

Evaluating longitudinal empathy changes from a supplemental mindfulness curriculum in four-year medical education program

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Evaluating longitudinal empathy changes from a supplemental mindfulness curriculum in four-year medical education program

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Background

- Medical students are at increased risk for burnout, depression, and depersonalization compared to the general population
 - 13.5% absolute increase in prevalence of depression after beginning medical school
 - 11.1% report suicidal ideation during medical school
- Empathy and mindfulness ratings significantly decrease throughout medical education, most notably when transitioning from pre-clinical to clinical training.
- The University of South Florida Morsani College of Medicine and Lehigh Valley Health Network launched the "SELECT (Scholarly Excellence, Leadership Experiences, Collaborative Training.) MD" program, combining a traditional medical education with a unique emphasis on emotional intelligence (EI).
- The program posits that the cultivation of EI throughout all four years of medical school will lead to the development of more compassionate and empathetic physicians.

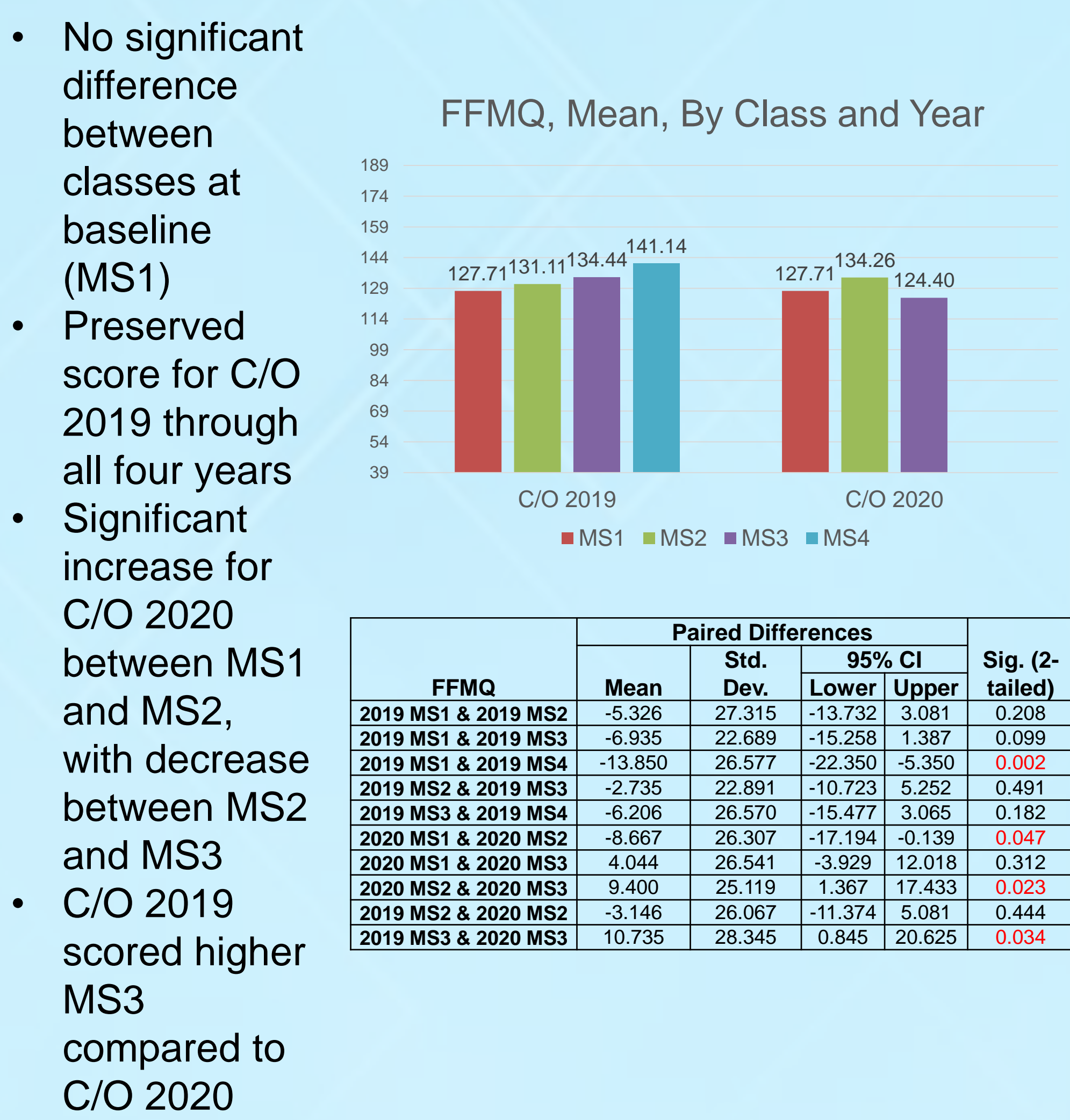
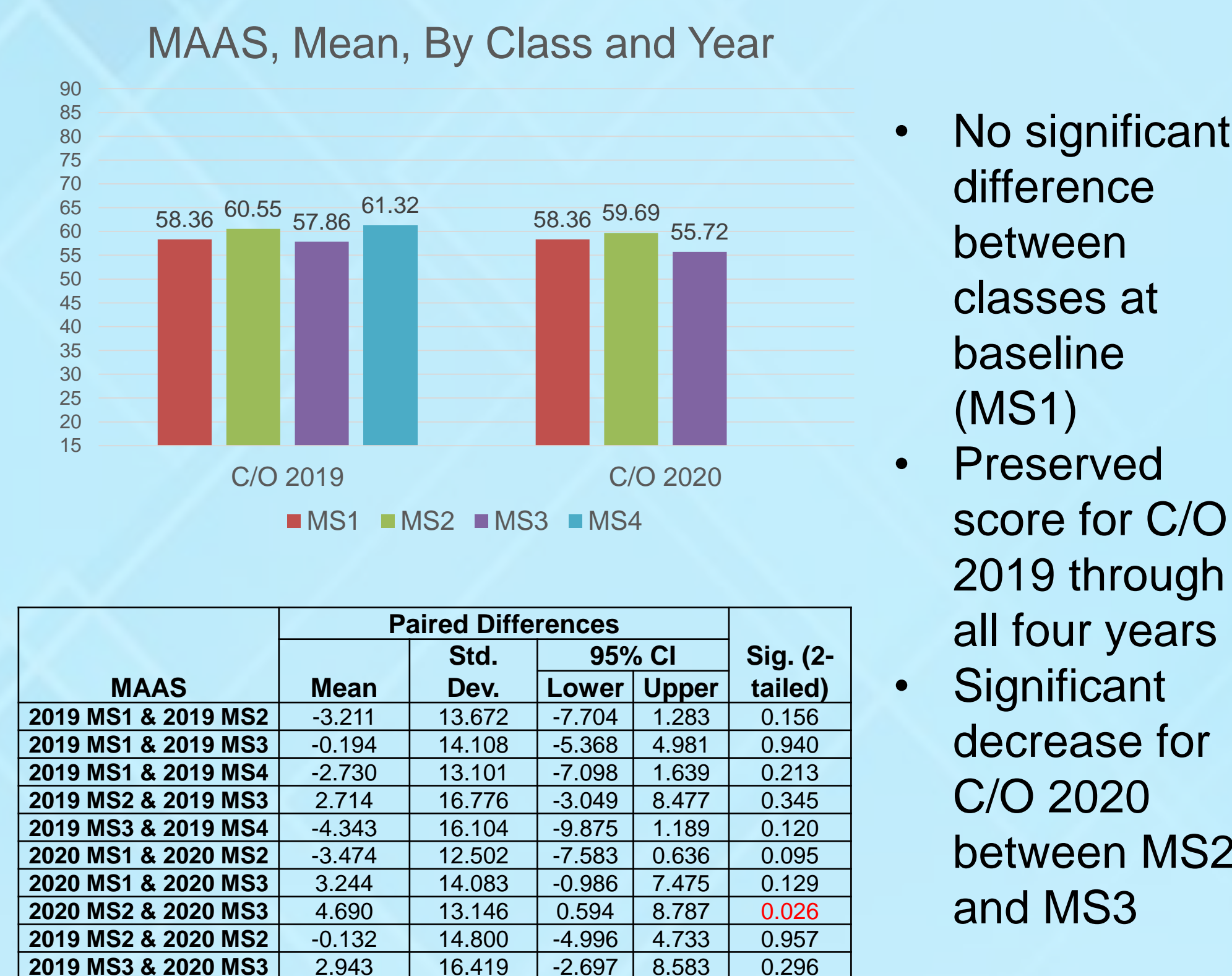
Problem Statement

How does a longitudinal EI-based supplemental medical curriculum affect the mindfulness and empathy of medical students?

Methods

- Three surveys were administered at the beginning of each academic year for two SELECT classes (Class of 2019 and 2020):
 - Jefferson Scale of Empathy (JSE)
 - Mindful Attention Awareness Scale (MAAS)
 - Five Facet Mindfulness Questionnaire (FFMQ)
- Survey scores were anonymous and compared between classes and years by paired difference analysis.
- Focus groups were held at the end of the first (MS1) and third (MS3) academic years to assess qualitative factors affecting students' SELECT experiences.
 - Focus groups were comprised of low- and high-scoring survey respondents; scores were de-anonymized by administrative partners and names for potential participants were returned to the research team without identifying which scores corresponded to each student.
 - 20 students from each class were invited to participate in focus groups.
 - Questions focused on pre-exposure to EI, experience during SELECT, and life experiences that may have impacted the educational experience.

Results



- No significant difference between classes at baseline (MS1)
 - Preserved score for C/O 2019 through all four years
 - Significant increase for C/O 2020 between MS1 and MS2, with decrease between MS2 and MS3
 - C/O 2019 scored higher MS3 compared to C/O 2020
- Significant trends from MS1 focus groups for Class of 2019 (N=13) and Class of 2010 (N=12)
- Prior exposure to mindfulness and EI (1/13 vs 6/12)
 - Importance of EI/mindfulness/empathy in applying to medical school (1/13 vs 7/12)
 - Participation in activities related to EI/mindfulness/empathy outside of school (8/13 vs 3/12)
 - Changing opinions of the SELECT program throughout the year (13/13 vs 12/12)
 - Recommend SELECT over the traditional medical curriculum (8/13 vs 12/12)

- JSE data was not available at time of analysis.
- Data collection is complete through Winter 2019 and continues with MS3 focus groups for the Class of 2020 during Spring 2019.

Discussion

- Class of 2019 maintained scores in mindfulness through all four years, with a significant increase noted when comparing MS1 and MS4 scores on the FFMQ; this trend was not present on the MAAS.
- Class of 2020 had a significant increase in FFMQ score between MS1 and MS2, but subsequently decreased in both MAAS and FFMQ scores between MS2 and MS3.
- Both classes did not significantly differ in baseline mindfulness scores, and responses to MS1 focus groups do not fully explain differences seen in scoring trends.
- Without JSE data, no inferences can be derived regarding the correlation of mindfulness and empathy scores or differences between the Class of 2019 and 2020.
- Data interpretation is limited by the small sample size of each class, test-retest bias, and lack of access to the JSE data at this time. Additionally, this study is limited by not utilizing the non-SELECT USF medical students as controls to better understand the direct impact of the SELECT curriculum.
- As the SELECT program continues to focus on fostering medical student emotional intelligence, these findings can help identify areas for improvement within the program and advance towards its goal of training the physician leaders of the future.

Conclusions

Longitudinal quantification of medical student mindfulness in an experimental undergraduate medical educational curriculum focused on emotional intelligence showed preservation of mindfulness across four years in one class and a decrease between the beginning of the second and third years in another class. Further data analysis is pending focus group testing of the Class of 2020 finishing their third year of medical school and study/correlation of empathy data on these two medical classes. This study highlights the need for further longitudinal studies assessing the efficacy of experimental educational models on the empathy and mindfulness of medical students.

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