What Factors Contribute to the Academic Productivity of Plastic Surgeons?

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INTRODUCTION: Success in academic surgery is typically measured by the number of publications, citations, and the amount of research funding generated by an individual or department[1]. Additionally, metrics of academic productivity are often used as part of the criteria for tenure or promotion across multiple specialties[2]. The purpose of this study was to identify academic characteristics that distinguish plastic surgery programs with high academic output as measured by citations, publications, and NIH funding.

MATERIALS AND METHODS: The American Council of Academic Plastic Surgeons (ACAPS) website was used to generate a list of all plastic surgery divisions/departments with residency programs. Scholarly metrics were determined for 955 faculty at the 88 ACGME plastic surgery departments and divisions with residency programs. The database was binned into tertiles by numbers of citations per department/division (high, H, medium, M, low, L). Characteristics were compared between these groups to identify the traits that set these programs apart.

RESULTS: Median numbers of faculty per program were 9. The mean publications per department/division were 479, citations; 9984, publications per faculty; 38, citations per faculty; 742. Programs in H had higher numbers of publications even after adjusting for departmental size (H:59, M:33, L:21, $p<0.05$). Programs in the H group also had higher numbers of mean PhDs and MD-PhDs per division, and higher total numbers of NIH grants (H:7.5, M:1.2, L:0.1, $p<0.05$), and R01/P01/U01 grants (H:2.5, M:0.5, L:0, $p<0.05$). There were no differences in gender distribution across these groups. Programs in H had significantly more total residents H:11.9 vs. M:7.6 and L:6.1, $p<0.05$ which was mainly driven by higher numbers of integrated residents.

CONCLUSIONS: The strongest determinants of academic productivity among plastic surgery programs appear to be effective utilization of faculty with advanced degrees, emphasis on NIH funding, and the presence of integrated residency programs. A recent study suggested that the presence of an integrated residency as well as subspecialty fellowships increases the productivity of academic faculty in plastic surgery[3]. A focus on NIH funding and the incorporation of integrated residency programs may be the optimal way to increase academic productivity in plastic surgery.

1. Mann M, Tendulkar A, Birger N, et al. National institutes of health funding for surgical research. Ann Surg. 2008;247:217–221.

2. Beasley BW, Wright SM, Cofrancesco J, Jr, et al. Promotion criteria for clinician-educators in the United States and Canada. A survey of promotion committee chairpersons. JAMA. 1997;278:723–728.

3. Duquette S, Valsangkar N, Sood R, et al. Do plastic surgery programs with integrated residencies or subspecialty fellowships have increased academic productivity? Plastic and Reconstructive Surgery Global Open. 2016;4(2):e614. doi:10.1097/GOX.00000000000005