

Proceedings from the 2021 Medical College of Wisconsin Innovations in Healthcare Education Research Annual Conference

The following award-winning abstracts were presented during the 8th Annual Medical College of Wisconsin (MCW) Innovations in Healthcare Education Research (IHER) Annual Conference in September 2021. Health care educators and researchers from MCW and other regional institutions meet annually at IHER to present their research and innovative ideas and to learn from one another about the new and creative approaches to educating students and residents. The 3-day conference includes nationally recognized keynote speakers, panel sessions, workshops, roundtables, oral presentations, and posters which can be viewed at <https://www.mcw.edu/IHER2021>. The winning oral presentations and posters in the research and innovations categories are published below.

BEST PRESENTATION: ORAL PRESENTATION – RESEARCH

Self-Reported Levels of Depression, Anxiety, and Stress During the First 6 Months of Medical School – A Case Study at the Medical College of Wisconsin’s Regional Campuses

Erin Gruber; Jeffery D. Fritz, PhD, MS, MA; Craig Hanke, PhD

Background: The rise in anxiety and stress experienced by Medical College of Wisconsin (MCW) regional campus students during the initial 6-month transition to medical school suggests psychological factors for burnout. The Depression Anxiety Stress Scale-21 (DASS21) instrument has quantitatively measured levels of depression, anxiety, and stress in past medical students. The previous DASS21 data showed increased levels of depression, anxiety, and stress at regional MCW campuses. Self-reported depression, anxiety, and stress levels may differ from what the DASS21 instrument assesses. The objective in this study is to better understand

depression, anxiety, and stress levels of 2 cohorts of MCW regional campus students during their first 6 months of medical school.

Methods: Surveys were distributed to first-year MCW regional campus students in August, November, and February of academic years 2019-2020 and 2020-2021. Surveys contained 3 questions to generate self-assessed levels of depression, anxiety, and stress, and all 21 questions of the DASS21 instrument to do the same. Surveys also contained 6 questions enabling longitudinal linkage of survey results while maintaining participant confidentiality. Survey results were scored for all levels, frequency values compared between survey timepoints, campuses, and gender identity (male or female). Longitudinal profiles were generated and compared. This study was funded by an MCW Learning Resources Grant and has institutional review board approval.

Results: In the study year 2019-2020, 91.3% (42 of 46) of surveys were com-

pleted by regional campus students. The COVID-19 pandemic interfered with survey distribution and return in 2020-2021; 1 campus returned surveys for August and November, and the other campus only for February. Regional campus depression levels remained low throughout the study, while anxiety and stress rose to severe levels. Participants who identified as female scored lower in all levels than males. Profile analysis suggested students experienced 1 profile for anxiety and 1 to 2 stress profiles, while depression levels showed no profile differentiation. Data compared prior to and during the pandemic showed inconclusive differences.

Conclusions: Depression levels remained low while stress and anxiety rose rapidly over the first 6 months of medical school. The DASS21 instrument assessed similar levels of depression but higher levels of anxiety and stress compared to the student self-reported scores, suggesting students may be experiencing higher levels of stress and anxiety than they are aware. In contrast to a previous study showing higher burnout among female compared to male students from these campuses,¹ this study suggests lower levels of anxiety and stress in female compared to male students. The influence of the COVID-19 pandemic on the cohort’s overall depression, anxiety, or stress levels during the pandemic was inconclusive.

Study Significance: The rise in anxiety and stress experienced by regional cam-

pus medical students during the first 6 months of medical school suggests the need for additional student support to mitigate these influences.

Reference

1. Treat R, Hueston WJ, Fritz JD, Prunuske A, Hanke CJ. Medical student burnout as impacted by trait emotional intelligence - moderated by three-year and four-year medical degree programs and gender: a single institution study. *WMJ*. 2021;120(3):188-194.

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BEST PRESENTATION: ORAL PRESENTATION – INNOVATION

Seeking Peer Outreach: An Integrated, Tiered Approach to Address Stigma and Isolation in Medical Education

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Problem Statement: Several studies highlight increased distress and emotional exhaustion in health care, starting with medical education.^{1,2} The stigma of psychiatric diagnoses may decrease health care workers’ willingness to seek help for their well-being, and students may be reluctant to express mental health struggles.³ While other mental health support programs exist, a tiered peer-support system targeted to medical education has not been developed previously.^{4,5} In response to alarming national statistics and devastating deaths in our community, the MCW Suicide Prevention Council was chartered. In the interest of inclusivity, leadership reflects diverse disciplines of faculty, staff, and students. The union of these voices led to the council’s inaugural initiative: Seeking Peer Outreach* (SPO*), a tiered peer-support network to increase awareness of mental health and build a supportive cultural climate.

Approach: SPO* has 3 tiers adapted from

a public health model. Tier 1 encompasses all MCW students, faculty, and staff. Tier 2 is composed of students and faculty trained in mental health first aid who interact with anyone in distress using an anonymous platform. Tier 2 resources can be accessed anonymously by scanning a QR code embedded in the pictorial SPO* logo. Additionally, Tier 2 members display a pin, silently identifying them as trusted peers. Tier 3 connects people in distress to licensed mental health professionals; existing MCW policies provide for a number of free counseling sessions that preserve the anonymity of those who seek this treatment modality. Interventions were structured to either increase protective factors or decrease risk factors for suicide. Surveys and use-metrics will be used to evaluate the pilot program’s efficacy at the regional Central Wisconsin campus.

Lessons Learned: The Central Wisconsin campus’s annual mental health climate survey helped determine which collective risk factors were most affecting our diverse population. We deemed the 2 most cited risks as the primary focus of our first initiative: stigma and isolation. The direct antidotes for these 2 risks are normalization and peer support, respectively, providing the foundation for SPO*. Our preliminary data identified additional factors necessitating the development of our training curriculum and mechanisms to optimize efficient resource accessibility, such as the QR code system. These factors include a heightened knowledge foundation, the unique risks among the LGBTQIA+ and racial minorities, and perceived lack of time. As we move forward, continued study of SPO*’s use-metrics and efficacy will help refine and scale the program institution-wide.

Significance: Culture change occurs with a framework to learn new skills challenging old beliefs. This program intends to create that framework. SPO* is a cost-effective means of promoting mental flourishing and cultural change in health education and, with further success, may be adapted nationwide.

References

1. Hansell MW, Ungerleider RM, Brooks CA, Knudson MP, Kirk JK, Ungerleider JD. Temporal trends in medical student burnout. *Fam Med*. 2019;51(5):399-404. doi:10.22454/FamMed.2019.270753
2. Rajapuram N, Langness S, Marshall MR, Sammann A. Medical students in distress: The impact of gender, race, debt, and disability. *PLoS One*. 2020;15(12):e0243250. doi:10.1371/journal.pone.0243250
3. Knaak S, Mantler E, Szeto A. Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions. *Healthc Manage Forum*. 2017;30(2):111-116. doi:10.1177/0840470416679413
4. Downs N, Feng W, Kirby B, et al. Listening to depression and suicide risk in medical students: the Healer Education Assessment and Referral (HEAR) Program. *Acad Psychiatry*. 2014;38(5):547-553. doi:10.1007/s40596-014-0115-x
5. Thompson D, Goebert D, Takeshita J. A program for reducing depressive symptoms and suicidal ideation in medical students. *Acad Med*. 2010;85(10):1635-1639. doi:10.1097/ACM.0b013e3181f0b49c

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BEST PRESENTATION: POSTER PRESENTATION – RESEARCH

Human Trafficking in Wisconsin: The Physician’s Role in Ending Modern Day Slavery

Marissa Cepress, BS

Background: Every county in Wisconsin has had reports of human trafficking, from rural towns to urban areas. In Wisconsin, 80% of human trafficking is sex trafficking. Since 2007, there have been more than 500 reported cases of human trafficking in Wisconsin, and over 2,000 suspected cases. From 2013 through 2016, there were 340 cases of human trafficking reported in Milwaukee alone, which leads experts to believe Milwaukee is the main hub of human trafficking in Wisconsin. The major route of trafficking through Wisconsin is Milwaukee to Fox Cities/Green Bay to Wausau. More than 80% of trafficked victims have reported seeking medical care from a physician during their time in captivity.

Methods: Obstetrics and gynecology, family medicine, and emergency/urgent care physicians (as these specialties most often

come in contact with human trafficking victims) in the Wisconsin Medical Society completed questions regarding their demographics. Then, they completed a pre-self-assessment regarding their knowledge and confidence in human trafficking protocols. They completed a quiz about basic knowledge regarding human trafficking. Finally, they read a short educational article and afterwards completed the same self-assessment and quiz. The results of these self-assessments and quizzes were used to measure a change in physicians' confidence and education after reading the article.

Results: Eighty-three percent of Wisconsin physicians have not received training specific to human trafficking but are familiar with their local resources. Physicians' understanding of human trafficking and their confidence to effectively and safely treat/help a victim of human trafficking improved after reading a short 1-page educational article. Thus, physicians' knowledge in human trafficking can be maintained or enhanced by simply reading an educational/informative article, which would take only about 10 to 15 minutes. Even when rewarded with continuing medical education credit, 75% of Wisconsin physicians are unwilling to voluntarily complete an online training course in human trafficking.

Conclusions: Overall, most Wisconsin physicians lack the knowledge and confidence to help victims of human trafficking, but this can be improved with a small amount of online education. As most physicians were unwilling to voluntarily complete an online training course to enhance their knowledge in human trafficking, Wisconsin should mandate training specific to human trafficking for physicians and all other health care workers.

Study Significance: Most physicians are not trained in recognizing victims of human trafficking, although they are one of the only professions that consistently come into contact with human trafficking victims.

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BEST PRESENTATION: POSTER PRESENTATION – INNOVATION

Identifying Barriers to Practicing a Growth Mindset in Medical Education

Katherine Lumetta, MEd, BS; Ellen Arndt, MD; Martin Muntz, MD; Kurt Pfeifer, MD

Problem Statement: The concept of mindset, based on research by Dr Carol Dweck, has long been studied in education.^{1,2} With a fixed mindset, people believe that their intelligence, characteristics, and abilities are innate and unchangeable. People with a growth mindset believe that their intelligence, characteristics, and abilities can be improved with effort. Mindsets influence how people view and approach challenges; those with a growth mindset seek out challenges and view mistakes as an essential part of learning. Mindset is often assessed by asking people to rate their agreement with statements that align more with a fixed mindset or growth mindset. However, even those with a growth mindset “on paper” may face barriers to practicing a growth mindset in medical education. We aimed to identify possible barriers to practicing a growth mindset and triggers for a fixed mindset in medical education.

Approach: Following a faculty development session and small group session on mindset, participants in the Kern Institute Coaching for Character, Caring, and Competence (4C) Program were surveyed about barriers to practicing a growth mindset and triggers for a fixed mindset in medical education. The survey included questions about barriers to practicing a growth mindset and triggers for a fixed mindset for M1/M2 students, M3/M4 students, and faculty members. Respondents included M1 through M4 medical students and faculty members. Responses were analyzed for common themes identified for M1/M2 students, M3/M4 students, and faculty members.

Lessons Learned: Forty-three responses

were received. The most common barriers to practicing a growth mindset and triggers for a fixed mindset identified overall were comparison to peers, fear of failure, focus on test scores and grades, pressure to prepare for the next step/residency, fear of being wrong or embarrassed, competition, lack of emphasis on learning/growth, and lack of time. The most common barriers and triggers identified for M1/M2 students were comparison to peers, fear of failure, and focus on test scores and grades. The most common barriers and triggers identified for M3/M4 students were pressure to prepare for the next step/residency, fear of being wrong or embarrassed, and focus on test scores and grades. The most common barriers and triggers identified for faculty members were lack of emphasis on learning/growth, fear of being wrong or embarrassed, and promotion.

Significance: Learners practicing a growth mindset may be more willing to seek out challenges, work to improve, and focus on mastery rather than performance. Overcoming the identified barriers to practicing a growth mindset may require fostering growth mindset at the individual and organizational level.

References

1. Osman NY, Hirsh DA. The organizational growth mindset: Animating improvement and innovation in medical education. *Med Educ.* 2021;55(4):416-418. doi:10.1111/medu.14446
2. Wolcott MD, McLaughlin JE, Hann A, et al. A review to characterise and map the growth mindset theory in health professions education. *Med Educ.* 2021;55(4):430-440. doi:10.1111/medu.14381

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