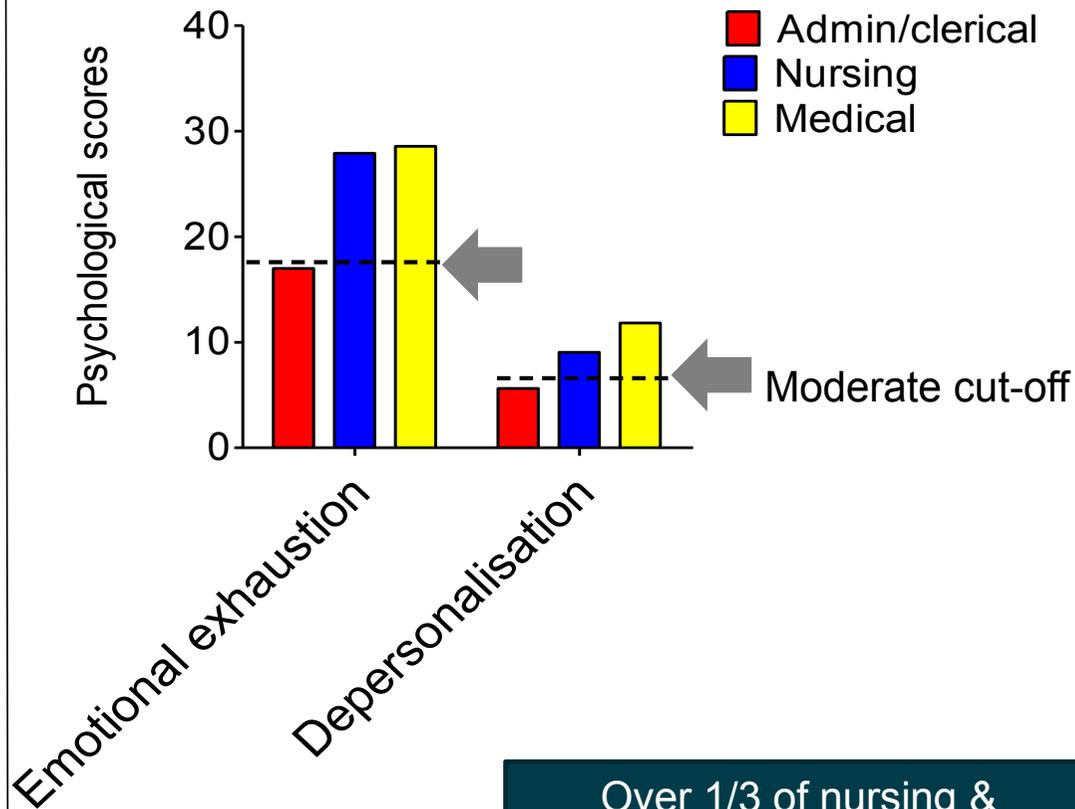


Salivary cortisol

Baseline salivary cortisol values (T1)



Psychological scores for burnout



Over 1/3 of nursing & medical staff experiencing burnout

N=42

11 ♂

31 ♀



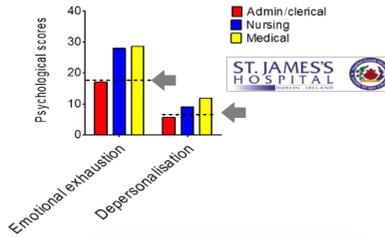
1 in 3

Irish doctors experience burnout

RCPI 2017

Emergency Department staff – most impacted group

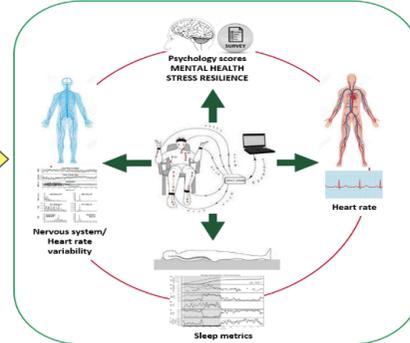
High burnout scores



Meditation to fit your lifestyle

- Bluetooth biofeedback sensors: Support practice adherence
- Prevent the development of psychological and physiological stress

8-week meditation programme, supported by mobile biofeedback device



↓ **Burnout** 0.63 effect size#
 ↓ **Stress** 0.75 effect size#
 ↓ **Anxiety** 0.79 effect size#



↑ **Boosted immunity (TNF-α + IL-6)**



RESULTS*

- Improved psychological and physiological stress
- Improved staff morale

* Pádraic J Dunne, Julie Lynch, Lucia Prihodova, Caoimhe O'Leary, Atiyeh Ghoreysy, Sharee A Basdeo, Donal J Cox, Rachel Breen, Ali Sheikhi, Aine Carroll, Cathal Walsh, Geraldine McMahon, Barry White. *Burnout in the Emergency Department: Randomised Controlled Trial of an Attention-based Training Programme. Journal of Integrative Medicine. 17 (2019) 173-180.*

0.2 is considered a small effect size, 0.5 represents a medium effect size and 0.8 a large effect size



International Journal of Clinical Trials
 Dunne PJ et al. *Int J Clin Trials*. 2017 May;4(2):88-95
 http://www.ijclinicaltrials.com pISSN 2349-3240 eISSN 2349-3259
 DOI: http://dx.doi.org/10.18203/2349-3259.ijct20171919

Original Research Article

Feasibility study protocol to examine the role of mantra meditation at reducing psychological distress in emergency department staff

Pádraic J. Dunne^{1*}, Caoimhe O'Leary², Lucia Prihodova², Rachel Breen², Cathal Walsh³, Laurence Freeman⁴, Aine Carroll⁵, Geraldine McMahon⁶, Barry White⁷

¹Room 0.50, Trinity Translational Medicine Institute, St. James's Hospital Campus, Trinity College Dublin, Dublin, D08 W9RT, Ireland; ²Royal College of Physicians of Ireland, Frederick House, 19 South Frederick Street, Dublin 2; ³Health Research Institute, MACSI, Room B3038, Main Building, University of Limerick, County Limerick, Ireland; ⁴Turvey Abbey, High St, Turvey, Bedford MK43 5DE, United Kingdom; ⁵National Director for Clinical Strategy and Programmes Division, HSE, Dr Steevens' Hospital, Steevens' Lane, Dublin D08 W2A8, Ireland; ⁶Department of Emergency Medicine, St. James's Hospital, Dublin 8, Ireland; ⁷National Centre for Hereditary Coagulation Disorders, St. James's Hospital, Dublin 8, Ireland

Journal of Integrative Medicine 17 (2019) 173-180

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journal homepage: www.jcimjournal.com/jim
 www.journals.elsevier.com/journal-of-integrative-medicine

Science Press

Original Research Article

Burnout in the emergency department: Randomized controlled trial of an attention-based training program

Pádraic J. Dunne^{a,*,1}, Julie Lynch^{b,1}, Lucia Prihodova^b, Caoimhe O'Leary^b, Atiyeh Ghoreysy Sharee A. Basdeo^d, Donal J. Cox^d, Rachel Breen^b, Ali Sheikhi^d, Aine Carroll^e, Cathal Walsh^d, Geraldine McMahon^f, Barry White^g

^aTrinity Translational Medicine Institute, Trinity College, Dublin D08 W9RT, Ireland
^bResearch Department, Royal College of Physicians of Ireland, Dublin D02 E434, Ireland
^cDepartment of Innovation, Fitbit Inc., San Francisco, CA 94105, USA
^dHealth Research Institute, Main Building, University of Limerick, Limerick V94 X5K6, Ireland
^eHealth Service Executive, Dr Steevens' Hospital, Dublin D08 W2A8, Ireland

Open access Research

BMJ Open Mantra meditation programme for emergency department staff: a qualitative study

Julie Lynch,¹ Lucia Prihodova,¹ Pádraic J Dunne,² Caoimhe O'Leary,¹ Rachel Breen,¹ Aine Carroll,³ Cathal Walsh,⁴ Geraldine McMahon,⁵ Barry White^{1,2,6}

To cite: Lynch J, Prihodova L, Dunne PJ, et al. Mantra meditation programme for emergency department staff: a qualitative study. *BMJ Open* 2018;8:e020685. doi:10.1136/bmjopen-2017-020685

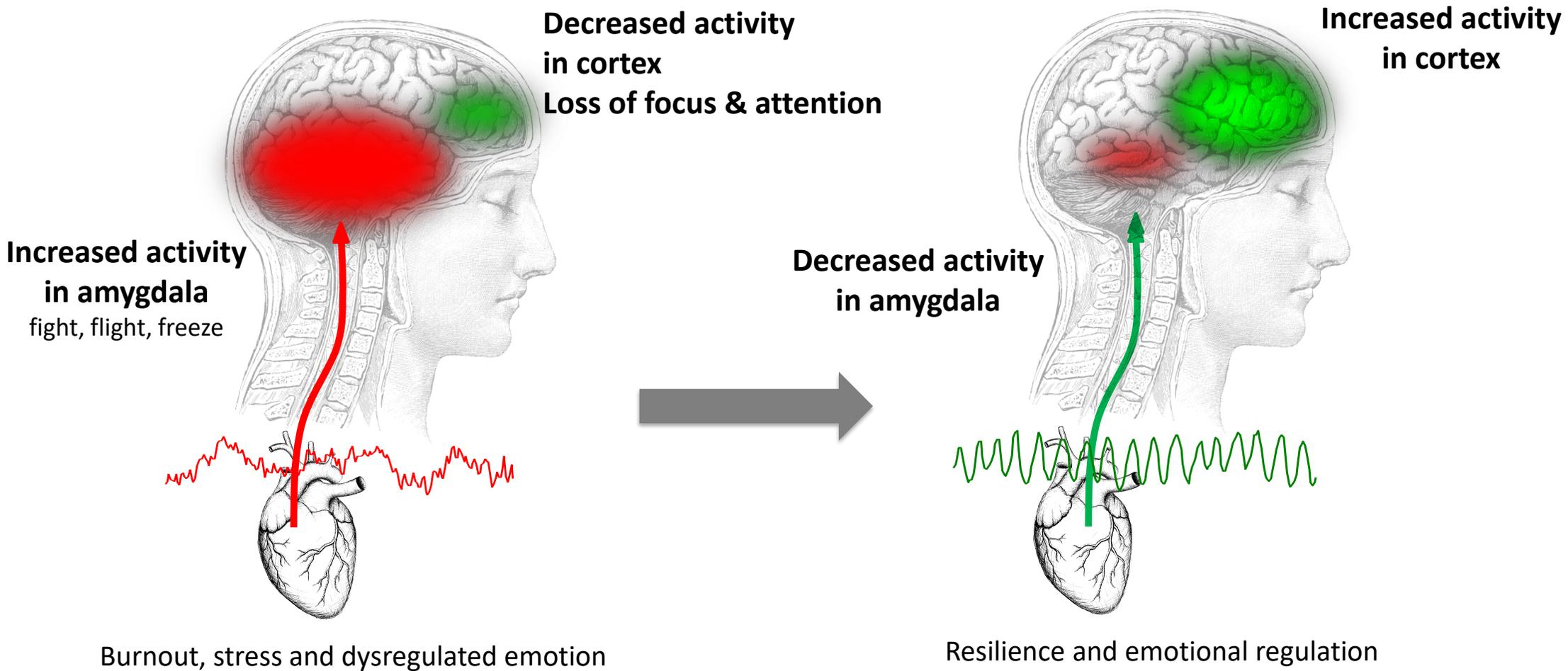
ABSTRACT
Objectives Rates of burnout and stress in healthcare practitioners are steadily increasing. Emergency department (ED) staff are particularly susceptible to such poor outcomes. Mantra meditation (MM) may contribute to increased well-being. The primary aim of this study was to obtain in-depth qualitative feedback on ED staff's

Strengths and limitations of this study

- In-depth interviews offered an exclusive insight into the personal experiences of mantra meditation from the perspective of emergency department staff.
- The study used a validated qualitative approach

The importance of regulating the stress response using ABT

Using daily practice as well as practice in the moment to self-regulate



Self-regulation using ABT practice

MY BRAIN – FROM AGITATED TO CALM IN 5 MINUTES USING ABT



β waves



α waves



Macrotellect EEG headset

EMOTIONAL REGULATION THROUGH COMPASSION-FOCUSED MEDITATION – COUPLED TO BIOFEEDBACK

HeartMath Inner Balance device – HRV measurement



Enhanced compassion for self and others
Emotional regulation

- Care/compassion/gratitude
- Prosocial motivation
- Dealing with difficult emotions

The Core Exercises

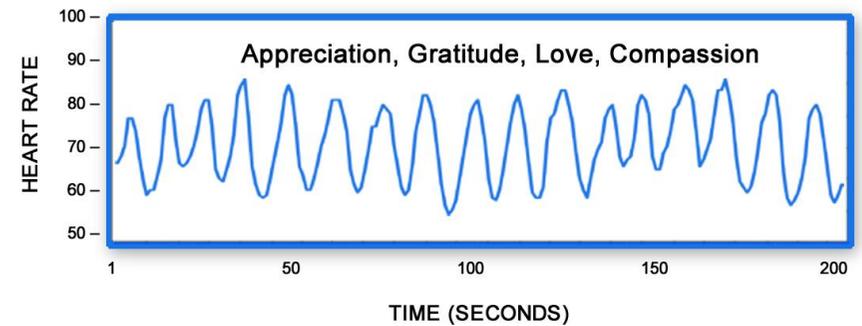
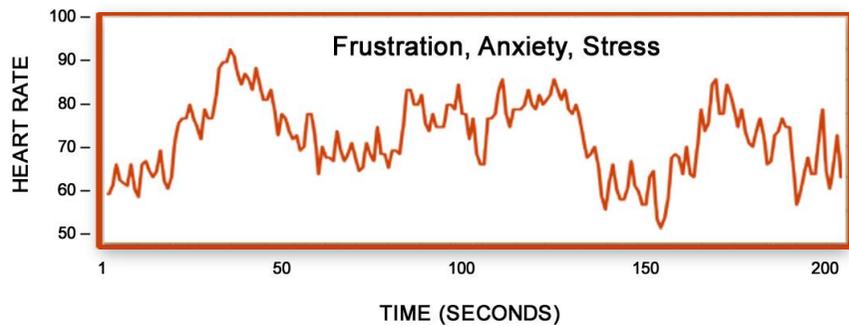
-  Loving-kindness meditation
-  Affect dyad

Current Opinion in Psychology

+ ❤️ HeartMath.

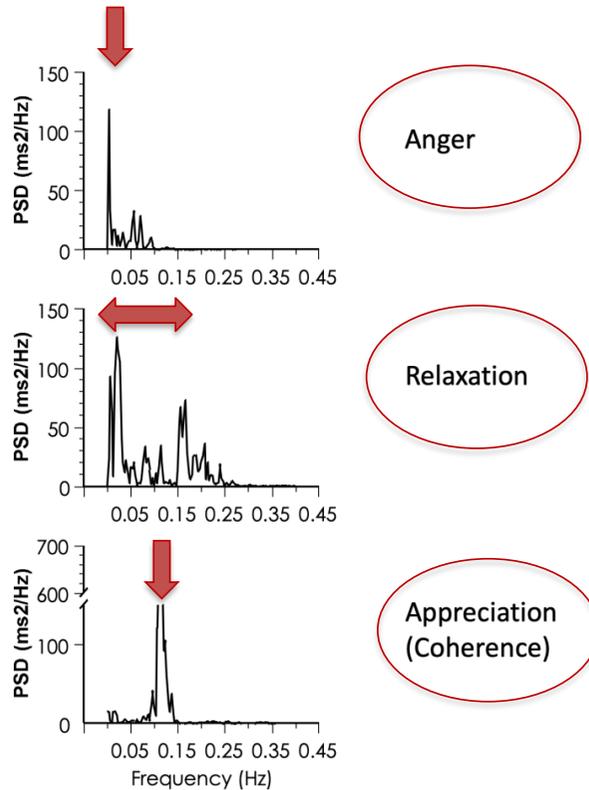
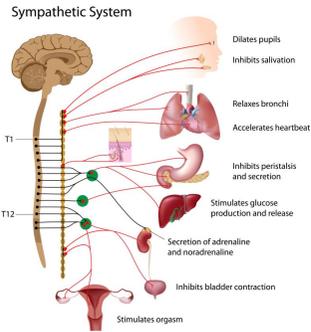
Emotional regulation through heart-focused meditation – coupled to biofeedback

The goal is to use this technique to regulate the ANS and HRV through paced breathing and emotional regulation



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Coherence through meditation is not relaxation



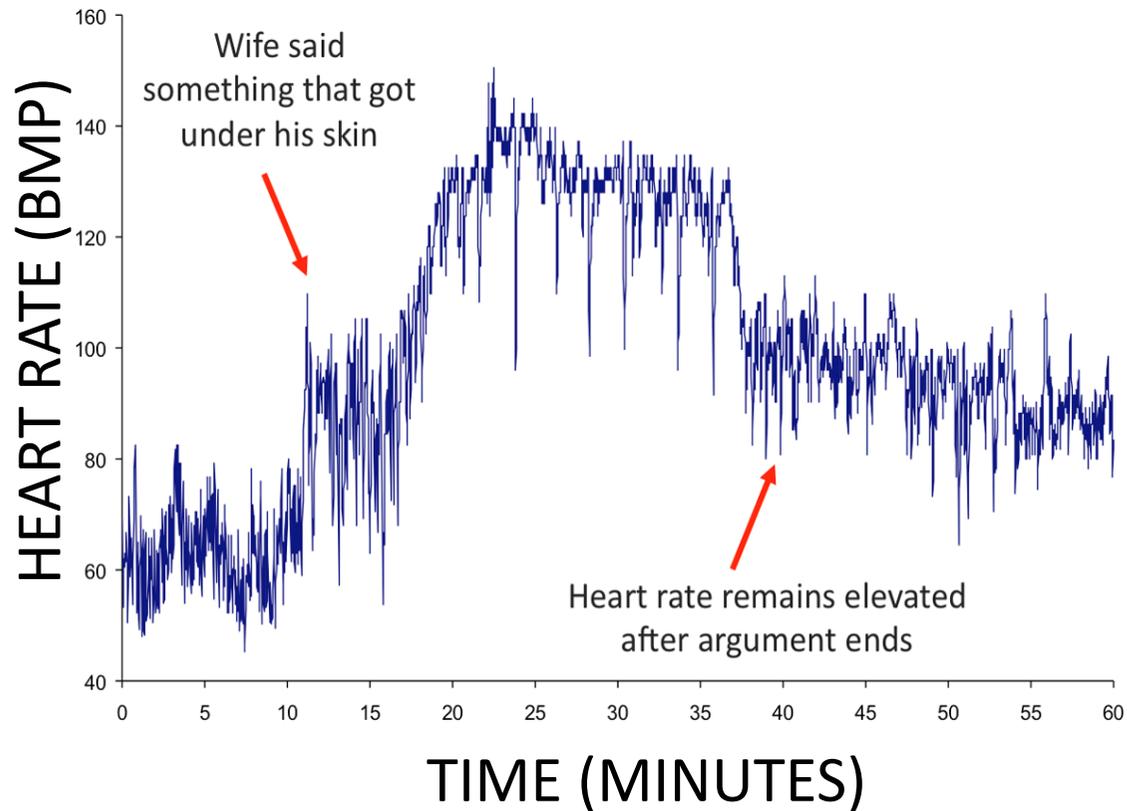
Predominantly sympathetic response

Oscillates between sympathetic and parasympathetic response

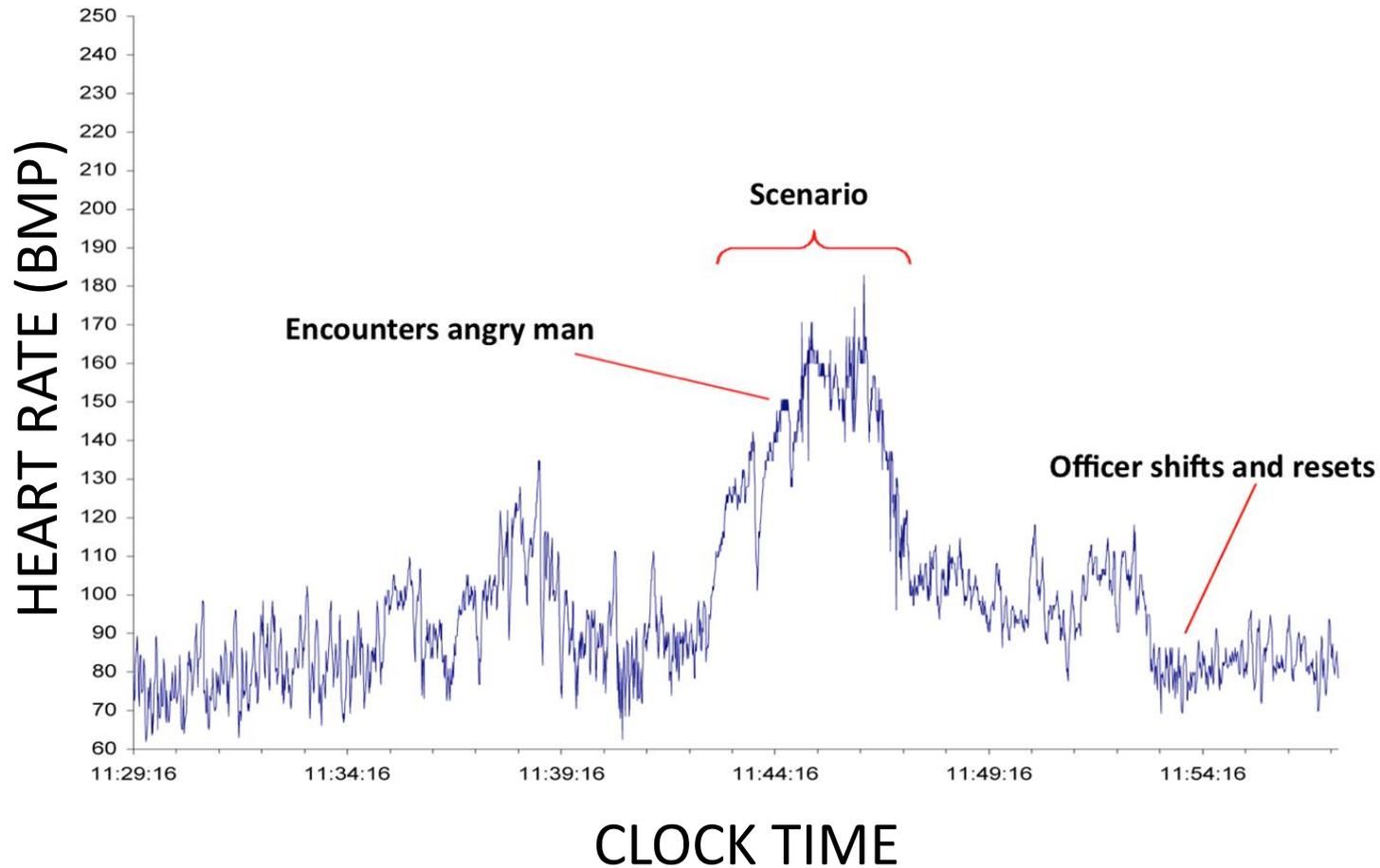
Remains consistent over fixed time period in a balanced state between sympathetic and parasympathetic

Communication and stress without regulation

US executive trialling InnerBalance device



Quick coherence: London Metropolitan Police training scenario



The Bottom Line:

It doesn't matter what type of meditative-like regulation you start with – as long as you start.

Use it as a tool to promote resilience & to deal with stress as it occurs

Domains of Resilience

HEALTHY EATING



SLEEP



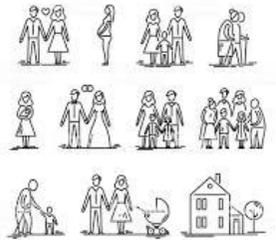
TOBACCO & ALCOHOL CONTROL



PURPOSE



RELATIONSHIPS



PHYSICAL EXERCISE



MENTAL HEALTH



Cognitive function,
focus, attention



Emotional regulation

RESEARCH TEAM



Dr Barry White (Principal Investigator), Consultant Haematologist and Head of Health Care Development Unit, VHI



Dr Pádraic Dunne (Principal Investigator), Senior Research Fellow, Immunologist and Psychotherapist. Institute of Leadership, Royal College of Surgeons in Ireland



Laurence Freeman OSB, Benedictine monk, Director of the World Community for Christian Meditation. Fr Freeman will act as the facilitator of the mantra meditation programme during the study.



Dr Geraldine McMahon, Consultant in Emergency Medicine, St James' Hospital



Julie Lynch, MPsychSc, Psychologist and Researcher, RCPI



Dr. Sharee Basdeo, (Research Fellow), Tuberculosis Immunology Research Group, Trinity Translational Medicine Institute, St. James's Hospital, Trinity College, the University of Dublin.



Caoimhe O'Leary, MPsychSc, Psychologist and Researcher, RCPI



Dr. Dónal Cox, (Post-doctoral Research Scientist), Tuberculosis Immunology Research Group, Trinity Translational Medicine Institute, St. James's Hospital, Trinity College, the University of Dublin



Rachel Breen, Project Executive, Meditation Programme, RCPI



Dr Áine Carroll, HSE National Director of Clinical Strategy Programmes.



Dr Lucia Prihodova, Research Psychologist, Research Department Manager, RCPI





THANK YOU
padraicdunne@rcsi.ie

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