

A Comparison of the Learning Environment and Student Wellness in Longitudinal Integrated Clerkships and Traditional Block Rotations

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ABSTRACT

Medical students report elevated prevalence of stress, anxiety, and depression. Mental health worsens in medical school, especially during clerkships, suggesting that learning environment may negatively impact wellness. There is limited literature describing wellness and learning environment in Longitudinal Integrated Clerkships (LICs) compared to traditional block rotations (TBRs). This study aimed to determine if there are differences in wellbeing and learning environment between students in LIC and TBR curricula at a single medical school. Students at the University of Colorado responded to surveys before and after clerkships (82 LIC, 71 TBR). Learning environment was evaluated through specific survey questions. The Dyrbye Medical Student Well-Being Index (MSWBI) was used to assess wellness. Results were compared using paired and independent t-tests, chi-square, and Fisher exact tests. There were significant differences in learning environment after clerkships. LIC students more often felt there were faculty they could confide in ($p < 0.001$) and that faculty/administration gave personal help to students ($p < 0.01$). LIC students also reported less intense competition for grades ($\chi^2 = 3.97, p = 0.046$). There was no difference in MSWBI score between LIC and TBR students. While TBR students' MSWBI score significantly increased pre- to post-clerkship, indicating decreased wellness (0.53, $p < 0.01$), the change for LIC students was not significant (0.37, $p = 0.07$). Students in LICs perceive greater support from faculty and administration, and experience tempering in the intensity of grading competition. Wellness is similar between TBR and LIC students, though LIC students may experience less of the negative impacts well-described to occur during clerkships.

INTRODUCTION

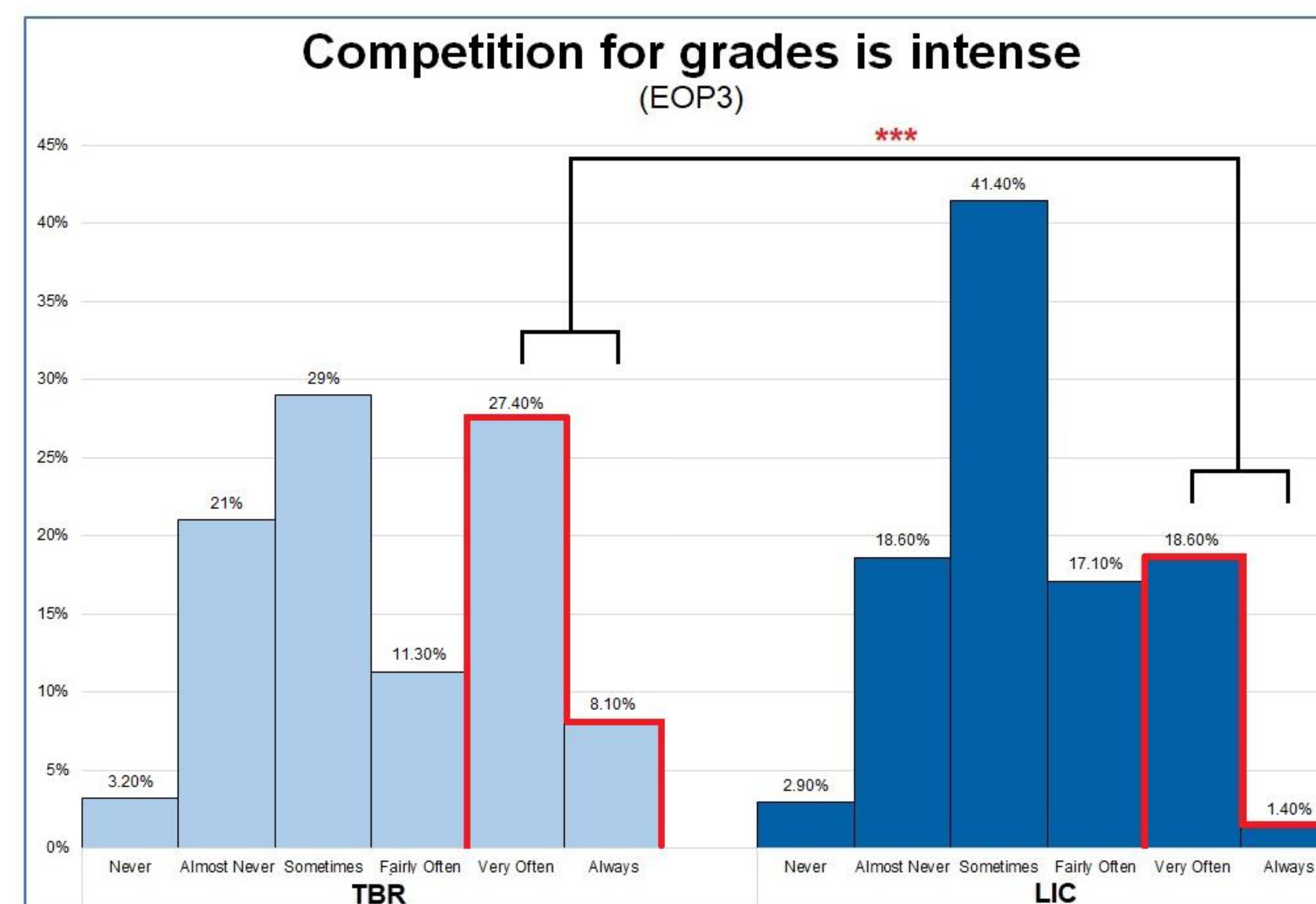
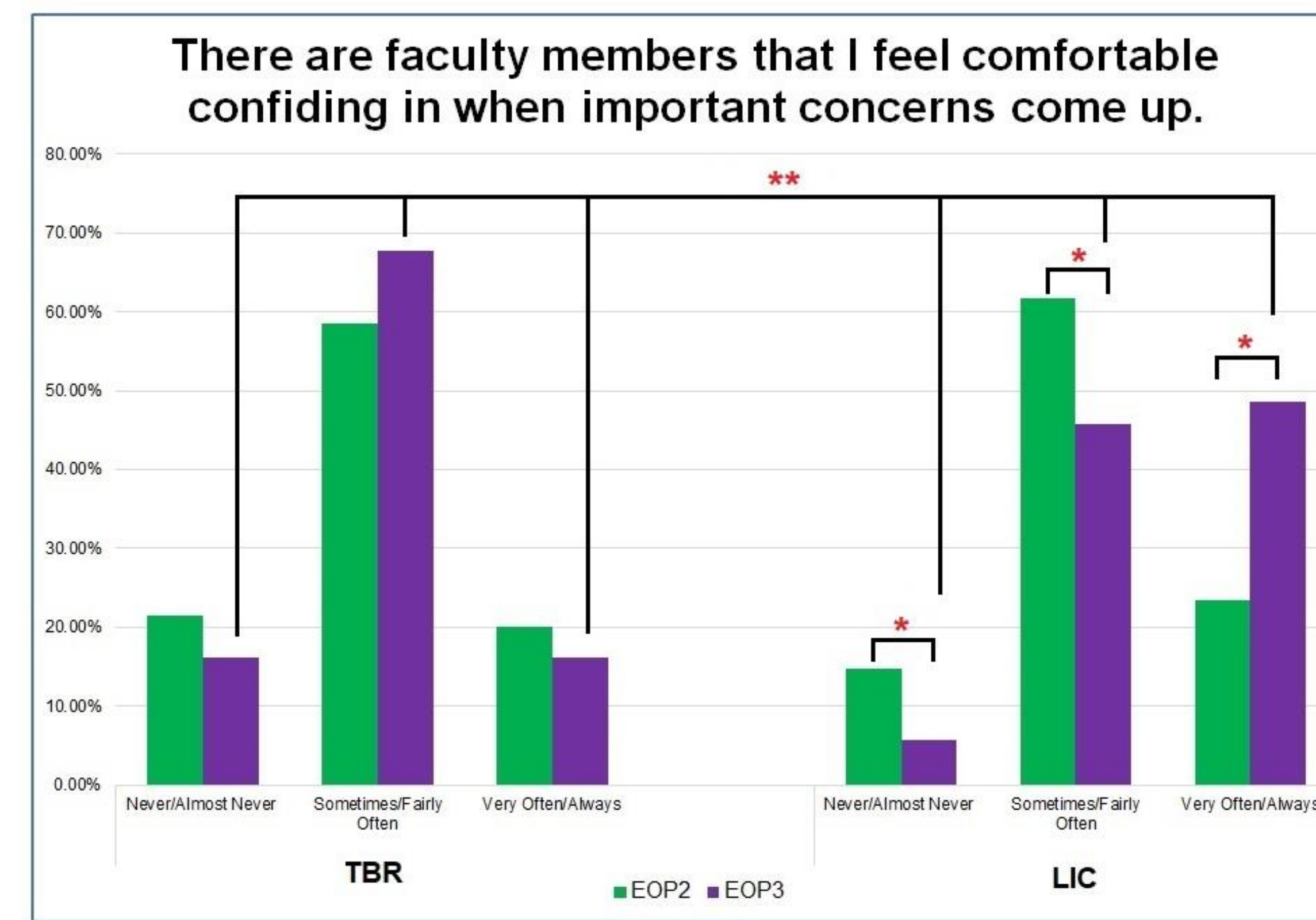
- Medical students report elevated prevalence of stress, anxiety, and depression^{1,2}
 - Mental health worsens in medical school, especially during clerkships, affecting academic performance, faculty relationships, and patient care^{3,4}
 - Changes in curricula (content, scheduling, grading, etc.) associated with improved wellbeing⁵
- Numerous US medical schools, including the University of Colorado (CUSOM), have adopted longitudinal integrated clerkships (LICs)
 - LIC students rotate in core specialties concurrently
 - Emphasize continuity of relationships with patients and faculty, meeting clinical competencies across multiple disciplines simultaneously⁶
 - Compared to traditional block rotations (TBRs), where students spend time in single specialty then rotate to another
- Limited literature describes wellness and learning environment in LICs compared to TBRs
- Aim:** Determine if there are differences in wellbeing and learning environment between students in LIC and TBR curricula at a single medical school

METHODS

- Students at CUSOM administered End of Phase (EOP) surveys
 - EOP2 survey before clerkships, EOP3 survey after completing clerkship rotations
- Analysis of EOP2 and EOP3 for CUSOM class of 2024
 - 153 students surveyed (71 TBR, 82 LIC)
 - Wellness measured with Dyrbye Medical Student Well-Being Index (MSWBI), validated tool screening for student distress^{7,8}
 - Learning Environment questions related to support, competition for grades, peer familiarity, and student input
- Compared LIC and TBR groups within EOP2 and EOP3, and changes between EOP2 to EOP3 within curriculum groups
 - Independent and paired t-tests, chi-square, Fisher exact tests

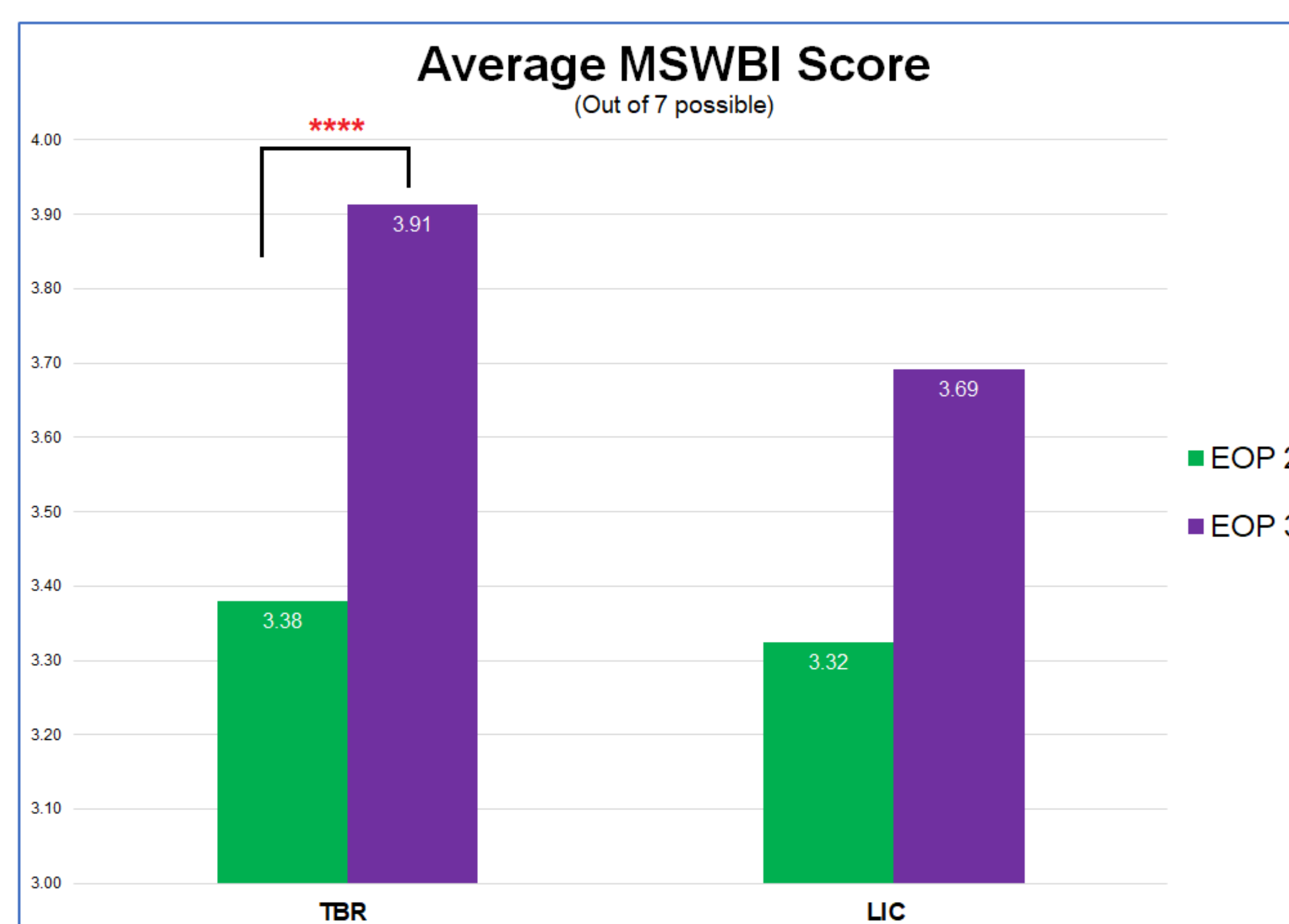
RESULTS

- No difference between groups in peer familiarity, student curricular input, or faculty professionalism
- Increase for LIC from pre- to post-clerkship in feeling there were faculty they could confide in ($p < 0.01$)
 - After clerkships, LIC students more often felt there were faculty they confide in than TBR peers ($p < 0.001$)**



- After clerkships, LIC students felt faculty and administration more often gave personal help to students ($p < 0.01$)
- TBR and LIC perceived increased competition for grades after clerkships ($p < 0.01$ for both)
 - Less intense competition for grades after clerkships in LIC than TBR ($\chi^2 = 3.974, p = 0.046$)***

- No difference in any MSWBI question, or in total average score, between LIC and TBR before or after clerkships
- TBR students' MSWBI score significantly increased from before to after clerkships, indicating decreased wellness (0.53, $p < 0.01$).**** The change in MSWBI score for LIC students was not significant (0.37, $p = 0.07$)



LIMITATIONS

- Subjects from a single US allopathic medical school limit generalizability
- Lack of randomization—students who chose LIC may vary from TBR students in unmeasured ways
- Contemporary events—medical students have higher rates of depression/anxiety during COVID-19 era⁹

CONCLUSIONS

- Students in LICs perceive greater support from faculty and administration, and experience tempering in the intensity of grading competition
- Wellness overall is similar between TBR and LIC students, though students in the LIC model may experience less of the negative impacts well-described to occur during clerkships
- Further research with larger cohorts could improve understanding LIC vs TBR curricula
- This information may be used in the field of medical education to guide discussions, updates, and implementation of curricular change

STATEMENTS

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