

# Medical Students, Stress and Coping Skills: Taking a Look

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# Content

- Definitions
- What we know about medical students
- Studies
- Our study focus
- Qualitative themes
- Scales
- Data
- Resources for students



# Learning Objectives

- 1) Define burnout, stress and coping in the context of medical student education
- 2) Identify medical students' ability to cope compared to others
- 3) Identify various types of coping skills
- 4) Explain VTCSOM coping study results to date



# Definitions

- Stress-an unpleasant feeling resulting from external demands
- Coping-cognitive and emotional attempts to deal with internal or external demands of an encountered situation
- Burnout-emotional exhaustion, depersonalization, decreased personal accomplishment
- Resilience-ability to rebound from a stressful experience



# Stressors

- Work more hours than other students
- High workload
- Broadness of studies
- Exam frequency
- High expectations
- Little time for hobbies
- Social isolation
- Competition
- Confronted with topics like death and grief



# What Do We Know from the Literature?

- Up to 90% of medical students experience stress
- There is a relationship between stress and depression.
- US and Canadian medical students have higher levels of distress than general population.
- Females > males in distress
- ½ of students have burnout
- 10% have suicidal ideation



# Other tidbits

- Ability to cope can impact academic success and emotional health
- Have stress in Years 1 and 2; transition to clinical setting is also distressing, perhaps for different reasons (e.g., imposter syndrome)
- Medical students w higher stress tend to have lower academic scores, which in turn increases stress and further impacts academic performance
- Majority of preclinical and clinical students use active coping strategies for stress; active coping strategies associated with higher life satisfaction
- Emotional coping mechanisms associated with more distress and depression.



# Study: Canadian Medical Students

- Medical students are not more resilient nor better equipped with coping skills than peers in the population

# Effects of burnout

- High prevalence of burnout and depression among US medical students has been documented (Dyrbye et al, 2019)
- Nearly 6 X more likely to discontinue their education
- Two surveys at VTCSOM/Carilion (At risk for burnout, Maslach scale):

	Percent 2016	Percent 2019
Medical Students	48%	60%

Scoring:  $\geq 27$  on EE subscale  
 $\geq 10$  on DP subscale

Alpha Scale Reliability=.78



# Effect on patients?

- Clinician distress and burnout likely decreases empathy for patients and potentially impacts patient care negatively.
- Physician well-being and related issues (e.g., depression, dissatisfaction) “associated with suboptimal patient care, lower patient satisfaction, decreased access to care and increasing health care costs” (JAMA, Charter on Physician Well-Being, March 2018)



# Our Study



This part of the presentation has been embargoed because the VTCSOM study is ongoing.



# Resources

- Office of Academic Counseling and Enrichment Services.
  - Peer educator program
  - Faculty/student mentoring program
  - Step prep resources
- Potential Accommodations - Carrie Knopf and [VT Services for Students with Disabilities.](#)



# Resources

- VTCSOM (and VT), recognizing the unique stresses of students and particularly health professions students, have increased resources and access to resources:
  - Cook Counseling Center
  - [Timely Care](#)



# Resources

- [Wellness Weekly](#)
- [Other wellness resources](#)
- Student Commons, Wellness Room, Center for Inclusion, Gyn
- Carilion Wellness Membership
- Wellness programming, partnering with Hokie Wellness and FBRI



# What Can We Learn from This Study?

- Students' stress levels vary considerably by year but are generally elevated (medical school is inherently stressful!); but sometimes feel overwhelmed
- Students are self-critical (imposter syndrome is real)
- Students could improve on seeking help from others (socialization as rugged individualists)
- Data are fairly consistent across the two classes
- VTCSOM has many resources available in support of our students



# References

Resilience, stress, and coping among Canadian medical students. Rahami, Baetz, Bowen, and Balbuena, Canadian Medical Education Journal, 2014, e5-e12

How to Cope with the Challenges of Medical Education? Stress, Depression, and Coping in Undergraduate Medical Students. Steiner-Hofbauer and Holzinger, Academic Psychiatry, 2020, -p 380-387

Medical Students' Use of Different Coping Strategies and Relationship With Academic Performance in Preclinical and Clinical Years. Schiller, Stansfield, Belmonte, Purkiss, Reddy, House et al, Teaching and Learning in Medicine, Volume 30, 2018, Issue 1

Medical School Strategies to Address Student Well-Being: A National Survey. Dyrbye LN et al. Academic Medicine 2019; 94(6):861-868.

# Questions or Comments?



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