



State of Women in Otolaryngology-Head and Neck Surgery: A Systematic Review

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Background

The percentage of female medical school matriculants now surpasses that of their male counterparts.¹ In Otolaryngology-Head and Neck Surgery (OHNS) approximately 37% of residents are female.² Progress has been made in the proportion of female OHNS faculty (25%) and residency program directors (30.4%).³⁻⁵ However, gender disparities still exist at the highest leadership levels.^{4,5} To improve female representation within OHNS, it is important to reflect upon how the diversity of OHNS residency programs, leadership positions, and academic research has changed over the last four decades. Discussion of obstacles that women in OHNS currently face is imperative to the advancement of future female leaders within the field. To our knowledge, no studies have systematically investigated the currently published literature on Women in OHNS. We aim to understand the progress that has been made and to identify current disparities and experiences disproportionately affecting female otolaryngologists.

Methods

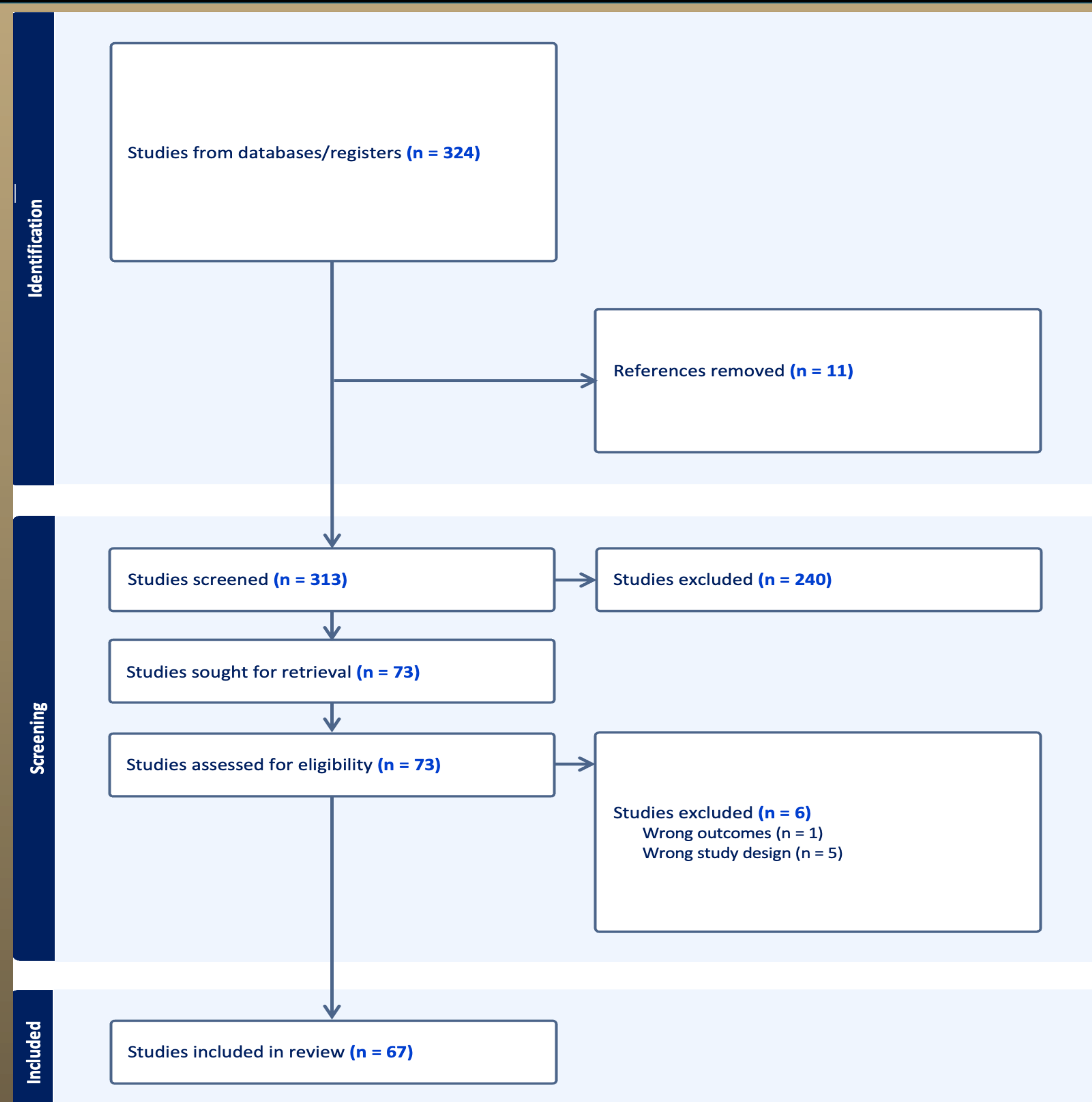
PubMed, EMBASE, and SCOPUS online databases were systematically searched in May of 2023 using variation of the following search terms:

- “Otolaryngology-Head and Neck Surgery”
- “Female Surgeon”
- “Internship and Residency”

Articles were included for final review and data extraction if they answered one of the following four questions:

1. How has the diversity of OHNS residency programs changed over the last four decades?
2. How has the diversity of OHNS leadership positions changed?
3. How has the diversity of academic OHNS changed?
4. What factors and experiences are currently impacting women in OHNS?

Results



CATEGORY	Number of Articles	Years Published	Findings Summary
Gender diversity in OHNS residency and fellowship programs	20	1980-2023	Proportion of female OHNS residents: 10 total-37.2% (1969-2020) Proportion of female OHNS faculty members: <15%-24.8% (1980-2020) Proportion of female program directors: 13%-30.4% (2013-2021) Proportion of female chairs: 5%-8% (2011-2020)
Gender diversity in OHNS sub-specialties	6	2019-2021	Proportion of practicing subspecialty surgeons: Rhinology: 18% (2017) Laryngology: 34% (2020) FPRS: 13% (2010-2020) Head and Neck: 25% (2007-2019)
Gender diversity in academic OHNS	24	2009-2023	H-Index values for women in OHNS: 8.1-9.5 (2018-2020) Overall female authorship: 8.7%-43% (1988-2019) Female first authorship: 3.2%-47% (1978=2019) Proportion of female OHNS editorial board members: 7.2%-20.8% (1997-2017) Proportion of women at associate professor rank: 21%-25% (2011-2018) Proportion of women at full professor rank: 11%-16% (2011-2018)
Experiences of women in OHNS	24	2004-2023	Burnout among female OHNS: 21.8%-65% Reports of verbal harassment during training among female OHNS: 31% Reported infertility rates of female OHNS: 30% Women in OHNS mean age at first pregnancy: 32-25 years Women in OHNS spending 21-40 hours/week on household management: 34.3% Men in OHNS spending 21-40 hours/week on household management: 7%

Conclusions

Significant progress has been made in the gender diversity of OHNS residency programs. However, discrepancies in gender representation remain at the highest leadership levels. Low representation of women at the OHNS chair level may be explained by low years in practice amongst female OHNS.

Lack of female mentorship, work-life balance, and feelings of burnout appear to have the largest impact on Women in OHNS. Programs within academic medical centers that focus on improving work-life balance and mentorship of female otolaryngologists may result in decreased feelings of burnout as well as increased retention and promotion of women in OHNS. Identifying and addressing experiences disproportionately impacting women in OHNS will allow for further reduction of gender disparity across leadership positions in Otolaryngology.

In the future, strong leadership and mentorship of women in OHNS will be needed to continue to close the gender gap and address experiences disproportionately affecting women in the specialty.

References

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Full reference list available upon request