

# A Picture Is Worth a Thousand Words: Unconscious Bias in the Residency Application Process?

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Applying for a residency program can be a stressful process for medical students. It is a combination of applying for a job in the “real world” and applying to a college or medical school. In certain fields of medicine or surgery, there may be over 600 residency applications for 40 to 80 interviewee slots. Different specialties, as well as programs within a given specialty, take a different number of residents per year. This can vary from 1 to over 20 available spots, depending on the field of medicine or surgery as well as the specific program. Orthopedic surgery residencies, for example, can match between 2 and 12 residents each year. During the 2013–2014 academic year at our institution, there were over 600 applications received for approximately 50 interview slots for a class of 5 orthopedic surgery residents. Nationally, according to publicly available 2013 National Resident Matching Program (NRMP) data, a total of 1038 applicants (833 US medical school seniors) applied for 693 spots in orthopedic surgery, of which 692 were filled, indicating that orthopedic surgery remains one of the most desired fields among medical school seniors.<sup>1</sup> Looking at the statistics provided by the NRMP data, orthopedic applicants remain some of the most competitive, with proportionally higher board scores, publication numbers, and grades, among other factors.<sup>1</sup>

Each individual program has its own method for sifting through the applications. At some institutions, the individual “in charge” of the selection committee may look through all applications initially, narrow them down, and then distribute them to the other members of the selection committee to determine the final interviewee list. At other institutions, the initial group of applications may be divided and distributed to the committee members so that each member reviews the applications and ultimately decides upon the interview candidates.

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The Electronic Residency Application Service (ERAS) application includes the applicant's name, birth city, current place of residence, education history, standardized test scores, grades achieved during medical school, letters of recommendation, personal statement, extracurricular activities, volunteer activities, research experience, and languages spoken, along with several other pieces of data, all intended to be able to give the committee a better understanding of the applicant. Interestingly, however, the application also includes a photograph of the applicant.

Countless authors have demonstrated that we make assumptions and reach conclusions without even being aware that this is occurring. This is the theory of “unconscious bias.”<sup>2-5</sup> Unconscious bias applies to how we perceive other people, and occurs when subconscious beliefs or unrecognized stereotypes about specific characteristics, including gender, ethnicity, religion, socioeconomic status, age, and sexual orientation, result in an automatic and unconscious reaction and/or behavior.<sup>6</sup> Unconscious bias has the ability to affect everything from how health care is delivered to how employees are hired.<sup>7-12</sup> We are all biased, and becoming aware of our biases will help us mitigate them in the workplace.

Title VII of the Civil Rights Act of 1964 requires that employers rely solely on job-related qualifications, and not physical characteristics, in their interviewing and hiring process. The US Equal Employment Opportunity Commission (EEOC), the federal agency that enforces Title VII, includes asking for photographs during the application stage on its list of prohibited practices for employers.<sup>13</sup> It is our belief that including a photograph in the ERAS application, prior to the selection of interview candidates, may produce unconscious bias in the decision for granting (or not granting) an interview, and this component of the application should be eliminated.

Using a wide spectrum of cultural backgrounds in employers, Dion and colleagues<sup>14</sup> demonstrated that the “what is beautiful is good” bias is present in all cultures when prospective employees are closely matched in qualification. Attractive individuals are thought to have better professional lives and stable marital relationships and personalities, according to previous studies.<sup>14</sup> There has been much research aimed at determining if physical attractiveness is a factor in hiring, and the evidence suggests that the more attractive the applicant is, the greater the chances of being hired.<sup>15</sup> Specifically, Watkins and Johnston<sup>15</sup> have found that attractive people are thought

to have better personalities than less attractive people, and that a photograph can influence the hiring decision process.

Bradley Ruffle at Ben-Gurion University and Ze'ev Shtudiner at Ariel University looked at what happens when job hunters include photographs with their curricula vitae (CV), as is the norm in much of Europe and Asia.<sup>16</sup> For over 2500 job postings, they sent 2 identical résumés: one with a photograph and one without a photograph. An equal number of male and female applicants were sent to each posting, as were an equal number of attractive and plain-looking photographs; applications without photographs were also sent as a control group. For men, the results were as expected: CVs of “attractive” men were more likely to elicit a response from the employer (19.7%) compared with those of no-picture men (13.7%) and plain-looking men (9.2%). Interestingly, men who were viewed as “plain-looking” were better off not including a photograph. For the female applicants, however, the results were unexpected: CVs of women without a picture elicited the highest response rate (16.6%), while CVs of “plain-looking” women (13.6%) and of “attractive” women (12.8%) were less likely to receive a response.<sup>16</sup>

It is an unfortunate reality that personal preference, bias, and, in some cases, discriminatory hiring practices all factor into the selection process.<sup>17</sup> This is why, as described above, the EEOC includes asking for photographs during the application stage on its list of prohibited practices for employers.<sup>13</sup> The EEOC website also states: “If needed for identification purposes, a photograph may be obtained after an offer of employment is made and accepted.”<sup>13</sup> In the residency application scenario, once an applicant has been granted an interview, a photograph can be taken on the day of the interview. With so many interviewees, this may help the interviewers to remember the interviewee. At this point in the process, the applicant has already been granted the interview. The bias associated with merely looking at a photograph is thus eliminated. This is in accordance with Title VII and is clearly different than including a photograph in the initial application, which directly violates Title VII.

Reviewers of applicants may have an unconscious bias due to the applicant's attractiveness, race, sex, ethnicity, etc. Other, subtler forms of bias may also be present. Without realizing it, people may judge the quality of the photograph, or even what the applicant was wearing in the photograph. In orthopedic surgery, for example, there may be bias in the “size” of the applicant regardless of sex. Reviewers may unconsciously think how is he/she going to hold the leg, cut a rod, reduce a hip, etc. Without even realizing it, this may sway the person reviewing the application to choose one applicant over another. This may occur regardless of the applicant's actual qualifications as based on the previously described factors, including test scores, grades during medical school, letters of recommendation, personal statement, extracurricular activities,

volunteer activities, and research experience.

Unconscious bias is present in everyone. In an ideal world, one would be able to eliminate all sources of unconscious bias in the application process. Bias due to attending an Ivy League school versus a state school, bias due to where the applicant is from, bias due to who wrote the letter of recommendation, along with various other sources of unconscious bias, would be able to be eliminated. Unfortunately, this is not possible. What is possible, however, is to remove the photograph from the application process and to comply with Title VII of the Civil Rights Act of 1964.

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