An Analysis of Implicit Bias in Medical Education

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

Comments
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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 “Determinants of Health” (DOrT) 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 taking 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 ETH/racial minorities) in the entering class of 2014 submitted written reflections following “Determinants of Health” (DOrT) course during the spring 2015 at the University of Massachusetts Medical School (UMMS). Students were instructed to select a reading, experience in taking 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.

RESULTS

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

  76% (95/125) of comments mapped to Implicit Bias

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<thead>
<tr>
<th>Theme</th>
<th>Descriptive Theme</th>
<th>Diagnostic Theme</th>
<th>Prescriptive Theme</th>
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<tbody>
<tr>
<td>Bias is inevitable/no one is perfect</td>
<td>24% (n=26)</td>
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<td>Bias is a product of society, cultural backgrounds and media. 57%</td>
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<td>Bias is a result of individual bias and vice versa</td>
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<td>Bias is identified through medical education</td>
<td>56% (n=70)</td>
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<td>Bias was mentioned systemic/organizational</td>
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<td>Bias negatively impacts patient care and treatment: 83%</td>
<td>79% (n=79)</td>
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<td>Bias is important to acknowledge implicit bias: 16% (n=20)</td>
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<td>It is important to understand where biases stem from to make conscious efforts to treat patients equally and not judge unfairly: 58% (n=73)</td>
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<td>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)</td>
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- Comments regarding IAT
  1. 56% (n=30) comments mapped to discussing the IAT
  a. 43% (n=30) were surprised by their results
  b. 29% (n=20) were not surprised
  2. 67 of 75 students reflected on implicit bias and its origin, despite not commenting on their reaction to the IAT.

Current Climate of Healthcare

40 students’ comments (32%) identified racism or racial bias existing within the medical field
- 1. potential sources of racism included lack of trust between physicians from historical events (including Tuskegee Syphilis Experiment) and societal disparities
- 2. 29 comments (23%), mentioned systemic/organizational bias as potentially having an impact on individual bias and vice versa

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

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