

Gender Disparities in Emergency Medicine Publications: 1991-2018

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Background: Scholarly productivity in academic medicine, determined by measures including publication count, is often a factor in hiring, promotion, and retention decisions. Existing research has demonstrated a “gender gap” in the academic medical literature across specialties that may influence how female academic physicians advance in their career. Limited research exists specific to the field of emergency medicine and the interaction between author degree, affiliation, region and author gender.

Objective: This study examined the gender of first and last authors published in four emergency medicine journals (*Annals of Emergency Medicine*, *American Journal of Emergency Medicine*, *Journal of Emergency Medicine*, and *Academic Emergency Medicine*) between 1991 and 2018. Secondary analysis assessed degree type, the association between author team composition and institutional affiliation, and author region.

Methods: All articles from selected emergency medical journals between 1991 and 2018 at three-year intervals were extracted from PubMed. Article title, type, year of publication, first and last author name, author degree(s), and first and last author affiliation information were documented for each article. Author gender was determined by name comparison to US Social Security Administration name-gender lists. When the author’s gender could not be determined by comparison, gender was manually determined by searching the author’s institutional website. Only articles containing original research from authors with US institutional affiliations were included.

Results There were 3417 articles included in the study with a total of 6764 authors. Female authors accounted for 19.3% of all physician authors, 23.2% of first authors, and 15% of last authors. Female authors were significantly more likely to be first authors than last authors (OR 1.72, CI: 1.49-1.98) and first authors were more likely to be female if publishing with a female last author (OR 1.5, 95%CI 1.25-1.8). The proportion of female authorship for first and last authors increased over the study period although there was not a significant trend for last authors in three of the four journals. There was a significant relationship between degree type and author gender for all authors (χ^2 - 366.57, $p < 0.0001$); female authors made up 19.3% of MDs, 20% of DOs, 37.2% of PhDs, and 47.8% of authors with other degrees. There were no significant relationships found between author gender and geographic region or shared institutional affiliation.

Conclusion: Between 1991 and 2018, female authorship of original research in four emergency medicine journals increased although the proportion of female last authors remained lower than the proportion of female physicians in the emergency medicine workforce. Female physicians were more likely to be first authors than last authors and female first authors were more likely to publish with a female last author. The gender gap in authorship was especially prominent for physicians compared to non-physician authors.