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Racquel J. Wells  
*University of Massachusetts Medical School*

Christine Motzkus  
*University of Massachusetts Medical School*

Suzanne B. Cashman  
*University of Massachusetts Medical School*

See next page for additional authors

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An Analysis of Implicit Bias in Medical Education

Authors
Racquel J. Wells, Christine Motzkus, Suzanne B. Cashman, Jeroan J. Allison, Michael Buckner, Sonia Chimienti, and Deborah L. Plummer

Keywords
implicit bias, Implicit Association Test, IAT, medical education curriculum

Comments
Racquel Wells participated in this study as a medical student as part of the Senior Scholars research program at the University of Massachusetts Medical School. This poster was presented on Senior Scholars Program Poster Presentation Day at the University of Massachusetts Medical School, Worcester, MA, on April 27, 2016.

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OBJECTIVE

To understand students' insight into implicit bias and stereotyping

To analyze comments in reflection papers submitted by students enrolled in the required undergraduate medical training program at the University of Massachusetts Medical School (UMMS). Student reflections were the subject of the investigation.

BACKGROUND

The Implicit Association Test (IAT) is a well-researched method for identifying an individual's implicit bias.

Occurring outside of conscious awareness, implicit bias is a form of nonverbal thoughts, behaviors, and actions that influence an individual and suggest unequal treatment.

In the undergraduate medical education, the IAT is commonly used to assess the medical students' personal bias.

Studies from the American Association of Medical Colleges (AAMC) have shown that bias is ranked highly as one of the least addressed educational goals in medical education and training.

Medical literature suggests that implicit bias affects clinical faculty patient care decisions; this in turn affects medical student education.

Data collected from our medical school's first year curriculum suggest that there are missed opportunities to explore the effects of implicit bias on health outcomes.

METHOD

125 first-year medical students (48% Female; 52% Male; mean age 25 years; 95% from Massachusetts, 8.8% identified as under-represented ethn/racial minorities) in the entering class of 2014 submitted written reflections following attendance and discussion-based learning in the Dott course. This research was exempt from IRB regulation as it involved existing documents and subjects were not directly identifiable. Grounded theory methodology was used for the qualitative analysis of the comments. Papers were de-identified, read, and codes were constructed according to emerging themes (descriptive, diagnostic, and prescriptive) found. The codebook developed focused on biases, systemic/institutional biases, individual bias, awareness, and health disparities. Student commentary was coded for themes and tallied for total amount of discussion for each theme. Inter-rater reliability was calculated for 20% of the sample using Cohen's kappa.

RESULTS

Under-represented minorities include Mexican-American, Mexican-Chicano, American Indian/Native Alaskan, Cambodian, African, Vietnamese, Black/African and American Portuguese.

For the twenty-five essays coded by both raters, Cohen's kappa was calculated to be 0.81 (p<0.001), indicating a high level of agreement between raters.

Statistical Analysis

76% (95/125) of comments mapped to implicit bias

Descriptive Theme

Interpretation of comments: 83% (n=26)

Diagnostic Theme

Bias is a product of society, cultural backgrounds and media. 57% (n=56)

Prescriptive Theme

Bias has a negative effect on the decision-making process that impacts patient care and treatment: 83% (n=79)

There is a fine line between clinical judgement and highlighting bias towards patient care: 13% (n=16)

It is important to understand where biases stem from to actively act against it for the benefit of better patient care: 73% (n=291)

Current Recommendations

68 of 75 students reflected on implicit bias and its origin, despite not commenting on their reaction to the IAT.

CURRENT CLIMATE OF HEALTHCARE

1. Potential sources of racism included lack of trust in physicians from historical events (including Tuskegee Syphilis Experiment) and societal disparities.

2. Comments regarding IAT:
   1. 56% (59/105) students mapped to discussing the IAT.
   a. 43% (n=30) were surprised by their results
   b. 29% (n=20) were not surprised

3. Students' comments revealed a significant depth of understanding about implicit bias and its impact on patient care.

CONCLUSIONS

The IAT is informative in the medical education curriculum.

Medical students gain insight into the importance of understanding personal implicit bias and the effect it may have on clinical decision-making.

Medical students identify and self-reflect on the development of behaviors and skills that will facilitate improved patient care decision-making and interactions.

Medical students may benefit from conversations with current faculty clinicians about the methods currently used to combat personal implicit bias in the current climate of healthcare.

Additional exploration of faculty involvement in these topics may engage medical students throughout their undergraduate medical training.

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REFERENCES

