Hawaii Orthopaedic Association
36th Annual Combined Orthopaedic Spring Symposium
April 22-23, 2022
Prince Waikiki

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MEDICAL STUDENT AUTHORSHIP TRENDS: A 10-YEAR ANALYSIS OF FOUR MAJOR ORTHOPAEDIC JOURNALS

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Background: Among various metrics used to evaluate medical students, orthopaedic-specific research demonstrates objective scholarly productivity, as well as interest in and commitment to the specialty. Given the rising competitiveness of attaining orthopaedic residency and increasing emphasis placed on research, the purpose of this study was to analyze medical student publication trends in four major orthopaedic journals over a 10-year period.

Methods: Websites of four major orthopaedic journals (*American Journal of Sports Medicine, Clinical Orthopaedics and Related Research, Journal of Arthroplasty,* and *Journal of Bone and Joint Surgery*) were accessed to identify articles published between 2011-2020. Articles were reviewed for the year, number of authors, degree(s) of each author, sex of each author, country, and state (if USA). Non-clinical studies were defined as basic science, biomechanical, technique, and educational studies. Country and state were determined based on affiliation of the senior author. Medical students were defined as authors who held a bachelor's only degree. Editorials and letters to the editor were not included.

Results: 15740 articles were included in this review (13510 clinical, 2230 non-clinical) with 82837 authors. MDs constituted 64.5% of first authors. A total of 5242 medical students authored 3769 publications (21.49% overall). Out of the 3769 publications, 919 (24.38%) were first author publications. Linear regression demonstrated an increasing annual trend of first author ($p=0.001$) and any author ($p<0.001$) medical student publications from 2011-2020, with increases of 291% and 206%, respectively. Linear regression demonstrated an increasing annual trend of male ($p=0.001$) and female ($p=0.01$) first author medical student publications from 2011-2020, with increases of 271% and 346%, respectively. Overall publications did not significantly change over the study period.

Conclusion: First author and any author medical student research productivity increased over the last 10 years, despite a constant number in overall orthopaedic publications. Additionally, there is growing female medical student involvement in the literature, highlighting the importance and efficacy of advocacy, mentorship, and opportunities in improving diversity in orthopaedics and medicine.