

# Study shows distinct appearance bias among reviewers for radiology residencies

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Reviewers selecting candidates for residencies in medical school radiology programs discriminated against applicants who were obese or facially unattractive, according to a study from Duke Health researchers.

The results showed that the physical appearances of applicants in their photographs was more important in admission decisions than were traditional medical school performance measures such as the candidates' grades, class rank, and honor society memberships.

"Appearance-based discrimination has been documented in the business world, where there is data to suggest that attractive people may be more successful, but in medicine, and in higher education more broadly, there is really no justification for it," said Charles M. Maxfield, M.D., Duke Radiology's Vice Chairman of Education and lead author of a study in the journal *Academic Medicine*. "It's unfortunate and disturbing, but perhaps not totally unexpected."

Maxfield and colleagues designed their study to explore the impact of physical appearance on resident selection. They created mock applications that were reviewed at five academic radiology departments by 74 faculty members. The reviewers believed they were assessing actual applications as part of their department's residency selection process.

They chose 76 photographs to present the pre-specified distribution of

facial attractiveness and obesity, as well as race/ethnicity and gender. Each [photograph](#) was then assigned a randomly generated name and other demographic information to create 76 baseline applicant identities.

Academic variables—including class rank, clinical clerkship grades, and standardized [test scores](#)—were then randomized for each application and reviewer, such that each reviewer saw a different combination of academic variables associated with any given photograph.

Analyzing the scores associated with each photograph and its randomized academic variables, the researchers were able to document a clear disadvantage for people who looked unattractive or obese in their application photographs compared to those appearing attractive and non-obese, regardless of academic records.

In real terms, an applicant who appeared obese and facially unattractive was only half as likely to receive an interview compared to an applicant who appeared non-obese and facially attractive.

"We find no reason to believe our findings are limited to radiology resident selection," Maxfield said. "Admissions decisions-makers throughout [higher education](#) should consider any potential appearance-based [bias](#) they may hold, and invoke strategies to manage that bias."

Maxfield said the admissions photograph was ideal to study, because the physical appearance of the applicant could be isolated and eliminated from other factors such as the person's confidence or charisma. He argued that similar biases could also manifest during in-person interviews, the next stage of the admissions process.

Maxfield said the study should serve as an alert as well as a learning opportunity. He said when biases are known, they can be guarded

against. As evidence, he noted that reviewers in his study favored black and Hispanic applicants over white and Asian applicants.

"To explain the preference for underrepresented minorities, we suspect our reviewers were prioritizing applicants they believed best met institutional goals and values," Maxfield said. "What this might show is that bias can be managed if you are aware of it and compensate."

Provided by Duke University

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