

What is the Ultimate Fate of Presented Abstracts? Conversion Rates of Presentations to International Publications from the 31st National Congress of Plastic, Reconstructive, and Aesthetic Surgery

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Abstract

Objective: Oral and poster presentations held at national congresses are regarded as important means for sharing of latest scientific data and personal experiences. However, many ideas shared at annual conferences fail to be published. The objective of this study was to examine the publication rate of presentations held at the 31st National Congress of the Turkish Society of Plastic Reconstructive and Aesthetic Surgeons and to analyze various factors associated with publication.

Material and Methods: The PubMed database was searched for peer-reviewed publications, corresponding to abstracts presented at the 2009 congress. For all abstracts, parameters including presentation type, topic, institution, author details, publication time, journal name, and impact factor were recorded. Collected data were analyzed using chi-square, Mann-Whitney U, and Kruskal-Wallis tests for statistical significance.

Results: In five years 16.8% of 569 proceedings were published in international peer-reviewed journals. The mean time to publication following the congress was 22 months (1–57 months) for 75 presentations, whereas 21 proceedings had been published prior to the congress. Compared with posters, the publication rate for oral presentations was significantly greater (30.5% vs. 13.3%; $p < 0.001$). The type of institution had no significant effect on the publication rate.

Conclusion: The overall publication rate for the 31st National Plastic Surgery Congress was found to be similar with other Turkish-based studies, but was somewhat lower than that of international counterparts. The significant difference found between the publication rates of oral and poster presentations was interpreted as a positive sign demonstrating a relatively higher level of scientific value and appeal.

Keywords: Presentation, publication, national congress, PubMed

INTRODUCTION

Sharing the results of medical research with wider masses in scientific meetings bears undeniable importance with respect to enhancing knowledge levels and sustaining scientific advancement. In addition to enabling researchers to transfer their know-how and experience to other researchers, colleagues, and majoring students, it enables them to obtain the comments and the feedback of the audience. This mutual interaction contributes to the further improvement and maturation of the presented studies. These activities, although being significant and contributing necessary aspects in academic development, at the same time help academicians to represent and promote their departments and institutions on a scientific level. However, the limited attendance in scientific meetings, despite all efforts, poses a challenge in effectively sharing the know-how and experience that are presented in oral and poster presentations.¹⁻³

Publishing in an international peer-reviewed journal is accepted as the golden standard for disseminating the scientific data obtained in a study.⁴ The acceptance of a paper, which has been presented at a congress, for publication in a peer-reviewed journal is also one of the most objective criteria that indicates the study was conducted using scientifically valid methods and offers healthy results.⁵ Planning and conducting studies with the aim of turning them into a publication, thereby consolidating them into presentations, is a major component that will in turn enhance the scientific qualities of the know-how and experience disseminated in congresses and meetings.^{6,7}

The common goal for all scientific studies ought to be their publication as an article for permanence and accessibility and thereby dissemination to as wide an audience as possible.⁸ Although papers presented at congresses are considered to be the preliminary versions

of published articles, many papers, for a variety of reasons, cannot be turned into a publication. Studies report that the publication rate of the presentations, which were presented at congresses organized by many different specialization branches, in international journals in 4 years was between 31.0% and 69.1%.^{9,23} In the 2007 Cochrane review, which covers approximately 30,000 presentations, the publishing rate of presentations was indicated to be 44.5%.³

A limited number of studies are available that report the rate at which the presentations presented in national congresses and meetings organized in Turkey are converted into publications. The available studies, in which dermatology, radiology, rheumatology, and physiotherapy congresses were reviewed, have found the rate at which presentations are published in international peer-reviewed journals to fall between 11.8% and 21.6%.²⁴⁻²⁷ No similar studies have been reported related to the national congresses and scientific meetings in the field of plastic surgery. The national congress which is organized annually by the Turkish Society of Plastic, Reconstructive and Aesthetic Surgeons (TSPRAS) is a scientific event held with the broad participation of plastic surgeons and researchers from across Turkey. The aim of this study was to identify the rate at which the oral and poster presentations made at the 31st National Congress of the TSPRAS are converted into publications and also to compare this rate to the results reported in the literature for Turkish and international congresses and to analyze a range of variables associated with the presentations that have been converted into publications.

MATERIAL AND METHODS

A search was conducted in the PubMed database (<http://www.ncbi.nlm.nih.gov/pubmed>) with the aim of identifying the presentations that were converted into publications in international peer-reviewed journals after being presented at the 31st National Congress of the TSPRAS. Data collection started on August 3, and screening was completed on August 8. All information related to the presentations made at the congress meeting was retrieved from the abstracts booklet, which was distributed to the attendees on CD-ROMs during the meeting. The timeframe between October 2009 and August 2014 was considered sufficient to convert the presentations into publications after being presented at the congress.²⁸⁻³¹

Excluding the presentations of guest speakers, all oral and poster presentations were included in the study. Information about the type and topic of the presentation, the institution of its authors, and the type of the institution were recorded for all presentations. The institution type of each presentation was determined from among four types, namely university, training and research, state, and private. In cases where the presentation was made jointly by several institutions, only the institution of the first author was taken into account. Military hospitals were classified under state institutions.

First, the PubMed database was queried based on the names of the authors mentioned in each presentation and on possible combinations of keywords selected from the presentation

titles.^{32,33} In cases where the query did not return any matches, publications of each author were scanned individually. In cases where still no matches were found, the same search was repeated in other databases. When a publication was found to match the masthead of the presentation, the abstract was reviewed to ensure that its content was consistent with that of the presentation. Presentations that were verified to have been converted into publications were recorded by the publication date, journal name, and impact factor, and, where applicable, any changes in the names of the first and co-authors were noted. Impact factors of the journals were determined using the "Journal Citation Report" (<http://www.webofknowledge.com/JCR/>) database, which was updated according to 2013 data. Publication dates of the presentations that were converted into publications were reviewed by their month and year data. Where the year and the quarter information was given in the data, the months of April, July, October, and December were considered as spring, summer, fall, and winter, respectively, and where only the year information was given, June was considered as the publication month.³⁴ Presentations identified to be published prior to the congress were also included in the evaluation.

Statistical Analysis

Statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS Inc.; Chicago, IL, USA) version 20 software. Correspondence of the variables to the normal distribution was assessed using visual (histogram and probability charts) and analytic (Kolmogorov–Smirnov/Shapiro–Wilk tests) methods. The data returned from normal distribution were analyzed using the independent samples t-test, whereas data returned from non-normal distribution were analyzed using the Mann–Whitney U and the Kruskal–Wallis tests. The chi-square test was used in analyzing categorical data. Numerical variables were reported in percentage as categorical variables using mean and standard deviation. The results were assessed using a confidence interval of 95% and were accepted as significant where p value was <0.05.

RESULTS

A total of 569 presentations were delivered at the 31st National Congress of the TSPRAS held in October 2009, of which 118 (20.7%) were oral and 451 (79.3%) were poster presentations. In the database search, 96 of these presentations (16.8%) were identified to be published in international peer-reviewed journals. A review of the published presentations by type showed that 36 (30.5%) of the oral presentations and 60 (13.3%) of the poster presentations were converted into publications. Accordingly, the difference was found to be statistically significant, and the publishing probability of oral presentations was found to be three times more than that of poster presentations [odds Ratio=2.86, 95% confidence interval (CI): 1.78–4.61; p<0.001].

Of the 96 publications, 21 (21.9%) were published prior to the congress; the publication time of the remaining 75 was found to be 22±16.3 months (1–57 months) on an average. Most of the articles (77.3%) were published within 3 years after be-

Table I. Distribution of presentations at the 31st TSPRAS National Congress based on diverse variations and their publishing rates

	Presentations		p value (Chi-square)
	Published	Total	
	n (%)	n	
Presentation method			<0.001
Oral presentation	36 (30.5)	118	
Poster presentation	60 (13.3)	451	
Institution type			0.753
University	70 (17.2)	406	
Training and Research	20 (15.0)	133	
State	2 (8.3)	24	
Private	4 (16.7)	6	
Topic			0.406
Head and Neck	16 (22.9)	70	
Experimental	10 (28.6)	35	
Wound Care	4 (19.0)	21	
General	11 (9.6)	114	
Craniofacial	8 (14.3)	56	
Lower extremity	9 (17.6)	51	
Burns	6 (18.2)	33	
Cleft lip and cleft palate	4 (16.7)	24	
Breast	5 (13.2)	38	
Aesthetics	7 (17.1)	41	
Hand surgery	16 (18.6)	86	

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ing presented at the congress. Of the presentations that were converted into publications, 6.7% were found to have been published after the fourth year. No significant relations were found between the publication times and the presentation types, institution types, or presentation topics (Figure 1, 2).

A review of the presentations by topics showed that the maximum number of presentations came from general surgery (n=114, 20%) and hand surgery (n=86, 15.1%). The distribution of the presentations by presentation method and institution type is summarized in Tables II and III. With respect to the addressed topics, the highest rate for converting presentations into publications was found in the experimental category (28.6%), albeit the difference among the publication rates were found to be of no statistical significance (Table I). In a review based on the distribution of the 11 topics that were published in total, head and neck (16.7%) and hand surgery (16.7%) were found to have the highest rates.

When the data were reviewed for institution types, universities (71.3%) were found to have made the highest contribution, followed by training and research (23.4%), state (4.2%), and private (1.1%) institutions (Table IV). No significant differences were found between the distribution of oral and poster presentations with respect to the institution types or the percentage

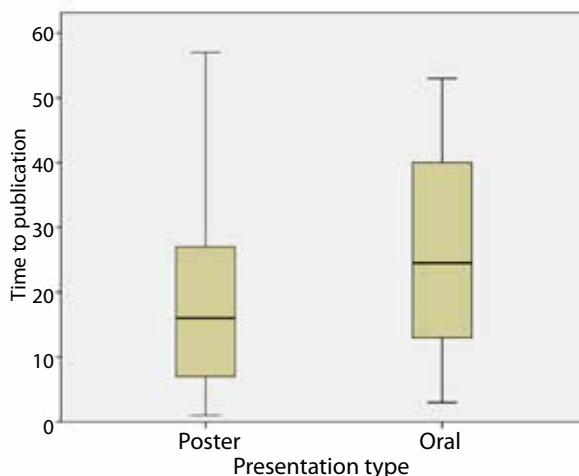


Figure 1. A review of the presentations that were both delivered at the 2009 national congress and converted into publications showed that poster presentations tended to be converted into publications sooner than oral presentations [median value 16 months (1–57) vs. 24.5 months (3–53); p=0.058]

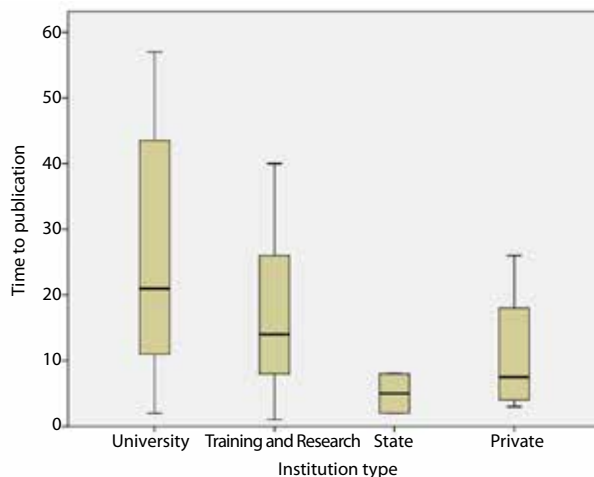


Figure 2. Presentations from state hospitals were identified to be published sooner than those from other institutions [median value 5 months (2–8); p=0.057]

in which presentations were converted into publications (Figure 3). The institutions that have the highest rates for converting presentations into publications are given in Figure 4.

Of the presentations that were accepted for publication in 36 peer-reviewed journals, 37.5% were published in three journals (Journal of Craniofacial Surgery, Journal of Plastic Reconstructive and Aesthetic Surgery, and Annals of Plastic Surgery) (Figure 5). Although the impact factors could not be obtained for four journals, the median impact factor for the remaining 32 journals was 1.458 (value interval: 0.208–3.328) (Table V). In terms of the impact factors of the journals that accepted the presentations for publication, no significant differences were found between oral and poster presentations or between different institution types.

Table II. Distribution of oral and poster presentations at the 31st TSPRAS National Congress based on topics

Presentation topic	Presentation type				Total (100%)
	Oral		Poster		
	Published, n (%)	Unpublished, n (%)	Published, n (%)	Unpublished, n (%)	
Head and Neck	4 (5.7)	5 (7.1)	12 (17.1)	49 (70)	70
Experimental	3 (8.6)	11 (31.4)	7 (20)	14 (40)	35
Wound Care	4 (19)	5 (23.8)	-	12 (57.1)	21
General	4 (3.5)	7 (6.1)	7 (6.1)	96 (84.2)	114
Craniofacial	4 (7.1)	6 (10.7)	4 (7.1)	42 (75)	56
Lower extremity	4 (7.8)	5 (9.8)	5 (9.8)	37 (72.5)	51
Burns	2 (6.1)	7 (21.2)	4 (12.1)	20 (60.6)	33
Cleft lip and cleft palate	1 (4.1)	9 (37.5)	3 (12.5)	11 (45.8)	24
Breast	2 (5.2)	8 (21.1)	3 (7.9)	25 (65.8)	38
Aesthetics	3 (7.3)	14 (34.1)	4 (9.7)	20 (48.8)	41
Hand surgery	5 (5.8)	5 (5.8)	11 (12.8)	65 (75.6)	86
Total	36 (6.3)	82 (14.4)	60 (10.5)	391 (68.7)	569

Table III. Distribution of presentations made at the 31st TSPRAS National Congress based on topic and institution

Presentation topic	Institution type				Total (100%)
	University, n (%)	Training and Research, n (%)	State, n (%)	Private, n (%)	
Head and Neck	47 (67.1)	20 (28.6)	2 (2.8)	1 (1.4)	70
Experimental	26 (74.3)	8 (22.8)	1 (2.8)	-	35
Wound Care	16 (76.2)	3 (14.3)	2 (9.5)	-	21
General	77 (67.5)	32 (28.1)	5 (4.4)	-	114
Craniofacial	47 (83.9)	7 (12.5)	2 (3.6)	-	56
Lower extremity	35 (68.6)	14 (27.4)	1 (1.9)	1 (1.9)	51
Burns	27 (81.8)	4 (12.1)	1 (3.0)	1 (3.0)	33
Cleft lip and cleft palate	17 (70.8)	7 (29.2)	-	-	24
Breast	26 (68.4)	9 (23.7)	3 (7.9)	-	38
Aesthetics	31 (75.6)	5 (12.2)	3 (7.3)	2 (4.8)	41
Hand surgery	57 (66.3)	24 (27.9)	4 (4.6)	1 (1.2)	86
Total	406 (71.3)	133 (23.4)	24 (4.2)	6 (1.0)	569

In 53.1% of the presentations that were converted into publications, changes other than their order were found in author names (Figure 6). In a review of the publications where there were no changes in the names themselves but where author names were added, deleted, or both added and deleted, no significant differences were found in terms of the changes made with respect to presentation or institution types. Of the 21 presentations that were delivered at the congress after being published in an international journal, name changes were identified in 9.5%, and of the presentations that were published after being delivered at the congress, name changes were identified in 65.5%, and this difference was found to be statistically significant ($p < 0.001$). When the presentations that were converted into publications were reviewed for the

names of the first authors, it was found that the names of the first authors had been changed in 21.9% and that these changes showed a similar distribution in terms of institution types, whereas the changes made in the first names were significantly more in oral presentations than in poster presentations (odds ratio=3.68, 95% CI: 1.34–10.10; $p = 0.009$) (Figure 7).

DISCUSSION

This study aimed at identifying the factors associated with converting presentations into publications and is the first analysis that examines the research presentations delivered at the National Congress of the TSPRAS. In other studies of similar content, scanning a single database was generally

Table IV. Distribution of the presentations delivered at the 31st TSPRAS National Congress among institutions and their publishing rates

Institution type	Presentation type				Total (100%)
	Oral		Poster		
	Published, n (%)	Unpublished, n (%)	Published, n (%)	Unpublished, n (%)	
University	30 (7.3)	62 (15.3)	40 (9.8)	274 (67.5)	406
Training and Research	5 (3.7)	18 (13.5)	15 (11.3)	95 (71.4)	133
State	-	1 (4.1)	2 (8.3)	21 (87.5)	24
Private	1 (16.7)	1 (16.7)	3 (50)	1 (16.7)	6
Total	36 (6.3)	82 (14.4)	60 (10.5)	391 (68.7)	569

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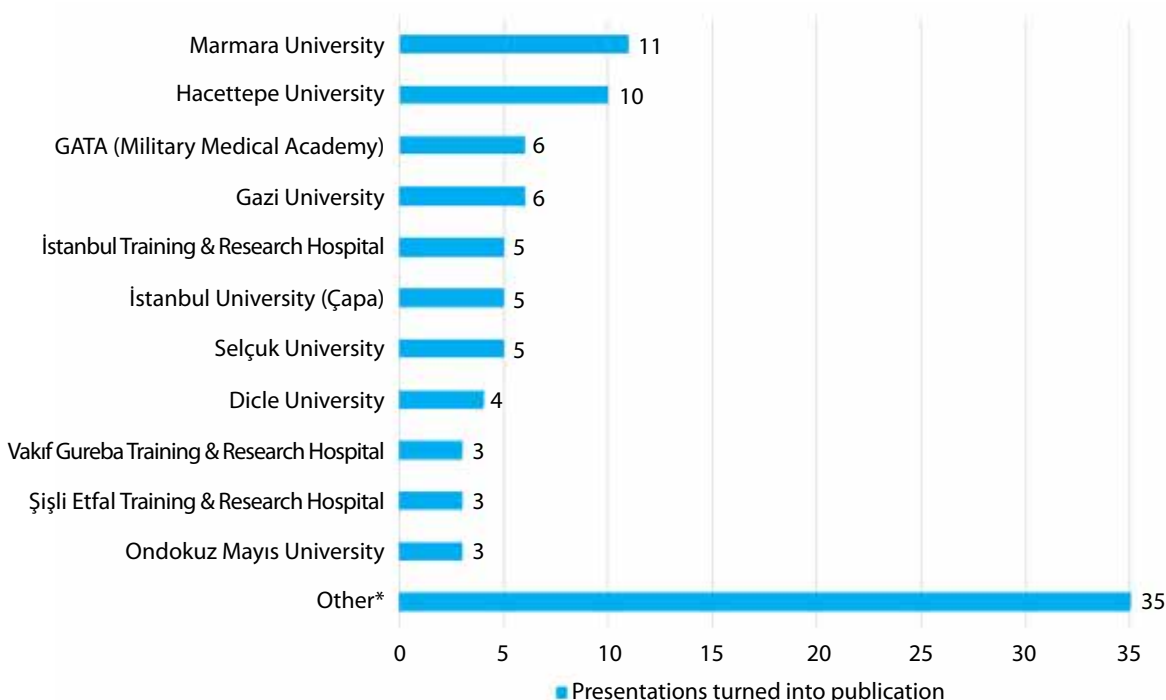


Figure 3. In the review of all of the institutions that attended the congress, the rate of the institutions that have converted at least one of their presentations into publications was found to be 67% in universities (25/37), 64.3% in training and research hospitals (9/14), 20% in state hospitals (2/10), and 80% in private institutions (4/5)

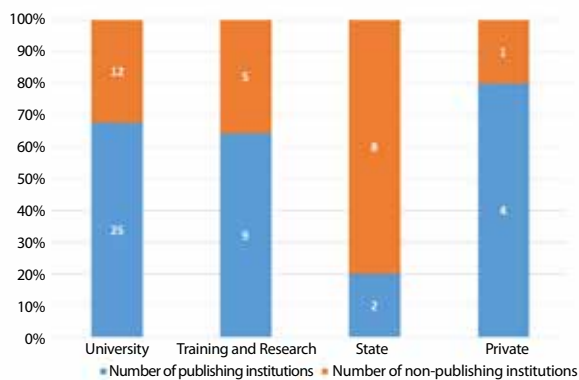


Figure 4. Ranking of the institutions that have produced the highest number of publications from their presentations at the 31st National Congress of the TSPRAS

accepted to be sufficient for this purpose.³ In this study, the PubMed database, which provides extensive access to international publications, was used. Our study, which was conducted in 2014 for analyzing the presentations from the 2009 congress meeting, has observed the 5-year period,³⁵ which is accepted to be an ideal time span for analyzing the rate of converting presentations into publications. This helped our goal to avoid obtaining results that would, because of delays in the publishing process, fall short of actual rates for converting presentations into publications.

The results found in the study show that 16.8% of all the oral and poster presentations made at the 31st National Congress of the TSPRAS were published in a peer-reviewed journal. A range of studies, in which the national congresses organized in Turkey in various fields such as radiology, rheumatology, and dermatology were analyzed, have reported the rate at which

Table V. Distribution by institution type of the presentations made at the 31st TSPRAS National Congress that were published in foreign journals as cited in PubMed and indexed by impact factor

Journal name	Impact factor	Institution type				Total
		University (n)	Training and Research (n)	State (n)	Private (n)	
Plast Reconstr Surg	3.328	4	-	-	-	4
J Neurosurg	3.227	-	1	-	-	1
Microsurgery	2.421	7	-	-	-	7
Urology	2.132	2	-	-	-	2
Laryngoscope	2.032	1	-	-	-	1
Int Wound J	2.023	1	-	-	-	1
J Trauma	1.970	1	-	-	-	1
Clin Biomech	1.880	1	-	-	-	1
Burns	1.836	2	-	-	-	2
Knee	1.702	1	-	-	-	1
Otolaryngol Head Neck Surg	1.625	1	-	-	-	1
Dermatol Surg	1.562	-	1	-	-	1
J Burn Care Res	1.550	-	1	-	-	1
J Plast Reconstr Aesthet Surg	1.474	11	1	-	-	12
Ann Plast Surg	1.458	6	4	-	1	11
Int J pediatr Otorhinolaryngol	1.319	-	1	-	-	1
Arch Gynecol Obstet	1.279	1	-	-	-	1
J Craniomaxillofac Surg	1.252	-	1	-	-	1
Clin Exp Dermatol	1.234	-	1	-	-	1
Int J Low Extrem Wounds	1.194	1	-	-	-	1
Aesthetic Plast Surg	1.189	3	3	1	-	7
J Reconstr Microsurg	1.006	3	-	-	-	3
Eur Rev Med Pharmacol Sci	0.988	1	-	-	-	1
Cutan Ocul Toxicol	0.920	-	-	-	1	1
Ear Nose Throat J	0.881	1	-	-	-	1
Vasc Endovascular Surg	0.766	1	-	-	-	1
J Craniofac Surg	0.676	11	1	-	1	13
Acta Orthop Traumatol Turc	0.554	1	1	-	1	3
J Plast Surg Hand Surg	0.521	4	-	-	-	4
Turkish J of Trauma and Emergency Surgery	0.379	1	-	-	-	1
B-ENT	0.377	-	1	-	-	1
Int Surg	0.208	1	-	-	-	1
Ann Burns Fire Disaster	-	1	-	-	-	1
Chir Organi Mov	-	-	-	1	-	1
J Hand Microsurg	-	1	-	-	-	1
Turkish J of Ear Nose and Throat	-	1	3	-	-	4
Total		70	20	2	4	96

presentations were published in foreign journals to range between 11.8% and 29.1%.^{24,27} Results from similar studies conducted in countries such as the USA, the UK, and Australia to examine the national or international congresses in fields other

than plastic surgery revealed this rate to range between 29.8% and 61.6%.^{2,30,34,36-41} Although there are very few studies that evaluate the congresses held in the field of plastic surgery, two publications from the UK report this rate to range between

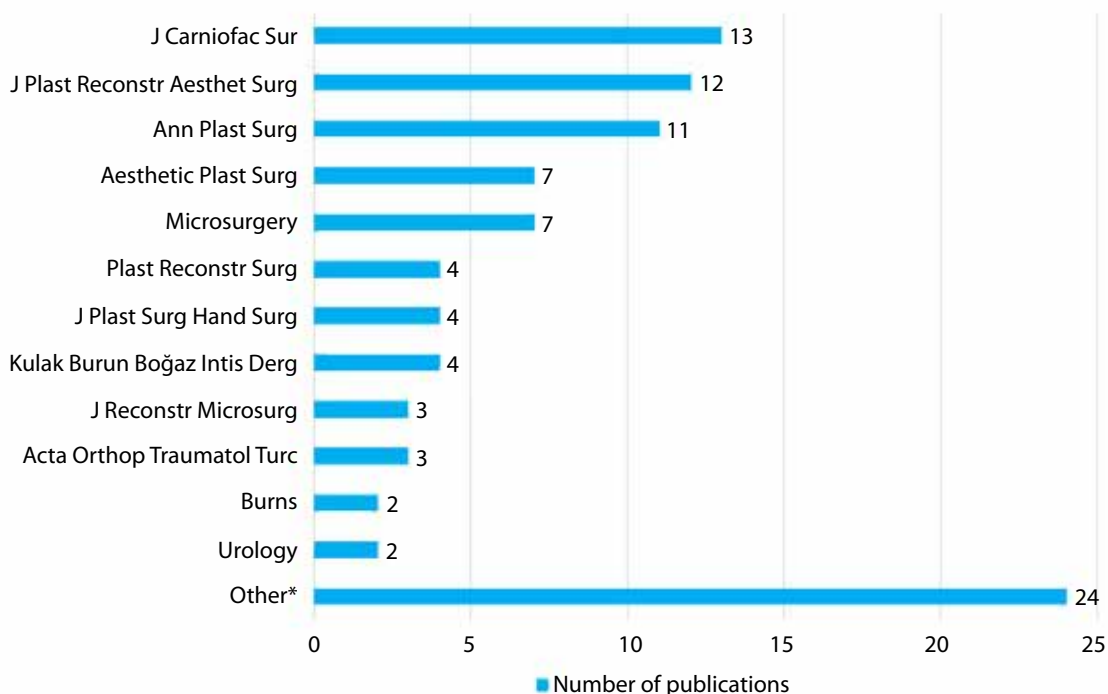


Figure 5. Ranking of the peer-reviewed journals indexed in the PubMed database according to the number of presentations accepted for publication among those presented at the 2009 congress

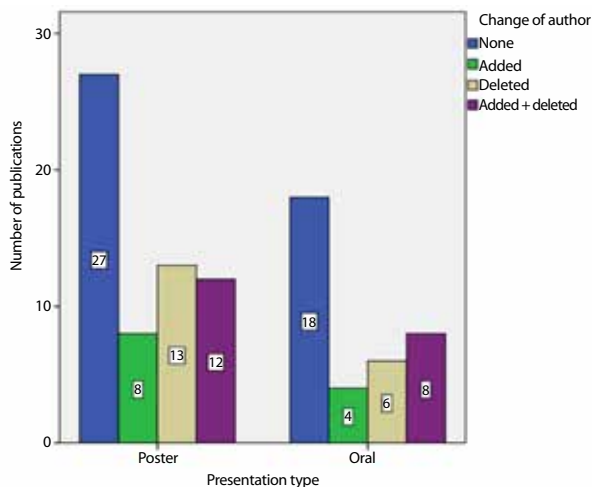


Figure 6. Review of the presentations that were converted into publications after being presented at the 31st National Congress of the TSPRAS with respect to author changes

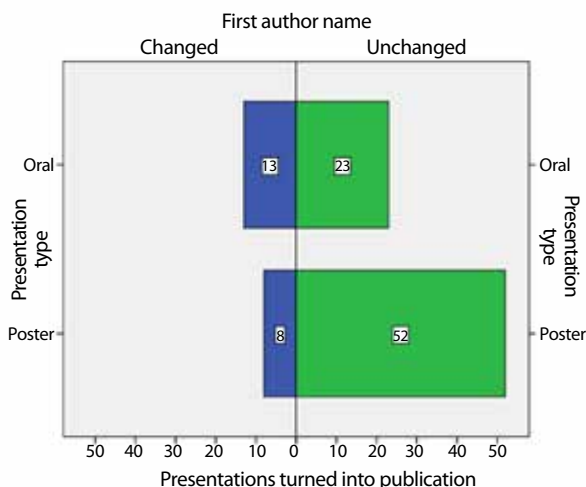


Figure 7. Author name changes were found to be more frequent among the oral presentations vs. poster presentations that were converted into publications after being presented at the 2009 congress

20% and 32%.^{8,42}The results of a study analyzing the plastic surgery congresses held in the USA and Canada and reported by Gregory et al.⁴³ revealed that the rate for converting presentations into publications was 45%; however, this study included only oral presentations and excluded poster presentations.

The Cochrane review³ indicates the low priority researchers assign to their studies and their lack of time for academic re-

search to be the possible reasons why researchers do not convert their congress and convention presentations into publications. A study examining the reasons why presentations in orthopedics are not converted into publications has, in addition to lack of time, emphasized that the continuation of the study as a large-scale project after the preliminary presentation as well as various disagreements among the authors could be contributing to this unfavorable outcome.²⁰ More-

over, availability of older studies with similar study designs and results, the fact that the presented results do not make any novel scientific contribution, a preconceived notion that the study could not be published because no favorable results were obtained, the presence of shortcomings and faults in terms of statistical methods, and selecting a topic that fails to create interest among readers can be named among the potential reasons that prevent researchers from turning their presentations into publications.^{20-23,28,44-47} Although the scientific language of the National Congress of the TSPRAS is Turkish, we find that various difficulties experienced in translating these presentations into English present another factor that impacts a lower publishing rate in peer-reviewed journals.

Although various studies report to have found no significant differences between the rates at which oral and poster presentations were converted into publications,^{16,18,46,48,49} the data obtained in our study as well as the results from a number of studies^{28,50-54} demonstrate that oral presentations hold a higher rate than poster presentations in this respect. In general, submissions for presentations that offer more intriguing results or methodologies with state-of-the-art, well-planned, and higher scientific value are admitted for oral presentation by the congress evaluation committees. Considering the close relationship of these parameters, which demonstrate the overall quality of the study, with the probability of converting these studies into publications, the fact that oral presentations show a significantly higher rate than poster presentations is not a surprising outcome. Furthermore, the feedback and criticism of the audience in the Q&A session following an oral presentation contribute to improving and completing the study before the publication phase.

The average time for which the presentations delivered at the 31st National Congress of the TSPRAS were converted into publications was found to be approximately 2 years, which is consistent with the results shown in similar previous studies.^{50,51,55} Our study found that 64% of the studies were turned into publications within the first 2 years and 93.3% within the first 4 years. This result supports the other studies that have reported that more than 90% of the presentations that were converted into publications were published within the 4 years following the congress.^{3,16,21,23,56-58} Accordingly, the preparation of the articles that are provided to the readers in peer-reviewed journals can be said to have taken approximately 2–4 years; thus, it can be understood that much of the information that is presented as “new” in the article is, in fact, not novel. A range of suggestions were developed towards resolving this issue, including shortening the journals’ evaluation period, electronic publication of the articles that have been accepted and are waiting to be published, or an acceptance requirement that the presentations submitted to congresses must have been either submitted or been accepted for publication in a scientific journal.⁴³ It is, however, important to bear in mind that more demanding acceptance criteria could have a negative impact on both the overall participation in congresses and the number of scientific studies shared with the audience. Our study has found that 21.9% of the presentations that were converted into publications had

been published prior to the congress meeting. This situation, which is deemed to become more widespread with the increasing number of peer-reviewed journals offering the possibility for earlier publication through electronic versions and with more researchers seeking to protect their work from plagiarism,^{4,35} is a major factor that can influence both the rates at which presentations are converted into publications and the scientific levels of congresses.

When the presentations were analyzed by topic, of the 569 presentations, 11 were found to be under various topics, and no significant correlations were identified between the presentations being converted into publications and their topics. Although of no statistical significance, the highest rate in converting presentations into publications was found to be in the experimental category at 28.6%. This rate can be explained with a higher tendency of such topics to be accepted for publication or a higher desire and motivation among researchers conducting experimental studies for converting their work into publications. On the other hand, head and neck and hand surgeries were found to be the fields enjoying the highest publication rates (n=16). Although hand surgery, in particular, comes forth with the highest publication rate (50%) among oral presentations, the rate of this category is reduced by the low publication rate seen among poster presentations.

Where studies were conducted jointly by multiple institutions, only the institution of the first author was considered as a limiting factor in the review. Accordingly, an analysis of the distribution of presentations among different institution types has shown, as expected, that the highest contribution came from universities. Universities can be deemed to actually have a higher share if we consider that some specialists, having begun their study in their university or in a training and research hospital and were later assigned to state hospitals as part of their obligatory service after completing their residency training, could have sent these studies from their current institution.

International peer-reviewed journals that predominantly use English are the major means that enable authors to reach wider audiences.⁵⁹ It is also a known fact that articles written in English are cited more than those in other languages, regardless of their impact factor, topic, and number of authors.⁶⁰ The presentations that were converted into publications and delivered at the 31st National Congress of the TSPRAS were published in a total of 36 international peer-reviewed journals, of which three are based in Turkey. More than half (52.1%) of these 96 studies were published in five journals (Figure 5). Although most of these 36 journals were seen to be comprehensive titles specific to plastic surgery, specialized journals, including urology and neurosurgery, and journals addressing a specific area such as microsurgery or burn care were also found to be preferred.

In more than half (53.1%) of the publications reviewed in our study, changes other than the order of the names were found to have been made in author names. Changes of this type were found to be more frequent among the studies that were

converted into publications after being presented in the congress. Considering that many of the studies were improved in the period following their presentation at the congress and converted into publications only after a conscientious writing process, such differences in author names and in the order of the names between the presentation and the publication can be deemed as expected outcomes. The fact that a significant difference was observed with respect to author names between the studies published before and after the congress (9.5% and 65.3%, $p < 0.001$, respectively) is supportive of this observation. On the other hand, however, a number of contradicting modifications were observed to have been made with respect to the first author names. Although this rate was found to be 21.9% in all of the publications that were reviewed in our study, the rate of such changes were strikingly found to be significantly higher in oral presentations than that in poster presentations ($p = 0.009$). One of the possible reasons that can explain this difference as found in our study is that junior specialists were named as the first author for the congress presentations as a means of motivating them to conduct scientific studies, and the order of the names were rearranged for publication. Further, because the process of converting oral presentations, which are characterized to be more worthy in terms of scientific contribution than poster presentations, demands substantial input, the name of the researcher that makes the highest contribution is determined as the first name, and this can be different to that in the congress presentation. However, given the presence of the numerous factors, both objective and subjective, that determine the author names and the order in which they are presented, a healthy analysis of the reasons and the implications of the changes observed in our study do not seem possible.

Taking also into account the various previous studies,^{25,26,33,36,56,61} the PubMed database was used in our study for identifying the presentations that were turned into publication. Therefore, it is deemed possible that presentations published in journals which are not indexed in the PubMed database, and those that were published after the scanning work was concluded on August 8, 2014, are not included in our study. Further, it is a possibility that some publications could not be identified in the database search because of changes in the study titles or in the names of the persons (e.g. name changes due to change in marital status), and/or of spelling errors. Therefore, it should be taken into account that the findings of our study have possibly revealed the rate at which the presentations delivered at the congress were converted into publications to be lower than the actual. Analyses were neither conducted on the numbers of authors of the presentations or the publications nor were the published presentations categorized in terms of publication types (e.g., compilation, original article, case presentation, technical note, letter to the editor). A number of studies^{37,62,63} have reported that studies that provide significant results have a higher rate of being published, and that this condition, defined as "editorial favoritism in scientific publication," would soon further reduce the reliability and validity of the results presented in articles.^{62,64-66} Disregarding the significance of the results presented in the studies constitutes another limiting factor in the examination process of our study.

Our study has developed various suggestions addressing researchers and the scientific evaluation committees for increasing the rates at which presentations made at congresses and scientific meetings are converted into publications. Although some studies suggest that a more selective process should be used in accepting presentations,²⁶ adopting more reasonable methods that will enhance scientific quality and thereby increase the chances of being published seems to be a more viable option than limiting the scope of submissions. For instance, presentations to be delivered at congresses may be required to have been submitted to a journal for publication.⁶⁷ Periodical analysis of the publication rates of presentations is also deemed to be beneficial. Moreover, institutions should allow their researchers the time for which they can work on their scientific activities and should provide the suitable physical conditions and research funds, adopt encouraging and motivating policies and incentives, and, when necessary, provide support in authoring through training programs. The "Published Congress Presentation Award" given by the Turkish Thoracic Society with the aim of motivating researchers is a good example for this kind of an incentive. The Turkish Thoracic Society gives this award to research studies that were presented at their national congress meetings, were published, and listed in SCI and SCIE in the past 5 years.

CONCLUSION

The average time for which the presentations delivered at the 31st National Congress of the TSPRAS were converted into publications was found to be consistent with the results found in the studies reported in the literature. The higher rate of converting oral presentations into publications vs. poster presentations is significant in that it shows that orally presented studies are found to be scientifically more worthy.

Researchers are expected to publish their original findings and results to disseminate them among wider audiences, thus enhancing the quality of scientific studies.⁶⁸ Designing further surveys to interview the authors of unpublished presentations will help reveal the underlying reasons of this outcome in a healthier manner. To be able to understand the factors impacting the prolonged time span until the acceptance of the presentations for publication, it will be beneficial to scrutinize the journal issues to which these presentations were previously submitted and declined.

Peer-review: Externally peer-reviewed.

Conflict of Interest: No conflict of interest was declared by the author.

Financial Disclosure: The author declared that this study has received no financial support.

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