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# Physical Activity in Matriculating and Senior Medical Students at the University of New Mexico



Ethan Prairie, MSIV, Nancy Shane, PhD, Elizabeth Lawrence, MD

## INTRODUCTION

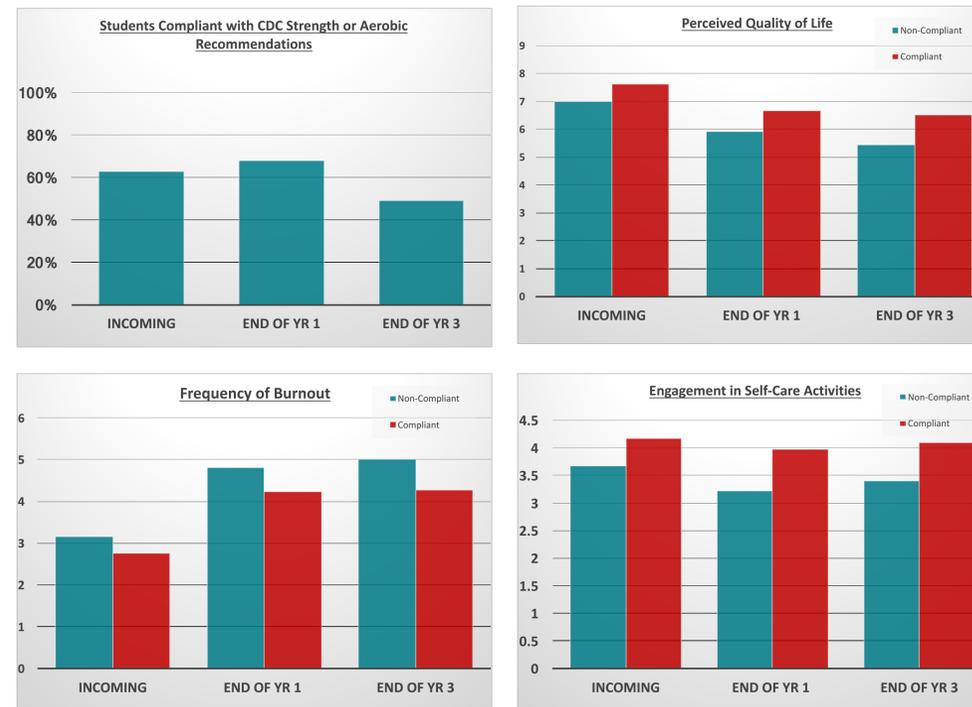
- Medical students experience high rates of burnout and depression.<sup>1,2</sup>
- Physical Activity (PA) is known to improve perceived quality of life and rates of burnout in medical students.<sup>3</sup>
- We sought to understand the exercise habits of University of New Mexico School of Medicine (UNM SOM) medical students in different phases of the curriculum and to determine if there was a relationship between the amount of exercise students engage in and their levels of burnout, perceived quality of life, and self-care.

## METHODS

- Since 2017, all UNM SOM students have been asked to complete an electronic, confidential wellness survey at matriculation, at the end of their 1st year, and at the end of their 3rd year of medical school.
- We analyzed surveys ( $n=414$ ) from the Classes of 2019-2022 using CDC recommended PA guidelines.\* Meeting either the aerobic or strength training guidelines was the threshold to determine whether students were exercising adequately.
- Independent T-tests were performed to test the hypotheses that meeting CDC aerobic or strength training guidelines was associated with lower burnout, improved perceived quality of life, and more self-care.

## RESULTS

- 47.8% of UNM medical students surveyed met CDC aerobic recommendations, 48.3% met CDC strength-training recommendations, 58.7% met either CDC aerobic or strength-training recommendations, and 36.5% met both sets of recommendations.
- CDC compliance decreased significantly in 3rd year students compared to matriculating and 1st year students ( $p < .001$ ).
- Across time periods, the wellness domains of compliant students were nearly always significantly higher than those of non-compliant students ( $p < .05$ ).



**Burnout, on a scale of 1-7, 7 being highest frequency of burnout**

Phase of Curriculum	CDC Compliant	Non-Compliant	p value
Matriculating ( $n=109$ )	2.75	3.15	.15
End of Year 1 ( $n=154$ )	4.24	4.80	.04
End of Year 3 ( $n=151$ )	4.28	5.01	<.001

**Quality of Life, on a scale 0-10, 10 being highest perceived QOL**

Phase of Curriculum	CDC Compliant	Non-Compliant	p value
Matriculating	7.6	7.0	.04
End of Year 1	6.8	5.9	.04
End of Year 3	6.5	5.4	<.001

**Self-Care, on a scale 1-5, 5 being engaging in more self-care**

Phase of Curriculum	CDC Compliant	Non-Compliant	p value
Matriculating	4.17	3.67	<.001
End of Year 1	3.98	3.22	<.001
End of Year 3	4.08	3.40	<.001

## DISCUSSION

- Our study is consistent with previous findings that PA is related to a decrease in burnout in medical students.<sup>3</sup>
- Our study is the first study, to our knowledge, to assess PA levels in different phases of medical school training.
- Medical students should be encouraged to exercise as a means of improving their perceived quality of life, reducing burnout, and enhancing self-care.

## CONCLUSIONS:

- Compliance with recommended PA levels decreases from matriculation to 3<sup>rd</sup> year of medical school.
- 3<sup>rd</sup> year students who meet CDC aerobic or strength-training guidelines have lower rates of burnout, higher perceived quality of life and engage in self-care activities more often than those who don't.
- Further research is needed to identify barriers to meeting these guidelines and to design interventions that successfully overcome these barriers.

### \*CDC PA GUIDELINES:

The CDC recommends adults get at least 150 min/week of moderate intensity, or 75 min/week of vigorous intensity aerobic activity. Adults are also advised to do muscle-strengthening activities involving all major muscle groups at least 2x/week.<sup>4</sup>

## REFERENCES

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