

The Effect of Associate Professorship Criteria on Emergency Medicine Congresses in Turkey

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Abstract

Objective: To evaluate the situation concerning oral and poster presentations given at Turkish and International Scientific Medical Congresses and adding to scientific knowledge before and after the change in associate professorship eligibility criteria that occurred in December 2016.

Methods: Poster and oral presentations at four consecutive emergency medicine congresses held between 2015 and 2018 by the Emergency Medicine Physicians Association of Turkey were included in the study. As data were collected from presentation booklets accessed online, ethics committee approval was not obtained. Since the associate professorship eligibility criteria changed in December 2016, the last two congresses before that date and the following two after they were compared. Numbers of authors, domestic and international participation rates, the departments involved, and the presence or absence of oral or poster presentations were assessed.

Results: Members of emergency medicine departments contributed to congresses with significantly more case reports than other participants ($p<0.001$). Presentations at congresses held before the change in associate professorship criteria in December 2016 involved larger numbers of authors, while those appearing after the change involved fewer names ($p<0.001$). Participation involved more poster presentations before the change in criteria, while the proportion of oral presentations increased after the change ($p<0.001$). Participation in congresses prior to the change in criteria more frequently involved case reports, while the proportion of original articles increased thereafter ($p<0.001$).

Conclusion: Presentations at congresses held prior to the change in associate professorship criteria involved a large number of author names, while fewer author names were observed following the change in criteria. In addition, prior to the change, participation involved more poster presentations, while the proportion of oral presentations increased after that change.

Keywords: Associate professorship criteria, oral presentation, congress, academic advancement

INTRODUCTION

Scientific medical congresses are an important component of ongoing medical education. As in other departments, these are a setting for scientific activity in which academics share their latest studies and unusual cases with colleagues for the advancement of science in the field of emergency medicine. This may take the form of oral or poster presentations once approval has been

received from the relevant congress scientific committee. Several factors affect the selection of these presentations by participants (1).

Various factors affect these presentations in different countries. One such factor in Turkey involves the associate professorship eligibility criteria. These criteria in Turkey changed in December 2016. Prior to that date, the criteria did not include oral or poster



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presentations at scientific assemblies (2). Several amendments were made to the eligibility conditions after December 2016. However, in December 2016, a legal amendment imposed a new basic condition of “scientific activity corresponding to a minimum of 100 in the relevant scientific field” on candidate associate professors (3). Among these changes, under item A under the heading of scientific meetings in Article 9, five points are awarded for oral presentations given at international scientific meetings and contributing to the field of science. Under item B, two points are awarded for oral presentations at Turkish scientific meetings and contributions to science, and at least five points must be obtained within the scope of that item. The maximum permitted total is 10, and the score for only one presentation at the same congress can be included. While oral presentations are included in the scoring, poster presentations are not.

The purpose of this study was to evaluate the effect of the new associate professorship eligibility criteria, applicable to all the health sciences, on the participation by emergency medicine specialists in these congresses with oral and poster presentations.

METHODS

Poster and oral presentations at four consecutive emergency medicine congresses held between 2015 and 2018 by the Emergency Medicine Physicians Association of Turkey (ATUDER) were included in the study. The data were collected from the association’s presentation booklets available online (4). Since the associate professorship eligibility criteria changed in December 2016, the last two congresses before that date and the following two after it were compared. Numbers of authors, participation from Turkey and overseas, primarily the proportions of the emergency medicine department as well as other departments, and the presence or absence of oral or poster presentations were examined and assessed. Our study is a retrospective observational study. Ethics committee approval is not required as it is obtained from information accessible over the internet.

Statistical Analysis

The study data were loaded onto Statistical Package for the Social Sciences (SPSS) version 15.0 software (SPSS) for analysis. The data were expressed as mean \pm standard deviation, mean, and percentage values. The chi-square test was applied in the analysis of categorical variables. P values <0.05 they were compared. Since there was a significant difference between the groups formed by the number of authors in our study, the post-hoc multiple comparison test was used to reveal which groups this difference was between.

RESULTS

A total of 4.346 presentations published in the online proceeding booklet of the national emergency medicine congresses organized by ATUDER between 2015-2018 was examined in our study. Visual poster and oral presentations in these congresses were evaluated before and after this date due to the new associate professorship criteria published in 2016.

Participant numbers and rates for all branches of health sciences at emergency medicine congresses held in 2015-2018, the mean numbers of authors, and numbers and rates of oral and poster presentations before and after the change in associate professor eligibility criteria are evaluated.

When we evaluated according to branches, the highest number of reports were emergency medicine (93%), general surgery (6.5%), radiology (2.9%), internal medicine (2.6%), neurology (2.4%) and biochemistry (2.4%) were sent by their departments. Considering the number of authors in the papers, the average number of authors was found to be 5.1 ± 2 by the emergency medicine clinic. The number of authors of the other clinics are respectively histology (7.6 ± 1.5), medical biology (7), biochemistry (6.9 ± 1.7), hyperbaric (6.7 ± 2.1), radiation oncology (6.5 ± 3.5), biostatistics (6.4 ± 2) pharmacology (6.1 ± 1.7), family medicine (6.1 ± 2.1) and general surgery (5 ± 2.1) (Table 1). The total number of poster presentations was 2.999, and the total number of oral presentations was 1.347. 94.2% of the poster presentations and 90.4% of the oral presentations belonged to the emergency medicine department. When the total reports were evaluated as articles and case reports, it was seen that the case reports were 77.7% and the original article presentations were 22.3%. When these papers belonging to the emergency medicine department were examined, the percentages of original articles and case reports were found to be 87.5% and 94.6%, respectively. When the total number of papers was examined according to the date of change of associate professor criteria, it was seen that there were 2.177 papers before this date and 2.169 papers after this date (Table 1).

Oral and visual poster presentations appeared with more author names before the change in associate professor eligibility criteria, in December 2016, and with fewer author names thereafter ($p < 0.001$). Participation before the change in criteria more commonly involved visual poster presentations, while the number of oral presentations increased thereafter ($p < 0.001$). Case presentations were more common before the criteria changed, while the proportion of original articles increased thereafter ($p < 0.001$). When the number of authors in the papers was compared before and after the criterion change,

Table 1. Participation numbers and rates among all health science branches at congresses held by the Emergency Medicine Physicians Association of Turkey in 2016-2018 and evaluation of the presentations

	Total number of publications	Number of authors	Presentation type		Type of oral presentation		Criteria change	
			Poster presentations	Oral presentations	Case report	Original article	Before (2015-2016)	After (2017-2018)
	n (%)	Mean \pm SD	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Emergency medicine	4.042 (93)	5.1 \pm 2	2.824 (94.2)	1.218 (90.4)	3.193 (94.6)	849 (87.5)	2051 (94.2)	1991 (91.8)
Internal diseases	112 (2.6)	5 \pm 2.1	68 (2.3)	44 (3.3)	68 (2)	44 (4.5)	71 (3.3)	41 (1.9)
General surgery	282 (6.5)	5 \pm 1.9	194 (6.5)	88 (6.5)	19 (5.7)	88 (9.1)	124 (5.7)	158 (7.3)
Dermatology	9 (0.2)	4 \pm 1.5	7 (0.2)	2 (0.1)	7 (0.2)	2 (0.2)	6 (0.3)	3 (0.1)
PRC	20 (0.5)	4.4 \pm 2.2	11 (0.4)	9 (0.7)	19 (0.6)	1 (0.1)	15 (0.7)	5 (0.2)
Radiology	125 (2.9)	5 \pm 1.9	83 (2.8)	42 (3.1)	99 (2.9)	26 (2.7)	58 (2.7)	67 (3.1)
Eye diseases	22 (0.5)	3.9 \pm 2.5	13 (0.4)	9 (0.7)	13 (0.4)	9 (0.9)	12 (0.6)	10 (0.5)
Pediatrics	41 (0.9)	3.9 \pm 1.9	25 (0.8)	16 (1.2)	22 (0.7)	19 (2)	19 (0.9)	22 (1)
Family medicine	29 (0.7)	5.2 \pm 1.1	23 (0.8)	6 (0.4)	15 (0.4)	14 (1.4)	15 (0.7)	14 (0.6)
PTR	12 (0.3)	5.8 \pm 2	8 (0.3)	4 (0.3)	7 (0.2)	(0.5)	3 (0.1)	9 (0.4)
ENT	24 (0.6)	5.6 \pm 1.7	18 (0.6)	6 (0.4)	19 (0.6)	5 (0.5)	16 (0.7)	8 (0.4)
Psychiatry	23 (0.5)	4.6 \pm 1.9	8 (0.3)	15 (1.1)	7 (0.2)	16 (1.6)	15 (0.7)	8 (0.4)
Infectious diseases	24 (0.6)	4.8 \pm 1.7	20 (0.7)	4 (0.3)	17 (0.5)	7 (0.7)	17 (0.8)	7 (0.3)
Cardiology	73 (1.7)	4.9 \pm 2.3	38 (1.3)	35 (2.6)	36 (1.1)	37 (3.8)	43 (2)	30 (1.4)
Neurology	97 (2.2)	4.7 \pm 2.2	67 (2.2)	30 (2.2)	77 (2.3)	20 (2.1)	46 (2.1)	51 (2.4)
Chest diseases	46 (1.1)	5.4 \pm 1.9	21 (0.7)	25 (1.9)	16 (0.5)	30 (3.1)	27 (1.2)	19 (0.9)
Orthopedics	88 (2)	4.7 \pm 2.3	57 (1.9)	31 (2.3)	59 (1.7)	29 (3)	44 (2)	44 (2)
Urology	46 (1.1)	3.8 \pm 1.9	16 (0.5)	30 (2.2)	21 (0.6)	25 (2.6)	13 (0.6)	33 (1.5)
Neurosurgery	78 (1.8)	4.3 \pm 2.4	51 (1.7)	27 (2)	57 (1.7)	21 (2.2)	23 (1.1)	55 (2.5)
Pediatric surgery	7 (0.2)	3.1 \pm 0.7	3 (0.1)	4 (0.3)	6 (0.2)	1 (0.1)	5 (0.2)	2 (0.1)
Thoracic surgery	96 (2.2)	5.1 \pm 1.9	56 (1.9)	40 (3)	71 (2.1)	25 (2.6)	39 (1.8)	57 (2.6)
CVS	83 (1.9)	5.2 \pm 1.5	66 (2.2)	17 (1.3)	63 (1.9)	20 (2.1)	67 (3.1)	16 (0.7)
Gynecology	15 (0.3)	4.9 \pm 2.3	12 (0.4)	3 (0.2)	9 (0.3)	6 (0.6)	9 (0.4)	6 (0.3)
Pathology	49 (1.1)	5.6 \pm 2.2	26 (0.9)	23 (1.7)	22 (0.7)	27 (2.8)	12 (0.6)	37 (1.7)
Microbiology	15 (0.3)	4.9 \pm 1.5	10 (0.3)	5 (0.4)	6 (0.2)	9 (0.9)	3 (0.1)	12 (0.6)
Biochemistry	105 (2.4)	6.9 \pm 1.7	37 (1.2)	68 (5)	28 (0.8)	77 (7.9)	69 (3.2)	36 (1.7)
Public health	13 (0.3)	6.1 \pm 2.1	6 (0.2)	7 (0.5)	2 (0.1)	11 (1.1)	7 (0.3)	6 (0.3)
Anesthesia	102 (2.3)	5 \pm 1.9	81 (2.7)	21 (1.6)	81 (2.4)	21 (2.2)	55 (2.5)	47 (2.2)
Biostatistics	37 (0.9)	6.4 \pm 2	16 (0.5)	21 (1.6)	6 (0.2)	31 (3.2)	21 (1)	16 (0.7)
Histology	21 (0.5)	7.6 \pm 1.5	10 (0.3)	11 (0.8)	2 (0.1)	19 (2)	16 (0.7)	5 (0.2)
Emergency medicine	8 (0.2)	4.9 \pm 2	2 (0.1)	6 (0.4)	4 (0.1)	4 (0.4)	5 (0.2)	3 (0.1)
Anatomy	26 (0.6)	5.8 \pm 2.3	16 (0.5)	10 (0.7)	11 (0.3)	15 (1.5)	19 (0.9)	7 (0.3)
Physiology	10 (0.2)	5.7 \pm 2.5	3 (0.1)	7 (0.5)	1 (0)	9 (0.9)	3 (0.1)	7 (0.3)
Nuclear medicine	14 (0.3)	4.9 \pm 1.9	11 (0.4)	3 (0.2)	6 (0.2)	8 (0.8)	12 (0.6)	2 (0.1)
Pharmacology	22 (0.5)	6.1 \pm 1.7	14 (0.5)	8 (0.6)	3 (0.1)	19 (2)	11 (0.5)	11 (0.5)
Nursing	9 (0.2)	4.6 \pm 1.7	4 (0.1)	5 (0.4)	3 (0.1)	6 (0.6)	1 (0)	8 (0.4)
Radiation oncology	2 (0)	6.5 \pm 3.5	-	2 (0.1)	-	2 (0.2)	-	2 (0.1)

Table 1. Continued

	Total number of publications	Number of authors Mean ± SD	Presentation type		Type of oral presentation		Criteria change	
			Poster presentations	Oral presentations	Case report	Original article	Before (2015-2016)	After (2017-2018)
	n (%)		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Genetics	10 (0.2)	4.9±1	2 (0.1)	8 (0.6)	6 (0.2)	4 (0.4)	4 (0.2)	6 (0.3)
Hyperbaric	3 (0.1)	6.7±2.1	1 (0)	2 (0.1)	1 (0)	2 (0.2)	2 (0.1)	1 (0)
Dentistry	1 (0)	1	-	1 (0.1)	1 (0)	-	-	1 (0)
Medical ethics	2 (0)	3.5±2.1	-	2 (0.1)	-	2 (0.2)	2 (0.1)	-
Medical biology	1 (0)	7	-	1 (0.1)	-	1 (0.1)	1 (0)	-
Clinical psychology	1 (0)	4	-	1 (0.1)	-	1 (0.1)	-	1 (0)
Total	4.346	-	2.999	1.347	3.376	970	2.177	2.169
	(100%)		(69%)	(31%)	(77.6%)	(22.4%)	(50.1%)	(49.9%)

*SD: Standard deviation, PRC: Plastic and reconstructive surgery, PTR: Physical therapy and rehabilitation, ENT: Ear, nose, and throat, CVS: Cardiovascular surgery

Table 2. A comparison of oral and poster presentation numbers and rates at emergency medicine congresses before and after the change in associate professor eligibility criteria in December 2016

	Criteria change		Total	p*
	Before (2015-2016)	After (2017-2018)		
	n (%)			
Number of authors				<0.001
One	38 (1.7)	137 (6.3)	175 (4)	
2-5	1.165 (53.5)	1.293 (59.6)	2.458 (56.6)	
6-10	954 (43.8)	733 (33.8)	1.687 (38.8)	
>10	20 (0.9)	6 (0.3)	26 (0.6)	
Post-hoc analysis p values	One vs. 2-5 One vs. 6-10 One >10 2-5 vs. 6-10 2-5 vs. >10 6-10 vs. >10			<0.001 <0.001 <0.001 <0.001 0.003 0.037
Type of presentation				<0.001
Poster	1.722 (79.1)	1.277 (58.9)	2.999 (69)	
Oral	455 (20.9)	892 (41.1)	1.347 (31)	
Case presentation				<0.001
Case report	1.726 (79.3)	1.650 (76.1)	3.376 (77.7)	
Original article	451 (20.7)	519 (23.9)	970 (22.3)	
Congress type				0.259
Turkish	2.160 (99.2)	2.158 (99.5)	4.318 (99.4)	
International	17 (0.8)	11 (0.5)	28 (0.6)	

*: Chi-square test

we found that the decrease in the number of authors after the criterion change was significant ($p < 0.001$). Participants did not distinguish between domestic and international conferences with the change in eligibility criteria (Table 2).

DISCUSSION

In the present study, before the change in associate professorship eligibility criteria in December 2016, oral and visual presentations involved larger numbers of author names, but the number of names subsequently decreased. Poster presentation rates also diminished after the change in criteria, whereas a marked increase was observed in oral presentations. This can be explained in terms of the change in associate professorship eligibility criteria. Prior to the change in these criteria, there was no requirement for candidates to contribute to congresses with oral presentations (2). A minimum of five points and a maximum of 10 must be earned from oral presentations at congresses. Oral presentations at international scientific congresses counted for 3 points, and those given at Turkish congresses counted for two (3). The score for each oral presentation is divided equally by the number of authors, and the score awarded to each individual varies depending on the number of authors named. One point noted by a number of candidate associate professors is that less valuable oral presentations after the change in criteria attracted higher scores. As determined in the present study, candidates who are considering becoming associate professors consider these congresses, which count as scientific meetings, as an environment for fulfilling the minimum requirement, making no distinction based on their domestic or international character.

Although the academic career path in Turkey is similar in some respects to those in the United States of America (USA), United Kingdom, Netherlands, and Germany, it also differs in some important aspects. The US system predominates in most countries. A young member of teaching staff in the USA sets out with the title of “assistant professor.” In order for a member of the teaching staff to secure the title of assistant professor, he must complete a process developed in the light of the particular university’s aims and requirements (5).

Universities’ development of their own associate professorship processes and their ability to implement them with no outside influence enables them to function autonomously and scientifically in line with their founding purpose, and gives them the flexibility necessary to manage scientific studies in line with the needs of today’s rapidly changing world. After working for 6-7 years, and if the individual’s publications and teaching performance are adequate, he is promoted to the rank

of “associate professor” (6). In Turkey, there is a requirement to fulfill the minimum conditions set out by the “Inter-University Associate Professor Examination Regulations Board”, a centrally-administered body, and these minimum conditions are published in each application period.

Intensive participation in congresses emerged in this study. The four Turkish or international emergency medicine congresses analyzed attracted 4.346 presentations, 1.347 of which were oral. The rate of oral presentations approximately doubled in the period after the change in eligibility criteria compared to the previous period. A previous study examining the publication rates of presentation abstracts at emergency medicine congresses held by the European Society for Emergency Medicine in 2011 and 2012, reported that 1.721 presentations were submitted to the two congresses, 462 of which were oral (7). The numbers of both oral and poster presentations per congress were higher in this study. The principal reason for this is the increase in the participation rate among both emergency medicine specialists and from other departments, compared to the previous period, as a result of the change in associate professorship criteria.

In another study, the total number of papers presented at the National Turkish Otorhinolaryngology and Head and Neck Surgery Congresses, three of the most extensive scientific meetings held in 2008, 2009, and 2010, was 1454, while the total number of papers presented to the four consecutive medical congresses evaluated in the present study was 4.346 (8). Another study reported that 538 papers were presented at the 30th Turkish Cardiology Congress, attracting international participation, in 2014 (9). Although emergency medicine was established only as a main department in Turkey in 1993, it has since produced large numbers of specialists and academics. More emergency medicine specialists aiming to become associate professors than those from other departments seek to fulfill the criteria for associate professorship.

Özdemir and Kutsal (10) concluded that the primary reason for participating in scientific research, at 51.2%, was academic advancement. Participants were found to make no distinction between domestic or international congresses following the change in associate professorship eligibility criteria. We attribute this to participant wishing to be appointed associate professors endeavoring to fulfill the minimum criteria as quickly as possible.

Although meeting the associate professorship eligibility criteria and endeavoring to become an associate professor within a short time is the most important factor that encourages academics to publish, it also entails a number of drawbacks. We think that the contribution of oral presentations to the associate professor

score may reduce the interest in scientific articles because it is more points than the pre-2016 criteria and because it is relatively easy to prepare. Tür and Ersin Aksay (11) reported lower total numbers of publications, first-name author publications and first-name research article numbers, international publication production rates, and total research article numbers among emergency medicine specialists in the post-associate professor period compared to the pre-associate professorship period (12).

Study Limitations

The principal limitation of this study is that only four emergency medicine congresses were included.

There were two emergency medicine associations at the time when the congress data we received in our study were available, we evaluated the ATUDER congress proceedings booklets in order not to create bias between the associations and because it is easier to access the congress proceedings booklets over the internet. We think that examining the data of other departments and other associations of emergency medicine in other studies to be conducted will support our study.

CONCLUSION

Based on the results of our study, we can say that with the change in the criteria for associate professor, the total number of authors decreased in the presented papers and the oral presentations increased compared to the poster presentations. The change in the criteria for associate professor in Turkey has led to an increase in participation from other disciplines to emergency medical congresses. In addition, the change of these criteria has increased the number of oral presentations in emergency medicine congresses. The reason for this can be attributed to the scores given to the oral presentations in the criteria. We think that the change of these criteria has contributed to the development of the scientific activities of emergency medicine physicians in the congress.

Ethics

Ethics Committee Approval: Ethics committee approval is not required as it is obtained from information accessible over the internet.

Informed Consent: Not required.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: B.S.S., Concept: Ö.U., H.T., Design: A.K., H.T., B.S.S., Data Collection or Processing: A.K., S.Y., Analysis or Interpretation: A.K., B.S.S., Literature Search: Ö.U., S.Y., Writing: Ö.U., S.Y.

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