Scholarly Research Productivity Among Ophthalmology Residency Graduates

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The Problem

The Accreditation Council for Graduate Medical Education (ACGME) requires that ophthalmology residents participate in scholarly activity during residency. However, to our knowledge it is unknown whether research publications during undergraduate, medical school, residency or fellowship training predict future academic publication performance among ophthalmologists. The aim of this study was to (1) measure scholarly research productivity (as measured by the h-index) among ophthalmology residency graduates, as measured by peer-reviewed publication output, and its relation to future publication output, and (2) evaluate whether scholarly impact of academic ophthalmologists is correlated with any specific characteristics.

Key Results

Graduates that had a higher mean total publication (M = 9.05, SD = 12.95) were significantly more likely to be in a fellowship than those that did not (M=3.23, SD=3.24) (t\textsubscript{234} = -3.89, p = .0001). Graduates with more first person publications and higher H-index values were also significantly more likely to pursue fellowships (t\textsubscript{234} = -3.87, p = 0.0001) (t\textsubscript{234} = -3.93, p = 0.0001).

Graduates that had a higher mean total publication (M = 14.19, SD= 18.20) were more likely to be found in academic careers than those that did not (M=4.47, SD = 4.96) (t\textsubscript{234} = -6.35, p = 0.0001). Graduates with more first person publications and higher H-index values were also significantly more likely to pursue academic careers (t\textsubscript{234} = -5.17, p = 0.0001) (t\textsubscript{234} = -4.84, p < 0.0001).

Gender proved to not be a significant determination of research pursuit in terms of publication or first person publication numbers (t\textsubscript{234} = -1.02, p = .3078) (t\textsubscript{234} = -0.61, p = .5404). However, H-index values for men (M = 3.45, SD= 3.93) and women (M = 2.52, SD=2.64) were significantly different (t\textsubscript{234} = -2.06, p = 0.0406).

The positive correlations between graduates’ research productivity, career and future research outcomes could present an interesting aspect for residency program directors or education policy makers. Since research training and participation during residency may be critical to producing ophthalmologists who move the field forward through the research, efforts are needed to emphasize and encourage research participation during medical training.

Methods

This study is cross-sectional in nature and included a random sample of 50 ophthalmology residency programs. From each program, a list of graduating residents from years 2013, 2014, and 2015 was compiled and each graduate was search on Scopus, PubMed, and Google Scholar. The publications of each graduate were then identified and data was extracted and collected in a double blind, duplicate fashion by 2 investigators. Research publication output was then stratified and analyzed.