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A UK funder's diversity review has found gender — but not racial — equality in successful grant applications.

UK FUNDER'S DATA POINT TO UNEVEN PLAYING FIELD

Grant success rates for scientists in under-represented minority ethnic groups are lower than for white applicants.

By Chris Woolston

Female scientists who apply for funding from Cancer Research UK (CRUK), a publicly funded charity based in London, have the same chance of success as their male counterparts, but applicants from minority groups face an uphill climb. Those are two of the key findings from the agency's internal diversity review, which suggests disparities linger amid some signs of progress towards equity.

The review stems from the charity's ongoing attempts to better track the demographics of grant winners, says Iain Foulkes, CRUK's executive director of research and innovation. "We know that, traditionally, there's a lack of diversity in biomedicine, especially in the UK, but we didn't know where we stood," he says. "It's the first time that we've accumulated enough data to actually put some analysis behind it."

Overall, female and male researchers who applied for any sort of CRUK grant since 2017 had the same rate of success: 28%. For members of minority ethnic groups, whose success rate was 11%, the chance of receiving funding is much lower.

The gender equality in success rates is a sign of progress, says Sophie Acton, a CRUK fellow and a cancer researcher at University College

London. "Women seem to be evaluated fairly," she says. "You have to look deeper to find the disparities."

But the data show a significant gender gap at the application stage. Just 31% of all applications for CRUK funding came from female researchers. (Fifty-eight per cent were from men, and about 12% of applicants didn't disclose their gender.) The gap was a little smaller for career-development fellowships for postdocs and other junior researchers: 42% of those applicants were women. In comparison, women account for about 46% of all biomedical academic staff (a group that includes postdocs and technicians as well as faculty members) and 22% of all biosciences faculty members in the United Kingdom.

Disparities persist among winners of prestigious programme awards, grants that provide senior researchers with up to £2.5 million (US$3.5 million) in funding for up to 5 years. Since 2017, women have accounted for 28% of all winners of programme awards. Members of minority ethnic groups accounted for 7%.

Foulkes says that the dearth of grant winners from minority ethnic groups is troubling and difficult to explain. He notes that applications from researchers from these groups are just as likely as those from white researchers to successfully pass the peer-review process. Applicants who make it through peer review generally move on to in-person interviews, and that's where researchers from minority ethnic groups seem to be at a disadvantage, he says. "Something happens at the interview stage, where white people have a greater level of success," he says. "We need to understand what that's about."

Potential explanations

There could be multiple reasons why researchers from minority ethnic groups tend to fall behind at the interview stage, says Lynn Asante-Asare, a medical student at the University of Leicester, UK, who in 2019 earned a PhD from the CRUK Cambridge Institute, where she is now a visiting scientist. Asante-Asare recently participated in a CRUK panel on the experiences of Black researchers in the cancer field.

Some researchers from minority ethnic groups might have missed out on guidance and preparation that could help them to excel at interviews, Asante-Asare says. "Mentorship from people who have gone through that process could help them feel comfortable in defending their research," she says.

But Asante-Asare also suspects that some interviewers might be unprepared to give researchers from marginalized backgrounds a fair chance. It's possible, she says, that a few evaluators have an overt bias against those applicants. She notes that racist attitudes were common in previous generations of scientists, and some of those attitudes could persist today. "We shouldn't be scared to say that there might still be a conscious bias," she says.

Some evaluators might also harbour subtle preferences to hire or support people who are like themselves, Asante-Asare adds. She thinks the casual small talk that often kicks off an interview, such as "What do you do for fun?" and "Where are you from?", could put candidates from marginalized backgrounds on unsteady and unequal footing: "Those questions leave quite a lot of room for bias." She suggests that interviewers should instead focus solely on a candidate's ability to do the research.

The CRUK report found that only 1% of grant applicants reported having a disability. A 2020 study[1] found similarly low rates of disclosure among applicants for US National Institutes of Health (NIH) grants. Foulkes says it's likely that a significant number of people decline to disclose disabilities in application forms. He describes a recent review committee, of which he was a member, that was unprepared to accommodate an interviewee who was hard of hearing. Even though the disability hadn't been declared, the committee should have been better prepared for such a situation, Foulkes says.

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CRUK is not the only agency examining diversity issues in funding. A 2019 report[2] from the NIH found that white applicants were 1.7 times more likely than Black applicants to win NIH grants. Grant requests from Black principal investigators accounted for less than 2% of all applications.

In December 2020, the largest funding agency in the United Kingdom, UK Research and Innovation (UKRI), reported that researchers from minority ethnic groups accounted for 18% of all fellows in 2018–19, a slight increase from the percentage in 2014–15.

A June 2020 report from UKRI showed that female applicants in 2018–19 enjoyed a higher success rate than did male applicants when applying for fellowships, at 24% to 16%. However, they lagged significantly behind in terms of grant size. The average value of grants won by female applicants was £640,000, compared with £672,000 for men.

The latest CRUK report underscores some of the challenges that female researchers still face as they try to progress in their scientific careers, says Caroline Gauchotte-Lindsay, an analytical chemist at the University of Glasgow, UK. Gauchotte-Lindsay co-authored a 2019 paper[3] identifying barriers to funding for female scientists in the United Kingdom. She's sceptical of suggestions that women simply need to be more confident or aggressive when applying for grants or fellowships. "I'm very worried when we try to fix the woman instead of the system," she says. "There must be some flaw in the way the process has been designed, and that's what we need to look into."

Gauchotte-Lindsay notes that many female researchers are saddled with teaching loads and service tasks that can slow down their research progress and make it harder to write multiple grant proposals. Ironically, some of that service work involves committees to promote diversity and inclusion. "Labour load is a massive problem," she says. "Women are already working very hard."

Fix the leaky pipeline

Acton says that CRUK should go beyond the diversity data to take a closer look at why female scientists drop out of the pipeline. The leaks seem to be especially severe towards the end of postdoctoral work. "It's at that stage that female postdocs decide 'this isn't for me', and that could be for a variety for reasons," Acton says. "The CRUK has personal contact with these people, and they are following their careers. They could find out."

Even before its recent self-evaluation, CRUK was taking steps to put applicants on a more-even footing, Foulkes says. He notes that women now account for nearly 40% of review-committee members, which is a "positive shift" from past years. Likewise, representation of researchers from minority ethnic groups on committees has reached 14%. Foulkes would like to get that number up to 20% – a potentially tall task given the relatively small pool of researchers from minority ethnic groups in the field.

Asante-Asare supports CRUK's continuing efforts to reach out to students from under-represented groups, although she adds that the charity could be doing even more to encourage researchers from marginalized backgrounds to study biomedicine or other science-related fields. "There are many CRUK scientists who would be more than happy to go into schools and to speak to students," she says. In her view, greater diversity would help the charity to fulfil its mission. "CRUK is a public-facing charity," she says. "We have a lot of interaction with patients. We maybe have to be better [at promoting diversity] than other funders. Society expects it of us."

"We have a genuine belief that diversity is good in cancer research," Foulkes says. He notes that some cancers are especially common and deadly in minority groups. "People who are connected to the issue should help drive the research on that issue," he says.

1. Swenor, B. K., Munoz, B., & Meeks, L. M. *PLoS ONE* **15**, e0228686 (2020).
2. Hoppe, T. A. *et al. Sci. Adv.* **5**, eaaw7238 (2019).
3. Jebsen, J. M. *et al.* Preprint at PsyArXiv https://doi.org/10.31234/osf.io/27mdz (2019).