Trauma-Informed Approaches to Medical Student Advising: A Pilot Workshop for Medical Student Advisors

Scholarly Report submitted in partial fulfillment of the MD Degree at Harvard Medical School

Date: 4 March 2020

Student Name: Sarah Berman

Scholarly Report Title: Trauma-Informed Approaches to Medical Student Advising: a pilot workshop for medical student advisors

Mentor Name(s) and Affiliations: Nhi-Ha Trinh, MD, MPH, Dept of Psychiatry, Massachusetts General Hospital

Plans to submit to MedEd Portal.

Student role
Planned study with mentors. Developed presentation and survey with mentors. Analyzed results and wrote up manuscript.

Table of Contents

Abstract	**1**
Introduction	**1**
Methods	**2**
Results	**3**
Discussion	**6**
Appendix	**6**
References	**7**
Revision comments	**7**

Glossary:
PTSD – Post-Traumatic Stress Disorder
ACEs – Adverse Childhood Experiences
TIC – Trauma-Informed Care
SAMHSA – Substance Abuse and Mental Health Services Administration
TIME –Trauma-Informed Medical Education
AP – Academic Performance
PB – Professionalism Behaviors
MH – Mental Health

MedEdPORTAL Educational Summary Report - Standard

Trauma-Informed Approaches to Medical Student Advising: a pilot workshop for medical student advisors

Berman S, BS, Brown T, BS, Radford C, BS, Potter J, MD, Trinh N MD, MPH

Educational Objectives

By the end of this activity, learners will be able to:
1. Define trauma and adversity and understand how medical students may be affected
2. Describe how to apply the six principles of a trauma-informed approach during student advising encounters
3. Identify two trauma-informed resources to support students who have experienced trauma

Abstract (limit to 250 words)

Introduction: Trauma and adversity are common among medical students and may contribute to burnout, mental health issues, and professionalism concerns. Six principles of trauma-informed care (TIC) have been developed to address trauma and adversity in the general population; Trauma-informed medical education (TIME)—the application of these principles within undergraduate medical education—has been proposed as a strategy to combat medical student distress. Despite this, no studies to date have applied these principles to medical student advising. To address this gap, we developed a workshop to introduce medical school advisors to trauma-informed advising. Methods: Thirty-six faculty advisors participated in a 20-minute workshop. The session began with a brief didactic presentation, followed by case discussion in small groups, then large group review of take-home points. Participants were surveyed pre- and post-training for their knowledge on TIC using multiple choice questions, their attitudes and comfort with TIC, and post-training satisfaction with the session. Results: Participants reported low levels of pre-intervention familiarity with TIC (3.13% of participants rated that they were very or extremely familiar). In terms of learning objectives being met: 93.55% of participants felt the intervention satisfactorily instructed them on how trauma affects medical students, 75% for teaching about TIC principles as applied to advising encounters, and 93.55% for identifying at least 2 resources for students with trauma histories. Discussion. There is a gap in knowledge around trauma-informed approaches in medical student advising and we offer a model to address this gap.

Introduction

Burnout and depression are rising problems in medical education, with 58.2% of surveyed medical students screening positive for depression and 55.9% reporting burnout.[1] These burnout rates are significantly higher than the general population.[1] Given that matriculating medical students have significantly lower rates of depression and burnout symptoms relative to age-similar college graduate students,[2] medical training itself, rather than characteristics inherent to medical students, may significantly contribute to medical student distress. The fact that 64% of medical students report experiencing mistreatment from an attending and 76% from a resident lends further support to this conclusion.[3] Additionally, a small study found that 26% of medical students report symptoms of secondary traumatization, which occurs when healthcare workers experience post-traumatic stress disorder (PTSD) symptoms like flashbacks, powerlessness, and emotional detachment after witnessing or hearing about a patient's traumatic experience, during their clerkship years.[4] In fact, some students may enter medical school with pre-existing trauma histories that may impact their experiences in medical school.[5] For example, 51% of medical students report having experienced at least one adverse childhood experience (ACE).[6]

When medical students are in distress, they may experience stigma or barriers to seeking help.[7] A study of 873 medical students found that only 33.9% of students with burnout sought help in the preceding 12 months and were less likely to seek help for a serious emotional problem (26.9%) than age-matched controls (38.8%).[8] Yet, addressing mental health issues in students may not only benefit them, but also their future patients. Improvements in mental health correlate with increased altruistic beliefs and decreases in the prevalence of unprofessional behaviors.[9] Similarly, professionalism and behavioral issues of "impaired" physicians have been linked to adverse experiences and trauma[10], and mental health issues may play a role in the development of unprofessional behaviors. This suggests that providing support and mental health care rather than punitive measures is a more appropriate strategy to address student behavioral issues.

Several interventions have been proposed to address mental health issues and distress among medical students, including pass/fail grading, mindfulness interventions, mental health care programs, curriculum changes, and advising/mentoring programs.[11] However, to date, there have been no interventions utilizing a trauma-informed care (TIC) approach to promote student health and wellbeing. TIC is a framework promoted by the Substance Abuse and Mental Health Administration (SAMHSA) that aims to address trauma – defined as any event or series of events that is experienced as harmful and has lasting adverse effects on physical, mental, emotional, spiritual, and/or social well-being – and resist re-traumatization in patients and communities.[12] It relies on six key principles: 1) safety; 2) trustworthiness and transparency; 3) peer support; 4) collaboration and mutuality; 5) empowerment, voice, and choice; and 6) cultural, historic, and gender issues.[12] Given that trauma is ubiquitous – 90% of American adults report at least one traumatic event as defined by the DSM-V in their lifetime – it is important to incorporate a trauma-informed approach in the medical education system.[13]

Trauma-informed medical education (TIME) has recently been proposed as a tool to combat burnout in medical students and improve patient-centered care. TIME would have educators and advisors shift from asking, "What's wrong with you?" to asking, "How has what happened to you affected you?" when working with students with professionalism or academic concerns. This frameshift would empower advisors and faculty to approach student professionalism issues with the understanding that the student might be struggling with adversity or mental health issues. It would also empower the faculty to view mental health issues as a consequence of the myriad of structural problems that exist in medical education today, as compared to a personal choice or moral failure. Finally, TIME can help guide faculty on how to approach students with sensitivity and understanding, which may by itself be therapeutic.

Trauma-informed advising is only a small piece of TIME, but given that faculty advisors are often the first people at medical school with whom students form longitudinal relationships, it is a framework that may have an immediate positive impact on both individual student well-being and the learning environment as a whole. We describe a trauma-informed advising workshop that was developed to educate medical school faculty advisors about trauma-informed approaches to student advising.

Methods

As part of an annual retreat for Harvard Medical School's Council of Academic Societies (i.e., academic advising system), we developed a workshop to teach faculty and staff about trauma-informed approaches to medical student advising. Thirty-six individuals participated in the workshop, which included 35 faculty and one student affairs staff member. The material was co-developed by 3rd and 4th year medical students as well as faculty in advising roles, all of whom had some experience or expertise in TIC. The session began with a 20-minute lecture (TIC in Advising PowerPoint; Appendix A) to introduce participants to TIC as well as data about medical student adversity. Then, participants were led through a guided discussion of a common advising scenario in which a student is summoned to their advisor's office because of professionalism concerns (TIC in Advising PowerPoint; Appendix A). Participants were given prompts to contemplate how they would apply SAMHSA's six principles to this scenario. The session concluded with a brief summary of take-home points, and participants were given several institution- and community-based resources for students in distress or who have experienced trauma.

In order to evaluate the session, pre- and post-intervention surveys were co-developed by students and advisors with experience in TIC. The surveys were also reviewed by Harvard University's Program of Survey Research fellow and feedback was incorporated into the final surveys. The pre-session survey (Appendix B) was administered via hard copy immediately prior to the educational session. Immediately after conclusion of the session, participants were administered the post-session survey via hard copy (see Appendix C). Surveys were numbered to pair pre-and post-intervention responses and subsequently de-identified after pairing. The pre-session survey utilized a 5-point, unipolar Likert scale to assess familiarity, attitudes, comfort, and confidence in using TIC principles during advising interactions. Knowledge of medical student adversity pre- and post-intervention was also assessed using a multiple choice question format to evaluate learning gains. The post-intervention survey also assessed whether learning objectives were met.

In the pre-session survey, participants rated baseline familiarity, attitudes, comfort, and skill around TIC (1= not at all familiar/important/comfortable/confident, respectively to 5=extremely familiar/important/comfortable/confident, respectively) and, in the post-session survey, if learning objectives

were met (1-strongly disagree to 5=strongly agree) using a five-point Likert Scale. Mean and standard deviation were calculated for these measures. Data were also converted to binary code (scores of 4 and 5 were converted to "yes" and scores that were 3 and below were converted to "no"). Percent scoring "yes" was calculated for each measure. Attitude measures and comfort measures were compared using Fisher exact test analyses ($p < 0.05$) to assess whether believing that TIC approaches are important was associated with comfort using TIC approaches. The pre- and post-intervention knowledge accuracy percentage was determined and compared via Fisher exact test analyses ($p < 0.05$).

Results

Thirty-six surveys were administered, and 32 surveys were collected (88.89% response rate). Twenty participants identified as female, and 12 identified as male. Sixteen participants had five or fewer years of advising experience, 15 had greater than five years of advising experience, and one declined to answer.

Regarding the pre-intervention familiarity measure ("How familiar are you with the six principles of SAMHSA's trauma-informed approach?"), 32/32 participants rated a mean score of 1.91 (SD=0.93). The percentage of those reporting that they were "very" or "extremely" familiar was 3.13% (1/32).

Regarding pre-intervention attitude measures, 32/32 participants rated an average importance score of 4.36 (SD=0.71) for impact on academic performance (AP), an average score of 4.36 (SD=0.66) for impact on professionalism behaviors (PB), and an average score of 4.5 (SD=0.67) for impact on mental health/well-being (MH). The percentage of those reporting scores of "very" or "extremely" important were 87.5% (28/32; AP), 90.63% (29/32; PB), and 90.63% (29/32; MH) respectively.

Regarding pre-intervention comfort measures, 31/32 participants rated an average comfort score of 3.29 (SD=0.90) for impact on AP, and an average score of 3.29 (SD=0.90) for impact on PB, and an average score of 3.45 (SD=0.96) for impact on MH. The percentage of those reporting scores of "very" or "extremely" comfortable were 38.71% (12/31; AP), 38.71% (12/31; PB), and 45.16% (14/31; MH), respectively.

When comparing attitude measures with comfort measures, fewer participants were "very" or "extremely" comfortable with talking with students about the impact of trauma, as compared to believing that addressing trauma in their advisees was "very" or "extremely" important among all three measurement criteria. For AP, the difference between attitude and comfort was 48.79 percentage points (Fisher exact test $p = 0.001$, $p < 0.05$). For PB, the difference between attitude and comfort was 51.92 percentage points (Fisher exact test $p < 0.001$, $p < 0.05$). For MH, the difference between attitude and comfort was 45.46 percentage points (Fisher exact test $p = 0.001$, $p < 0.05$). See Figure 1.

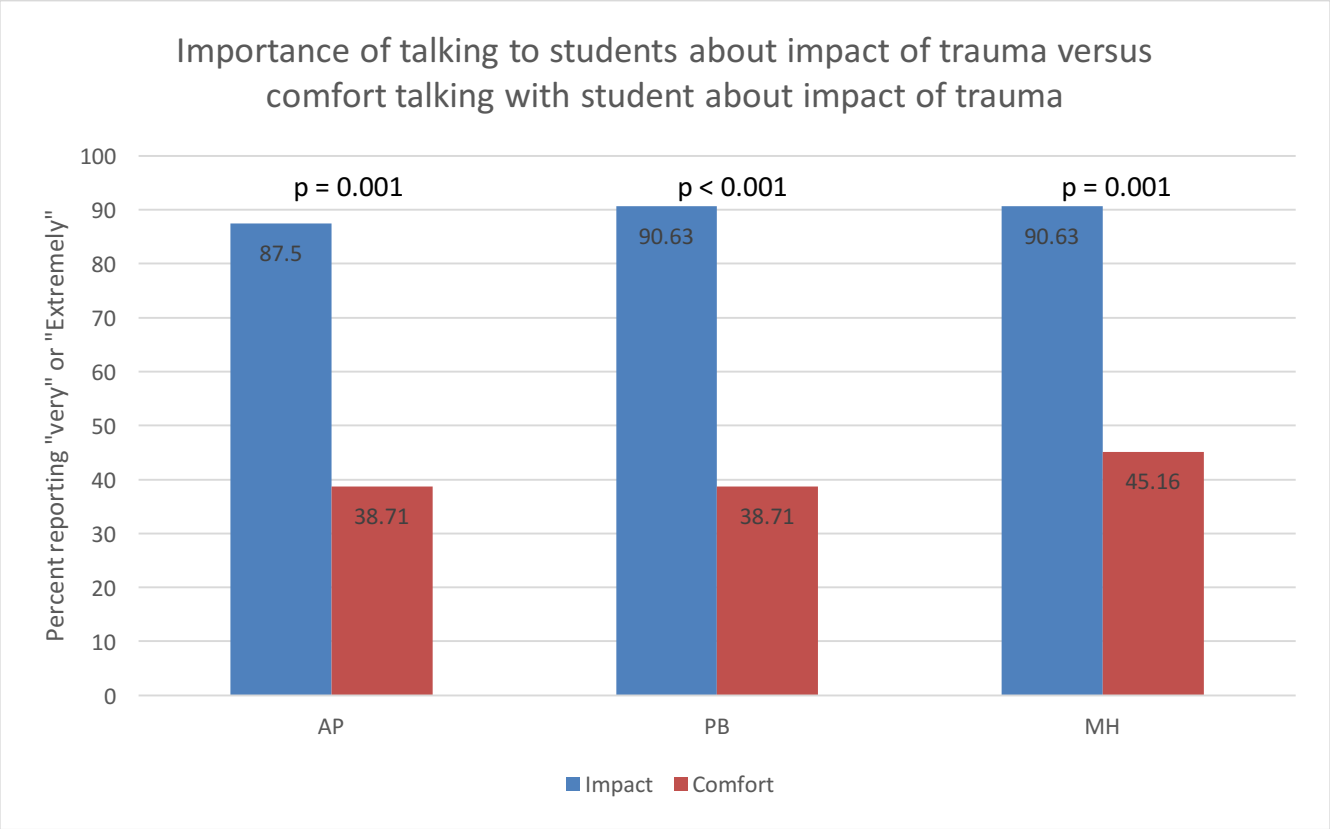

Figure 1: AP = Academic Performance, PB = Professionalism Behaviors, MH = Mental Health/Well-being. Fisher exact test p value set at p <0.05.

Regarding pre-intervention confidence measures, 31/32 participants rated an average confidence score of 3.48 (SD=0.81) for collaboration and mutuality, and an average score of 3.10 (SD=0.94) for peer support, an average score of 3.68 (SD=0.75) for trust, an average score of 4.06 (SD=0.68) for transparency, an average score of 4.00 (SD=0.68) for empowerment, voice, and choice, and an average score of 3.13 (SD=0.85) for cultural, historical, and gender issues. The percentage of those reporting that they were “very” or “extremely” confident was 41.94% (13/31) for collaboration and mutuality, 29.03% (9/31) for peer support, 51.61% (16/31) for trust, 80.65% (25/31) for transparency, 77.42% (24/31) for empowerment, and 35.48% (11/31) for sociocultural issues (See figure 2).

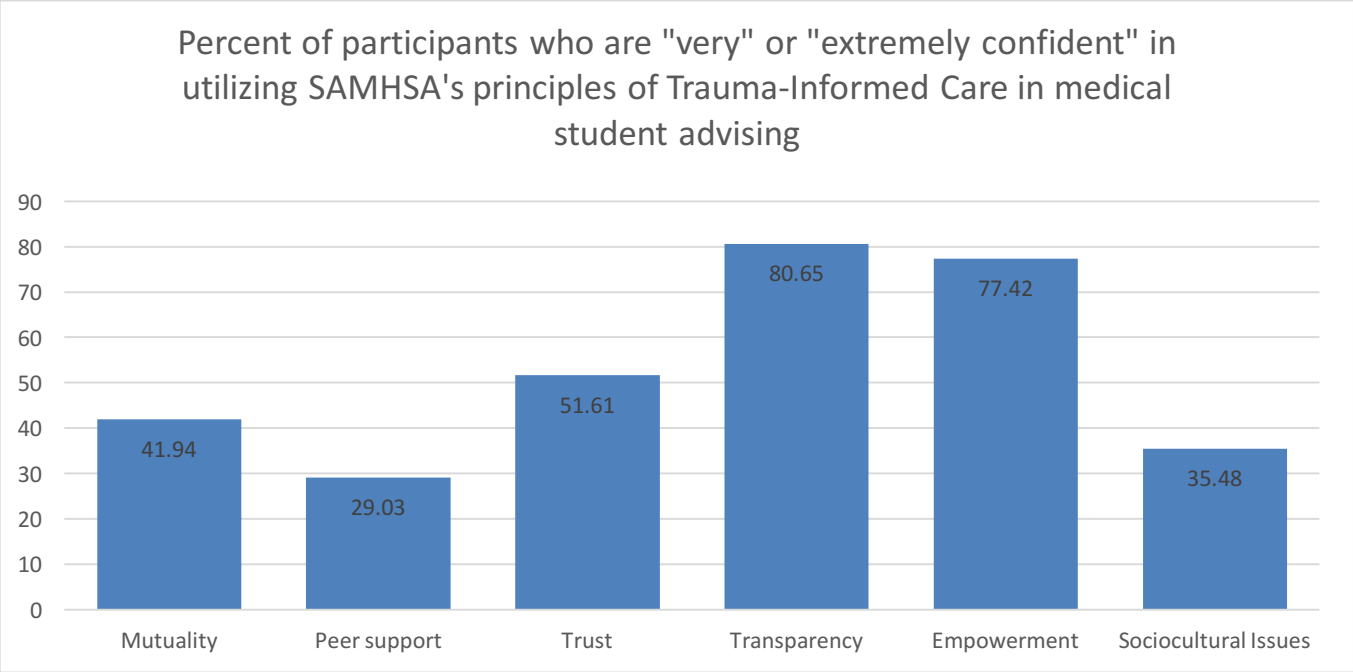

Figure 2

Thirty participants completed both the pre- and post-intervention knowledge questions. Prior to the intervention, the percentage of participants who answered correctly was 56.7% (17/30) for knowledge of pre-matriculation adversity rates and 33.3% (10/30) for medical student mistreatment rates. After the intervention, the percentage of participants who answered correctly were 93.3% (28/30) and 76.7% (23/30) respectively. This represents an improvement of 36.7 (Fisher exact test $p = 0.007$, $p < 0.05$) and 43.3 (Fisher exact test $p = 0.002$, $p < 0.05$) percentage points respectively (See Figure 3).

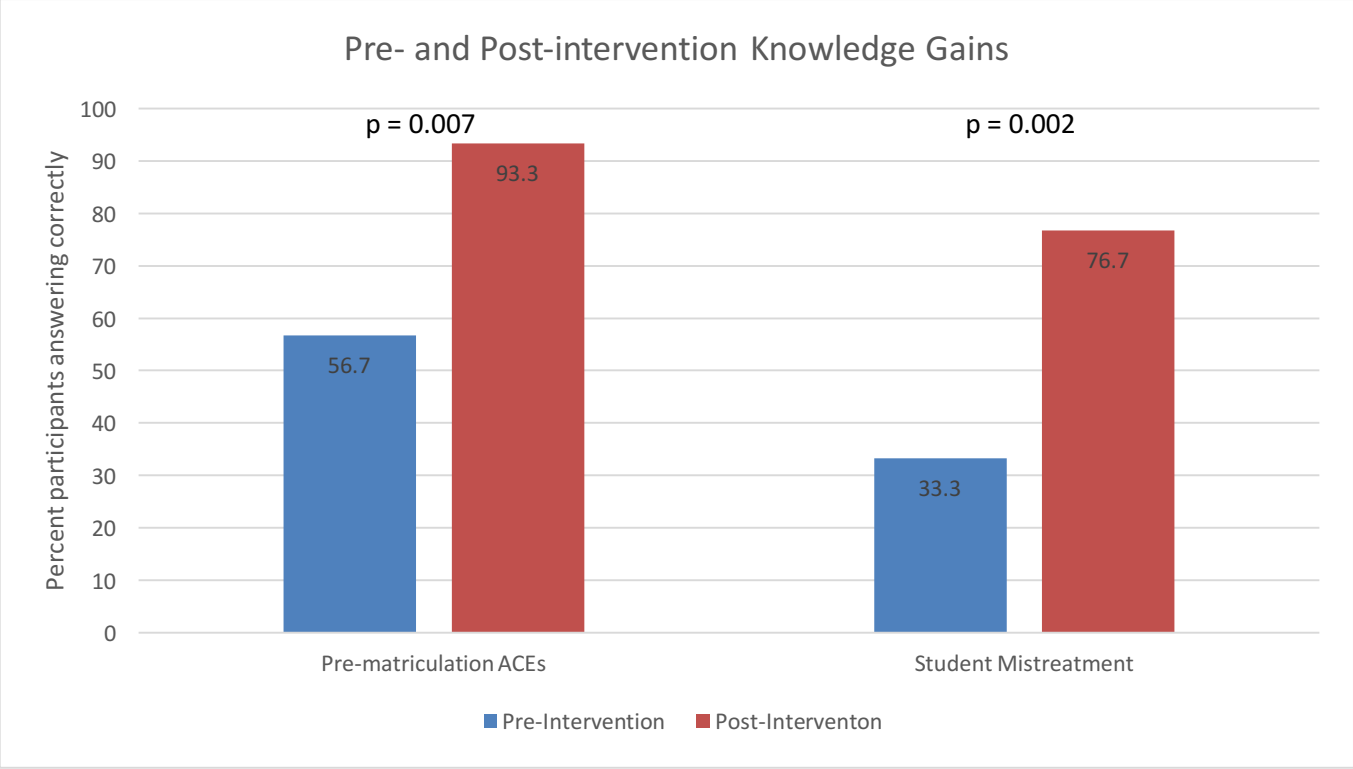

Figure 3: ACEs = Adverse Childhood Experiences, fisher exact test p value set at p = <0.05.

Regarding connecting students to trauma-informed resources, 31 participants rated an average score of 2.48 (SD=0.96) for ability to connect students with trauma-informed resources. 12.90% (4/31) rated this as "agree" or "strongly agree".

Regarding the learning outcomes assessed in the post-intervention survey, 31/32 participants rated fulfillment of learning outcomes an average of 4.35 (SD=0.61) for "Define trauma and adversity and understand how medical students may be affected". The percentage of respondents who rated the learning with "agree" or strongly agree" was 93.55% (29/31). 32/32 participants rated an average of 3.94 (SD=0.67) for "Learn how to apply the six principles of a trauma-informed approach during advising encounters". The percentage rating "agree" or strongly agree" was 75% (24/32). For, "Identify two trauma-informed resources to support students with traumatic experiences", 32/32 participants rated an average of 4.55 (SD=0.62). The percentage rating "agree" or "strongly agree" was 93.55% (29/31).

32/32 participants rated interest in learning more about trauma-informed approaches to advising an average of 4.25 (SD=0.67). 87.5% (28/32) were "very" or "extremely interested" in learning more about trauma-informed approaches to advising.

Discussion

This intervention represents, to our knowledge, the first formal attempt to apply trauma-informed principles to undergraduate medical education advising. Although the majority of faculty in our sample felt that trauma was important to address in students across several domains, they were generally unfamiliar with TIC. Furthermore, a lower percentage of participants actually felt comfortable addressing trauma in students, suggesting a faculty development gap that needs to be addressed. This brief intervention was successful in increasing participant knowledge of medical student adversity, and participants were generally satisfied that the workshop achieved the learning objectives.

The session had several notable limitations. First, the session was limited to a 20-minute time frame due to scheduling constraints during the retreat. A longer and more thorough presentation would allow for more reflection, additional case-based learning, and actual practice of skills. Second, participant numbers were limited as this intervention took place at one institution with a small number of faculty and staff. Similarly, the advising structure of our institution may not be representative of medical schools in general. A multi-institution assessment would be useful in understanding the degree to which medical school advisors and advising systems are trauma-informed, as well as to develop and assess efficient and effective training for faculty and staff. Thirdly, we only assessed for baseline attitudes and comfort and did not evaluate how these were affected by the intervention. Fourth, we were unable assess whether knowledge gains were retained over time, or whether the intervention led to changes in advisor practices or student outcomes. Finally, given there were no formal assessments published to date for trauma-informed advising, we developed our own. Future research is needed in these areas, including the development of a validated tool to assess for trauma-informed advising practices and approaches.

Despite these limitations, our data shows that trauma-informed approaches to student advising are relevant to medical students and that faculty advisory and student affairs staff members are eager to learn a TIC approach to advising. Future work will include the development of in-depth trauma-informed advising curriculum for faculty and staff involved in medical student advising and student affairs. Observed standardized advising experiences analogous to Observed Structured Clinical Experiences or OSCEs should be developed to help faculty practice these approaches and to assess their development. Likewise, student outcomes (e.g., mental health measures, advising satisfaction measures, professionalism outcomes) should be developed to assess for meaningful change in light of a trauma-informed advising structure. For lasting change, these faculty development initiatives will necessarily need to go hand in hand with larger trauma-informed school policy and institutional changes at the medical school and hospital levels. Trauma-informed advising is an integral part of TIME and may be a promising tool in the effort to prevent and treat medical student burnout, mental health issues, and professionalism concerns.

Appendices

A. TIC in Advising PowerPoint.pptx
B. Pre-intervention evaluation.pdf

C. Post-intervention evaluation.pdf

References

1. Dyrbye LN, West CP, Satele D, et al. Burnout among U.S. medical students, residents, and early career physicians relative to the general U.S. population. *Acad Med*. 2014;89(3):443-451. doi:10.1097/ACM.0000000000000134

2. Brazeau CMLR, Shanafelt T, Durning SJ, et al. Distress among matriculating medical students relative to the general population. *Acad Med*. 2014;89(11):1520-1525. doi:10.1097/ACM.0000000000000482

3. Cook AF, Arora VM, Rasinski KA, Curlin FA, Yoon JD. The prevalence of medical student mistreatment and its association with burnout. *Acad Med*. 2014;89(5):749-754. doi:10.1097/ACM.0000000000000204

4. Al-Mateen CS, Linker JA, Damle N, Hupe J, Helfer T, Jessick V. Vicarious traumatization and coping in medical students: a pilot study. *Acad Psychiatry*. 2015;39(1):90-93. doi:10.1007/s40596-014-0199-3

5. Anonymous. In My Experience: How Educators Can Support a Medical Student With Mental Illness. *Acad Med*. 2019;94(11):1638-1639. doi:10.1097/ACM.0000000000002953

6. Sciolla AF, Wilkes MS, Griffin EJ. Adverse Childhood Experiences in Medical Students: Implications for Wellness. *Acad Psychiatry*. March 2019. doi:10.1007/s40596-019-01047-5

7. Spiers J, Buszewicz M, Chew-Graham CA, et al. Barriers, facilitators, and survival strategies for GPs seeking treatment for distress: a qualitative study. *Br J Gen Pract*. 2017;67(663):e700-e708. doi:10.3399/bjgp17X692573

8. Dyrbye LN, Eacker A, Durning SJ, et al. The Impact of Stigma and Personal Experiences on the Help-Seeking Behaviors of Medical Students With Burnout. *Acad Med*. 2015;90(7):961-969. doi:10.1097/ACM.0000000000000655

9. Dyrbye LN, Harper W, Moutier C, et al. A multi-institutional study exploring the impact of positive mental health on medical students' professionalism in an era of high burnout. *Acad Med*. 2012;87(8):1024-1031. doi:10.1097/ACM.0b013e31825cfa35

10. Williams BW. Professionalism Lapses and Adverse Childhood Experiences: Reflections From the Island of Last Resort. *Acad Med*. 2019;94(8):1081-1083. doi:10.1097/ACM.0000000000002793

11. Wasson LT, Cusmano A, Meli L, et al. Association Between Learning Environment Interventions and Medical Student Well-being: A Systematic Review. *JAMA*. 2016;316(21):2237-2252. doi:10.1001/jama.2016.17573

12. SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach. 2014.

13. Kilpatrick DG, Resnick HS, Milanak ME, Miller MW, Keyes KM, Friedman MJ. National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. *J Trauma Stress*. 2013;26(5):537-547. doi:10.1002/jts.21848