

Research Article

Publication Rates of Podium Presentations from the Orthopaedic Summit: Fellow Resident and Medical Student Annual Meeting 2019-2021

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Purpose

To determine the publication rate of presentations presented at the Orthopaedic Summit and Evolving Techniques (OSET) Fellow Resident and Medical Student Annual Meeting 2019-2021

Methods

All presentations from the OSET annual meeting between 2019 -2021 were identified from the OSET's official website and confirmed through review of the OSET Official Programs. The 2019 and 2021 meeting were in person and the 2020 meeting was virtual due to the COVID pandemic. This information was then used to direct a search on PubMed and Google Scholar database to determine if the presentation was associated with a publication since the meeting. Publishing information was entered into the database.

Results

For 2019-2021 there were a total of 227 presentations with 101 associated publications (45%). The highest rate of publications was 63% of presentations published in 2019, followed by 49% rate of publications in 2020, and 27% rate of publications in 2021. The presentations were published at an average of 8.1 months after presentation.

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[Conflicts of Interest Statement for Sanchita Gupta](#)

b Dr. Cannada is an Orthopaedic Trauma Surgeon from Jacksonville, FL. She is affiliated with Novant health, where she is the Director of Faculty Integration for the UNC School of Medicine Charlotte Campus, Medical Student Clerkship Director and Professor. She completed a 3-year term on the AAOS BOD in 2018 as the first female Chair of the Board of Specialty Societies. She was responsible for developing the current fellowship match process for orthopaedics. She is a member of the Orthopaedic Trauma Association and served on the BOD and received the first OTA DEI and Health Disparities Leadership Award in October 2022. She developed the Young Practitioners Forum & was an editor for the 2021 OTA Core Curriculum Lecture Series. She served as a president of the Ruth Jackson Orthopaedic Society and received the inaugural "She for She" Award in 2022. She edited and produced both editions "Guide for Women in Orthopaedic Surgery" and the "Guide for Medical Students in Orthopaedic Surgery". She currently chairs the Development Committee and is on their BOD and is Chair of the Mid America Orthopaedic Association Education Committee and serves on its BOD. Dr. Cannada has made it her mission to make the path better for those that follow, by her work and leadership roles. She is passionate about the topics of diversity, discrimination, bullying and harassment in medicine. She is a founding member of #Speak Up Ortho. She has over 190 publications and 250 presentations at national meetings. She could not do this without the support of her family, her husband Jeff and daughter Annalise and her parents, the late John W. Metcalf MD and her mom, Theresa Metcalf. Her favorite role is "soccer mom".

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Conclusion

Our research demonstrated a 45% publication rate over a 3-year period of presentations presented at the OSET annual meetings. Our results are comparable to other publication rates for podium presentations in other societies (e.g. American Academy of Orthopaedic Surgeons, Annual Meeting of the Pediatric Orthopaedic Society of North America, Orthopaedic Trauma Association Annual Meeting, American Academy for Surgery of the Hand, Annual Meetings of the North American Spine Society, and American Orthopaedic Society for Sports Medicine Annual Meeting). This validates the quality of research presented in podium presentations format at the OSET Annual Meeting.

INTRODUCTION

Conference posters and podium presentations are an opportunity for a variety of different medical professionals to showcase research that has the potential for innovation, improvement of patient outcomes, and provides new relevant clinical information. Peer-reviewed posters, abstracts, and podium presentations that are accepted to annual meetings are assumed to have the further goal to submit their work to peer review journals.

Since 2011, Orthopaedic Summit (OSET) attempts to provide the best education through panels, debates, lectures, and clinical case presentations for community and academic-based orthopaedic physicians, mid-level providers, and advanced practitioners from across the globe to improve the delivery of healthcare and enhance patient care for all patients faced with traumatic musculoskeletal injury or disease. The Orthopaedic Summit provides countless educational opportunities with diverse international perspectives on the latest techniques and technologies in arthroplasty and arthroscopy of the knee, hip, shoulder, foot, and ankle, hand, wrist and elbow, sports medicine, spine, trauma, and nonoperative and perioperative management. In 2015, OSET began the Fellow/Resident annual meeting section where medical students, residents, and fellows had the opportunity to achieve OSET's mission. To date, there are currently no prior studies that have found the publication rates of podium presentations at the OSET meeting. Publication rates of research at other orthopaedic surgery educational meetings has been reported around 46% for American Society of Hand Annual Meeting, 49% for Annual Meeting of American Academy of Orthopaedic Surgeons, 44% for Annual Meetings of North American Spine Society, and 45% for American Orthopaedic Sports Medicine Annual Meeting, and 51% for Annual Meeting of Pediatric Society of North America (Abzug et al. 2014; Donegan, Kim, and Lee 2010; Williams et al. 2018; Lee et al. 2018; Gowd et al. 2018).

The purpose of this study was to determine the publication rate of OSET podium presentations at the OSET Annual Meetings for the years 2019-2021 as there was consistency in the faculty and programming for this portion of the meeting.

METHODS

Presentation tiles were obtained from the OSET Annual Meeting from years 2019-2021 and cross referenced with

the OSET website and placed into an excel sheet. The presentations were cataloged into sub-categories based on the grouping in the OSET Annual Meeting Final Program. These include: Trauma, Spine, Arthroplasty, Foot and Ankle, Hand, Pediatrics, Oncology, Sports (Knee, Hip-FAI), Shoulder, Basic Science, and Education. During the time period 2019-2021, 227 podium presentations were presented. Using PubMed (Medline) and Google Scholar Database, searches of the podium presentations were conducted to determine whether the presentations had a subsequent journal publication during July 2022. We first used the title of the presentation and presenting author to determine if it was published. However, if no publications were found using this method, additional authors were entered. If no journal article match was found, the presentation was categorized as unpublished. The results of the search were collected and analyzed in a database.

STATISTICAL ANALYSIS

Chi-squared tests were used to evaluate differences in publication rates of 2019 through 2021 OSET presentations. Unpaired 2-sample t tests were used to assess the mean number of months to publication. Statistical analyses with P value less than 0.5 ($P < 0.05$) were considered significant.

RESULTS

At OSET, 227 presentations were presented at the OSET annual meetings between the years 2019-2021, ranging from 63 in 2019 to 88 in 2021. Overall, 101(45%) presentations were published at the time of the present study (Table 1). On average, 76 presentations per year were presented for the OSET annual meetings between 2019-2021. The lowest percentage of presentations published was in the year 2021 (27%, $n = 24$), the year with the highest rate was 2019 (63%, $n = 40$). Of the 101 OSET presentations published, 23 were excluded from the analysis for the time to publication as the presentations were already published prior to the OSET meeting of that year, thus only 78 presentations were included in analysis. 95% percent of presentations that went on to publication were published within 18 months of the OSET annual meeting of that year ($N = 96/101$), and 100% of presentations published were published within 3 years of the OSET annual meeting ($n = 78/101$). The average mean time to publication for the 2019-2021 annual meetings was 8.1 months. The mean time to publish for the 2019 OSET annual meetings was 11.03 months with a trend toward less publication time; the mean time for publication for

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the 2020 and 2021 OSET annual meetings were at 9.88 and 3.46, respectively. ($r^2 = 0.86$; [Figure 1](#)). Among the 3 OSET meetings included in this study, there was statistically significant difference between publication rates between all 3 years, including 2019, 2020, and 2021. ($P < 0.05$). Of all published presentations, 5% ($n = 5/101$ OSET published) were published prior to the OSET meeting of that respective year.

Published presentations were in a myriad of different journals ($n = 35$). Among the 101 presentations published, 8% were published in the Journal of Sports Medicine ($n = 19$; 8%); 4% were published in Bone Joint Journal ($n = 8$, 4%); 4% were published in The Journal of Bone and Joint Surgery (JBJS) ($n = 8$, 4%) ([Table 2](#)).

Presentations were divided into categories based on topic ([Table 3](#)). The most prevalent presentation categories presented during the OSET meetings from 2019-2021 were the following: shoulder (19%, $n = 53/227$); sports (13%, $n = 47/227$). The highest rates of publication were found to be in the following categories: oncology (100%, $n = 1/1$); foot and ankle 71% ($n = 5/7$); sports (57%, $n = 27/57$); shoulder (55%, $n = 29/53$).

DISCUSSION

The ultimate goal of research presented at scientific meetings is to be published in peer-reviewed journals. According to prior studies, publication rates serve as a good metric and quality measurement tool for educational meetings (Narain et al. 2017). The publication rate for presentations presented at the annual OSET meetings from 2019-2021 was 45%. There is currently no previous OSET data to compare our data to. Publication rates of research at other orthopedic surgery educational meetings has been reported around 46% for American Society of Hand Annual Meeting, 49% for Annual Meeting of American Academy of Orthopaedic Surgeons, 44% for Annual Meetings of North American Spine Society, 45% for American Orthopaedic Sports Medicine Annual Meeting, 51% for Annual Meeting

of Pediatric Society of North America, and 56% for American Orthopedic Foot and Ankle Society Annual Meeting (Abzug et al. 2014; Donegan, Kim, and Lee 2010; Lee et al. 2018; Williams et al. 2018; Gowd et al. 2018; Amirhamzeh et al. 2012).

A summary of previously reported publication rates for research presentations for various orthopaedic surgery subspecialty meetings can be found in [Table 4](#). Our highest rate of publication is from the 2019 meeting at 63%. It is expected that with more time, the rates of publications for 2019- 2021 annual meetings will increase. In addition, the percentage of females presenting at the OSET conference across all years ([Table 6](#)) has been higher than the overall rate of Orthopaedic female residents at 15% and AAOS Female Members at 7% (Williams et al. 2017; Rawicki et al. 2022).

Prior studies have used publication rates as a measure of the quality of research presented at meetings, therefore higher publication rates equate with higher quality research (Narain et al. 2017; Le et al. 2021). Based on the assumption, the OSET Annual meeting presentations from 2019-2021 are of equal value compared to current literature of other orthopaedic subspecialty meetings.

The limitations of this study include a presentation that was published and not discovered using our specific search methodology. In addition, there remains a possibility of human error, where a presentation was not accounted for that may have been published. There is also the possibility that a presentation was published in a journal, however, our search methodology was not able to search and account for it.

Overall, the presentations publication rate of OSET Annual Meetings: Fellow Resident and Medical Student Annual Meeting 2019-2021 has been comparable to other orthopaedic subspecialty meeting presentations publication rates. Presentations presented at the current OSET Annual Meetings are of high quality and contribute to clinical practice comparatively to other subspecialty meetings.

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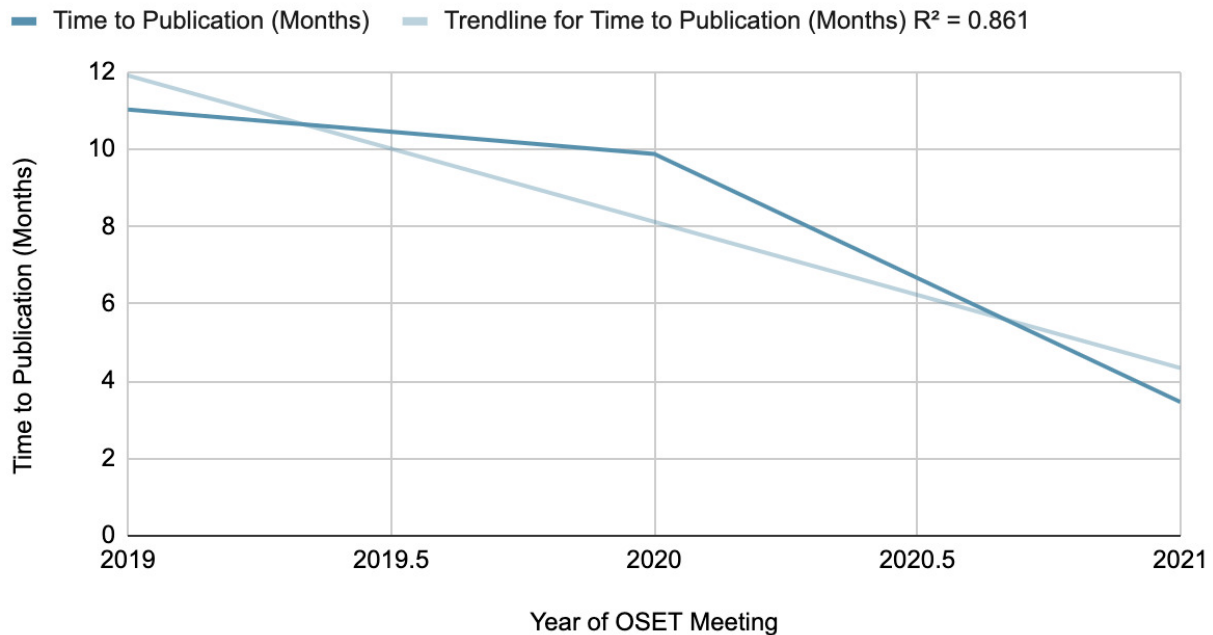
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Table 1. Overall Publication Rates of Presentations Presented at the Annual OSET Meetings by Year

Years of OSET Meeting	TOSETI Published (%)	Not Published	TOSETI Presentations
2019	27	64	88
2020	49	39	76
2021	63	23	63
All Presentations	201	126	227

Time to Publication (Months) vs. Year of OSET Meeting

**Figure 1. Comparison of mean time to publication for presentations since presentation at the 2019-2021 Orthopedic Summit Annual Meetings****Table 2. Distributions of Journal Publishing Presentations from the 2019 to 2021 OSET Annual Meetings**

Name of Publishing Journal	Number of Presentations Published	Percentage of all Published OSET Presentations from 2019-2021
American Academy of Orthopedic Surgery	5	2
Arthroplasty	6	3
Arthroscopy	6	3
Arthroscopy Sports Medicine Rehabilitation	6	3
Bone Joint Journal	8	4
Orthopedic Trauma	6	3
Orthopedic Experience and Innovation	4	2
Shoulder Elbow Surgery	8	4
Sports Medicine	19	8
Others	33	15

Table 3. Characteristics Presentations of the 2019 through 2021 Annual OSET Meetings

OSET Categories	Published N =	Not Published N =	% Category Published
Arthroplasty (39)	16	23	41 %
Basic Science (11)	5	6	46 %
Education (13)	5	8	38 %
Foot and Ankle (7)	5	2	71 %
General (8)	0	8	0 %
Hand (9)	2	7	22 %
Oncology (1)	1	0	100%
Pediatrics (8)	3	5	38 %
Shoulder (53)	29	24	55 %
Spine (10)	3	7	30%
Sports (Knee, Hip-FAI) (47)	27	20	57 %
Trauma (21)	9	12	43 %



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Table 4. Summary of Publication Rate of Other Orthopaedic Surgery Subspecialty Meetings

Meeting	Years	Research Media	Publication Rate (%)	Author/Paper
American Society for Surgery of the Hand Annual Meetings	2000-2005	Podium/Poster	54/41 (46)	Abzug et al. 2014
Annual Meeting of the American Academy of Orthopaedic Surgeons	2001	Podium/Poster	52/47 (49)	Donegan, Kim, and Lee 2010
Orthopaedic Trauma Association Annual Meeting	2008-2012	Podium	73	Williams et al. 2018
Orthopaedic Trauma Association Annual Meeting	2005-2010	Abstracts	66	Lee et al. 2018
Annual Meetings of the North American Spine Society	2010-2012	Abstracts	44	Narain et al. 2017
American Orthopedic Society for Sports Medicine Annual Meeting	2011-2015	Abstracts	45	Gowd et al. 2018
Annual Meeting of the Pediatric Orthopedic Society of North America	2002-2006	Abstracts	51	Amirhamzeh et al. 2012
American Orthopedic Foot and Ankle Society Annual Meeting	2008-2012	Podium/Poster	74/56	Williams et al. 2017
Pediatric Orthopaedic Society of North America (POSNA) meeting	2013-2016	Abstracts	58.2	Rawicki et al. 2022
Annual Meeting of the American Academy of Orthopaedic Surgeons	2014-2017	Podium/Poster	73/65.1	Le et al.
Orthopaedic Research Society (ORS) annual meeting	2012-2014	Podium Presentations	60.2	Hollenberg et al.

Table 5. Presentations by Gender

OSET Year	Male	Female
2019	51	12
2020	64	12
2021	65	23

Table 6. Comparison of mean time to publication for presentations since presentation at the 2019-2021 Orthopedic Summit Annual Meetings

Year of OSET Meeting	Time to Publication (Months)
2019	11.03
2020	9.88
2021	3.46



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