BACKGROUND AND PURPOSE

• Until recently, scholarship on prejudice, biases, and inequality has focused on the explicit, conscious attitudes held by individuals.
• In the past decade, it has become clearer that many biases are not always explicitly held or discussed, but are often hidden and unknown, even to the person with the bias.
• Explicit bias—consciously held beliefs that are often expressed openly
• Implicit bias—attitudes and beliefs that are unconscious, quick, and effortless
• Implicit bias, although outside of conscious awareness, can affect an individual’s behavior
• Thus, studying implicit bias is imperative to reduce healthcare disparities
• Researchers at Harvard University developed a series of Implicit Association Tests (IAT), including the Race IAT, to observe and measure implicit bias
• Many studies exist regarding training healthcare professionals on implicit bias
• However, the research usually focuses on nursing and medical students
• This study fills a much-needed gap in data on implicit bias within the pharmacy profession
• This study explores pharmacy students’ perceptions of the Race IAT

OBJECTIVE

• Identify and analyze pharmacy students’ perceptions about their own implicit racial biases

METHODS

Design
• This was a qualitative study of first year pharmacy students’ results and impressions of the Harvard Race IAT

Procedures
• First year pharmacy students enrolled in a Pharmacy Practice course completed a test, Harvard Race Implicit Association Test (IAT), for homework to uncover their unconscious racial bias
• All students then wrote at least one paragraph reflecting on if they agreed or disagreed with their results and why
• At the beginning of class, students were given a survey to capture their IAT results and demographic information
• Retrospectively and following Institutional Review Board approval, pharmacy students’ reflections were subjected to thematic analysis and descriptive analyses were completed of their demographic info

Data Analysis
• Pharmacy students’ demographic data such as race and ethnicity were self-reported prior to the start of lecturing in an in-class anonymous survey
• Two members of the research team (authors 4 and 5) independently read and re-read all the students’ reflections to become familiar with the data as well as coded the data and identified themes
• The full research team then reviewed the thematic map and further refined and defined the themes until consensus was reached

RESULTS

• Out of the 97 students enrolled in the course all completed the self-reflection
• Only 90 completed the survey
• Pharmacy students were categorized into one of two themes: those who felt the Race IAT results aligned with their views of themselves (egosyntonic) and those who felt that the Race IAT results did not align with their views of themselves (egodystonic)
• Egosyntonic is a psychological term that refers to thoughts, behaviors, feelings, or values that are consistent with one’s self-image or identity
• The pharmacy students who indicated agreement with their implicit bias are considered egosyntonic because they show a strong identity between self and their implicit racial bias
• Egodystonic represents the opposite of egosyntonic
• Instead of thoughts, feelings, and behaviors being aligned with one’s identity or self-image, they are in direct conflict

Table 1: Descriptive Statistics of Sample (N = 90)

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>48</td>
<td>54%</td>
</tr>
<tr>
<td>Male</td>
<td>42</td>
<td>46%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/Non-Black</td>
<td>72</td>
<td>80%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Asian</td>
<td>12</td>
<td>13%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strength of Preference</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Americans</td>
<td>22.9</td>
<td>2.98</td>
</tr>
<tr>
<td>African Americans</td>
<td>26.4</td>
<td>2.98</td>
</tr>
</tbody>
</table>

Table 2: Students’ Implicit Association Test (IAT) Reflections Organized Thematically

<table>
<thead>
<tr>
<th>Theme</th>
<th>Example</th>
<th>Theme</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Egosyntonic</td>
<td>“I agree and was not surprised with my result because it well reflects the values of the community I grew up with.”</td>
<td>2. Egodystonic</td>
<td>“I never press one race over the other and always give someone a chance to prove they are before I make assumptions.”</td>
</tr>
<tr>
<td>“The test doesn’t teach you anything you shouldn’t already know about yourself unless you are unable to accept how you actually feel.”</td>
<td>“I learned that I was slightly biased towards European Americans which was surprising and makes sense knowing that everyone has at least a little bit of bias.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Although my “preference” exists, I do not truly feel that it affects my day to day life or my interactions with whomever I may encounter.”</td>
<td>“I don’t consider myself a racist to any degree and I don’t think I stereotype anyone simply based on their race.”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| i. Order of questioning, existing mechanics | “I often think of the reason I got this result was because the survey questions were worded as though I am an African American and their views towards white people.” |
| j. Muscle Memory | “I thought the quick pictures were more of a brain challenge than an accurate representation of my natural instincts.” |

DISCUSSION

• This study is the first to measure implicit attitudes about race among pharmacy students with several important contributions
• First, this study revealed biases that the pharmacy students did not know
• Second, this study highlights the dissociation between implicit (unconscious, endorsed beliefs) and explicit (conscious, endorsed beliefs) associations
• Third, this study provides insight into how to train pharmacy students to increase self-awareness, which may lead to improved health outcomes
• The Race IAT has proven to be a useful tool for raising self-awareness among pharmacy students
• Even if explicit attitudes are modified among pharmacy students, training is likely to remain and increase healthcare disparities
• As educators, we need to provide recoucurring opportunities throughout the four years of pharmacy school
• This study allows the students the time to process the information and allow them to adjust their self-identity, especially considering the cognitive dissonance we have found among students disagreeing with their Race IAT results (the egodystonic group)
• Studies have shown that although unconscious bias is widespread, it is malleable, not permanent, and can be unlearned through intention and taking the time to create new associations
• A necessary part of developing their professional identity as health equity practitioners will be to provide them with ample opportunity to address, acknowledge, and challenge their implicit biases while building a positive self-image through mastery of their skills as pharmacists
• Racial and ethnic disparities in healthcare continue to be a significant and persistent issue in the United States so future studies should explore the effect of the racial implicit bias within pharmacy practice
• The study has a couple of limitations
  • Social response bias
  • Our results may not be generalizable to a larger population
  • However, it is affirming that the percentage of our students who reported a pro-white bias is aligned with the national data minimizing the risk of social response bias and lack of generalizability

CONCLUSIONS

• 66% of all students showed some level of European American preference and 13% showed some level of preference for African Americans
• Those that agreed with results of the IAT cited family, friends and community as contributors to their own implicit bias
• Those that disagreed with their results believed that their implicit association did not affect their behavior or believed that the race IAT was invalid
• This finding reinforces the need for continuing personal awareness training throughout the four years of pharmacy school

REFERENCES