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## More women in radiology research: need for diversity and inclusion



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In a new study that examines the potential challenges and obstacles to female radiologists conducting research and publication of work, the [American Association for Women Radiologists](#) propose strategies to overcome these challenges. In the report published in [Academic Radiology](#), researchers say that initiatives targeting the identified challenges to radiology research can help promote greater diversity and inclusion for radiologist researchers, which will lead in improving the quality of the research itself.

Disparities based on gender have long been discussed in the radiology field and continue to demand attention. It is not clear, however, what potential gender disparities may exist in radiology research and publication. Two new studies have revealed an increasing number of female authors of original research articles in radiology. Yet women still represent a substantial minority in terms of being lead authors of publications in radiology journals, and female authorship is lower in the United States than in various other countries including Canada, England, France, The Netherlands, and South Korea.

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The study results found that female radiologists were very interested in conducting research, although they were also more often expected by their departments to participate in educational activities. Women overall did not feel that their work was fully valued or received full credit from their departments. In addition, women generally reported insufficient departmental support and other resources for conducting research, with the overwhelming majority reporting receiving insufficient research time.

Close to half of the women surveyed identified more research time as the single item that would be most helpful for achieving greater research success. Women reported more often having a male rather than a female research mentor, and a personal research mentor was also identified as helpful to greater research success. Family/child-care issues and unconscious bias at the departmental/chair level were also prevalent issues identified by respondents. Furthermore, the women surveyed generally felt that their practices do not make deliberate efforts to support women in their research activities, including when stratified by a broad spectrum of individual and practice characteristics.

An analysis of all NIH grants received by radiology departments in 2015 demonstrated that women researchers received only 15.9% of grant funding and 13.3% of overall funding, and that the average funding amounts were lower for grants received by women than by men in the same field. This potential gender imbalance regarding radiology research is significant when considering that this disparity poses serious risks that less research emphasis is focused on issues in imaging that directly impact women's health. Furthermore, greater inclusion and leadership by women in radiology research would promote more creativity and innovation.

In the past articles on diversity in radiology have examined various approaches, like strong mentorship early in radiologists' careers, initiatives to ensure the visibility and recognition of accomplishments by individuals from underrepresented groups, as well as development of programs to provide executive coaching and training experiences. Nonetheless there is a shortage of initiatives specifically addressed to the disparities in radiology research and publication, which requires a new set of potential approaches. The aim of the study was to assess challenges faced by female radiologists in radiology research and publication and determine effective strategies to solve these issues.

For the study, an electronic survey was conducted of female non-trainee members of the American Association for Women Radiologists in September and October, 2017. Respondents were recruited by e-mail and the study was [HIPAA-compliant](#) and approved by the [NYU School of Medicine Institutional Review Board](#).

The survey was developed to address the study goals of relating to challenges faced when conducting radiology research and publication as well as possible strategies for overcoming these challenges. The survey authors included two members of the AAWR executive committee and three members of the American College of Radiology Commission for Women and Diversity. The survey was initially pilot-tested by approximately ten radiologists from the authors' home institutions. Feedback from the pilot testing was then applied to update the survey and improve the questions' clarity and relevance to the study goal. The final survey consisted of a range of multiple choice items as well as a single free-response item and is available online.

The survey was conducted electronically with approximately 280 active non-trainee members of the American Association for Women Radiologists. All responses were voluntary and anonymous. Two reminder e-mails were sent. These e-mails were distributed in September and October of 2017. The first question asked for the respondent's gender. If responding male, then the survey terminated at that point.

The study findings further support a number of strategies to help cultivate research success of women radiologists such as:

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- Interventions need to be implemented at the highest executive levels, including departmental and institutional leadership to combat both unconscious and conscious bias.
- Sincere commitment by leadership to the goal of equality in research opportunities is needed and should be openly communicated.
- Transparent procedures to be implemented for securing start-up and ongoing research time, access to departmental research resources, as well as nomination for promotion, as their lack tends to disadvantage women.
- Appropriate policies need to be in place regarding work-life balance and family/child care. This could include considering the impact on those with childcare or other home obligations of the timing of research meetings that are scheduled before or after routine work hours.
- Policies to ensure diversity when identifying departmental members to serve on relevant committees and research projects.
- Measures to secure that research tracks are available to both men and women faculty hires. Women researchers would benefit not only from personal mentors, but also coaches and sponsors who can take a more active role in promoting their mentee's success.
- Robust training provided early in the education continuum, not only in research methodology but in negotiation skills, management, leadership and other areas that would support additional growth as an investigator.
- Greater availability of resources to support successful research by interested radiologists is particularly evident at smaller practices.

While the survey responses show the potential unconscious bias among departmental and practice leaders, unconscious bias may also exist among the respondents regarding their own careers, as well as among the survey authors themselves in the design, execution, and interpretation of the survey. Of note, we surveyed only a single group of women radiologists at a single point in time. It is possible that members of the AAWR have different perspectives regarding the topic compared to other women radiologists. The survey also inherently reflects the opinions of respondents; researchers did not have data reflecting the actual impact and effectiveness of the various proposed resources and solutions. It is still not known how men radiologists would have responded to the same questions as well as potential differences between women and men radiologists regarding perceived research opportunities in their departments.

Promoting greater diversity and inclusion among radiologist investigators is important for enhancing the quality of such research. This survey of female radiologists identified a range of perceived barriers to achieving such diversity. Initiatives targeting such issues could be useful for improving participation of women in research and the quality of radiology research.

Sources: [Academic Radiology](#), [American Association for Women Radiologists](#)

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