

# Is a high Emotional Intelligence score protective against burnout symptoms in medical students on their clinical rotations?

Emory University School of Medicine



## Background & Purpose

Burnout in the medical field is a state of mental and physical exhaustion related to work or caregiving activities. The literature reveals that burnout is prevalent amongst medical students with some studies suggesting that over half of medical students are affected<sup>4</sup>. These levels of burnout are higher than in the general population. Most of the literature on burnout symptoms in the medical profession deal with prevalence and postulate that work environment changes and stress reduction strategies might be an effective strategy to deal with this problem. There is a paucity of literature on medical student attributes that may be protective against burnout.

Emotional intelligence and “soft skills” represent a person’s capacity to be aware of, control, and express emotions, and to handle interpersonal relationships judiciously and empathetically<sup>5,6</sup>. This study will look for a correlation between emotional intelligence and burnout symptoms in medical students in the clinical years. Emotional intelligence has been shown to correlate with happiness, self-esteem, loneliness and even job satisfaction<sup>7,8,11</sup>. In a study of special education teachers in Greece, a correlation between emotional intelligence scores and burnout was found, showing that high levels of perceived emotional intelligence proved protective against burnout and correlated with higher job satisfaction. It is important to note that these special education teachers showed baseline high levels of emotional intelligence<sup>9</sup>. In another study, emotional intelligence correlated with life satisfaction, rumination, and coping strategies<sup>8</sup>.

Emotional intelligence is often considered a combination of “soft skills” including self-awareness, self-regulation, social skills, motivation, and empathy.

While there are a number of published measures designed to measure EI, this study’s goal was to combine multiple instruments to encompass all aspects of the soft skills that make up emotional intelligence – motivation, self-awareness, self-regulation, social skills, and empathy. Each individual instrument was selected to measure at least one component of the aforementioned soft skills. The 12-item Grit Scale, the Hardiness-Resilience quiz, and the “Reading the Mind in the Eyes” quiz are the instruments that will be used to measure emotional intelligence.

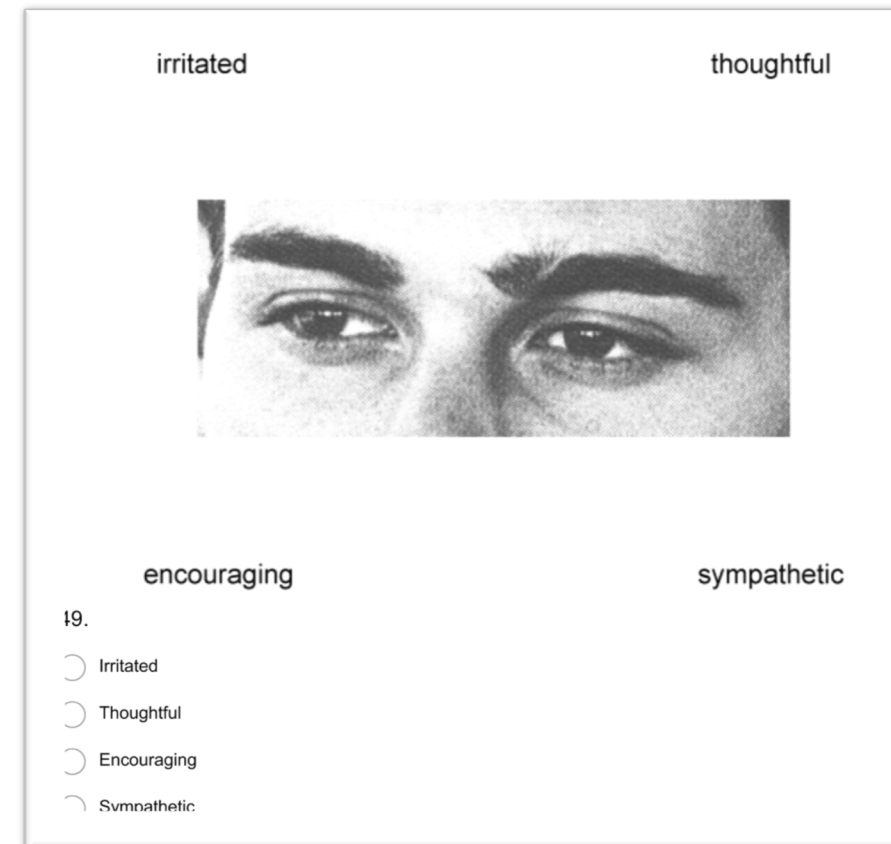
Measuring burnout has also been described and measured in many different ways. There are three key dimensions of burnout: emotional exhaustion, depersonalization, and reduced personal accomplishment. While the Maslach Burnout inventory is a validated tool to measure burnout symptoms, there are other readily available measurement instruments that are specific to the medical profession. The Professional Fulfillment Index (PFI) was developed specifically for the medical profession and has been shown to correlate with the MBI<sup>10</sup>. See figure 2.

## Methods

This prospective correlation study will include surveys sent via email to Emory University School of Medicine students with planned graduation years of 2022 and 2021. These student doctors will be asked to complete an electronic survey via email to capture their emotional intelligence and also burnout symptoms. The survey will include the grit scale<sup>1,2</sup>, Hardiness-Resilience (DR-15) quiz, and the “Reading the Mind in the Eyes” (Eye) quiz (see figure 1).

Pearson correlation analysis and likely a multiple regression analysis of the specific instruments will be performed to determine the relationship between emotional intelligence and burnout symptoms in medical students in their clinical years.

Figure 1: Example of the “Reading of the Mind in the Eyes” Quiz



## Conclusions

While much of the literature on burnout on the medical profession is focused on treatment strategies and describing the prevalence of this problem, this study aims to describe characteristics of medical students that may prove protective against burnout. Many of the attending physicians responsible for the teaching of medical students and residents in the clinical setting report how important the “soft skills” associated with emotional intelligence are, but these characteristics are not routinely gleaned from medical school applications, standardized test scores, or even many structured interviews. If emotional intelligence in medical students proves to be protective against burnout symptoms, then this study will add to the growing data on the importance of emotional intelligence, especially in a population of learners that are particularly susceptible to burnout. Future directions on whether emotional intelligence can be taught to medical students and whether emotional intelligence in a medical student carries over into their work as a physician are also needed.

Figure 2: Example of one section of the Professional Fulfillment Index (PFI)

	Not at all true Score=0	Somewhat true Score=1	Moderately true Score=2	Very True Score=3	Completely true Score=4
a. I feel happy at work	[ ]	[ ]	[ ]	[ ]	[ ]
b. I feel worthwhile at work	[ ]	[ ]	[ ]	[ ]	[ ]
c. My work is satisfying to me	[ ]	[ ]	[ ]	[ ]	[ ]
d. I feel in control when dealing with difficult problems at work	[ ]	[ ]	[ ]	[ ]	[ ]
e. My work is meaningful to me	[ ]	[ ]	[ ]	[ ]	[ ]
f. I'm contributing professionally (e.g. patient care, teaching, research, and leadership) in the ways I value most	[ ]	[ ]	[ ]	[ ]	[ ]

## References

1. Duckworth A, Peterson C, Matthews M, Kelly D. Grit: Perseverance and passion for long-term goals. *J Pers Soc Psychol* 2007; 92(6):1087-101.
2. Duckworth A, Quinn P. Development and validation of the short grit scale (grit-s). *J Pers Assess* 2009; 1(2):166-74.
3. Halbesleben J, Demerouti E. The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory, *Work & Stress* 2005; 19:3, 208-220.
4. Ishak W, Nikraves R, Lederer S, Perry R, Ogunyemi D, Bernstein C. Burnout in medical students: a systematic review. *Clin Teach*. 2013 Aug;10(4):242-5. doi: 10.1111/tct.12014. Review. PubMed PMID: 23834570.
5. Mayer JD, Salovey P, Gomberg-Kaufman S, Blainey K. A broader conception of mood experience. *J Pers Soc Psychol*. 1991 Jan;60(1):100-11. PubMed PMID: 1995832.
6. Mayer J, Salovey P et al. Emotional intelligence as a standard intelligence. *Emotion* 2001;1(3):232-42.
7. Petrides, KV, Furnham A. Trait emotional intelligence: behavioural validation in two studies of emotion recognition and reactivity to mood induction. *Eur. J. Pers.*, 2003 17: 39-57. doi:10.1002/per.466
8. Petrides KV, Pita R, Kokkinaki F. The location of trait emotional intelligence in personality factor space. *Br J Psychol*. 2007 May;98(Pt 2):273-89. PubMed PMID: 17456273.
9. Platsidou, M. Trait Emotional Intelligence of Greek Special Education Teachers in Relation to Burnout and Job Satisfaction. *School Psychology International*. 2010. 31(1), 60–76.
10. Trockel M, Bohman B et al. A Brief Instrument to Assess Both Burnout and Professional Fulfillment in Physicians: Reliability and Validity, Including Correlation with Self-Reported Medical Errors, in a Sample of Resident and Practicing Physicians. *Acad Psychiatry*. 2018 Feb;42(1):11-24. doi: 10.1007/s40596-017-0849-3.
11. Ye J, Yeung DY, Liu ESC, Rochelle TL. Sequential mediating effects of provided and received social support on trait emotional intelligence and subjective happiness: A longitudinal examination in Hong Kong Chinese university students. *Int J Psychol*. 2019 Aug;54(4):478-486.