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Editorial

Comment on "Gender Differences in Research Grant Applications and Funding Outcomes for Medical School Faculty"

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In 1980, 29% OF MEDICAL SCHOOL GRADUATES were women; in 1990, 39% were women. Even with long tenure tracks and waits for promotion to Full Professor, by this time one would have expected female representation in the higher ranks to be approaching these levels. As we learn from the paper by Waisbren et al. in this issue,[1] however, in 2002 only 11% of Full Professors and 19% of Associate Professors in the Harvard Medical System were women, a percentage pretty much in line with national figures. Women enter the academic pipeline in about equal numbers (46% of Instructors), but something happens after that.

Because research is key to promotion and applying for and getting grants is key to research, the process and funding outcomes of grant applications need to be looked at critically. We learn from this paper that women submit fewer grant applications (including to NIH, which provides the most funds), ask for less money and fewer years of funding, and are less successful in being funded.[1] When controlled for rank, the picture becomes more complex.

Application for grants goes up with rank, as does success in receiving funding, but the patterns differ for men and women. For the 3-year period studied (2001–2003), about a third of male professors (above the rank of Instructor) submitted grant applications. This figure is commensurate with women Assistant Professors, but above this rank, more than half of the female Associate Professors and Full Professors applied for grants. There are not very many in these ranks compared with men, but those there were highly active. Indeed, the key critical difference is at the Instructor level, where significantly more men than women apply. Thus, women do not get the same kind of start on their research careers at Harvard as men do. This difference has implications for avenues of alleviation, to which I will return.

When looking at success in obtaining funding, only at the Full Professor level do men have a higher success rate than women. (Because of small numbers, this difference is not statistically significant, but the percentage difference—the effect size—is actually higher than any other difference in the paper.) Thus, women Full Professors, who actually apply for more grants than men at that level and receive the same average funding, still find themselves with a lower success rate. If this is a replicable finding, it raises the question of funding bias, some evidence of which does exist in recent reports from funding agencies. It is clearly important to continue to monitor this discrepancy. Among Full Professor men, over 50% were successful in their grant applications, considerably higher success than any of the other groups. It is reminiscent of what has been called a Matthew Effect—to those who have is given. Equity would require a careful monitoring to ensure that senior women are not unfairly disadvantaged.

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This is the story we get from "Gender Differences in Research Grant Applications and Funding Outcomes for Medical School Faculty."[1] Fewer women than men move up the ranks in the Harvard Medical system. The critical point seems to be at the Instructor level, where fewer women than men submit grant applications, they ask for less money and receive less, and ask for shorter durations, even though they are equally successful in receiving what they request. In contrast, women at the Associate Professor level are more likely than men to submit grant applications; their success in receiving funding is the same, but the amount they receive is considerably less. Probably they are still requesting less. Finally, among those few at the Full Professor level, more women than men submit applications and now they receive an equal average amount of funding, but their success rate is less.

What are we to make of these findings, and what implications can we draw for alleviating the situation? Clearly, it is important to help women Instructors with proposal writing. They must be mentored on the importance of doing this for their careers and guided on where to go for funding and the amounts and durations that make sense. Women need to be told that when they do apply, their success rates match those of the men, and if, as the authors suggest, some of the difference in amounts asked for result from lower salaries, the institution must equalize salaries. So, a careful check on salaries and mentoring and guidance on grant applications are a high priority. Women might also be given seed money for preliminary research to better prepare them for writing proposals.

Of course, there is another problem here: these early years tend to be the childbearing years. Hence, along with important career mentoring must come awareness and response to this difference. It is here that institutional support is critical if women are to have an equal chance at academic careers in medicine. Can there be a modification in their clinical schedules so that they can have more time for research? Can they have more leave time? The important point here is that they need help at this early stage to do the research necessary to move up in academic medicine.

Here, also, more data would be useful. Are women more likely than men to be on the clinical educator track? Are fewer people on this track—of either sex—promoted? Does this mean that the institution needs to reconsider its promotion policies? The point of these questions is not to make recommendations but to shift the discussion from "fixing" the women to a consideration of the institutional norms and practices that create their problems in the first place.

From the data in this paper, we find that among women who have reached the upper ranks (at least in 2002), their research funding begins to be equal to that of men, and the proportion who submitted grant applications exceeded that of their male peers.[1] More data would be useful here as well. Are these women less likely to be married and less likely to have children? The authors suggest this as a possibility—that those whose commitment to medicine is not total may be the ones exiting the profession and thus leaving behind those remarkable career-oriented women of top talent who apply for research funding more than their male colleagues. The younger generation is less likely to follow this path, however, so the future may bring even fewer women to the top ranks of academic medicine. It is critical, therefore, to confront the question of what aspects of the academic career in medicine can be modified to allow dedicated women (and men) to thrive in it even when they have interests and responsibilities outside of medicine.

These are some thoughts generated by this paper. Its importance lies in introducing rank as a critical variable in the analysis.

REFERENCE

1. Waisbren SE, Bowles H, Hasaan T, et al. Gender differences in research grant applications and funding outcomes for medical school faculty. J Womens Health 2008;17:xxx.

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