



Optimism and Step 1

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Abstract

Background

Optimism is a personality trait that correlates with improved coping skills, physical health, and emotional wellbeing. Various interventions have been shown to increase optimistic thinking. To date, there have been few investigations into the effect of optimism on academic performance.

Methods

Beginning in February 2019, one week after completing their foundational sciences curriculum, 2nd year medical students (n=112) at the Indiana University School of Medicine completed the Life Orientation Test-Revised (LOT-R), which assesses dispositional optimism. The correlation between Optimism scores and Step 1 exam scores were examined.

Results

There was a small positive correlation (Pearson $r = 0.257$) between Optimism scores and Step 1 exam scores ($p = 0.006$).

Conclusions

Optimism may be a potentially significant factor associated with medical student performance. Interventions to increase optimism may prove useful for improving student academic performance and possibly their overall wellbeing.

Methods

Beginning in February 2019, one week after completing their foundational sciences curriculum, 2nd year medical students at the Indiana University School of Medicine were invited to complete the Life Orientation Test-Revised (LOT-R), which assesses dispositional optimism.

The LOT-R includes 6 statements scored on a 5-point Likert Scale from "I disagree a lot" to "I agree a lot". Examples of statements included: *In uncertain times, I usually expect the best; If something can go wrong for me, it will; Overall I expect more good things to happen to me than bad*". Negative statements are reversed scored.

Higher scores indicate a higher level of optimism. Students were instructed to complete the LOT-R before sitting for the Step 1 exam between February and April of 2019.

The correlation between Optimism scores and Step 1 exam scores was examined using Pearson r . Indiana University Institutional Review Board approval was obtained and students consented to participate.

Discussion

Participants in this study had similar scores to the reported population norms for Optimism and Step 1 scores (22.1 and 233, respectively)^{3,4}.

The results of this study showed a small, though significant, positive correlation between Optimism Scores and Step 1 Exam scores. This may indicate that the development of positive coping mechanisms such as optimism are a potential intervention for improving student performance. However, the main constraint of this study was the inability to establish a causal relationship between the two variables.

With the recent change in Step 1 scoring to pass/fail, it will be less evident whether optimistic thinking has an impact on standardized test scores. It is also unclear whether the results of this study are generalizable to each student's overall academic performance.

Introduction

Optimism is a personality trait that correlates with improved coping skills, physical health, and emotional wellbeing.¹ Various interventions have been shown to increase optimistic thinking, such as cognitive behavioral therapy.²

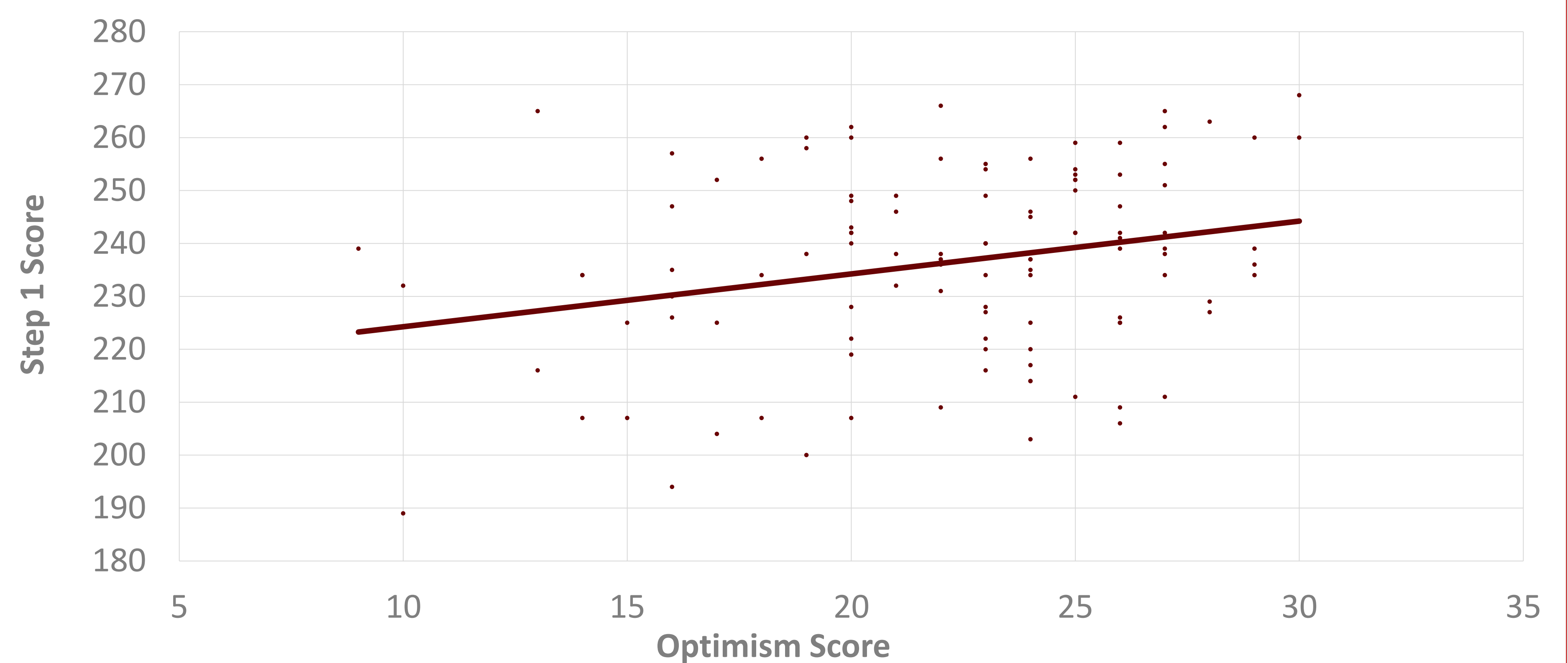
To date, there have been few investigations into the effect of optimism on academic performance. For medical students, the USMLE Step 1 exam is a significant stressor that has a large impact on future career options.

Results

	Optimism Score	Step 1 Score
Number of Subjects	115	112
Mean	22.0	236.4
Median	23	238
Minimum value	6	189
Maximum value	30	268

Scatter plot of optimism scores vs Step 1 scores.

Pearson Correlation = 0.257, $p = 0.006$, $N = 112$



Conclusions

Optimism may be a potentially significant factor associated with medical student performance, specifically on the USMLE Step 1 exam.

Further research should investigate if a causal relationship exists between the two factors. If such a relationship is found, interventions specifically targeted to increase optimism may prove useful for improving student academic performance and possibly their overall wellbeing.

References

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