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Publication rates of podium presentations at the American Shoulder and Elbow Surgeons annual open versus closed meetings 2008 to 2012

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Aim: The purpose of this study was to analyze the publication rate for abstracts presented at podium presentations from the American Shoulder and Elbow Surgeons (ASES) annual open and closed meetings from 2008 to 2012.

Materials and methods: Abstracts accepted as podium presentations for the open and closed meetings from 2008 through 2012 were followed. A search was performed using Google Scholar and PubMed for all published manuscripts. This analysis looks at abstracts categorized based on annual meeting (open versus closed) and by meeting year (2008–2012). Data including publication journal, publication date, and level of evidence were recorded. Descriptive statistics, t-tests, and odds ratios were performed with $p < 0.05$ significance.

Results: A total of 365 abstracts were accepted to the open and closed annual meetings from 2008 to 2012, with 49% and 51% presented in open and closed forums. A total of 222 (61%) were published within 3-years in peer-reviewed journals. No difference existed in 3-year publication rate between open and closed podium presentation meetings (112/178, 63% open; 110/187, 59% closed; $p = 0.4229$); however, presentations at closed meetings were more likely to be published after 3-years compared to open meetings (2/178, 2% open; 15/187, 12% closed; $p = 0.002$). Most common journal of publication was the Journal of Shoulder and Elbow Surgery (JSES) (50%).

Conclusions: Podium abstracts presented at the open and closed annual meetings have publication rates of 63% and 59% with overall combined publication rates of 61% from 2008 to 2012. The high publication rate and high impact of publications speak to the exemplary educational value of ASES annual meetings.

The presentation of novel findings and outcomes related to evidence-based clinical practice has been extremely valuable and important in shaping the clinical decision making of physicians worldwide. At national scientific meetings, abstracts serve as a primary medium through which information is transmitted and passed on to others. Most national scientific meetings have an arduous abstract review process that closely evaluates all submitted abstracts, in which only a handful are selected to be presented either via podium or poster. The abstracts of the strongest, most clinically significant manuscripts are selected for presentation; however, abstracts are often limited by word or character restrictions, limiting the ability of the reviewer to aptly determine the quality of the study.[6]

There are a host of national scientific meetings held each year in which researchers can choose to submit their abstracts to be selected for meeting presentation. Publication rates at these meetings range from 36% to 67%, with previous studies showing that a majority of abstracts are published within 3-years of meeting presentation.[1–4,8–11,14,15] The relationship between abstracts presented and the subsequent manuscript publication of presented abstracts in peer-reviewed scientific journals likely influences a meeting's status, popularity, and general attendance. The manuscript

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publication process of accepted abstracts has many important factors; however, abstracts selected for meeting presentation and manuscript publication, by a peer-reviewed committee, likely represent the most impactful papers.

The publication rates of abstracts presented at various orthopedic meetings have been established, yet, to our knowledge, there have been no data published on publication rates following the American Shoulder and Elbow Surgeons (ASES) open and closed annual meetings.[2–5] Thus, the purpose of this study was to analyze the publication rates of presentations at the ASES annual meetings as well as factors influencing publication. We hypothesize that the ASES closed meetings will have an increased publication rate relative to the open meeting with the overall publication rate for ASES presentations comparable to other prominent national scientific meetings.

Materials and methods

To obtain a comprehensive list of all abstracts presented and subsequently published after the annual ASES open and closed podium presentation meetings from 2008 through 2012, a thorough online search was performed using Google Scholar and PubMed. An electronic version of the program's booklet for the ASES open and closed annual meetings from 2008 through 2012 was provided by ASES. The study period selected spans 5-years up until 2012 as to allow for publication rates over a 3-year time interval to be sufficiently tracked.

In this study, abstracts presented as podium presentations were followed. Abstracts were categorized based on annual meeting type (ASES open versus ASES closed) and by meeting year (2008, 2009, 2010, 2011, and 2012). To conduct the search systematically, a methodical search strategy was used that included key words from the abstract titles, author's names, MeSH terms, and/or key words from the abstract body. This search approach is in accordance to methods from similar studies retroactively evaluating publication rates from national scientific meetings.[3,5,7] If there was not a match between a presented abstract and published manuscript in the initial query, our search methodology was broadened to include a cross-reference of each author's last name. This search algorithm was repeated multiple times by multiple authors shielding our results from the effect of not including abstracts in our publication rate that were indeed published. When a confirmed pairing between presented abstract and published manuscript was identified a record of the published manuscript's title, publication date, level of evidence, and publishing journal was documented.

After evaluating all 365 abstracts presented at the ASES open and closed annual meetings from 2008 to 2012, publication results were analyzed using IBM SPSS Statistics Version 22 (SPSS Inc, Chicago, IL, USA). Group data were analyzed using SPSS's analyze descriptive statistics function for mean and standard deviation calculations. Comparison data between groups (open versus closed) was calculated using Student's t-test (unpaired). SPSS regression modeling was employed as to determine the relationship between dependent variable (open podium versus closed podium) on independent variables (publication status, publishing journal, and time to publication). An odds ratio with a 95% confidence interval was also used to determine the likelihood of presentation type reaching manuscript publication. All statistical testing was evaluated with a threshold of $p < 0.05$ for statistical significance.

Results

A total of 365 abstracts were accepted to the ASES open and closed annual meetings from 2008 to 2012, with 178 abstracts presented at the open meetings (48.8%) and 187 abstracts presented at the closed meetings (51.2%). Of 365 accepted abstracts, 222 (60.8%) were published within 3-years in peer-reviewed journals, with an additional 17 (4.66%) published after 3-years.

There was no difference in 3-year publication rate between open and closed podium presentation meetings (open: 112/178, 62.9% Table I; closed: 110/187, 58.8% Table II; $p = 0.4229$). Presentations at closed meetings were more likely to be published after 3-years compared to open meetings (2/178, 1.8% open; 15/187, 12.0% closed; $p = 0.002$). The overall publication rates for open podium versus closed podium presentations were 62.9% (n = 112) and 58.8% (n = 110) within 3-years of being presented (Table III and Fig. 1).

The most common journals for publication included: Journal of Shoulder and Elbow Surgery (JSES) (n = 111, 50%), Journal of Bone and Joint Surgery (JBJS) (n = 42, 18.9%), American Journal of Sports Medicine (AJSM) (n = 29, 13.1%), Clinical Orthopaedics and Related Research (CORR) (n = 8, 3.6%), and Arthroscopy (n = 8, 3.6%) (Table IV).

Table I
ASES meetings open podium presentation rate of publication within 3-years, 2008–2012

	2008	2009	2010	2011	2012	Total
Selected for open podium presentation, n	36	44	26	40	32	178
Published within 3 years, n	26	26	14	27	19	112
Publication rate, %	72.2	59.1	53.8	67.5	59.4	62.9

Table II
ASES meetings closed podium presentation rate of publication within 3-years, 2008–2012

	2008	2009	2010	2011	2012	Total
Selected for closed podium presentation, n	35	35	38	40	39	187
Published within 3 years, n	22	18	20	21	29	110
Publication rate, %	62.9	51.4	52.6	52.5	74.4	58.8

Table III
ASES meetings open and closed podium presentations' publication rate comparison, 2008–2012

Type of presentation	Published, n (%)	Unpublished, n	Total, n	Odds ratio (95% CI)	p Value
Open podium	112 (62.9)	66	178		
Closed podium	110 (58.8)	77	187	1.1879 (0.7796, 1.8099)	0.4229

Table IV
ASES meetings journal of publication for abstracts, 2008–2012

Journal	n	%
Journal of Shoulder and Elbow Surgery	111	50.0
Journal of Bone and Joint Surgery	42	18.9
American Journal of Sports Medicine	29	13.1
Clinical Orthopaedics and Related Research	8	3.6
Arthroscopy	8	3.6
All other journals*	24	10.8
Total	222	100

* All other journals include: *Journal of Orthopaedic Trauma*, *Journal of Pediatric Orthopaedics*, *The Journal of Hand Surgery*, *Journal of Surgical Orthopaedic Advances*, *International Orthopaedics*, *American Journal of Orthopedics*, *Journal of Extracorporeal Technology*, *Journal of Orthopaedic Research*, and *Operative Techniques in Orthopaedics*.