Is Instagram Use Among Orthopaedic Surgery Programs Associated with Increased Residency Applicant Interest?

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Introduction

Social media use among orthopaedic surgery residency programs has grown in popularity. The purpose of this study was to determine whether Instagram use among orthopaedic surgery residency programs correlated with an increased number of residency applicants from 2020 to 2022.

Methods

- All data was collected in August 2023
- Applicant data was extracted from AAMC Residency Tool Explorer.
- Instagram accounts for orthopaedic surgery residency programs, including residency and departmental profiles, were compiled for 2020, 2021, and 2022.
- Engagement data (number of comments and likes) was obtained via Popster's social media analytics program for business accounts or manually collected for non-business accounts for 2020, 2021, and 2022.
- Likes were weighted as one point and comments were weighted as three points.
- If programs had more than one account, the engagement scores were summed.
- Programs were included if they had Instagram accounts and AAMC applicant data for all three years.

Results

- 172 Instagram accounts were identified for 153 (72.8%) orthopaedic surgery residency programs out of a total of 210 U.S. programs for the years 2020 to 2022.
- 129 (75%) accounts were active in 2020, 154 (90%) accounts in 2021, and 166 (97%) accounts in 2022.
- Across all accounts, mean engagement scores were 2,938 (range: 0-116,421), 3,391 (range: 0-98,532), and 3,482 (range 0-62,048) for each consecutive year 2020 to 2022.
- Average number of applicants were 636 (range = 38-1,337), 661 (range = 201-1,015), and 824 (range = 324-1,235) for each consecutive year 2020 to 2022.
- Instagram engagement score was weakly positively correlated to number of applicants for orthopaedic residency programs each year with increasing correlation seen each subsequent year (2020: r=0.15, p=0.06; 2021: r=0.18, p=0.02; 2022: r=0.20, p=0.01).

### Table 1. Instagram Engagement and Residency Applicant Data for 2020 to 2022

	2020	2021	2022
Average Engagement Score	2,938	3,391	3,482
Average Number of Applicants	636	661	824

Table 2. Correlation of Instagram Engagement to Number of Residency Applications for 2020 to 2022

Year	Pearson Correlation Coefficient (R)	P-value	N
2020	0.15	0.06	153
2021	0.19	0.02	153
2022	0.20	0.01	153

Table 3. Trend between Instagram Engagement Data and Number of Residency Applications from 2020 to 2022

$y = 2.0536x + 1818.4$
$R^2 = 0.5177$
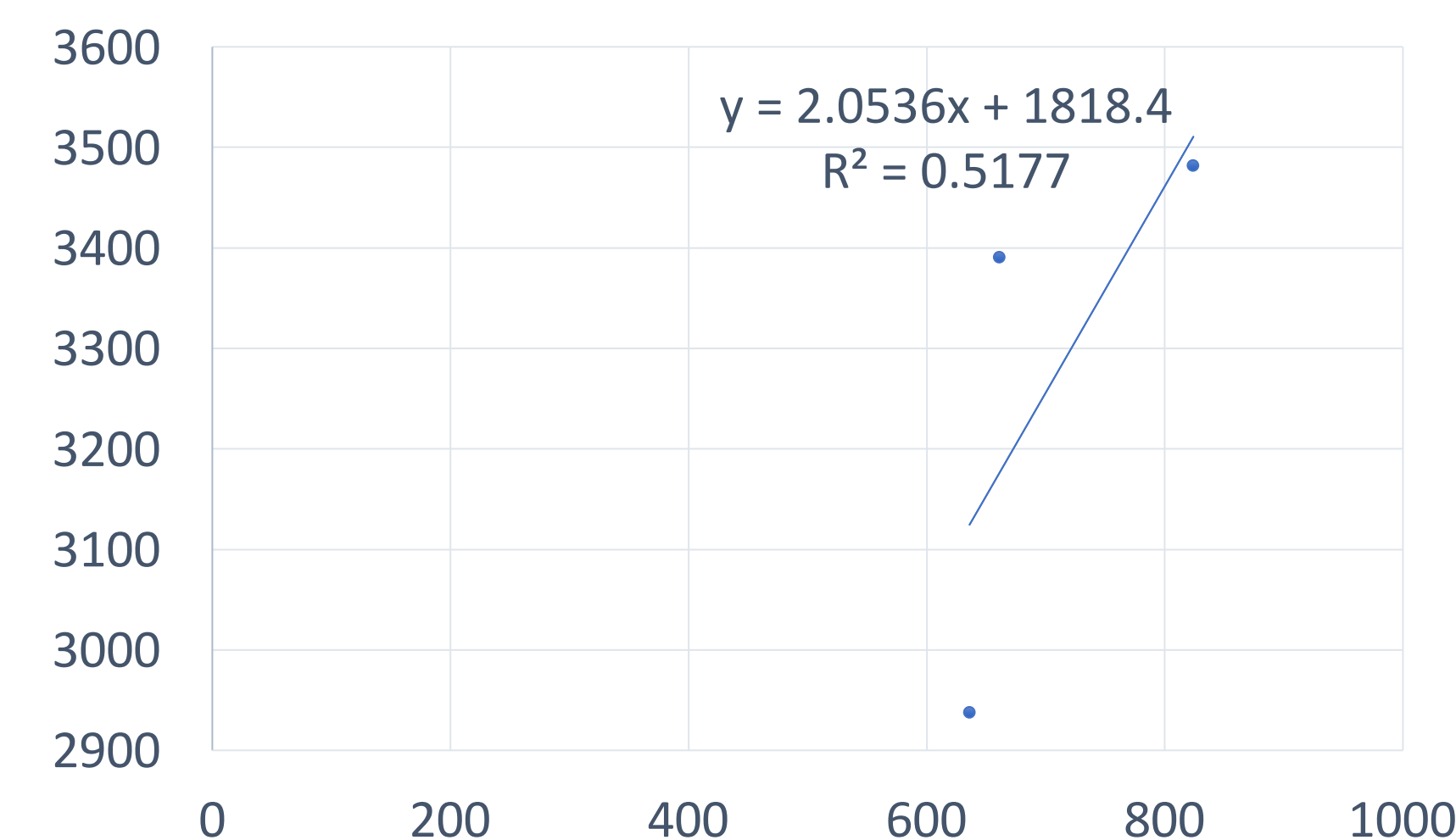
Conclusion

There appears to be a positive correlation between Instagram use among orthopaedic surgery residency programs and the number of residency applicants, with increasing correlation in more recent years. As social media continues to engage applicants among academic orthopaedic residency programs, the impact of residency application trends may continue to increase. Orthopaedic surgery residency programs can use Instagram to promote and increase applicant interest for their programs.

Study Limitations

- For programs with non-business Instagram accounts, engagement data was collected manually which could potentially result in inaccurate values
- Only quantitative data was collected to calculate engagement scores, which does not include qualitative data such as type of content which can have influence on applicant numbers.
- Cross sectional study

Future Research Opportunities

- Study other social media platforms.
- Collect qualitative data and factor it into engagement score calculations.
- Conduct a survey study to assess the impact of social media use on applicant decision making.
- Make a ranking list of the most influential programs on Instagram.