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An Analysis of Implicit Bias in Medical Education

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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 curriculum, 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.

OBJECTIVE

• To understand students’ insight into implicit bias and stereotyping.
• To analyze comments in reflection papers submitted by students enrolled in the required “Dismantling of Health” (DOTT) course during the spring 2015 at the University of Massachusetts Medical School (UMMS). Student reflections responded to the request that they “select a reading, experience in tailoring the IAT or class discussion and comment on how the material led to new insight about the potential effect of bias or stereotyping on future clinical decisions.”

METHOD

125 first-year medical students (48% Female; 52% Male; mean age 25 years; 95% from Massachusetts, 8.8% identified as under-represented ethnic/racial minorities) in the entering class of 2014 submitted written reflections following a discussion 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 development focused on “bias,” “systemic/institutional bias,” “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 Portuguese.

Statistical Analysis:
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.

<table>
<thead>
<tr>
<th>Themes and Implicit Bias</th>
<th>Proportion of Comments</th>
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<tbody>
<tr>
<td>Descriptive Theme: Racial bias is inevitable 24%, (n=26)</td>
<td>75% (95/125) of comments mapped to implicit bias</td>
</tr>
<tr>
<td>Diagnostic Theme: IAT is a beneficial tool to acknowledge implicit bias: 16% (n=20)</td>
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<tr>
<td>Prescriptive Theme: Recognizing bias is an important step in actively acting against it for the benefit of better patient care: 73% (n=91)</td>
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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 can 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 and not judge unfairly: 32% (n=40) actively acting against it for the benefit of better patient care: 73% (n=91)
• It is a physician’s responsibility to dismantle the bias found in the healthcare system, through avenues such as advocacy and legislation: 32% (n=40)

ACKNOWLEDGEMENTS

I would like to thank the medical students of the entering Class of 2014 for their honest and open opinions surrounding these critical components of the medical student professional development.

REFERENCES