



Exercise & Depression in Osteopathic Medical Students

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Hypothesis

Osteopathic students may have a better mental health profile compared to allopathic students and want to determine:

- 1) Prevalence of depression amongst NoordaCOM osteopathic medical students
- 2) Correlation of exercise with the degree of depression
- 3) Whether the application of the osteopathic principles and tenets play a role in their mental health and correlate with their level of physical activity

Methods & Materials

Students are invited to participate in a paper survey comprised of 26 questions divided into 5 sections: the Beck Depression Inventory (BDI-ii), Morgenstern Exercise Survey (MES), survey questions related to osteopathic tenets, and general demographics.

The BDI-ii instrument has been shown to correlate with clinicians' ratings of depression.² The prevalence of no, light, moderate, and severe levels of depression will be obtained. Students will be able to determine their scores. Participants can detach the cover letter and their score. They are encouraged to seek advisement and counseling if they receive moderate and severe levels of depression.

The MES is a short physical activity survey that captures all types and levels of exercise which can be appropriately applied to medical students' lifestyles.

Osteopathic-tenet survey questions inquire about:

- 1) "Do you feel that your values towards mental health and exercise align with an osteopathic mindset?"
- 2) "Do you feel that your values towards mental health and exercise played a factor in applying to osteopathic medical school?"

Institutional culture affects student health

Background

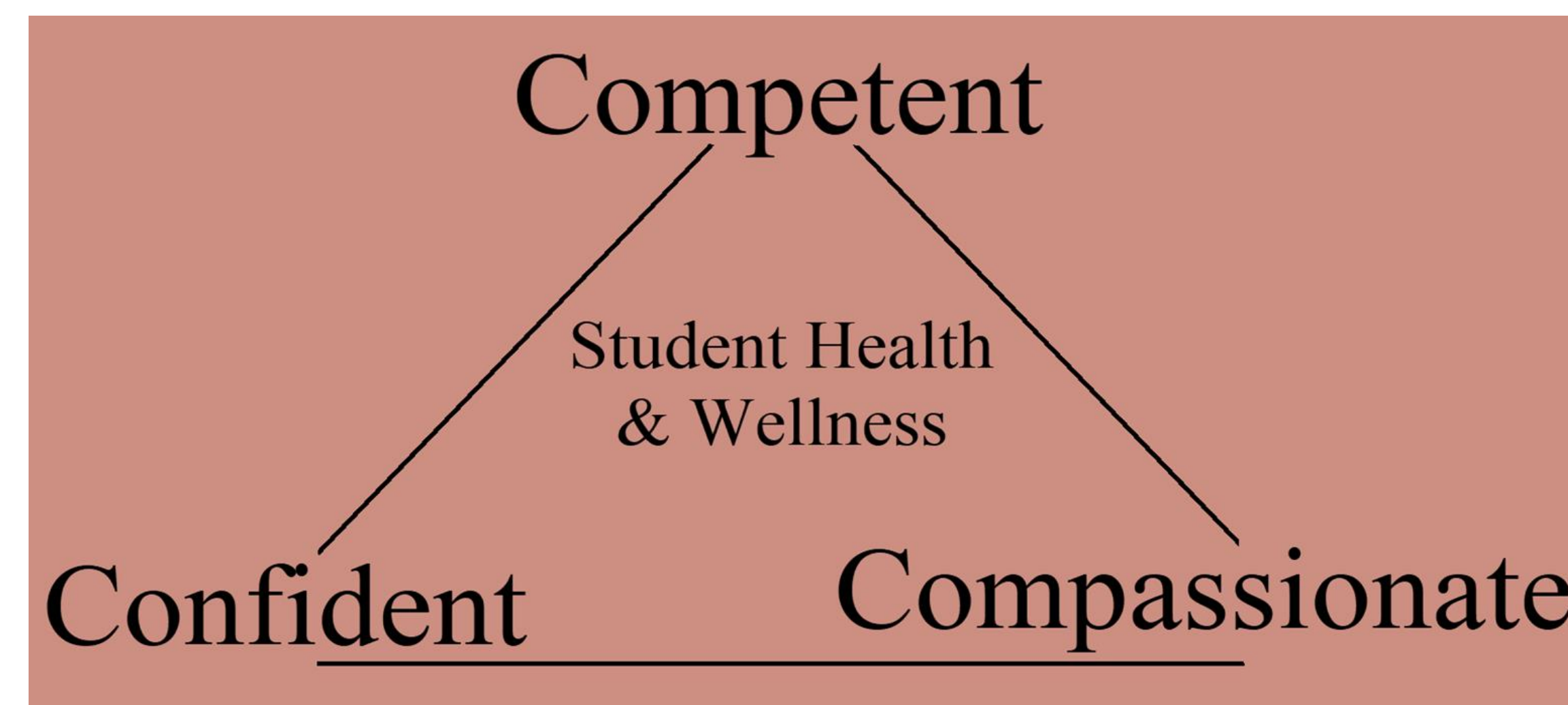


Figure 1. At the heart of NoordaCOM's mission to produce competent, confident, and compassionate physicians is a focus on its students' health and wellness.

The NoordaCOM curriculum emphasizes and integrates wellness. The campus environment is very supportive to the student body. The rigorous preclinical curriculum, exams, and the striving for performing well can be very stressful for medical students.

A 2016 systematic review estimated that 27% of allopathic medical students had depression or depressive symptoms and 11% had suicidal ideation.¹ These rates are higher than the general population. Additionally, these studies did not include osteopathic medical students.

The osteopathic principles advocate a balance "between the body and mind" and not much literature is available regarding how wellness and the osteopathic tenets play a role in the daily lives, mental health and wellness of osteopathic medical students.

A 2018 study examined 1st year osteopathic medical students' attitudes towards importance of physical activity and priority placed on exercise. This importance can also be translated to exercise counseling for their future patients.

Preliminary Results:

- **Response rate:** 42% (94/225)
- **Levels of depression:**
 - None-66% (32 Male; 29 Female)
 - Light/MMD-25% (14 Male; 9 Female)
 - Moderate-4% (3 Male; 1 Female)
 - Severe-1% (1 Male)
- **Exercise hours:**
 - ≤5hrs/week: Light 80%, Moderate 88%, and Vigorous 72%
 - 6-19hrs/week: Light 16%, Moderate 6%, and Vigorous 22%
- **Osteopathic alignment:**
 - 87% strongly agree/agree that their values align with an osteopathic mindset
 - 65% strongly agree/agree that their mental health and exercise were a factor in osteopathic medical school application

Conclusions

The research is ongoing and requires further statistical analysis. The issue with students and moderate to severe levels of depression needs to be addressed. Students spend up to 5hr/week with combinations of light, moderate, and vigorous exercise. NoordaCOM campus environment and the alignment of osteopathic tenets may contribute to decreased prevalence of depression amongst NoordaCOM students.

References

1 Dyrbye LN, Thomas MR, Shanafelt TD. Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. Acad Med. 2006;81(4):354-73.

2 Beck A, Steer R, Garbin M. Psychometric properties of the Beck Depression Inventory: twenty-five years of evaluation. Clin Psychol Rev. 1988;8:77-100.