Discussion: The results of this study suggest that the inclusion of the SJT CASPer in the screening of applicants to postgraduate medical training provides important information that can result in a reduction in the number of formal interventions and number of professionalism concerns among selected residents, subsequently reducing associated costs as well as faculty and staff time.

Significance: In addition to the immediate benefits of integrating SJTs in the applicant selection process, the cost savings associated with reduced formal interventions can be redirected to enhancing institutional endeavors (e.g., Competence by Design launch) and improving programs (e.g., additional funding for courses and well-being work).

Purpose: Previous studies have shown that medical student mistreatment and burnout are common.1,2 Studies suggest that factors within the learning environment are associated with burnout, decline in empathy, and career regret among learners (i.e., medical students and residents).1 Mistreatment, poor feedback, insufficient autonomy, high faculty demands, inadequate role models, and high workload are among likely contributing factors.1,4 However, little longitudinal data exist to describe how mistreatment and other learning environment experiences relate to subsequent burnout and other student characteristics.1,5 We conducted this study to examine the association between mistreatment and perceptions of the learning environment and subsequent burnout, empathy, and career regret.

Methods: We conducted a cohort study that analyzed data from 2014–2016 Association of American Medical Colleges (AAMC) second-year survey (Y2Q) and 2016–2018 AAMC Graduation Questionnaire (GQ). We performed multiple linear or logistic regression analysis to evaluate associations of the independent variables, measured during year 2 of medical school, with exhaustion, disengagement, empathy, and career regret, measured during year 4 of medical school. All models included mistreatment, Medical School Learning Environment Survey subscale (faculty, emotional climate, and student–student interactions) scores, Oldenburg Burnout Inventory (exhaustion and/or disengagement scores), Interpersonal Reactivity Index score, quality of life score, stress score, and demographics as measured during year 2 of medical school. The model for career regret during year 4 of medical school also included career regret during year 2 of medical school as an independent variable. Medical students who responded to both AAMC surveys were included in the analysis. The study was deemed exempt by the Mayo Clinic Institutional Review Board.

Results: Data from 14,126 medical students were analyzed: 52% were women and mean age was 27.7 at graduation. Mistreatment reported by 22.9% on the Y2Q. In multivariable analysis adjusted for Y2Q measures, mistreatment reported during year 2 of medical school as an independent variable. Medical students who responded to both AAMC surveys were included in the analysis. The study was deemed exempt by the Mayo Clinic Institutional Review Board.

A Longitudinal National Study Exploring Impact of the Learning Environment on Medical Student Burnout, Empathy, and Career Regret

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References

Discussion: Medical students who experienced mistreatment and who perceived the learning environment less favorably were more likely to subsequently develop higher levels of exhaustion and disengagement, lower levels of empathy, and career regret in comparison with medical students with more positive experiences. Strategies to improve student well-being, empathy, and experience should include approaches to eliminate mistreatment and improve the learning environment.

Significance: Medical students who experienced mistreatment and who perceived the learning environment less favorably were more likely to subsequently develop higher levels of exhaustion and disengagement, lower levels of empathy, and career regret in comparison with medical students with more positive experiences. Our findings suggest strategies to improve student well-being, empathy, and experience should include approaches to eliminate mistreatment, optimize faculty–student interactions, build peer support, and enhance students’ self-efficacy.

Improving Student Understanding of Clerkship Expectations With an Online, Interactive Frame-of-Reference Training Module

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Purpose: Assessment of medical students during clerkships is largely driven by clinical performance ratings, but many students perceive clinical evaluations to be “unfair” and call for more training of evaluators. Limitations in self-assessment may contribute to this perception, and frame-of-reference training may improve students’ ability to recognize different levels of performance. The objective of this study was to determine if an online, frame-of-reference training module can improve students’ understanding of clerkship expectations for clinical performance in the medicine clerkship.

Methods: Core faculty in the medicine clerkship developed multiple case presentations that demonstrated different levels of performance in the Reporter, Interpreter, Manager, and Educator (RIME) components of our clerkship evaluation form. The case presentations were revised in an iterative fashion to reach a consensus in defining each of the case presentations as below, at, or exceeding expectations for clerkship students. Using these presentations, an online, interactive frame-of-reference training tool was developed where students, before starting clerkships, rated a set of case presentations, compared their ratings with those determined by core faculty (correct ratings), and received feedback about why a given presentation merits a particular rating. At the start of the clerkship, students completed another training module with a new set of case presentations, either remotely on their own (odd-numbered clerkship blocks) or in-person with group discussion facilitated by the clerkship director (even-numbered blocks). We used chi-square tests to compare proportion of students choosing correct ratings on case presentations at baseline versus in-clerkship training and to compare student responses between remote versus in-person training groups with an end-of-clerkship survey on the effect of training on their understanding of clerkship expectations.

Results: All rising third-year students (N = 177) completed baseline training, and 140 students (100% enrolled in blocks 1–6 of medicine clerkship) completed the in-clerkship training. Students enrolled in blocks 7 and 8 were excluded due to COVID-related cancelations/rescheduling of clinical rotations. Overall, the percentage of cases answered correctly at baseline