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The Effect of an Intersectionality Elective on the Perceived Self-Efficacy of Medical Students in Addressing Health Inequity

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The Effect of an Intersectionality Elective on the Perceived Self-Efficacy of Medical Students in Addressing Health Inequity

Cover Page Footnote

This group would like to acknowledge the Office of Diversity and Inclusion at the University of Texas Health Sciences Center at Houston as well as Dr. Rebecca Lunstroth and Dr. Anson Koshy for their contributions to the success of this project.

Authors

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Introduction

Medical education is amid a paradigm shift, emphasizing tools such as cultural humility and highlighting diversity to better prepare future physicians[1]. A core tenet of this paradigm is to acknowledge and address the role bias and social institutions play in health care quality and delivery. Racism has been a particular focus in recent years. The Center for Disease Control (CDC), American Public Health Association (APHA), and the American Association of Medical Colleges (AAMC) have declared structural racism as a driver of health inequities and consequently developed guidelines for academic medical centers to address it as a means of improving patient care[2-5]. These steps are critical; however, addressing only racism is insufficient as it ignores other salient factors that negatively impact medical practice. One framework which offers a more nuanced approach is intersectionality. This concept contextualizes an individual's experience as a combination of cultural and social identities. The benefits and challenges specific to an individual belonging to a racial group, gender, sexual orientation, and other identity markers interact in complex ways at a macro societal level[6-8]. Patients represented in this way can better characterize the collective impact of any bias (i.e., racism, sexism, ableism, heteronormativity) they may be victims of rather than addressing each element individually. As such, intersectionality provides a more cohesive and realistic understanding of the individual. With this understanding, medical education and medical practice can be better suited to address health inequities[9-10].

Current study

In an exploratory pilot study, we examined the effect a 10-week student-led elective based on the intersectionality framework on the self-efficacy of medical students addressing health inequities. This measure of self-efficacy was modeled after Alfred Bandura's general self-efficacy in order to assess students' perceived capabilities related to the treatment of and finding resources for diverse patient populations[11]. Bandura purported it is not enough for individuals to possess the requisite knowledge and skills to perform a task; they also must have the conviction that they can successfully perform the required behavior(s) under typical and, importantly, under difficult circumstances. It was hypothesized that there would be an increase in self-perceived efficacy at the end of the course compared to the beginning.

Method

Participants and procedure

First- and second-year medical students at a large medical school in the Southwest were invited to participate in a ten-week pilot elective entitled "Intersectionality in Medicine."

The 25 participants who voluntarily enrolled in the elective completed a ten-minute online survey through RedCap before the course (Supplemental Figure 1). In the survey, participants rated their ability to anticipate the healthcare needs of various patient populations and their comfort in discussing course topics on a 10-point Likert scale (0 – Very Poor – 10 - Excellent).

Small- and large-group discussions during the course addressed the following themes: healthcare access, race/ethnicity, women in medicine, LGBTQ+ health, disability, and other stigmatized populations (Table 1). Small group meetings occurred once a week for two hours and consisted of 4-6 students, one of whom was a second-year medical student facilitator. It was left up to the discretion of the groups to decide the format of the meetings, either in-person or virtual and how to address the course content. The student facilitators were volunteers who contributed to the design of the course during the preceding summer and attended three additional facilitator-only meetings just prior to the start of the course and two during the 10 weeks. The meetings addressed the resources covered in subsequent weeks and potential discussion questions or topics. For large-group meetings, course participants attended a lecture given by a faculty member from emergency medicine at our institution and a panel discussion. The student panel consisted of two third-year medical students who spoke about their clerkship experiences in the context of race, sex, sexual orientation, and disability. Before each meeting, participants were assigned resources (including podcasts, peer-reviewed journal articles, testimonials, opinion pieces, and art) to review. After the elective concluded, students completed a post-course survey, again through RedCap, that was identical to the pre-course survey. All survey results were anonymous. Demographic data was collected. This study was approved by the institution's Institutional Review Board as exempt.

Data analysis

One-tailed, two-sample unequal variance T-tests were performed on matched questions in pre- and post-surveys to evaluate changes in participants' ability to treat patients and familiarity with course concepts.

Results

Twenty-five students (N_{female} = 13; 52%) completed the pre-course and post-course surveys. The participants were racially diverse: White American (N= 12, 48%), Asian American (N= 8, 32%), Black/ African American (N= 4, 16%), and Hispanic(N= 3, 12%); heterosexual (N= 20, 80%), second-year students (N= 15, 60%), between the ages of 22-25 (N= 18, 72%).

Post-course survey results for all 15 Likert Scale questions were significantly improved compared to pre-course responses (Figure 1). The most significant improvement was observed in the participants' ability to assess the health care needs of patients living with HIV (M= 6.92, SD = 1.38) when compared to the pre-course survey, $t(24)$ = -6.64, $p = 3.6 * 10^{-7}$. Other areas that demonstrated the most significant improvement were the participants' ability to assess the health care needs of older adults and patients with disabilities and the participant's ability to identify their own biases.

Discussion:

Incorporating intersectionality into health care would introduce nuance, individualization, and complexity. This framework provides a platform for improved patient care as it accounts for systemic factors impacting health[12-13]. This study examined an initial attempt to incorporate intersectionality into a medical school curriculum. Students used various media (podcasts, peer-reviewed journal articles, testimonials, opinion pieces, and art) to facilitate discussions about the impact of group membership on health in a modified student-led framework[14]. The goal of the curriculum utilized by the intersectionality course was to highlight the experiences of underserved communities in health care and emphasize the impact which intersectionality has on the availability and quality of care that is delivered to those communities. Participants improved significantly in all assessed areas: Understanding one's own biases, assessing the needs of different populations, the ability to find relevant resources, and awareness of mistreatment in a health care setting. These data indicate growth which is tremendously valuable for physicians as they highlight improvement in introspection, problem-solving, and situational awareness. The AAMC Diversity, Equity, and Inclusion competencies make this point as they highlight several critical components of the intersectionality course, specifically the subsections "Advancing Diversity and Integration in Practice" and "Mitigating Stigma and Implicit and Explicit Biases" from the Diversity and Equity sections respectively[15].

As mentioned previously, medical training is beginning to highlight systemic racism as a factor affecting patient health and patient care. This course is among the first of its kind, going beyond racism to address intersectionality. It asks the question: how do gender, sexuality, race, socioeconomic status, and other factors interact, and how do they collectively impact a patient's ability to seek, receive, and benefit from health care in the United States? Whether this course and courses like it will produce better physicians remains to be seen. However, this study's results indicate the methodology's efficacy and invite further investigation.

Implications and future directions

It should be noted that this research is a preliminary study that is based on the data of 25 students who self-selected to enroll in this 10-week elective. This report is also exclusively relies on self-report measures. Therefore, the generalizability of this study is limited. However, it has been shown that web-based study results generalize equally as "in-person" research studies[16]. Therefore, this study serves as a foundation to expand and identifies the potential of including intersectionality scholarship as part of medical school training. As has been noted in other curriculum changes at this institution, this course demonstrates the benefit of longitudinal instruction[17]. Whether due to time or other constraints, organizations often choose to address themes of diversity, equity, and inclusion in stand-alone workshops or single lectures and it is important to note the success of this course given its longitudinal structure. The results of this investigation invite further study with larger cohorts across multiple institutions.

Furthermore, future research should explore two important areas expanding beyond training in medical school. First, it is critical to investigate the best approaches for transitioning from a discussion course covering intersectionality to real clinical practice. Second, in that vein, training of practicing physicians must be scrutinized in order to understand how current practices help or harm patients of varying cultural backgrounds, sexual orientations, and other identity groups. Overall, understanding how an intersectionality framework impacts the efficacy of medical students is critical to inform the ongoing revision of medical education. It is also an essential step toward rewiring health care delivery in such a way that intentionally and meaningfully addresses social determinants of health.

Conclusions

The impact of intersectionality on health and health care at an individual level is becoming better understood. Considering this developing scholarship, this study represents a call to action for healthcare education and training programs. Institutions adopting bias training, most often addressing race, likely are not doing enough to properly train their physicians to appropriately interact with and correctly treat patients in a culturally sensitive way. These data introduce an educational tool that could be more powerful and produce physicians better equipped to address and understand health inequities and the cultural biases and structures that produce them.

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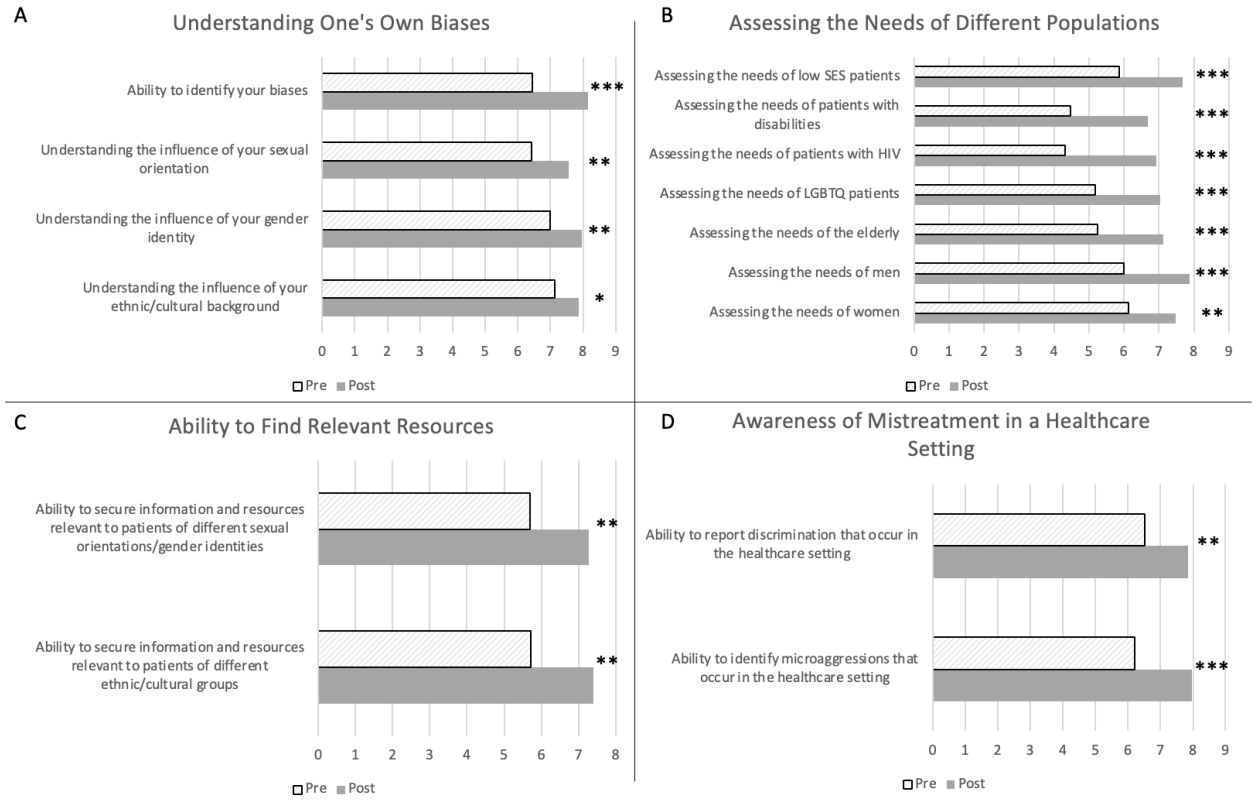
Figures:

Figure 1 (A, B, C, D): Pre and Post Results of Measured Outcomes



* p<0.03
** p<0.01
*** p<0.001

Tables:

Table 1: Description of 10-week Intersectionality Curriculum

Week 1: Introduction

Week 2: Access to Care 1 - Barriers to accessing care
- Resource deserts
- Rural vs. urban health care
- The uninsured

Week 3: Access to Care 2 - Suboptimal care in the health care setting
- Patient mistrust due to racial differences
- Provider unconscious bias
- Care when translation is necessary

Week 4: Access to Care 1 - Barriers to accessing care
- Resource deserts
- Rural vs. urban health care
- The uninsured

Week 5: Women as Patients
- Gender bias when treating pain
- maternal mortality among African American women
- Sex differences in disease presentation

Week 6: Women as Providers
- Gender bias in training
- Racism and sexism directed towards female physicians
- Wage gap for female physicians

Week 7: LGBTQ Health 1
- Access to care for LGBTQ patients
- Relevant terms and definitions for LGBTQ Care

Week 8: LGBTQ Health 2
- LGBTQ membership in current political landscape
- Mental health in LGBTQ population
- LGBTQ patients as victims of violence

Week 9: Stigmatized populations
- Health care in American Prisons
- Stigma in medicine
- Health care for immigrants and asylum seekers

Supplemental Figures:

Supplemental Figure 1: Pre and Post Course Surveys

Intersectionality in Medicine Pre-Survey

AAA

This is the Intersectionality in Medicine pre-survey and should be completed before starting the course. Survey responses are anonymous. Only Intersectionality in Medicine leaders will have access to this information. Data will be used to improve the course for future students and for research purposes.

Thank you!

Please type the last 5 digits of your phone number:
* must provide value

Please indicate your current academic status at McGovern:
* must provide value

- ○ First Year
- ○ Second Year
- ○ Third Year
- ○ Fourth Year

Please indicate your age:
* must provide value

- ○ 18-21 years
- ○ 22-25 years
- ○ 26-29 years
- ○ 30-33 years
- ○ Over 33 years
- ○ Prefer not to answer

Please indicate your gender:
* must provide value

- ○ Male
- ○ Female
- ○ Non-binary
- ○ Prefer not to answer
- ○ Other

Please indicate your race/ethnicity:
* must provide value

- ○ Hispanic or Latino, any race
- ○ White, Non-Hispanic
- ○ Black or African American, Non-Hispanic
- ○ American Indian or Alaskan Native, Non-Hispanic

	○ Asian, Non-Hispanic ○ Native Hawaiian or Other Pacific Islander, Non-Hispanic ○ Prefer not to answer ○ Other
Please indicate your sexual orientation: * must provide value	○ Lesbian ○ Gay ○ Bisexual ○ Heterosexual ○ Prefer not to answer ○ Other
What motivated you to enroll in this course and what do you hope to get out of the experience? * must provide value	
What is the best way to learn about your own implicit bias/ignorance? What is the best way to overcome it? * must provide value	
How comfortable are you identifying/explaining social determinants of health and their impact on health outcomes? * must provide value	○ Not at all ○ A little ○ Somewhat ○ Quite a bit ○ Extremely
How much do you think social determinants of health influence health outcomes? * must provide value	○ Not at all ○ Only a little ○ To some extent ○ Rather much ○ Very much
How would you rate yourself in terms of understanding how your ethnic/cultural background has influenced the way you think and act? * must provide value	Very Poor Fair Excellent Change the slider above to set a response reset

How would you rate yourself in terms of understanding how your gender identity has influenced the way you think and act?

* must provide value

Very Poor Fair Excellent

Change the slider above to set a response

reset

How would you rate yourself in terms of understanding how your sexual orientation has influenced the way you think and act?

* must provide value

Very Poor Fair Excellent

Change the slider above to set a response

reset

How would you rate your ability to accurately identify your own culturally biased assumptions as they relate to your future medical practice?

* must provide value

Very Poor Fair Excellent

Change the slider above to set a response

reset

How would you rate your ability to effectively secure information and resources to better serve patients of different ethnic/cultural groups?

* must provide value

Very Poor Fair Excellent

Change the slider above to set a response

reset

How would you rate your ability to effectively secure information and resources to better serve patients of different sexual orientations/gender identities?

* must provide value

Very Poor Fair Excellent

Change the slider above to set a response

reset

How would you rate your ability to assess the health care needs of women?

* must provide value

Very Poor Fair Excellent

Change the slider above to set a response

reset

How would you rate your ability to assess the health care needs of men?

* must provide value

Very Poor Fair Excellent

Change the slider above to set a response

reset

How would you rate your ability to assess the health care needs of older adults?

* must provide value

Very Poor Fair Excellent

Change the slider above to set a response

How would you rate your ability to assess the health care needs of the LGBTQ community?
* must provide value

Very Poor Fair Excellent
Change the slider above to set a response
reset

How would you rate your ability to assess the health care needs of individuals living with HIV?
* must provide value

Very Poor Fair Excellent
Change the slider above to set a response
reset

How would you rate your ability to assess the health care needs of patients with disabilities?
* must provide value

Very Poor Fair Excellent
Change the slider above to set a response
reset

How would you rate your ability to assess the health care needs of patients who come from low socioeconomic backgrounds or who are insured, underinsured, or publicly insured?
* must provide value

Very Poor Fair Excellent
Change the slider above to set a response
reset

How would you rate your ability to identify microaggressions that occur in the healthcare setting?
* must provide value

Very Poor Fair Excellent
Change the slider above to set a response
reset

How would you rate your ability to report harmful behaviors that occur in the healthcare setting, such as race- or gender-related discrimination?
* must provide value

Very Poor Fair Excellent
Change the slider above to set a response
reset

How comfortable are you having conversations about race?
* must provide value

○ Not at all ○ A little ○ Somewhat
○ Quite a bit ○ Extremely

How comfortable are you having conversations about women's health disparities/gender bias against female healthcare workers?

○ Not at all ○ A little ○ Somewhat
○ Quite a bit ○ Extremely

How comfortable are you having conversations about LGBTQ health/gender affirming care? * must provide value	○ Not at all ○ A little ○ Somewhat ○ Quite a bit ○ Extremely
Did you take the Implicit Bias test? * must provide value	○ Yes ○ No
Submit	