

Stress Management & Resiliency Training (SMART): Applications for Health Care Providers and Patients

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- Evelyn Sikorski, CSW, CEAP, Manager Employee Wellness & Employee and Family Assistance Program
- Cara Feldman-Hunt, MA, Program Manager UVM Integrative Health

Agenda Tonight

- Our collaborative aim
- About Benson Henry Institute (BHI) and the Stress Management and Resiliency Training (SMART)
- What did we do?
- What are we doing?
- RR practice
- SMART panel
- Open discussion & questions

An Integrative Collaboration is Born

- Jane Nathan: BHI trained to implement their Stress Management & Resiliency Training (SMART) to med students, residents, healthcare practitioners and patients.
- Cara Feldman-Hunt: Extensive integrative health programs on UVM campus
- Evelyn Sikorski: Innovative employee wellness programs UVMMC

Common interest: To find a unified program of stress management appropriate for practitioners, patients, employees, students etc. across the UVM medical and educational campus (UVMMC, CNHS, and COM).

How about the BHI SMART program?

Benson Henry Institute (BHI)

BHI- Integrative collaboration between Harvard Medical School (HMS) and Mass General Hospital (MGH)

*Herbert Benson- Cardiologist and pioneer who 50 years ago hypothesized a remarkable, new idea in medicine:

Slowing down your breath might help treat hypertension

- Studied with Buddhist monks, TMs in the 1960s
- Was ridiculed as a quack
- HMS tried to fire him - for over 30 years!

Discovered: Relaxation Response (RR):

Hypothalamic mediated reaction → decreased sympathetic nervous system activity, decreased heart rate, lower metabolism and decreased respiratory rate and increased oxygen flow

* Physiological opposite of fight or flight stress response

Research is in: THIS IS SCIENCE!

**Question no longer is “Does it work?” but
“How it works?”**

Herb & I 😊

“Isn’t it wonderful, we’ve gone from ridicule to science!”



Our Initial Aim

- To determine the benefits of SMART to leaders and health care professionals in the UVM community.
- To determine their interest to bring the SMART model forward to staff, patients, families and students in the UVM academic and health sciences.



What's the Problem with Stress?

Chronic Stress (bottom up/red) → **amygdala** → hormone & cortisol release → inflammatory response → degradation mood stabilization neurotransmitters → stress response chronically over stimulated (fight or flight mode)

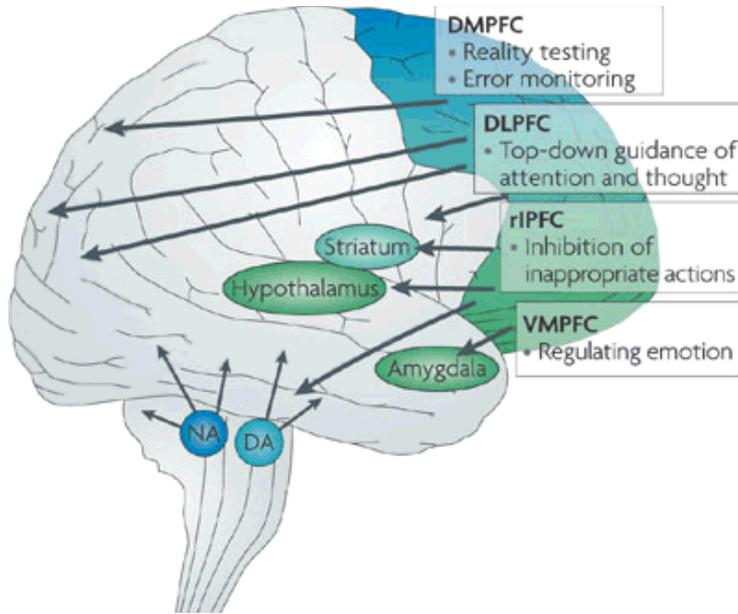
- Infection
- Tissue damage
- Reduced mood stabilization
- Cellular imbalance → poor use of oxygen



RR (top down/blue) → **prefrontal cortex** → use oxygen more efficiently → better mental & physical resilience, sleep, digestion, mood, sense of well being, immune response, blood pressure, cholesterol



Prefrontal regulation during alert, non-stress conditions



Dorsal Medial Pre Frontal Cortex (DMPFC)

- Reality testing
- Error monitoring

Dorsal Lateral PFC (DLPFC)

- Top-down guidance of attention and thought

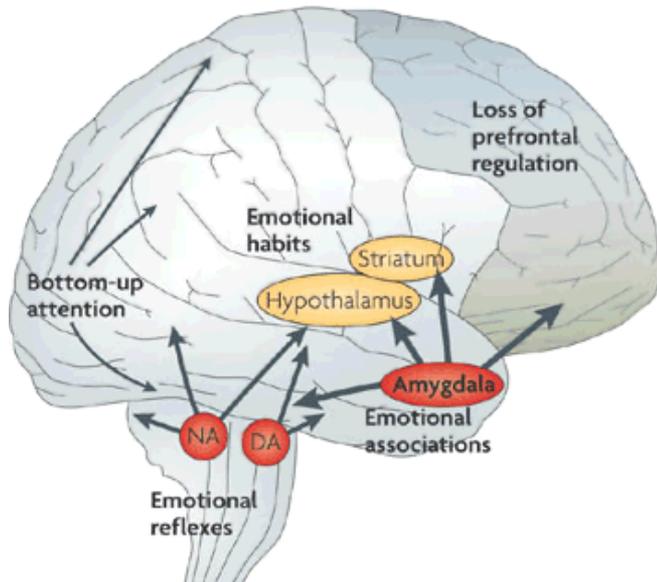
Right Inferior PFC (RIPFC)

- Inhibits inappropriate motor actions

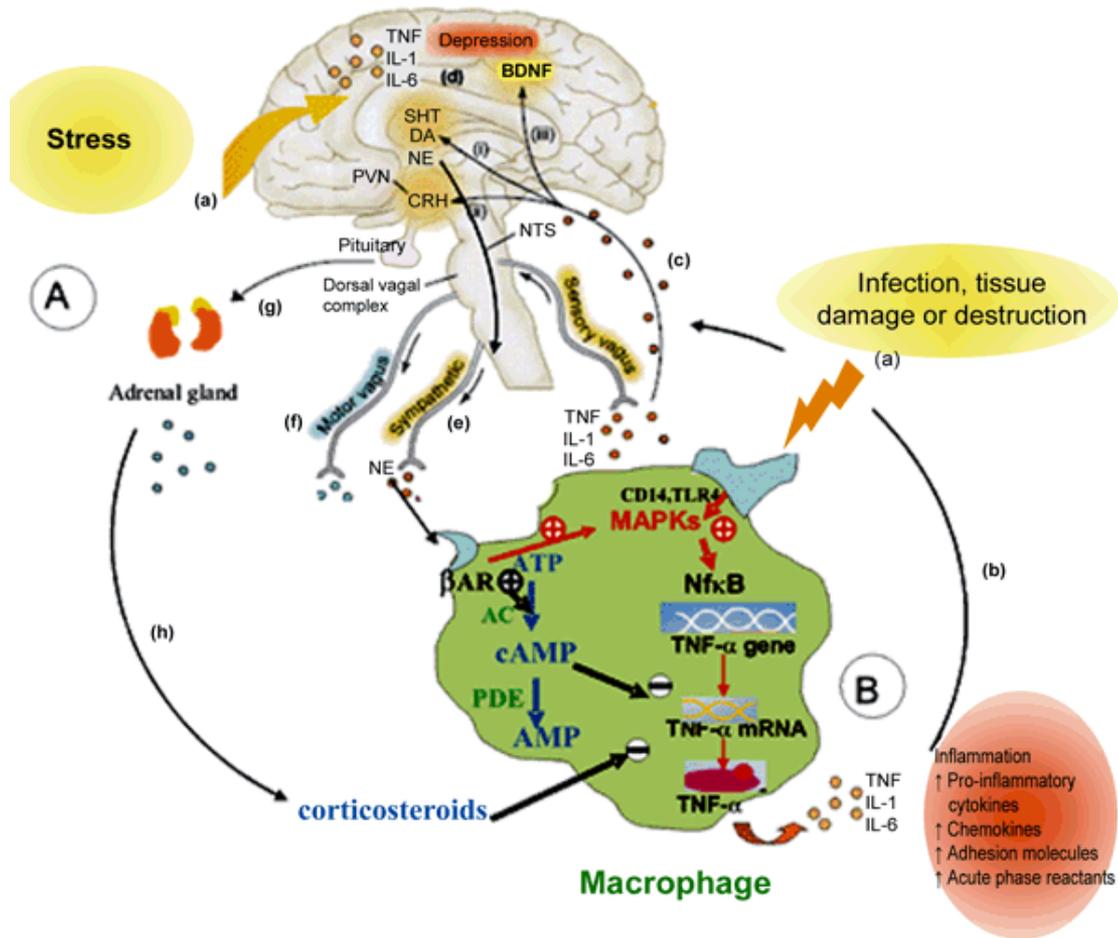
Ventral Medial PFC (VMPFC)

- Regulates emotion

Amygdala control during stress conditions



Your Brain on Stress



HOW **STRESS** AFFECTS THE BODY

BRAIN

Difficulty concentrating, anxiety, depression, irritability, mood, mind fog

CARDIOVASCULAR

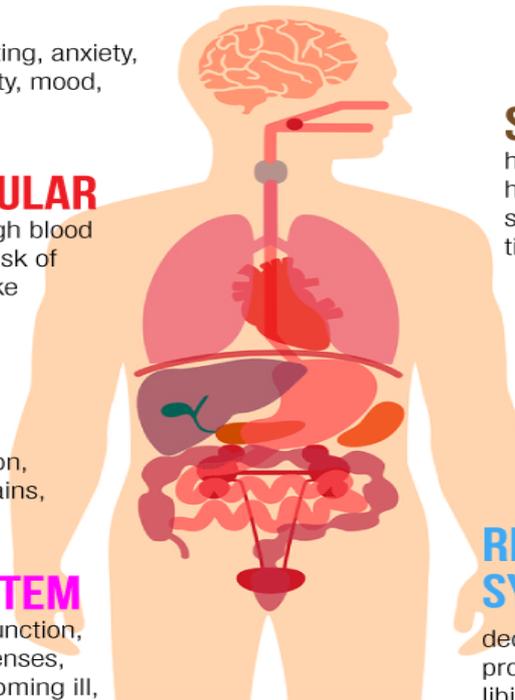
higher cholesterol, high blood pressure, increased risk of heart attack and stroke

JOINTS AND MUSCLES

increased inflammation, tension, aches and pains, muscle tightness

IMMUNE SYSTEM

decreased immune function, lowered immune defenses, increased risk of becoming ill, increase in recovery time



SKIN

hair loss, dull/brittle hair, brittle nails, dry skin, acne, delayed tissue repair

GUT

nutrient absorption, diarrhea, constipation, indigestion, bloating, pain and discomfort

REPRODUCTIVE SYSTEM

decreased hormone production, decrease in libido, increase in PMS symptoms

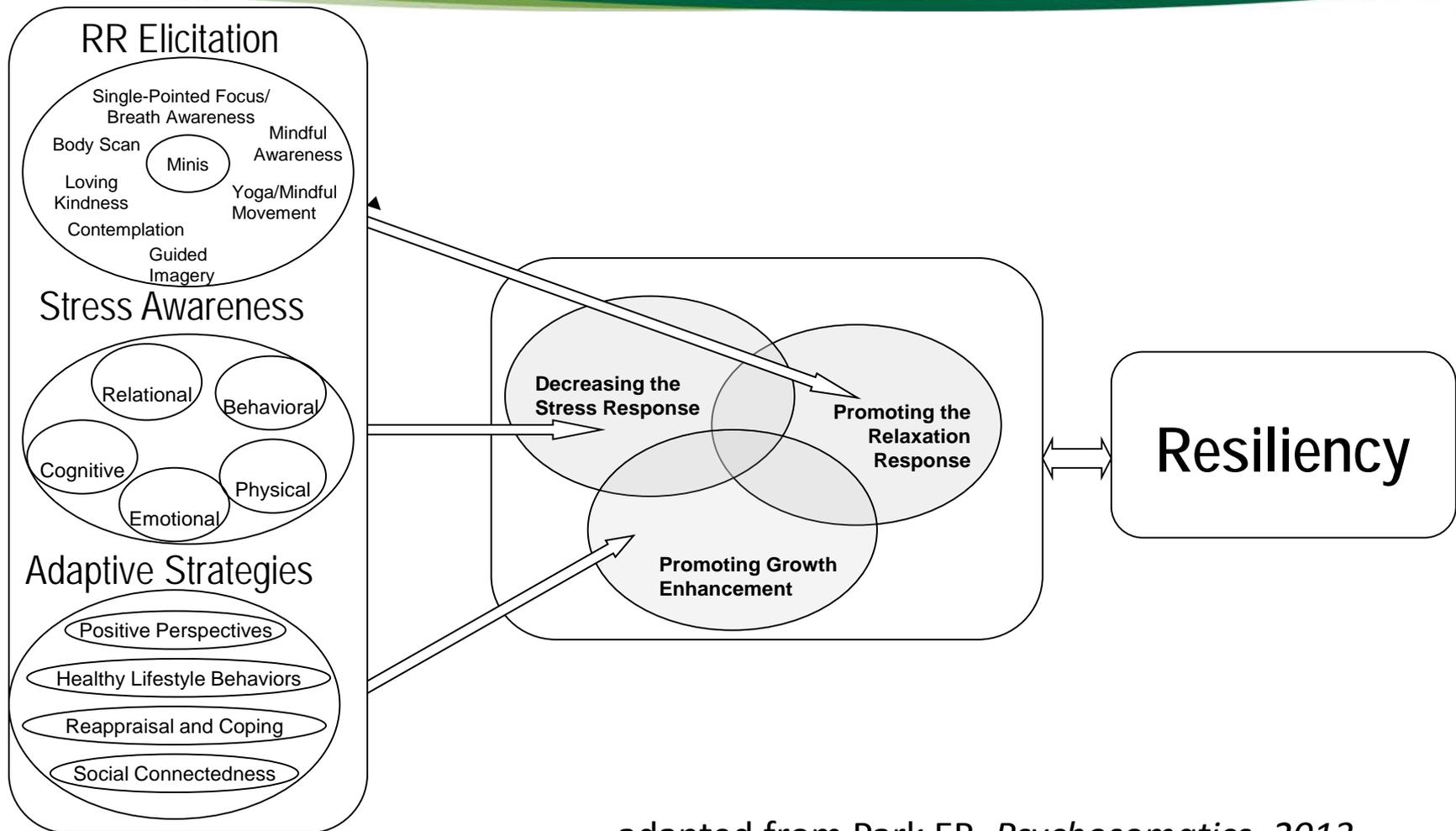
What is SMART?

- Developed over 40 years research at BHI
- Teaches participants resiliency to stress over 8 weeks, 2hr/wk group sessions
- Lots of education, group exercises and homework
- Provides:
 - A wide array of tools inclusive of all interests, personalities and motivation level
 - Includes only evidence-based strategies from:
 - Positive psychology literature
 - Established CBT techniques
 - Life satisfaction, mindfulness & meditative literature

Components of SMART

- ✓ Elaborations on the neuroscience of stress
- ✓ How to elicit the relaxation response (RR) through mindful and meditative practice
- ✓ ID personal response to stress- impact, how to intervene
- ✓ Metacognitive - How we think and how that affects us
- ✓ Retraining prefrontal cortex; promotion of adaptive coping
- ✓ Scientific rationale for resilience-based lifestyle behaviors; i.e., nutrition, exercise, restorative sleep and social support
- ✓ Motivational/behavioral strategies for successful behavior change

SO... What Does SMART Look Like??



adapted from Park ER, *Psychosomatics*, 2013.

Is There Data to Support SMART?

- Palliative care practitioners who took SMART perceived less stress and had increased perspective taking.
- 2015 retrospective study found 4452 MGH patients who took SMART utilized healthcare 43% less the year after taking part.
 - Clinical encounters down 42%
 - Imaging down 50%
 - Lab encounters down 44%
 - Procedures down 21%
 - Emergency room visits down from 3.6 to 1.7/year



Results Continued

- Compared to 13,149 control patients matched for health care utilization, SMART participants had 25% lower utilization across all clinical categories.
- Cost savings estimated to be between **\$640 and \$25,500 per patient per year.**
- Conclusion: SMART could help reduce individual disease burden and utilization of healthcare resources.

Mehta et al 2016; Stahl et al 2015

Why Do This With Healthcare Providers?

The Negative Trajectory of Stress for Healthcare Providers

Stress → Job Burnout

- Job dissatisfaction/absenteeism/job turnover
- Negative emotional states (depression, anxiety, substance use/abuse, suicide)
- Poor physical health (sleep disturbance, chronic conditions, frequent illness)
- Decreased empathy (patient and self)
- Compromised patient quality of care and satisfaction
- Increased medical errors and costs

Burnout: A Very Serious Epidemic

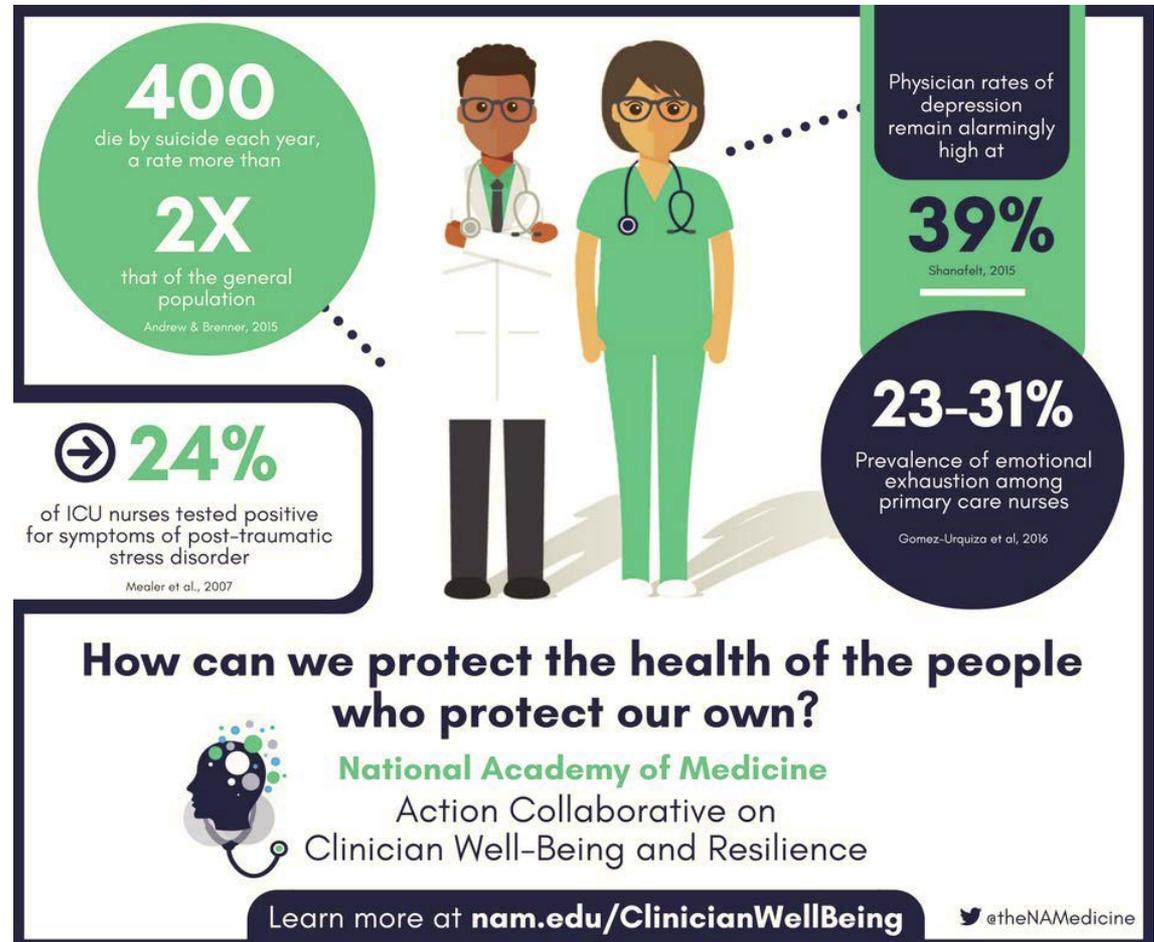
~ 50-75% medical students & resident physicians

~ 54% of attending physicians

~ 37-86% nurses

~ 21-67% mental health clinicians

Dossett 2017



What Did We Do?

Who: Invited 20 leaders and healthcare professionals from the UVMHC, LCOM & CNHS

Age/gender: X=50; 20% male; 80% female

Role: 35% admin; 50% clinical; 10% mix; 5% supervisory

When: 8 Fridays; 8:30-10:30am; Jan-Mar 2017

Facilitators: Researchers from BHI came up from Boston weekly to lead the sessions

Funding: Generously provided through a special employee wellness fund from BlueCross BlueShield of Vermont

Pre/Post Measures

- ✓ Knowledge, Beliefs & Practice of MBM Interventions
- ✓ Perceived Stress Scale (PSS): 10 item; 5 point scale; score range 0-40; lower score = less stress
- ✓ Mindful Awareness and Attention Scale (MAAS): 15 item; 6 point scale; range 15-90; higher score = more mindful/aware/attentive
- ✓ Mid Training, Post Training 8-week and 9 month Follow-Up Qualitative Use and Satisfaction Surveys

Results

- ✓ 90% of these extremely busy professionals - with jobs on and off site - participated in at least 7 of the 8 sessions (Friday mornings)
- ✓ Significant increases were found in their personal use of daily meditation and conscious mindful practice.

(paired t-test; pre/post survey; $t(17) = -4.53, p .000$)

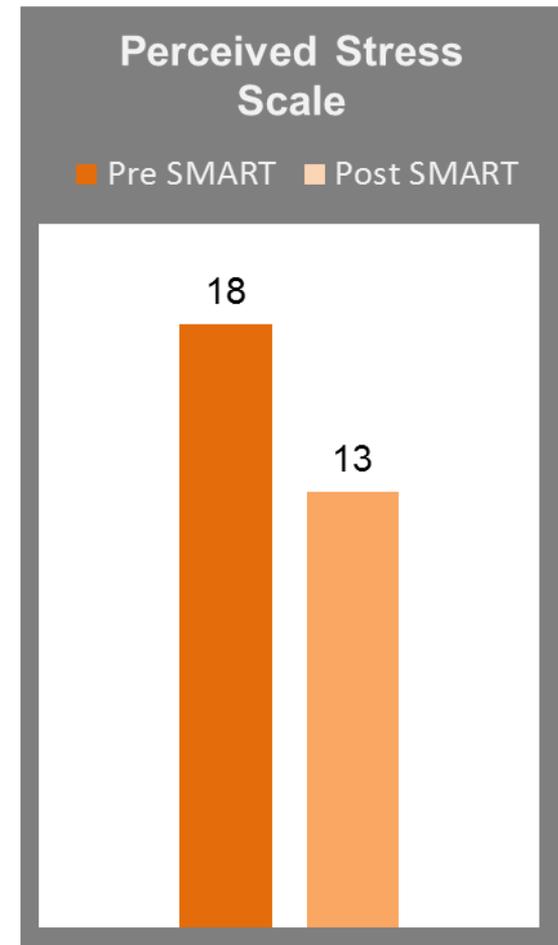


Perceived Stress Scale (PSS)

- ✓ Significant decreases found in perceived stress. (paired t-test; $t(18) = 3.85$, $p = .001$)

Greatest item shifts included feeling:

- Increased control of the important things in life
- Less stress over unexpected events
- Less nervous and “stressed” in general
- More on top of things
- Better able to overcome difficulties
- Less anger due to things out of your control



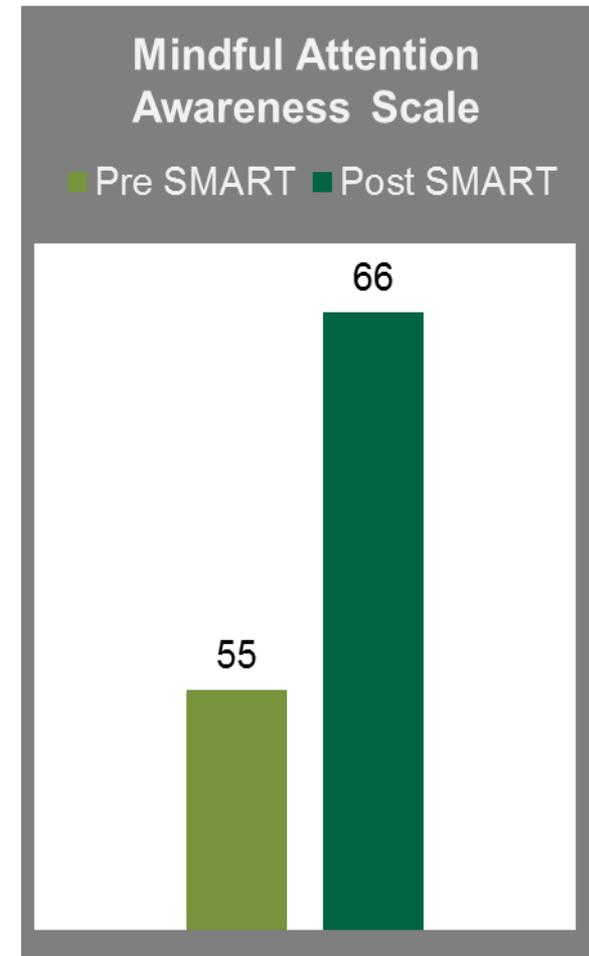
Mindful Awareness & Attention Scale (MAAS)

- ✓ Significant increases found in mindful awareness and attention.

(paired t-test, $t(18) = -4.65$, $p.000$)

Greatest item shifts:

- Less rushing through activities; more concerted directed attention
- Better able to listen with focused attention
- Better staying in and focusing on the present to complete goals
- Less running on “automatic”; greater awareness of “doing”
- Better remembering someone’s name



Follow-Up

- 15/20 came back mid workday for an 8 week reunion
- 86% experiencing positive impact on job burnout
- 93% integrating SMART practice into their professional lives
- 100% experiencing successful integration of extended SMART practice into their personal lives
- 86% wanted ongoing group connection
- 9 month follow up: 12/20 came- 100% were still using SMART principles successfully in personal and professional lives

Participant Comments

- “Wonderful curriculum and practitioners – I enjoyed it and found it very worthwhile.”
- “Excellent exposure to practices, science, group camaraderie, great faculty.”
- “I am so much less stressed now.”
- “I hope we can offer more sessions and get people trained to teach.”
- “Completely enjoyed this – it has expanded the depth of my practices and the services I extend to patients and employees.”
- “...this has been one of the most beneficial trainings I have ever done.”
- “Thank you for this great opportunity.”

Lessons Learned

- 100% of these busy professional endorsed that they very much enjoyed participating in SMART.
- 100% recommended the model for various populations:
 - Other healthcare leaders and administrators
 - All healthcare professionals and employees
 - Medical and nursing trainees
 - Residents and physicians of all kinds
 - Patients of all kinds and their families



Next Steps

- UVM Foundation Grant to certify three SMART facilitators through the rigorous BHI process while providing SMART to two groups of patients with chronic conditions.
- Frymoyer Scholarship with Drs. Laura McCray and Nathalie Feldman to provide a 6-hour, specially designed and abbreviated version of SMART (called SMART-R) to Family Medicine and Ob-Gyn residents to help mitigate burnout and inspire wellness.

Stress Management and Resiliency Training for Residents (SMART-R)



Why ? Back to Burnout...

- ACGME: resident fatigue → resident work hours.
 - Studies show minimal changes in resident wellbeing with time reduction
 - Stress not solely a time problem
- Plea nationally for strategies to mitigate burnout
 - ✓ Individual intervention
 - ✓ Organizational changes
 - ✓ Systemic changes



Solutions

* Mindful Living & Practice

- Studies show physicians who practice mindfully:
 - Provide care that stands out
 - Have improved ability to empathize with patients
 - Are better able to find meaning in their work
 - Are healthier, happier and more balanced people

Translation: Happier
healthier docs → better work
environment → improved
patient care → lower costs



What is SMART-R?

- HMS/MGH residents saw benefits of SMART to patients
- They adapted SMART exercises into an abbreviated 6-hour version for themselves focused on:
 - ✓ Eliciting the RR
 - ✓ Gaining personal stress awareness
 - ✓ Reviewing adaptive coping strategies to learn better ways to manage stress



Frymoyer Grant 2017-19

Nathan, McCray, & Feldman

- Three, two-hour SMART-R sessions with Ob-Gyn and Family Med residents October, January, May
- Texting self care reminders in between
- Evaluating fall-spring changes in
 - Perceived Stress
 - Mindful Awareness Attention
 - Burnout (2-Q)
 - Empathy
 - Knowledge/Beliefs MBM and Practices
 - Program evaluation
- 2nd year: Considering opening up to all residents

UVM Foundation Grant: Volunteers Wanted for Research Study

Criteria: Stable, medically diagnosed chronic condition;
able to commit to coming to 8-weekly sessions

Rule outs: Current group *not* recommended for recent
or acute physical, mental health or substance issues.

Cost: Free (grant funded, \$550 value/patient).

Recruitment now in progress for the first group of 20

- **Tuesdays January 16 - March 6; 5:30-7:30 pm**
- **Location: One South Prospect, UHC Burlington**

Second group April - June, 2018 (dates TBD)

The heart and science of medicine.

UVMHealth.org/MedCenter

SMART for Chronic Conditions

For more information, call (802) 847-1089

or email:

stressmanagement@uvmhealth.org

