

Contribution of Gender on Compensation of Veterans Affairs-affiliated Dermatologists: A Cross-sectional Study

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Abstract

Background: Gender disparity in research funding, leadership, authorship, and compensation in medicine is well documented, with most parameters favoring male over females. Gender differences in salary in dermatology have not been well studied.

Objective: To investigate the contribution of gender to dermatologists' compensations in the Veterans Affairs (VA) healthcare system.

Methods: A retrospective cross-sectional study was conducted by identifying VA-affiliated dermatologists from U.S. Department of VA website. The contributions of gender, years since graduation, h-index, academic appointment, race, and region on the publicly available salaries were analyzed using a linear-regression model to isolate the effects of gender and interaction with other variables.

Results: There was no gender-dependent salary gap for VA-affiliated dermatologists. However, there was gender disparity in the Midwest region. In addition, years since graduation, h-index, and academic appointment were significant predictors of salaries.

Conclusion: The VA hospitals have maintained gender equality in dermatologist compensation, likely reflecting recent effort to promote gender equality.

Introduction

Despite some progress in gender parity in the past century, salary discrepancies between sexes persist and are particularly prevalent among healthcare professionals^{1,2}. In dermatology, females are well represented, making up 52% of dermatologists but underrepresented as full professors^{3,4}. Females also lag behind in terms of research findings and leadership. Gender based compensation in dermatology, however, has not been explored in depth. In this study, we investigated whether there are gender pay disparities in dermatology in a government-based model. We also examined predictors of salaries of male and female dermatologists based on the publicly available 2018 Veteran Affairs (VA) data.

Methods and Materials

Study population

VA dermatologists were identified from physicians in the U.S. Department of Veterans Affairs website (<https://www.accesstocare.va.gov/ourproviders/>) and matched with race data from Redi-Data (<https://redidata.com/healthcare-lists>). Data on locations and salaries was found through Federal Employee Lookup (<https://www.federalpay.org/employees>). Academic appointment and medical school graduation year were identified through Doximity.org, Docinfo.org, and/or medical school and hospital websites. Years since graduation were calculated based on the year 2018 to match salary data. H-indices were extracted from Scopus.com.

Linear regression model

A linear regression model accounting for the effects all of the above variables on salaries and interactions of gender with all other variables was used for multivariate analysis.

Results

In total, 247 VA dermatologists were included in the final analysis, with 114 females and 133 males (Table 1).

In univariate analyses, male dermatologists were compensated significantly higher than female dermatologists (\$122,968 vs. \$118,807, $p=0.0333$). However, male dermatologists also had significantly higher years since graduation (25.8 years vs. 19.3 years, $p<0.0001$) and h-indices (13.9 vs. 6.4, $p<0.0001$). Physicians with no academic appointment were the largest group (99, 40.1%) and females were significantly underrepresented as professors ($p=0.0007$).

Multivariate analysis showed that gender was not a significant contributor to salary. Instead, years since graduation ($p<0.0001$), h-index ($p=0.0066$), and academic appointment ($p<0.0001$) contributed significantly to VA dermatologists' salaries (Fig 1A-C). Specifically, greater number of years since graduation was associated with higher salaries (Fig. 1A). Similarly, VA dermatologists with higher h-indices were associated with higher compensations (Fig. 1B). For academic appointments, professors had significantly higher salaries than associate professors, assistant professors, and those without an academic appointment ($p<0.0001$). In addition, associate professors had higher salaries compared to assistant professors ($p=0.0001$) and those without academic appointments ($p=0.0034$) (Fig 1C).

Gender did not contribute to salary overall, but there was an interactive effect between gender and region ($p=0.0099$). Compared to females, male dermatologists had significantly higher salaries in the Midwest ($p<0.0018$) (Fig 1D). Males also had higher average salaries in the West and South, whereas females had higher average salaries in the Northeast, but none reached statistical significance (Fig 1D).

Table 1. Demographic information of all VA dermatologists included in the study

	Female (n=114)	Male (n=133)	Total (n=247)
Mean salary (std.)	\$118,807 (\$11,826)	\$122,968 (\$15,268)	\$121,048 (\$13,916)
Mean years since graduation, (std.)	19.3 (11.6)	25.8 (13.4)	22.8 (13.0)
Median h-index (std.)	6.4 (9.6)	13.9 (18.2)	10.5 (15.3)
Academic appointments, No. (%)			
Professor	8 (7.0)	30 (22.6)	38 (15.4)
Associate professor	21 (18.4)	14 (10.5)	35 (14.2)
Assistant professor	38 (33.3)	37 (27.8)	75 (30.4)
No academic appointment	47 (41.2)	52 (39.1)	99(40.1)
Geographic distribution, No. (%)			
West	37 (32.2)	31 (23.3)	68 (27.5)
Midwest	20 (17.5)	34 (25.6)	54 (21.9)
South	36 (31.6)	45 (33.8)	81 (32.8)
Northeast	21 (18.4)	23 (17.3)	44 (17.8)
Race, No. (%)			
White	91 (79.8)	104 (78.2)	195 (78.9)
Black	0 (0.0)	2 (1.5)	2 (0.8)
Asian	23 (20.2)	20 (15.0)	43 (17.4)
Unspecified	0 (0.0)	7 (5.3)	7 (2.8)

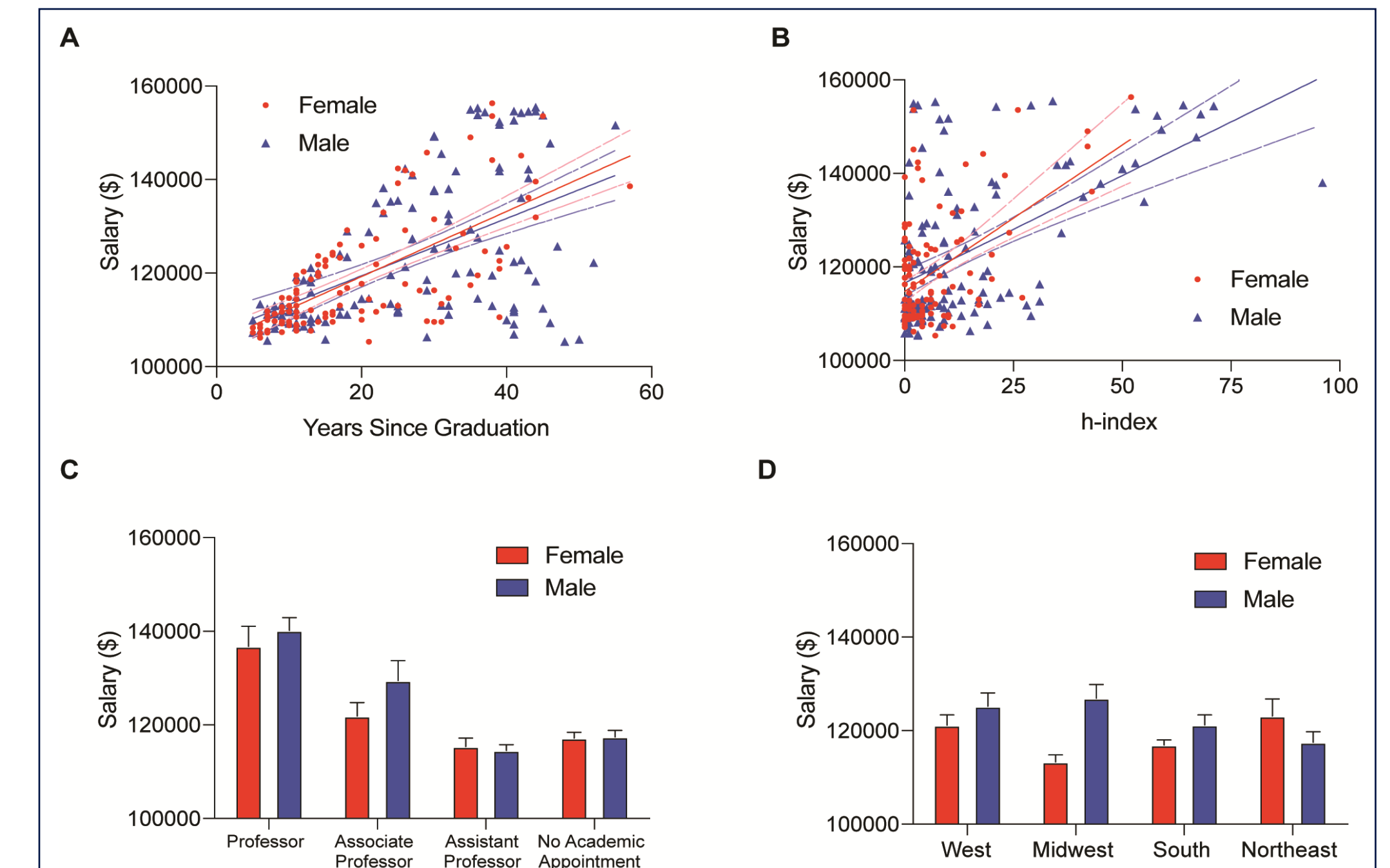


Figure 1. Determining factors of VA dermatologists. A. Salary of VA dermatologists across years since graduation. Blue: male, red: female. Solid line: linear fit, dotted line: 95% confidence interval. B. Salary of VA dermatologists across h-index values. Blue: male, red: female. Solid line: linear fit, dotted line: 95% confidence interval. C. Salary of VA dermatologists in different academic ranks. Blue: male, red: female. D. Salary of male and female VA dermatologists in various regions in the United States. Blue: male, red: female.

Discussion/Conclusions

Years since medical school graduation, h-index, and academic rank influenced salary while gender and race did not, indicating that compensation is largely merit-based. Previous study suggesting that male dermatologists were compensated more than female dermatologists⁵ did not control for these factors.

Gender pay gap for dermatologists in the Midwest is in line with the gap observed in the general population in this region⁶.

No racial differences in salary was observed. Incidentally, Black and Native American were found to be significantly underrepresented in dermatology, highlighting the need to increase racial diversity in both the general and VA dermatology workforces to optimize patient experiences.

Limitations: Data included only dermatologists employed by the VA system and excluded dermatologists who started working for the VA after 2018.

Conclusions: Our findings suggest that while there is an apparent salary gap between male and female VA dermatologists, the disparity can be explained by gender discrepancies in years since graduation, h-index, and academic appointments, all of which can impact salary and are skewed towards males. The lack of overall gender difference in the VA system is an optimistic sign for narrowing of gender gap.

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