

# Analysis of Papers Presented in the Turkish National Congress of Otorhinolaryngology Head and Neck Surgery: The Effect of Changes in Criteria for Associate Professorship

## Türk Ulusal Kulak Burun Boğaz Baş Boyun Cerrahisi Kongresi'nde Sunulan Bildirilerin Analizi: Doçentlik Kriterlerindeki Değişikliklerin Etkisi

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**ABSTRACT Objective:** The aim of this study is to investigate whether the changing associate professorship criteria makes a difference in the scientific presentations in terms of author number, presentation type and scientific research type in The Turkish National Congress of (ORL-HNS). **Material and Methods:** The Turkish National Congress of ORL-HNS held in the 3 years before and after the change of criteria for associate professorship were included in the study. For evaluation, past congress proceedings books on the website of the Turkish Ear-Nose-Throat Head and Neck Surgery Association were used. **Results:** When oral presentations were evaluated according to the number of authors per study, the number of study by a single author was 50 (8.7%) in the period after the change in criteria and 10 (2.0%) in the period before. When oral presentations were evaluated according to the type of study, the number of retrospective studies increased significantly after the varying criteria compared to before. When the poster presentations were evaluated according to the number of authors per study, there was no statistically significant difference in the number of studies by a single author between the 3 years before and after the change of the criteria ( $p=0.338$ ). **Conclusion:** The findings of our study do not show that the studies after the changes in the criteria are scientifically less valuable or there are ethical problems in the studies. However, it clearly shows that new criteria cause some changes in the behavior of researchers in scientific activities.

**ÖZET Amaç:** Bu çalışmanın amacı, değişen doçentlik kriterlerinin, Türk Ulusal Kulak Burun Boğaz-Baş Boyun Cerrahisi (KBB-BBC) Kongresi'ndeki bilimsel sunumlarda yazar sayısı, sunum şekli ve bilimsel araştırma türü açısından farklılık yaratıp yaratmadığını araştırmaktır. **Gereç ve Yöntemler:** Doçentlik kriterlerinin değişmesinden önceki ve sonraki 3 yılda düzenlenen Türk Ulusal KBB-BBC Kongresi çalışmaya dâhil edildi. Değerlendirme için Türkiye Kulak Burun Boğaz Baş Boyun Cerrahisi Derneğinin internet sitesinde yer alan geçmiş kongre bildiri kitaplarından yararlanıldı. Bildiriler yazar sayısına, sunum şekline ve bilimsel araştırma türüne göre ayrı ayrı değerlendirildi. **Bulgular:** Sözlü sunum yapılan çalışmaların türüne göre değerlendirildiğinde, tek yazarlı çalışma sayısı doçentlik kriter değişikliğinden sonraki dönemde 50 (%8,7), önceki dönemde 10 (%2,0) olarak saptandı ( $\chi^2=94,089$ ,  $p<0,001$ ). Sözlü sunumlar çalışmanın türüne göre değerlendirildiğinde, değişen kriterler sonrasında retrospektif çalışma sayısında öncesine göre anlamlı artış olduğu saptandı (sırasıyla %49,4'e karşı %34,6,  $p<0,001$ ). Prospektif ve deneysel çalışmaların sayısında önemli bir azalma olduğu saptandı. Poster sunumu yapılan çalışmalar yazar sayısına göre değerlendirildiğinde, kriterlerin değişmesinden önceki 3 yıl ile sonraki 3 yıl arasında tek yazarlı çalışma sayısında istatistiksel olarak anlamlı bir fark yoktu ( $p=0,338$ ). **Sonuç:** Çalışmamızın bulguları, doçentlik kriterlerinde değişiklik yapıldıktan sonraki çalışmaların bilimsel açıdan daha az değerli olduğunu ya da çalışmalarda etik sorunların yaşandığını göstermemektedir. Ancak yeni kriterlerin araştırmacıların bilimsel faaliyetlerdeki davranışlarında bazı değişikliklere neden olduğu açıkça görülmektedir.

**Keywords:** Associate professorship; academic career; congress; otorhinolaryngology; presentation

**Anahtar Kelimeler:** Doçentlik; akademik kariyer; kongre; kulak-burun-boğaz; sunum

**TO CITE THIS ARTICLE:**

Akdoğan VM, Vural Ö. Analysis of Papers Presented in the Turkish National Congress of Otorhinolaryngology Head and Neck Surgery: The Effect of Changes in Criteria for Associate Professorship. Journal of Ear Nose Throat and Head Neck Surgery. 2024;32(2):59-65.

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Peer review under responsibility of Journal of Ear Nose Throat and Head Neck Surgery.

**Received:** 29 Oct 2023

**Received in revised form:** 21 Jan 2024

**Accepted:** 22 Jan 2024

**Available online:** 31 Jan 2024

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Attaining the title of associate professorship is one of the most important steps in the career of researchers in Türkiye.<sup>1</sup> The criteria for associate professorships in order to receive this title are determined by the Türkiye Interuniversity Committee. Criteria for Associate Professorship have been changed in December 2016, and a system based on scoring, unlike the previous conditions, was adopted. Along with the changes in criteria, oral presentations at national and international scientific meetings have become one of the mandatory criteria that the candidate must complete.

The Turkish National Congress of Otorhinolaryngology Head and Neck Surgery (ORL-HNS) is one of the most important scientific meeting that bring researchers together to share and discuss the latest developments in professional and scientific terms. The scientific program of the congress includes conferences, panels, courses and free presentations with the contributions of national and international scientists.

It has been shown that being able to meet the criteria for associate professorship is one of the most important factors affecting the academic activities of researchers.<sup>2</sup> The change in the criteria in 2016 and the necessity of scientific meeting activities as oral presentation that were not required before may cause some behavioral changes regarding the presentations made by researchers in scientific meetings.

The aim of this study is to examine The Turkish National Congress of ORL-HNS held in the 3 years before and after the changing associate professorship criteria and to investigate whether the change in criteria makes a difference in the scientific presentations in terms of author number, presentation type and scientific research type at the congresses.

## MATERIAL AND METHODS

### STUDY DESIGN

The criteria for associate professorship changed in December 2016. One important change that comes with the new criteria is that oral presentations at national and international scientific meetings become one of the mandatory criteria that the candidate must complete. The scientific meeting activity item of new criteria is shown in [Table 1](#).

A total of 3 national ORL-HNS congresses were held once in 2017, 2018 and 2019 after the varying criteria for associate professorship. For this reason, national ORL-HNS congresses held in the 3 years before and after the change of criteria were included in the study. For evaluation, past congress proceedings books on the website of the Turkish Ear-Nose-Throat Head and Neck Surgery (ENT-HNS) Association were used. Papers were evaluated separately according to the number of authors, presentation types (oral presentation, printed poster and e-poster) and scientific research type (case report, retrospective, prospective, experimental and cross-sectional studies). The years 2014, 2015 and 2016 were analyzed as the period before the change in criteria, and 2017, 2018, and 2019 were analyzed as the period after the change in criteria. The study protocol was approved by the Başkent University Research Ethics Committee (date: May 21, 2020; number: KA20/180). This study was not conducted on patients, so informed consent form was not obtained. This study was performed in accordance with the Helsinki Declaration of the World Medical Association.

### STATISTICAL ANALYSIS

Statistical analyses were performed using the SPSS 25 (IBM Corp. Released 2017. IBM SPSS Statistics

**TABLE 1:** The scientific meeting activity item of new criteria.

Scientific meeting activity (related to the scientific area for which associate professorship is applied and not produced from the doctorate thesis prepared by the candidate)	
a)	Studies presented in international scientific meetings (excluding posters), full text or summary published in the proceeding booklet either in printed or electronic form. 3 points
b)	Studies presented in national scientific meetings (excluding posters), full text or abstract published in the proceeding booklet either in printed or electronic form. 2 points
■	Within the scope of this item, it is compulsory to get at least 5 points, maximum 10 points can be obtained. No more than one paper presented at the same meeting is scored.
■	The score obtained from oral presentations is divided equally by the total number of authors participating in the study.

for Windows, Version 25.0. Armonk, NY: IBM Corp.) software. Median (interquartile range), percentage and frequency were used for the variables. Fisher’s exact test and chi-square test were used in the analysis of categorical data.

In cases where the expected frequencies are less than 20%, an evaluation has been made with the “Monte Carlo Simulation” to include these frequencies in the analysis.  $p < 0.05$  and  $p < 0.01$  values were accepted for the significance level of the tests.

## RESULTS

A total of 3,108 studies were presented at the National ENT-HNS congresses in the last 6 years. When the distribution of studies according to type of presentations as oral presentations, printed posters and e-posters was evaluated, there were 1,080, 967 and 1,061 studies, respectively. The distribution of the presentations by years is summarized in Table 2.

When oral presentations were evaluated according to the number of authors per study, the number of study by a single author was 50 (8.7%) in the period after the change in criteria and 10 (2.0%) in the period before the change in criteria ( $\chi^2=94.089$ ,  $p < 0.001$ ). The number of studies by two, three and four authors also increased significantly in the period after the change in criteria compared to the period before the change in criteria. The number of studies by five, six and more than seven authors decreased significantly in the period after the change in criteria compared to the period before the change in criteria. The distribution of oral presentations by the number of authors within the 3 years before and after the change of associate professorship criteria is summarized in Figure 1.

	Oral presentation	Printed poster	E-poster
2019	218	76	119
2018	192	87	106
2017	165	69	199
2016	156	222	136
2015	179	394	151
2014	170	119	350

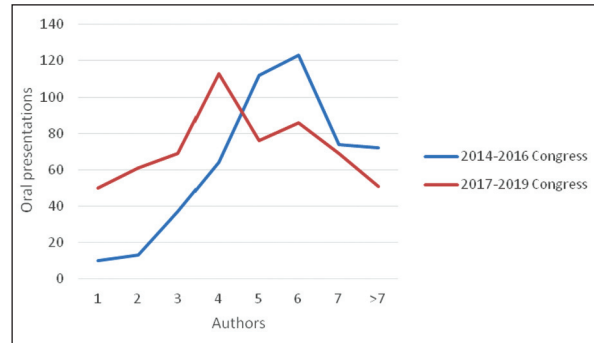


FIGURE 1: The distribution of oral presentations by the number of authors within the 3 years before and after the change of associate professorship criteria.

When the annual distribution of oral presentations by the number of authors was evaluated, there was no statistically significant difference in the number of studies by a single author between 2019 and 2018. There was also no statistically significant difference in the number of studies by a single author between 2017, 2016, 2015 and 2014. The number of studies by a single author increased significantly in 2019 and 2018 compared to 2017, 2016, 2015 and 2014. The annual distribution of oral presentations by the number of authors is summarized in Table 3.

When oral presentations were evaluated according to the type of study, the number of retrospective studies increased significantly after the varying criteria for the associate professorship compared to before (49.4% vs. 34.6%, respectively,  $p < 0.001$ ). There was a significant reduction in the number of prospective studies and experimental studies. There was no statistically significant difference in the number of cross-sectional studies. The distribution of oral presentations by the type of study within the 3 years before and after the change of the associate professorship criteria is summarized in Table 4.

There were 2,028 poster presentations at the National ENT-HNS congresses in the last 6 years. While the number of the poster presentations in the period before the change in criteria was 1,372, the number of poster presentations in the period after the change in criteria was 656. There was a statistically significant reduction after the change in criteria ( $p < 0.001$ ). When the poster presentations were evaluated according to the number of authors per study, there was no statis-

**TABLE 3:** The annual distribution of oral presentations by the number of authors.

Authors		Years of congress						Total
		2019	2018	2017	2016	2015	2014	
1.00	n	22 <sub>a</sub>	23 <sub>a</sub>	5 <sub>b</sub>	4 <sub>b</sub>	4 <sub>b</sub>	2 <sub>b</sub>	60
	%	10.1	12.0	3.0	2.6	2.2	1.2	5.6
2.00	n	25 <sub>a</sub>	28 <sub>a</sub>	8 <sub>b</sub>	5 <sub>b</sub>	3 <sub>b</sub>	5 <sub>b</sub>	74
	%	11.5	14.6	4.8	3.2	1.7	2.9	6.8
3.00	n	28 <sub>a</sub>	20 <sub>a</sub>	21 <sub>a</sub>	16 <sub>a,b</sub>	13 <sub>a,b</sub>	8 <sub>b</sub>	106
	%	12.8	10.4	12.7	10.3	7.3	4.7	9.8
4.00	n	49 <sub>a</sub>	36 <sub>a,b</sub>	28 <sub>a,b</sub>	31 <sub>a,b</sub>	22 <sub>b,c</sub>	11 <sub>c</sub>	177
	%	22.6	18.7	17.0	19.9	12.3	6.5	16.4
5.00	n	23 <sub>a</sub>	27 <sub>a</sub>	26 <sub>a,b</sub>	25 <sub>a,b</sub>	49 <sub>c</sub>	38 <sub>b,c</sub>	188
	%	10.5	14.1	15.8	16.0	27.4	22.4	17.4
6.00	n	31 <sub>a,b</sub>	21 <sub>b</sub>	34 <sub>a,c</sub>	42 <sub>c,d</sub>	26 <sub>a,b</sub>	55 <sub>d</sub>	209
	%	14.2	10.9	20.6	26.9	14.5	32.3	19.4
7.00	n	23 <sub>a,b</sub>	18 <sub>b</sub>	28 <sub>a</sub>	20 <sub>a,b</sub>	29 <sub>a</sub>	25 <sub>a,b</sub>	143
	%	10.5	9.4	17.0	12.8	16.2	14.7	13.2
7>	n	17 <sub>a</sub>	19 <sub>a,b</sub>	15 <sub>a,b</sub>	13 <sub>a,b</sub>	33 <sub>c</sub>	26 <sub>b,c</sub>	123
	%	7.8	9.9	9.1	8.3	18.4	15.3	11.4
Total	n	218	192	165	156	179	170	1,080
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Values with different letter in the same raw are significantly different ( $\chi^2=176.012$ ;  $p<0.001$ ).

**TABLE 4:** The distribution of oral presentations by the type of study within the 3 years before and after the change of the associate professorship criteria.

Study design		Years of congress		Total
		2017-2019	2014-2016	
Retrospective	n	284 <sub>a</sub>	175 <sub>b</sub>	459
	%	49.4	34.7	42.5
Prospective	n	162 <sub>a</sub>	186 <sub>b</sub>	348
	%	28.2	36.8	32.2
Cross-sectional	n	59 <sub>a</sub>	49 <sub>a</sub>	108
	%	10.3	9.7	10.0
Experimental	n	70 <sub>a</sub>	95 <sub>b</sub>	165
	%	12.2	18.8	15.3
Total	n	575	505	1,080
	%	100.0	100.0	100.0

Values with different letter in the same raw are significantly different ( $\chi^2=27.833$ ;  $p<0.001$ ).

tically significant difference in the number of studies by a single author between the 3 years before and after the change of the criteria ( $p=0.338$ ).

When the single-author oral presentations were evaluated according to the publication status, there was not a statistically significant difference between two groups (Fisher’s exact test;  $p>0.05$ ) (Table 5).

## DISCUSSION

The academic career is the path we take through our schooling. There are several steps we have to go through in order to proceed on this path. One of the most important of these steps in Türkiye is undoubtedly attaining the title of the associate professorship.<sup>3</sup> The associate professorship is an important indicator

**TABLE 5:** Publication status of the single-author oral presentations within the 3 years before and after the change of the associate professorship criteria.

Publication status		Years of congress		
		2017-2019	2014-2016	Total
Published	n	16	5	21
	%	32.0	50.0	35.0
Unpublished	n	34	5	39
	%	68.0	50.0	65.0
Total	n	50	10	60
	%	100.0	100.0	100.0

Fisher's exact test; p>0.05.

of scientific competence. With this title, it is accepted that a person has gained qualifications such as scientific research, lecturing, thesis consultancy, application and innovation in a profession.<sup>1</sup> These competencies accepted for associate professorship are also valid in the field of medicine.

In the article 3 of the Higher Education Law numbered 2,547, an associate professor is defined as “a person who has the academic title of associate professor granted by the Interuniversity Committee”. The Interuniversity Committee was established for the first time with the Universities Law dated June 18, 1946 and numbered 4,936. Since its formation, the Interuniversity Committee has been authorized to determine the criteria that must be met by candidates applying for the associate professorship and to be awarded the title of associate professor.

Criteria for associate professorship have been changed over time and new criteria have been determined by The Interuniversity Committee. The main purpose of determining these criteria and changing them over time is to increase the scientific quality, to provide an objective and auditable assessment within the framework of the principle of equality and impartiality.<sup>4</sup> There are many studies regarding the adequacy, measurability and reliability of these criteria and the impact of the criteria on the scientific activities of candidates.

Demir et al. demonstrated that being able to meet the criteria for associate professorship is one of the most important factors affecting the academic activities of researchers.<sup>2</sup> This was also shown in the

study conducted by Tur and Aksay in 2012 on their field of expertise.<sup>5</sup> As a result of their work, it was shown that there was a decrease in the rate of publication of researchers after obtaining the title of associate professor. These studies show that the criteria for associate professorship affect candidates’ academic behavior both qualitatively and quantitatively.

Criteria for Associate Professorship have been changed in Türkiye in December 2016. The new regulation is based on a scoring system where the candidates can apply for the associate professorship by collecting 100 points among the criteria given. One of the changes that came with the new criteria is that the number of authors in publications is now important. Before the scoring system, the number of authors in the publications was not important, only the number of publications was important. Now, the score for each author from the total score determined for a publication varies according to the number of authors. In the study of Gokgoz et al. it was shown that the articles have been written with fewer researchers with the change in the criteria for associate professorship.<sup>6</sup> With this study, it was seen that the new criteria cause changes in the researcher’s academic behavior.

Another important change that comes with the new criteria is that oral presentations at national and international scientific meetings become one of the mandatory criteria that the candidate must complete. There are some important factors to consider when evaluating oral presentations. If the study presented in the scientific meeting is published in a medical journal, it will be evaluated only in one of the subtitles of publication or scientific meeting while scoring. If the



researcher presents more than one study in the same meeting, only one of them will be scored. Additionally, oral presentation score will be divided by the number of researchers in the study, higher scores will be obtained in studies with fewer authors.

Just as the new criteria affect researchers' academic behavior regarding publications, they can also affect researchers' academic behavior regarding oral presentations at scientific meetings. Our study is the first to examine how the new criteria affect researchers' academic behavior regarding oral presentations. When oral presentations were evaluated, the number of studies presented with fewer authors increased significantly with the change of criteria. The higher score to be obtained from oral presentations with fewer authors may have led the authors to such a change. When the poster presentations were examined, there was no difference in the number of studies with a single author with the change of criteria. However, there was a significant decrease in the number of poster presentations after the change of the criteria. In the scoring system, which comes with new criteria, points are taken from oral presentations and not from poster presentations. As points were taken from the oral presentations, the behavior in the number of authors in oral presentations has changed. Since poster presentations did not affect the score, the behavior in the number of authors did not change in these. These findings support the hypothesis that the cause of the change in behavior depends on the change in the criteria of the associate professorship. In addition, the decrease in the number of poster presentations after the change of the criteria may be due to the researchers' tendency to make oral presentations rather than poster presentations in order to get points.

Retrospective studies are easier studies that can be completed faster and can be performed by fewer

researchers compared to prospective studies. Experimental studies and prospective studies are generally long-lasting studies that require multidisciplinary work and can be done with more researchers. The reason for the decrease in experimental studies and prospective studies, while the increase in retrospective studies after the change of the criteria, may be due to the increasing tendency of researchers to studies that can be completed in a short time and with a small number of researchers.

## CONCLUSION

The quantitative expression of the scientific activities that researchers must complete according to the associate professorship criteria causes researchers to focus their efforts on scoring. The findings of our study do not show that the studies after the changes in the criteria are scientifically less valuable or there are ethical problems in the studies. However, it clearly shows that new criteria cause some changes in the behavior of researchers in scientific activities. We expect the obtained data to be a guide for improvements in associate professorship criteria.

### *Source of Finance*

*During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.*

### *Conflict of Interest*

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

### *Authorship Contributions*

*All authors contributed equally while this study preparing.*

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