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Medical Student Burnout in a Small-Sized Medical School

Adam Y. Chan

East Tennessee State University

Elizabeth Farabee

East Tennessee State University

Grace Wholley

East Tennessee State University

Peter Blosser

East Tennessee State University

Jordan L. Herring

Medical College of Georgia

See next page for additional authors

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Author Names

Adam Y. Chan, Elizabeth Farabee, Grace Wholley, Peter Blosser, Jordan L. Herring, and Richard L. Wallace

Introduction

Medical students' varied manifestations of psychological distress (e.g. burnout, depression, low mental QOL, stress, fatigue), their reluctance to seek help, and the potential serious consequences of their distress underscore the need for screening and identifying the students in greatest need of individualized attention. Burnout is an occupational condition characterized by emotional exhaustion, depersonalization, and a low sense of personal accomplishment. While medical students begin schooling with mental health profiles similar to or better than peers who pursue other careers, there is a downward trajectory throughout school suggesting this phenomenon often originates in medical school. For physicians and residents, burnout has been linked to poor outcomes such as patient safety, might contribute to suicidal ideation and substance abuse, and may undermine professional development.

49.6%

Medical Students¹

50.0%

Resident/ Fellows¹

37.3%

Early Career Physicians¹

Methods

Medical Student Well-Being Index (MSWBI)

The MSWBI was invented by Mayo Clinic and is a reliable tool that helps medical schools and individuals screen psychological well-being. The self-reported survey evaluates fatigue, depression, burnout, anxiety/stress, and mental/physical quality of life (QOL) in medical students. It has been validated with a threshold score of ≥ 4 to have a sensitivity and specificity of over 90% in identifying students with low mental QOL or recent suicidal ideation/serious thoughts of dropping out.²

Methods (cont.)

Participants & Recruitment

Eligible participants were recruited from the ETSU Quillen College of Medicine and must be enrolled full-time as a medical student in their respective class from Fall 2017 to Spring 2019 terms. Each year, surveys were conducted in the middle of the school year. Omitted (n=2) results due to incomplete responses. IRB approval was obtained from East Tennessee State University prior to their surveying in 2017 to 2019.

Participant response rate: (420/491 = 85.5%)

Table 1. Demographic Characteristics

	Male	Female
Total (N=349)	195	154
Class of 2018 (n= 70)	46	24
Class of 2019 (n=63)	40	23
Class of 2020 (n=72)	36	36
Class of 2021 (n=70)	40	30
Class of 2022 (n=74)	33	41

Table 2. MSWBI Scoring Criteria

Item	Points assigned	
	Standard Scoring Well-being	Weighted Scoring to stratify risk of suicidal ideation
1. have you felt burned out from your work?	1	0
2. have you worried that your work is hardening you emotionally?	1	0
3. have you often been bothered by feeling down, depressed, or hopeless?	1	5
4. have you fallen asleep while stopped in traffic or driving? (or have you fallen asleep while sitting inactive in a public place)	1	0
5. have you felt that all things you had to do were piling up so high that you could not overcome them?	1	1.5
6. have you been bothered by emotional problems (such as feeling anxious, depressed, or irritable)?	1	5
7. has your physical health interfered with your ability to do your daily work at home and/or away from home?	1	1.5

Methods (cont.)

Data Analysis

Unpaired T-test comparison was used to determine significance for unweighted and weighted scoring criteria against a national normative sample group (N=4324).

Results

Figure 1. Percentage of Each Class Meeting "At-Risk" Criteria

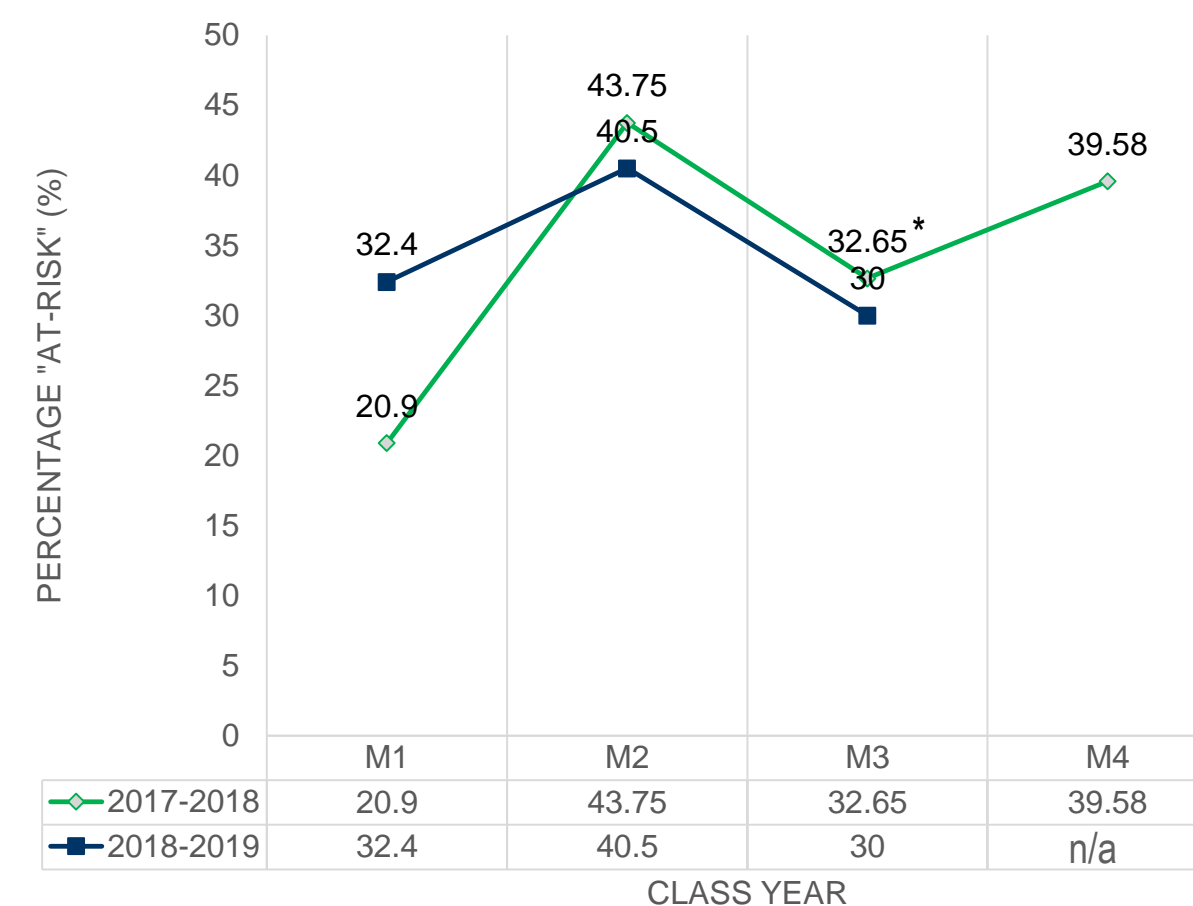
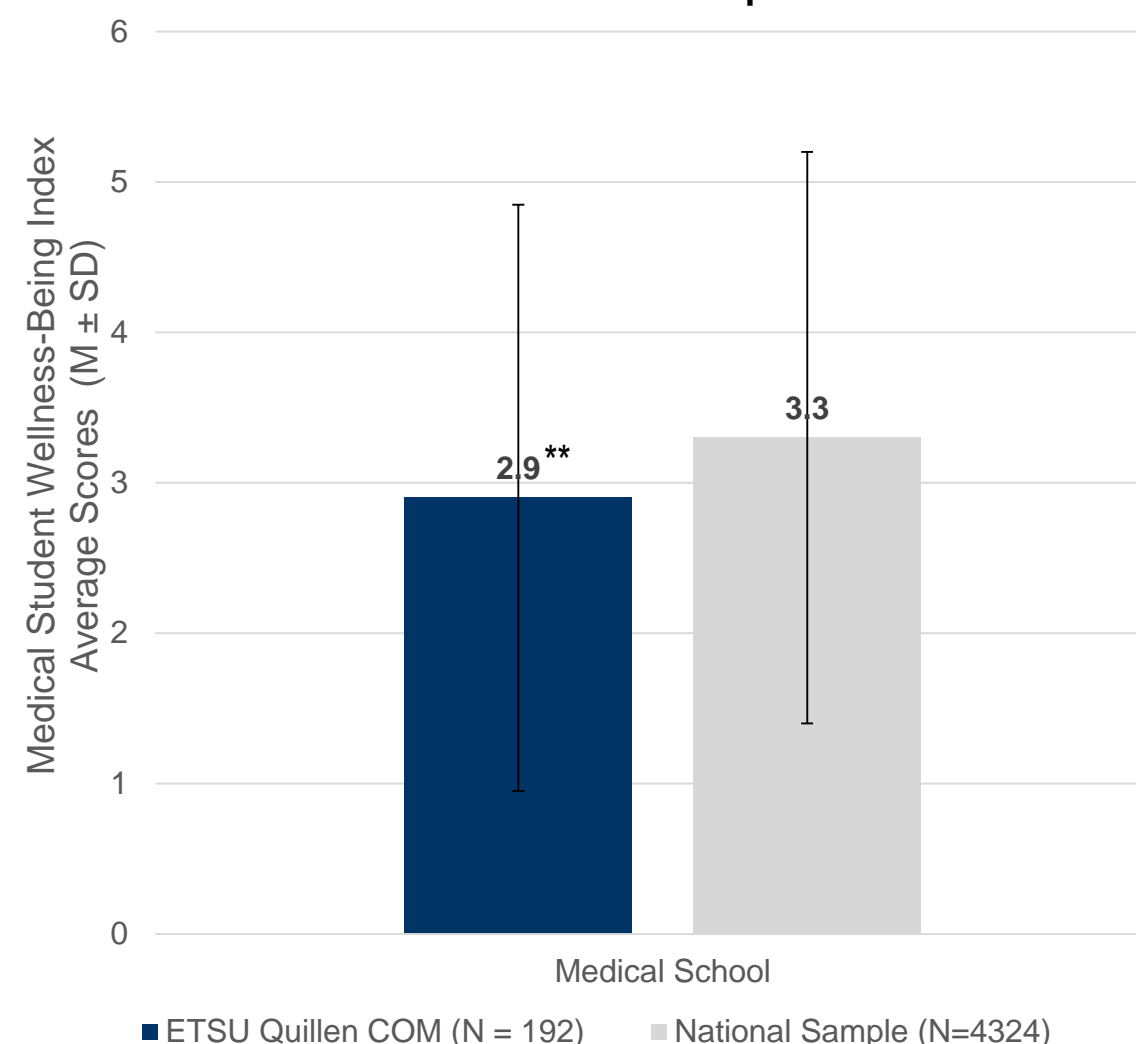


Figure 2. Comparison of average WBI scores in 2018-2019 of ETSU Quillen COM versus National Sample



Summary

Quillen M1-M3s (N=192) in 2018-2019 reported a statistically significant (P value = 0.01, CI = -0.64, -0.09) lower risk for burnout, QOL, and suicidal ideation compared to the national sample group (N=4324). There was a reported 39.1% of the M1-M3s that met "at-risk" criteria. In both 2017-2018 and 2018-2019, the M2 year has the highest reported "at-risk" score at 40.5%. The M3 year reported a lower mean score (2.6 ± 1.9) compared to the national sample (3.3 ± 1.9) (P value = 0.004, CI = -1.2, -0.23).

Discussion

Quillen recently adopted the "pass/fail" system for the 2019-2020 academic year for the first two basic science years. It would be interesting to evaluate responses from transitioning to medical school to the middle of the academic year for M1 and M2s to see if it follows national trends and set a baseline for assessing changes in a class. Gender differences can be seen between the medical school classes. The 2018-2019 M4 data could not be obtained at the time of the presentation. In 2017-2018, the M4s participated and self-reported pre-Match, and in 2018-2019, the surveys were distributed after Match Day. Results from this study can help guide decision making from institutions and allocate limited-resources more purposely to M2 and M4 academic school years.

References

¹ Dyrbye, L.N., West, C.P., Satele, D., Boone, S., Tan, L., Sloan, J., & Shanafelt, T.D. (2014). "Burnout among US medical students, residents, and early career physicians relative to the general US population." *Acad Med*, 89(3), 443-451.

² Dyrbye, L.N., Schwartz, A., Downing, S.M., Szydlo, D.W., Sloan, J., Shanafelt, T.D. (2011). "Efficacy of a brief screening tool to identify medical students in distress." *Acad Med*, 86: 907-914.

Acknowledgements

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