



THE UNIVERSITY OF VERMONT  
COLLEGE OF NURSING  
AND HEALTH SCIENCES

# Stress Management & Resiliency Training (SMART) for Nursing Students

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# Acknowledgements

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(Jazwierska, 2018)

*I declare that there are no relationships, conditions, or circumstances that present a conflict of interest relevant to the content of this presentation*

# Introduction

- Nursing students <sup>2,10,13</sup>
  - ↑ Stress & anxiety
  - ↑ Absenteeism
  - Clinical stressors



(Goldman, 2015)

## Background

## HOW STRESS AFFECTS THE BODY

Chronic Nursing Student stress leads to:

- Poor sleep quality
- Learning & academic performance
- ↑ Attrition rates
- Burnout
- Depression
- Suicide

### BRAIN

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

### CARDIOVASCULAR

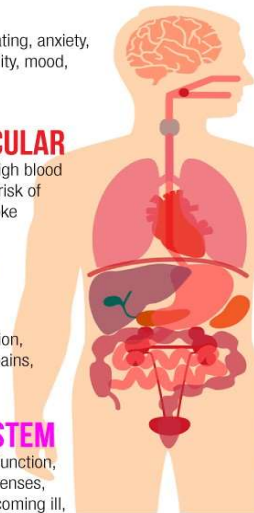
higher cholesterol, high blood pressure, increased risk of heart attack and stroke

### 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

## Background

■ Unmanaged stress & anxiety in nurses leads to <sup>2, 10, 13</sup>

- ▶ ↑ medication errors
- ▶ Adverse patient outcomes
- ▶ Risk for substance abuse
- ▶ Increased RN turnover
- ▶ Suicide

## Rationale & Implications

- Mindfulness programs;
  - ▷ ↓ Stress & anxiety levels <sup>2,3,4,11</sup>
  - ▷ Rarely implemented into nursing programs
- Benson Henry Institute (BHI) Stress Management & Resiliency Training (SMART) program
  - ▷ Not tested with nursing students



(Bucceri, 2020)

## Does the Research Support SMART?

SMART significantly ↓ stress in:

- ▶ Palliative care MDs <sup>12</sup>
- ▶ Faculty researchers, NP's and MD's at MGH

UVM & UVMMC <sup>14, 15, 16</sup>

- ▶ SMART ↑ mindful attention awareness & ↓ stress, anxiety, & depression in:
  - ▶ Patients
  - ▶ Administrators
  - ▶ Medical students
  - ▶ Resident MDs



## Purpose and Aims

1. Establish baseline stress and anxiety levels for 4<sup>th</sup> year B.S. nursing students
2. Evaluate effectiveness of SMART implementation with 4<sup>th</sup> year B.S. nursing students
3. Determine how participation in SMART impacts nurses over time compared to controls



(Jazwierska, 2018)



## Ethical Considerations

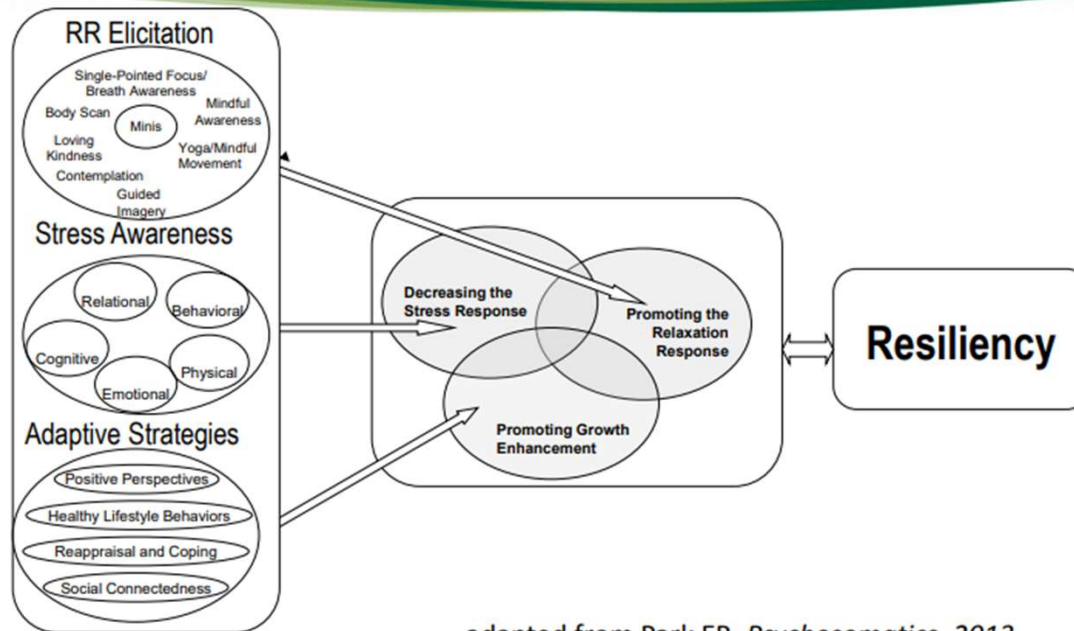
- ▷ IRB determination of “not research” via exemption category 2 – “exempt from IRB review”
- ▷ SMART team did not advise, teach, evaluate 4<sup>th</sup>-year B.S nursing students
- ▷ Participation voluntary
- ▷ Data kept confidential
- ▷ List of mental health resources provided to all participants
- ▷ Protocol established if students developed worsening mental health symptoms

## Intervention

■ Fall, 2020 Semester:

- ▶ Implemented 8-week SMART program w/ 4<sup>th</sup>-year B.S. nursing students (n=14)
- ▶ SMART sessions 1.5 hours per week over Zoom
- ▶ 4<sup>th</sup>-year B.S. nursing students served as control (n=18)

# How Does SMART Work?



adapted from Park ER, *Psychosomatics*, 2013.

## Method

- Longitudinal surveys in REDCap to all participants (n=32)
  - ▶ Pre and Post around SMART in the Fall, 2020 semester
  - ▶ 2<sup>nd</sup> posttest in between graduation and sitting for NCLEX in June 2021
  - ▶ 3<sup>rd</sup> posttest goes out November 2021

## Outcome Measures

### ■ Pre/posttest surveys measured:

- ▶ Mindful attention/awareness
- ▶ Perceived stress
- ▶ Anxiety, & depression symptoms
- ▶ Use of mind-body medicine practices
- ▶ Qualitative survey:
  - ▶ Student perception of stress management opportunities in curriculum
  - ▶ SMART program implementation/satisfaction

## Quantitative Scales

1. Mindful Attention Awareness (MAAS-15)  $\alpha = 0.85-0.93$
2. Perceived Stress Scale (PSS-10)  $\alpha = .86$
3. Anxiety section of the Patient-Reported Outcomes Measurement Information System (PROMIS-29)  $\alpha = .77-.98$
4. Depressive symptoms on the Patient Health Questionnaire-2 (PHQ-2)  $\alpha = 0.86$
5. Custom Mind-Body Medicine survey to measure participants' engagement in mind body practices

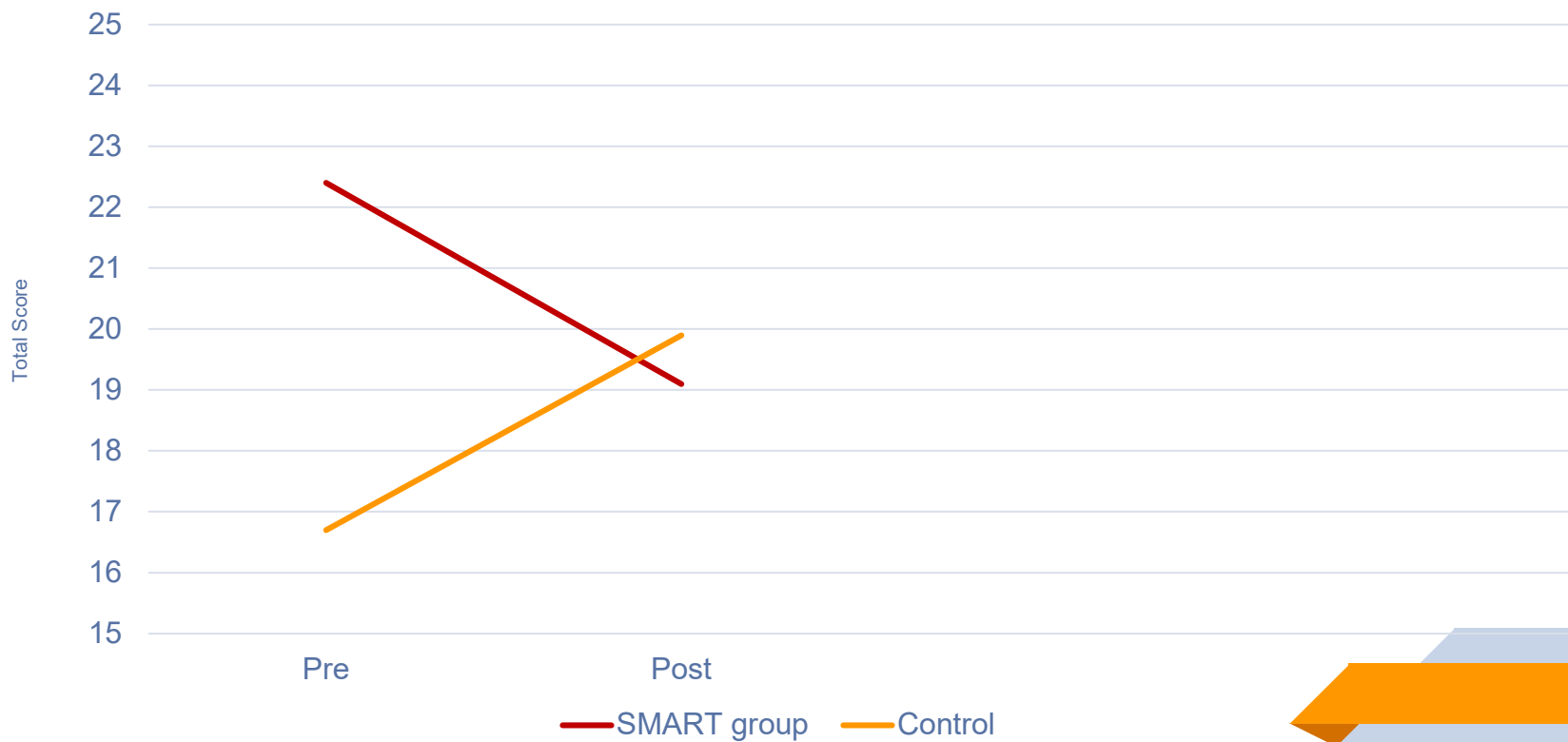


## Results: Pre to Post-1 Changes

- Mindful Attention Awareness Levels
  - ▷ Remained stable for SMART, ↓ for control (p=.00)
- Total Perceived Stress levels
  - ▷ ↓ for SMART (p<.05), ↑ for Control (p=.01)
- Total Anxiety
  - ▷ ↓ for SMART (p<.05), trend towards increased for Control (p=.11)
- Total Depression
  - ▷ ↓ for SMART (p<.05), unchanged for control (p=.3)
- Engagement in mind body practices
  - ▷ ↑ for SMART (p=.003), unchanged for control (p=.5)

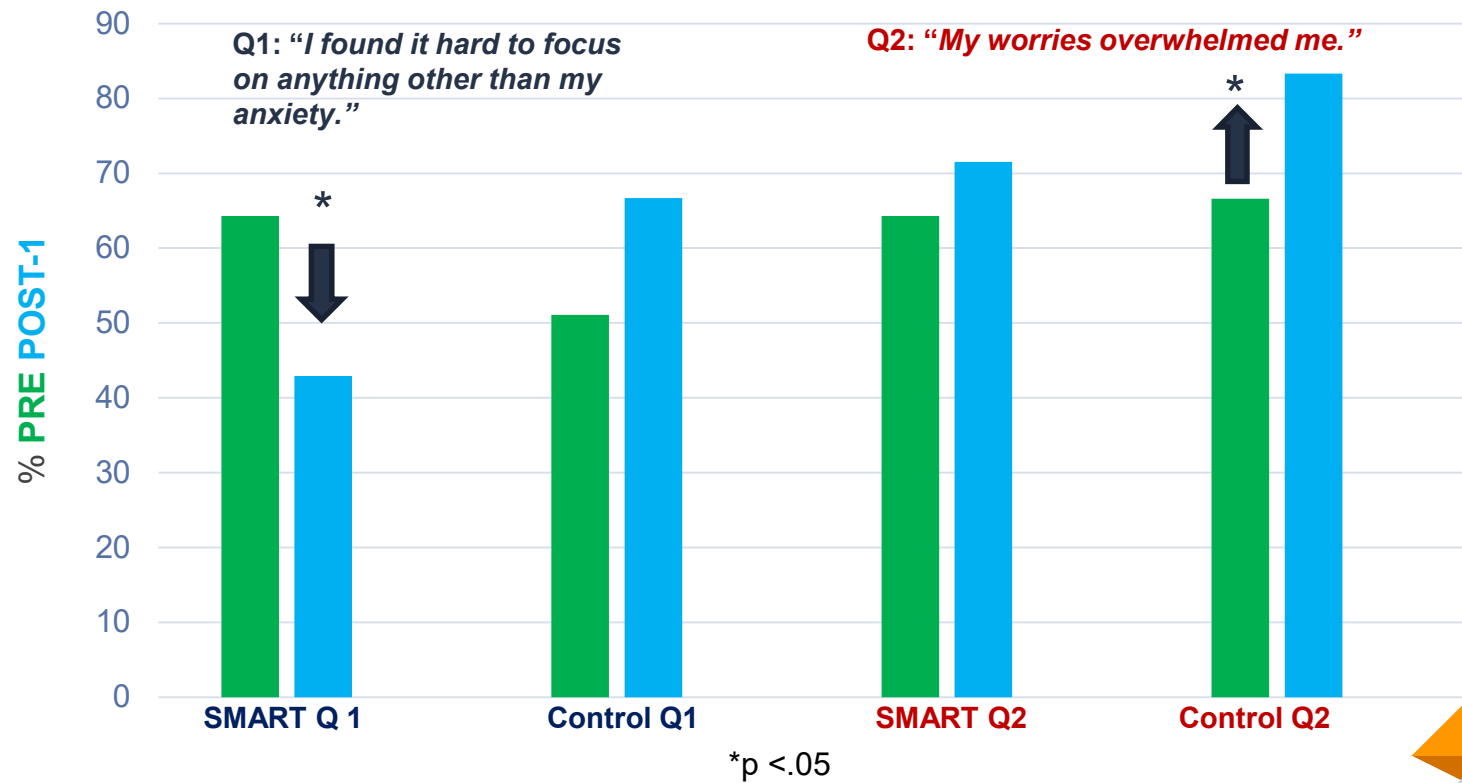
\*p values reported 1 tail (t-test) given known direction of effect and small n (SMART n=14; Control n=18)

## Pre to Post-1 Changes in Nursing Student Perceived Stress

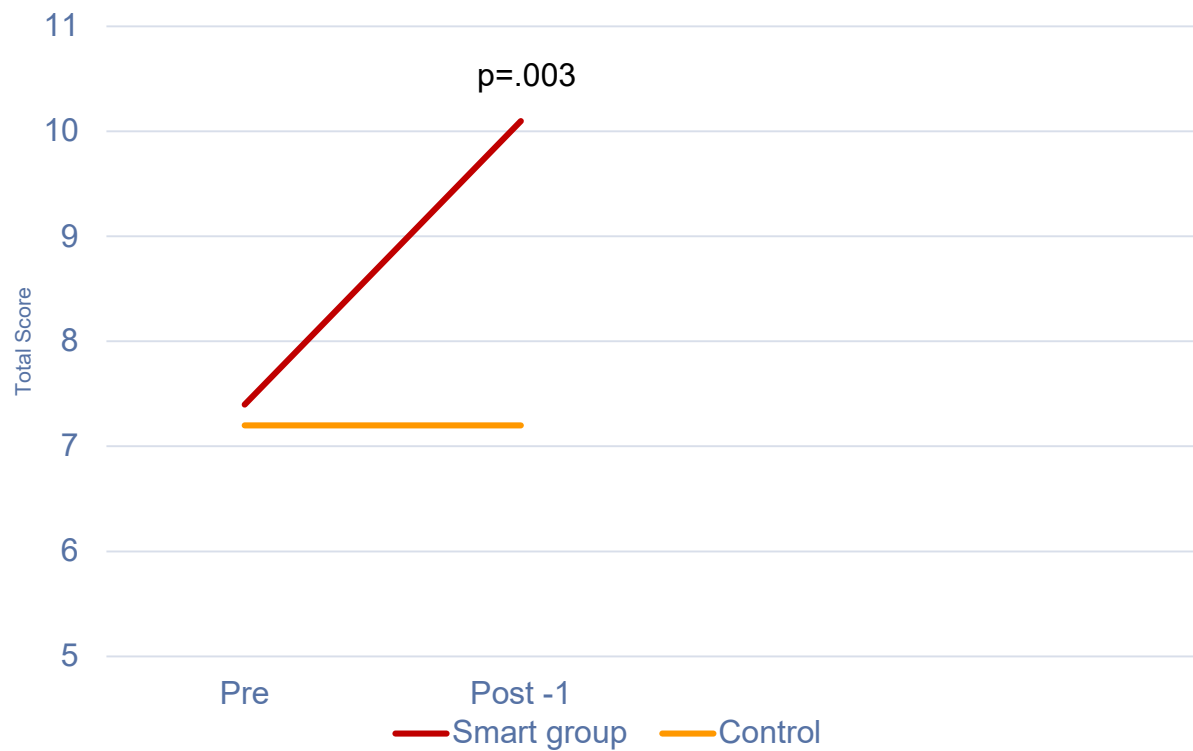




## Anxiety Symptoms: % “often-always”



## Engagement in Daily to Weekly Mind-Body Medicine Practices



- Yoga
- Tai Chi
- Conscious mindful practice
- Exercise
- Meditation

## Control Group End of Semester Posttest-1 Comments

### Control

- ▷ “My mental health has gotten worse”
- ▷ “My anxiety levels have significantly increased since the start of the semester”
- ▷ “Stress like this is unsustainable”
- ▷ “I cannot in good faith enter a field responsible for caring for others if I cannot care for myself”
- ▷ “It feels that all my coping mechanisms are misplaced”



(Hackett, 2021)

## SMART Group End of Semester Posttest-1 Comments

### SMART

- ▶ “I have the time to put myself first, for my own health and the health of my patients.”
- ▶ “I didn't realize how much I needed this, and could not be more grateful for it during this time!”
- ▶ “I learned how to cope with stress and has taught me ways to do this for myself but also to teach patients”
- ▶ “This has provided me with the education and tools to reduce stress in my own life”



(Jazwierska, 2018)

## Satisfaction Survey Results Posttest- 1 Comments

### SMART Group

- ▷ 100% recommended the SMART training
- ▷ 50% prefer virtual (Zoom) SMART and 50% would have preferred in-person training
- ▷ 80% felt all nursing students should be required to take SMART
- ▷ 58% felt SMART should be implemented during sophomore year
- ▷ 93% felt that college credit should be awarded for SMART (if required)

### Control Group

- ▷ 78% interested in a stress management training



## Limitations

- Small sample size
- Participants self-selected into groups
- Predominantly white, female
- Threats to internal validity
  - ▷ Pandemic
  - ▷ Cyberattack
  - ▷ 2020 Presidential Election

## Conclusion

- Nursing students *are* stressed, anxious, & depressed
- SMART was effective in decreasing stress, anxiety, & depression in nursing students
- Nursing students were very satisfied with the program

## SMART Students' Take-Away

- “If you treat your body right, you'll feel better. To take care of yourself so you can take care of others.”
- “This jumpstarted my journey to creating a healthier lifestyle mentally and physically. I now have the tools.”



meditation  
Science  
control stress  
negative into positive  
I have the time  
incorporate mindfulness  
positive thinking  
lifestyle  
mind-body connection  
journey to health  
healthier



## Next Steps

- 3<sup>rd</sup> posttest goes out in November
- Determine financial sustainability
- Implement w/all sophomore level nursing students
- Consider SMART implementation with graduate nursing students & Nurses
- More research is needed
  - ▷ Random sample design to eliminate self selection bias
  - ▷ Virtual vs. in -person SMART

## References

1. Chernomas, W. M., & Shapiro, C. (2013). Stress, depression, & anxiety among undergraduate nursing students. *International Journal of Nursing Education Scholarship*, 10(1), 255-266. <https://doi.org/10.1515/ijnes-2012-0032>
2. Mehta, D., Perez, G., Traeger, L., Park, E., Goldman, R., Haime, V., . . . Jackson, V. (2016). Building resiliency in a palliative care team: A pilot study. *Journal of Pain and Symptom Management*, 51(3), 604-608. <https://doi.org/10.1016/j.jpainsymman.2015.10.013>
3. Nathan, J., McCray, L., & Feldman, N., (2021). The text effect: Stress management and resiliency training pilot for resident physicians. *Family Medicine*. 53(2):139-144. <https://doi.org/10.22454/FamMed.2021.847102>.

\*Scan for full reference list



OR visit: [flowcode.com/p/AnmWXjh7z?fc=0](https://flowcode.com/p/AnmWXjh7z?fc=0)