Disputes & Debates: Editors' Choice

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Editors' Note: Leadership, Recognition Awards, and Publication by Men and Women in the American Academy of Neurology

In "Leadership, Recognition Awards, and Publication by Men and Women in the American Academy of Neurology," Miyasaki et al. reported a proportional increase in female membership, committee engagement, first- and last-author publications, and awards between 1997 and 2017. In fact, they found that proportionately, women were significantly more likely to receive recognition awards in this time period, although the absolute number of women was lower. The authors compared their findings with a previous study by Silver et al., which showed women only received 21.9% of AAN awards. However, Silver et al. clarified that this percentage refers to awards aimed at individual physician recipients from 2008 to 2017, emphasizing that although women as a whole were proportionally more likely to receive recognition awards, women physicians comprise the minority of recipients of awards aimed at physicians. Langer-Gould complimented the AAN's efforts to improve sex disparities but noted that there is more work to be done, as evidenced by the fact that only one-third of AAN members who are senior, researcher, or honorary neurologists are women. Although she posited that female neurologists may see less value in AAN membership, Keran et al. refuted this suggestion, noting that, based on their assumptions, there will not be an equal number of women and men AAN members until 2047 and that 92.7% of US neurologists are members of the AAN. Silver et al. further commented that future disparity studies must emphasize consistency, accuracy, and transparency, and Gross et al. agreed.

Ariane Lewis, MD, and Steven Galetta, MD
Neurology® 2021;97:200. doi:10.1212/WNL.00000000000012337

Reader Response: Leadership, Recognition Awards, and Publication by Men and Women in the American Academy of Neurology

Annette Langer-Gould (Los Angeles)
Neurology® 2021;97:200–201. doi:10.1212/WNL.00000000000012333

I read the article by Miyasaki et al.¹ with interest. Keys to academic success include publications, grants, and professional society leadership positions—keys that have been traditionally controlled by White men. This has had the predictable effects of primarily men advancing in academic careers. The American Academy of Neurology has taken conscious steps toward reducing sex disparities. The data presented by Miyasaki et al.¹ indicate relative improvements in the metrics where the AAN has most influence: bestowing awards, serving on committees, and contributing the first and last authorship in *Neurology*®. Proportionally, these metrics were similar among men and women AAN members by 2017. However, despite equal numbers of women and men completing neurology residencies, the number of AAN members remains mostly men. The discrepancy is greatest when comparing the number of female neurologists, or those with a membership designation of senior, researcher, or honorary (n = 4,992), with males (n = 10,877). When students, interns, junior, and physician affiliates are added, this difference is

smaller. This implies that lower-level positions are overrepresented among female AAN members, and female neurologists see less value in AAN membership. Retrofitting a system designed for White men to accommodate the rest of us is a messy process. There is much work to be done. I admire the AAN for trying.

1. Miyasaki JM, Mapleshorpe E, Yuan Y, Keran C, Gross RA. Leadership, recognition awards, and publication by men and women in the American Academy of Neurology. *Neurology*. 2020;95(24):e3313-e3320.

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Author Response: Leadership, Recognition Awards, and Publication by Men and Women in the American Academy of Neurology

Chris Keran (Minneapolis), Robert A. Gross (Rochester, NY), Yan Yuan (Edmonton, AB), and Janis M. Miyasaki (Edmonton, AB)
Neurology® 2021;97:201. doi:10.1212/WNL.0000000000012334

We thank Dr. Langer-Gould for responding to our article.¹ We agree that “despite equal numbers of women and men completing neurology residencies, the number of AAN members remains mostly men.” We reported, “given the historic imbalance and assuming an equal retirement or attrition rate, we estimate that women and men will be equal in number among the neurologist AAN membership in 2047.”

The assumptions we used were:

1. The initial sex gap in 2007 was more than 6,800 (see table 1 showing 12,156 US men and 5280 US women).
2. The starting year when equal numbers of men and women enter neurology was 2007.
3. There are 800 new neurology residents a year,² so 400 new males and 400 new females.
4. There are 200 neurologists who retire every year² (and assuming they are all male).
5. Equal mid-career attrition.

Given those assumptions, if the net annual increase in US women neurologists was 200, it would take 34 years to achieve equilibrium ($6,800/200 = 34$ years). The presumption that the differences in numbers of female members are based on “seeing less value of membership” is therefore not correct based on our calculations. Furthermore, 92.7% of US neurologists are members of the AAN based on 2019 results.

1. Miyasaki JM, Mapleshorpe E, Yuan Y, Keran C, Gross RA. Leadership, recognition awards, and publication by men and women in the American Academy of Neurology. *Neurology*. 2020;95(24):e3313-e3320.
2. Dall TM, Storm MV, Chakrabarti R, et al. Supply and demand analysis of the current and future US neurology workforce. *Neurology*. 2013;81(5):470-478.

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Reader Response: Leadership, Recognition Awards, and Publication by Men and Women in the American Academy of Neurology

Julie K. Silver (Boston), Anna M. Bank (Staten Island, NY), Julie A. Poorman (Boston), and Richard Goldstein (Boston)
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We were interested to read the study by Miyasaki et al.¹; however, the way this new study characterizes our previous research on recognition awards is incorrect. For example, the introductory citation—“a recent publication found only 21.9% of American Academy of

Neurology (AAN) awards were given to women”¹—is a misstatement of one of our findings. We found that between 2008 and 2017, women physicians received 21.9% of a specific set of recognition awards “exclusively or primarily aimed at individual physician recipients.”² Given the long-documented history of gender-related disparities for women in medicine, we specifically focused on a subset of awards and recipients as our goal was to better understand how women physicians were represented within the AAN.

In this new study, the authors proceed to use our study as a comparator, despite looking at a different study population. Essentially, our research question was: Are women physicians equitably represented among recipients of AAN physician-focused recognition awards? We found that during the 63-year history of the AAN recognition awards, 323 physician-focused awards were presented to recipients; “Of these recipients, 264 (81.7%) were men and 59 (18.3%) were women. During the most recent 10-year period studied (2008–2017) ... the AAN presented 187 awards to physician recipients, comprising 146 men (78.1%) and 41 women (21.9%).”² This new study had a different research question: Are women as a whole equitably represented among all AAN merit award recipients? In contrast to our findings, during the 3 specific years that the authors studied, they found that “women were proportionately more likely [than men] to receive recognition awards in all years studied (1997 [$p = 0.008$], 2007 [$p < 0.001$], and 2017 [$p < 0.001$]), although absolute numbers of women were less.”¹

In the discussion of the new study, the authors compare their findings with ours and again misstate our study population as women rather than women physicians. We acknowledge that they used a larger—but not “more complete”¹—data set compared with ours by including women among all recipients (vs women among physician recipients) and an aggregated list of undefined merit awards in 3 specific years (vs a defined and annotated list of 20 individual physician-focused awards presented over the 63-year history of AAN recognition awards). Furthermore, it is a mischaracterization to state that their results “more accurately”¹ indicate the relative sex-related rates of obtaining an AAN award because their “statistical analysis adjusts for the relative number of men to women.”¹ In fact, our study did report and compare the year-by-year proportions of women among recipients of individual physician-focused recognition awards and neurologist (physician) members of the AAN when published membership data were available. Although our yearly statistical analysis was often limited by a lack of AAN membership data, we noted that although it had “been more than 2 decades since the proportion of women among US neurologist members of the AAN was lower than 18%, 1 in 4 AAN award categories demonstrated 0%–18% representation of women among physician recipients during the most recent decade. Moreover, for highly prestigious awards, underrepresentation was more pronounced.”²

Future studies investigating the state and advancement of women in neurology would benefit from more attention paid to consistency, accuracy, and transparency in reporting study parameters and comparators, as these affect a study’s results, discussion, and conclusions as well as the confluence of research in this specialty.

1. Miyasaki JM, Mapleshorpe E, Yuan Y, Keran C, Gross RA. Leadership, recognition awards and publication by men and women in the American Academy of Neurology. *Neurology*. 2020;95(24):e3313–e3320.
2. Silver JK, Bank AM, Slocum CS, et al. Women physicians underrepresented in American Academy of Neurology recognition awards. *Neurology*. 2018;91(7):e603–e614.

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Author Response: Leadership, Recognition Awards, and Publication by Men and Women in the American Academy of Neurology

Robert A. Gross (Rochester, NY), Yan Yuan (Edmonton, AB), Chris Keran (Minneapolis), and

Janis M. Miyasaki (Edmonton, AB)

Neurology® 2021;97:203. doi:10.1212/WNL.0000000000012336

We thank Dr. Silver and colleagues for responding to our article.¹ They have identified an important gap between men and women in neurology, at least as represented in the AAN.² We agree, also, with their conclusion that for studies to be fully compared, there needs to be a detailed parsing of parameters and criteria, with similarity in focus and aims. Our studies differ in important ways, and although we used their study as a comparator—it being an important prior contribution—we certainly did not mean to misrepresent their findings. We appreciate their pointing out important differences, for this is the way science advances. In future, we hope that disparity studies will be able to address more fully the issues raised.

1. Miyasaki JM, Mapleshorpe E, Yuan Y, Keran C, Gross RA. Leadership, recognition awards, and publication by men and women in the American Academy of Neurology. *Neurology*. 2020;95(24):e3313-e3320.
2. Silver JK, Bank AM, Slocum CS, et al. Women physicians underrepresented in American Academy of Neurology recognition awards. *Neurology*. 2018;91(7):e603-e614.

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CORRECTION

Long-term Clinical Outcomes of Hematopoietic Stem Cell Transplantation in Multiple Sclerosis

Neurology® 2021;97:203. doi:10.1212/WNL.0000000000011825

In the article “Long-term Clinical Outcomes of Hematopoietic Stem Cell Transplantation in Multiple Sclerosis” by G. Boffa et al,¹ the x-axis of figures 2B, 2D, and 3B should be labeled “Time (years).” The authors and editorial staff regret the error.

Reference

1. Boffa G, Massacesi L, Inglese M, et al. Long-term clinical outcomes of hematopoietic stem cell transplantation in multiple sclerosis. *Neurology*. 2021;96(8):e1215-e1226.

RETRACTION AND REPLACEMENT

Hospital Admission and Readmission Among Homeless Patients With Neurologic Disease

Neurology® 2020;97:203. doi:10.1212/WNL.0000000000009565

In the article “Hospital Admission and Readmission Among Homeless Patients With Neurologic Disease” by Rosendale et al,¹ in tables 1, 2, and 5, only data in compliance with AHRQ guidelines should have been published. The online version has been retracted and replaced. The authors regret the errors.

Reference

1. Rosendale N, Guterman EL, Betjemann JP, Josephson SA, Douglas VC. Hospital admission and readmission among homeless patients with neurologic disease. *Neurology*. 2019;92(24):e2822-e2831.

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Long-term Clinical Outcomes of Hematopoietic Stem Cell Transplantation in Multiple Sclerosis

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