

High Emotional Intelligence is Associated with Lower Medical Student Burnout in the Clinical Year

Introduction and Research Questions

Burnout is defined as a state of emotional, cognitive and physical exhaustion that emerges in response to chronic interpersonal and occupational stressors. The prevalence of medical student burnout is high (up to 50%). Emotional Intelligence (EI) is a trait that has been found to predict burnout in nurses, residents, and physicians, but there continues to be a gap in knowledge about the association between EI and burnout among medical students.

Objective: The purpose of this study was to measure and describe the association between EI and burnout in medical students attending a United States medical school.

Methods and Study design

We conducted a secondary data analysis of 260 medical students with data collected between 2014 and 2017. The previous studies and this analysis were all approved by the IRB.

Statistical analysis: Group differences were examined using a One-Way ANOVA with Tukey's multiple comparisons.

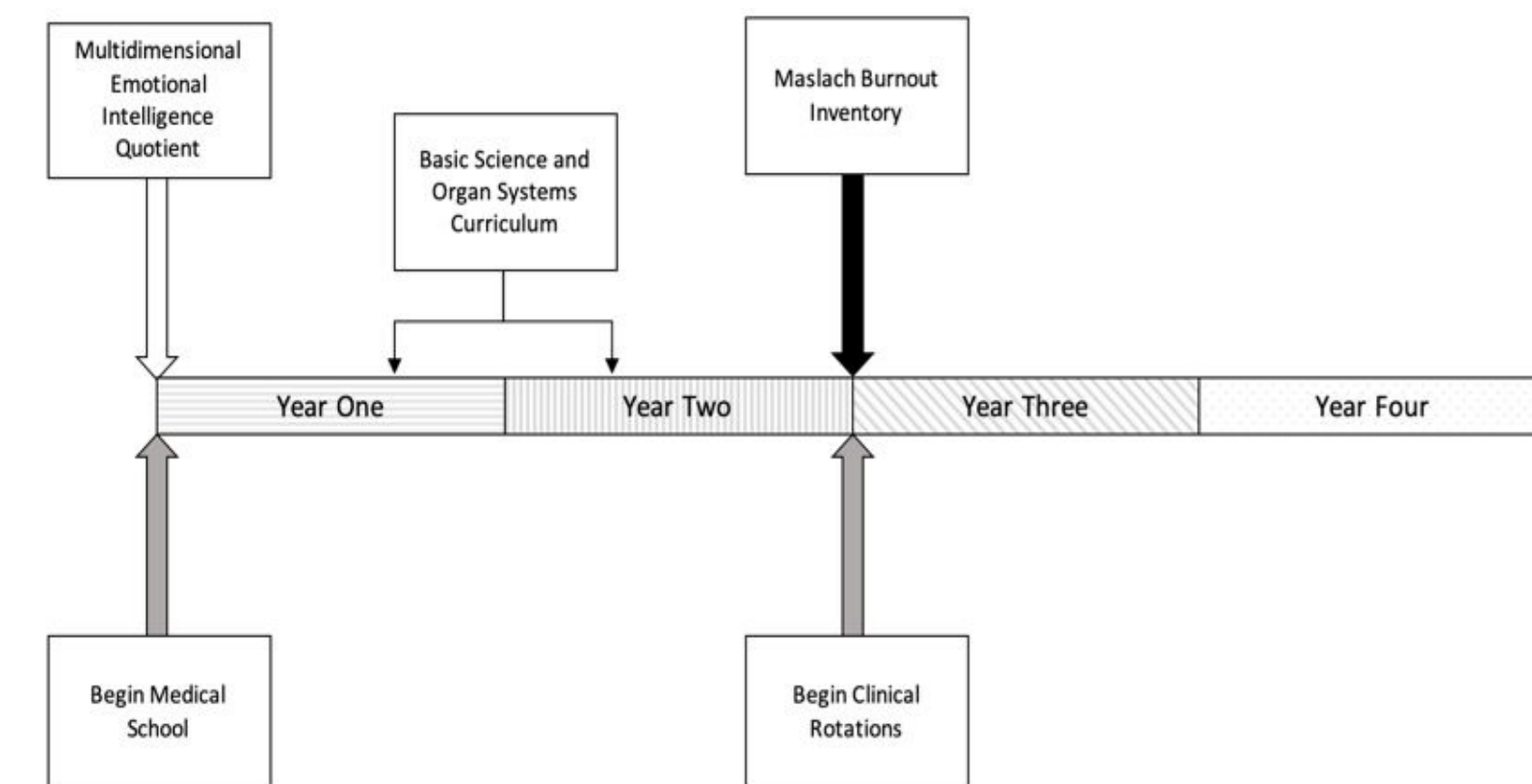


Figure 1. Study Diagram. Timeline depicting assessment of baseline Emotional Intelligence (white arrow) in the beginning of medical school and the MBI to measure student burnout (black arrow) at the beginning of the third year.

Table 1. Emotional Intelligence collected during the first year of medical school and of the Maslach Burnout Inventory collected during the third year of medical school. n=260.

Characteristic	Results
Gender	
Female, No. (%)	106 (41.9)
Male, No. (%)	147 (58.1)
Overall Emotional Intelligence, Mean (SEM)	111.5 (10.66)
Maslach Burnout Inventory	
Emotional Exhaustion (Mean, SEM)	25.72 (0.70)
Emotional Exhaustion (Degree)	
High, No. (%)	124 (48)
Emotional Intelligence, Mean (SEM)	109.7 (0.93)
Moderate, No. (%)	71 (27)
Emotional Intelligence, Mean (SEM)	112.4 (1.2)
Low, No. (%)	65 (25)
Emotional Intelligence, Mean (SEM)	113.9 (1.3)
Depersonalization (Mean, SEM)	9.05 (0.39)
Depersonalization (Degree)	
High, No. (%)	69 (26)
Emotional Intelligence, Mean (SEM)	110.7 (1.2)
Moderate, No. (%)	88 (34)
Emotional Intelligence, Mean (SEM)	109.1 (1.1)
Low, No. (%)	103 (40)
Emotional Intelligence, Mean (SEM)	114.0 (1.1)
Personal Accomplishment, Mean (SEM)	37.03 (0.40)
Personal Accomplishment (Degree)	
High, No. (%)	126 (48.5)
Emotional Intelligence, Mean (SEM)	114.1 (0.92)
Moderate, No. (%)	86 (33.0)
Emotional Intelligence, Mean (SEM)	110.6 (0.99)
Low, No. (%)	48 (18.5)
Emotional Intelligence, Mean (SEM)	106.1 (1.7)

Results

Emotional Intelligence and Emotional Exhaustion (Year 3)

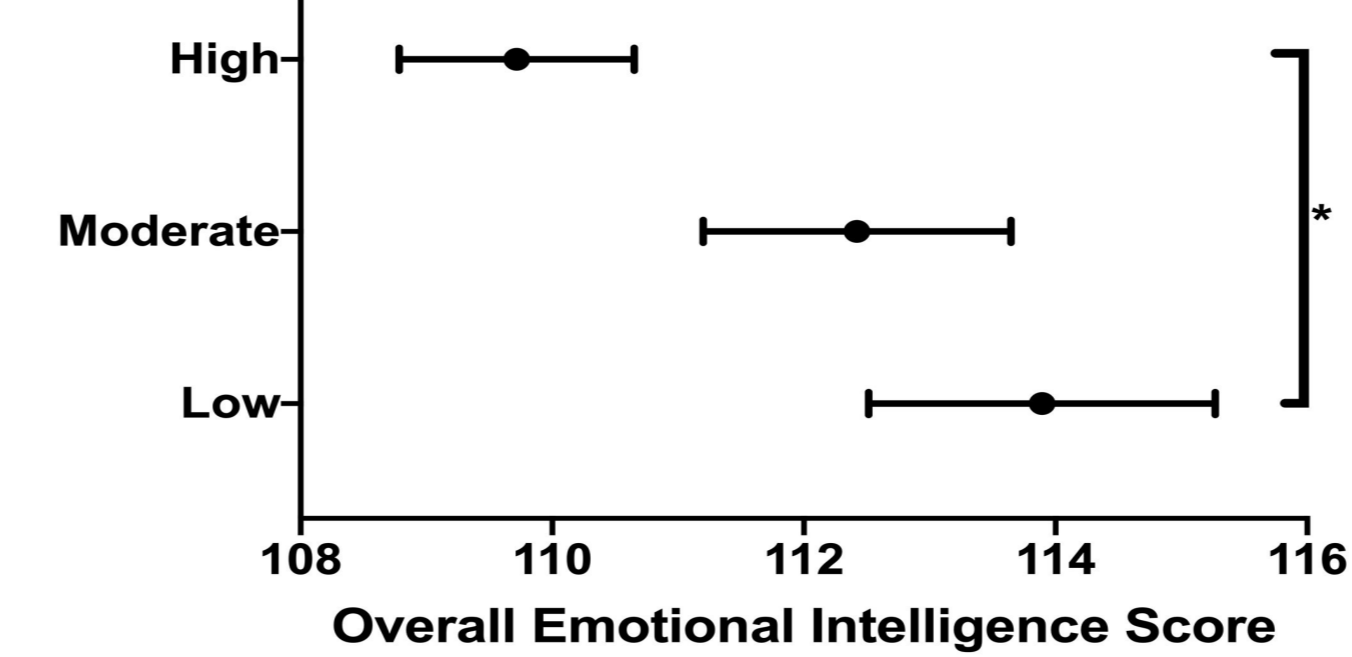


Figure 2. Mean Emotional Intelligence scores of medical students reporting high, moderate, and low Emotional Exhaustion.

Emotional Intelligence and Personal Accomplishment (Year 3)

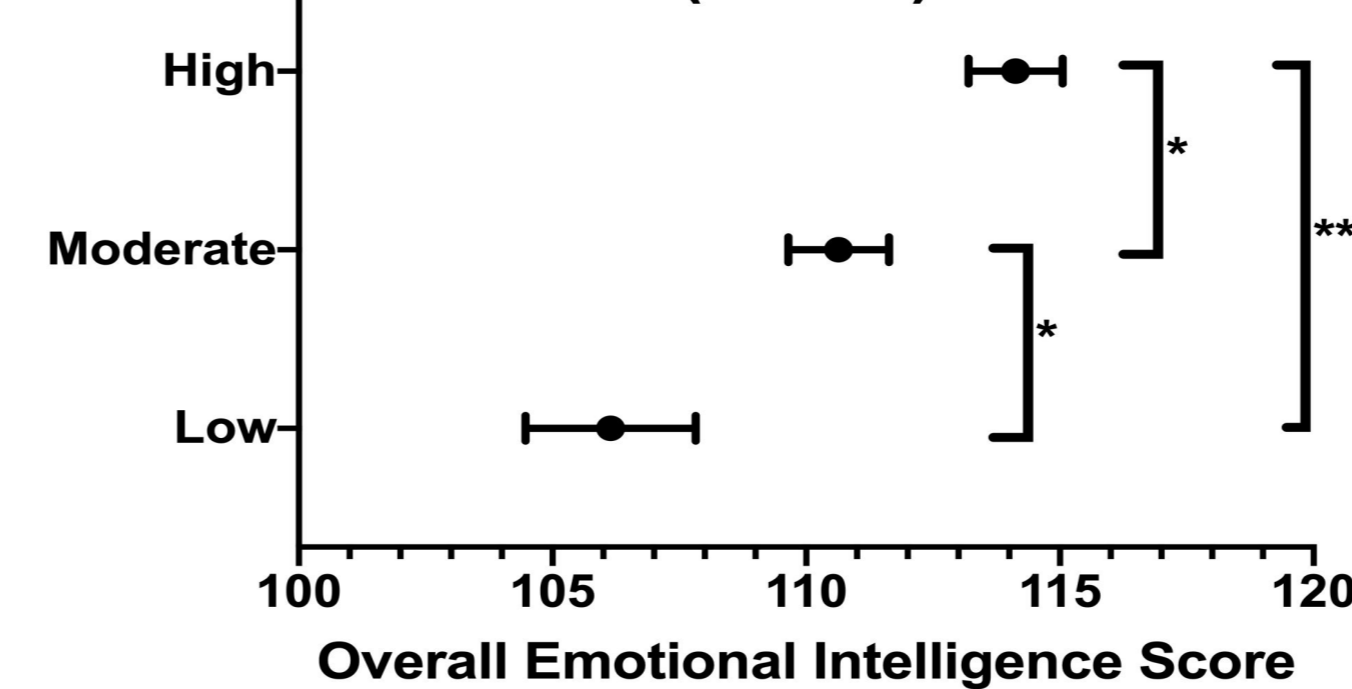


Figure 3. Mean Emotional Intelligence scores of medical students reporting high, moderate, and low Personal Accomplishment.

Emotional Intelligence and Depersonalization (Year 3)

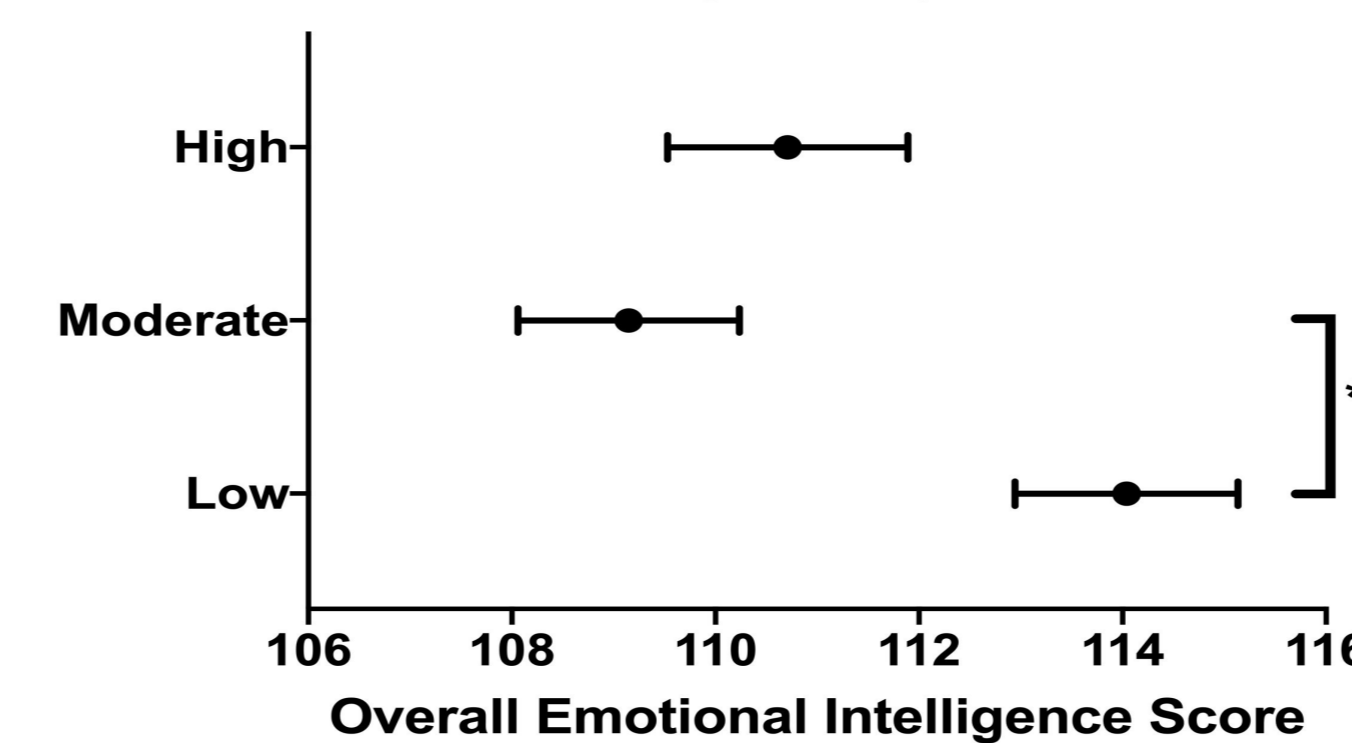


Figure 4. Mean Emotional Intelligence scores of medical students reporting high, moderate, and low Depersonalization.

- A high score on the emotional exhaustion index was associated with lower average overall EI scores compared with a low emotional exhaustion score (Fig. 1, $p < 0.05$, $d = 0.399$).
- Third year medical students scoring high on the personal accomplishment index had a significantly higher average EI score compared to those who had low personal accomplishment scores (Fig. 3, $p < 0.001$, $d = 0.725$).
- Low scorers for depersonalization had significantly higher average overall EI scores compared to those who scored high on depersonalization (Fig. 2, $p < 0.05$, $d = 0.315$).

Conclusions

These results suggest an inverse statistically significant association between Emotional Intelligence and burnout among medical students.

The groups with low levels of emotional exhaustion and depersonalization have a higher average Emotional Intelligence. The group with a high level of personal accomplishment has a higher average Emotional Intelligence.

The inverse association between Emotional Intelligence and burnout suggests that Emotional Intelligence can be used as predictor of burnout and a learned modality in medical programs to help reduce burnout.

Future studies exploring the relationship between EI, burnout and additional factors impacting student well-being may provide valuable knowledge to more effectively address burnout in medical students.

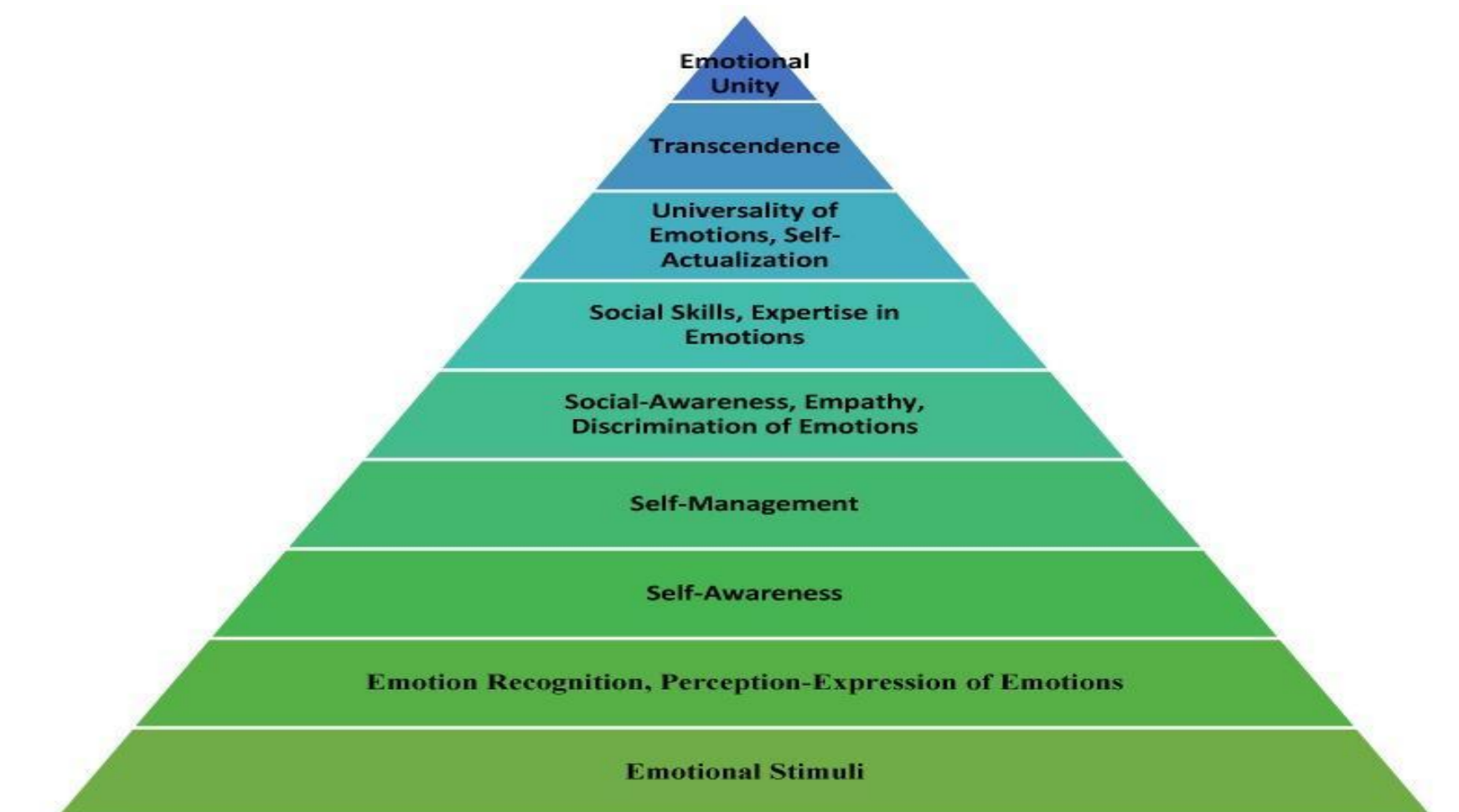


Figure 5. The Emotional Intelligence Pyramid (9-layer model). Drigas AS, Papoutsis C. A New Layered Model on Emotional Intelligence. *Behav Sci (Basel)*. 2018;8(5):45. Published 2018 May 2. doi:10.3390/bs8050045