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A Comprehensive Evaluation of Abstracts from National Cardiology Congresses Based on the 2016 Academic Criteria

Ulusal Kardiyoloji Kongreleri Bildiri Özetlerinin 2016 Akademik Kriterlerine Göre Kapsamlı Bir Değerlendirmesi

ABSTRACT

Objective: This study aims to describe the effects of the new academic criteria, established in 2016, on the abstracts presented at the National Congress of the Turkish Society of Cardiology (NCTSC).

Methods: Abstracts from 13 consecutive annual congresses were reviewed. A literature search using PubMed, Google Scholar, and Web of Science databases determined if an abstract was later published in a scientific journal. Abstracts was divided into two time groups based on 2016 academic criteria: Group 1 contained 4,828 abstracts accepted for NCTSC from 2009 to 2016, and Group 2 had 2,284 abstracts accepted for NCTSC from 2017 to 2021.

Results: Between 2009-2021, 7,112 abstracts were accepted into the NCTSC scientific program. Group 2 exhibited a lower publication rate (43.2 vs. 23.9%, $P < 0.001$), fewer authors [7 (5-9) vs. 4 (3-6), $P < 0.001$], and a reduced rate of original investigations (72.3% vs. 56.5%, $P < 0.001$) compared to Group 1. Concerning the quality metrics of journals where the abstracts were published, Group 2 had a lower impact factor (0.59 ± 1.71 vs. 0.26 ± 1.09 , $P < 0.001$), decreased presence in the science citation index or science citation index-expanded indices (70.4% vs. 57.9%, $P < 0.001$), and a smaller representation in the second or third quartile (24.2% vs. 16.1%, $P < 0.001$) than Group 1. Being in Group 1, oral presentations, original investigations, and cardiac imaging were identified as independent predictors for subsequent publication in scientific journals.

Conclusion: The study reveals that the 2016 academic criteria negatively impacted the publication processes of abstracts accepted at NCTSCs.

Keywords: Abstract, academic journal, impact factor, publication, Turkish Society of Cardiology

ÖZET

Amaç: Bu çalışma, 2016 yılında tanımlanan yeni akademik kriterlerin Türk Kardiyoloji Derneği Ulusal Kongresi (TKDUK) bildirimleri üzerindeki etkilerini tanımlamayı amaçlamıştır.

Yöntem: Toplam 13 ardışık yıllık kongrede sunulan bildiri özetleri değerlendirildi. Bildirilerin bilimsel bir dergide yayınlanıp yayınlanmadığını anlamak için PubMed, Google Scholar ve Web of Science veritabanları ile literatür taraması yapıldı. Çalışma, 2016 yılında yayınlanan yeni akademik kriterlere göre 2 zaman grubuna ayrıldı. Grup 1'de 2009-2016 yılları arasında TKDUK'larda kabul edilen 4828 özet bildiri, Grup 2'de ise 2017-2021 yılları arasında TKDUK'larda kabul edilen 2284 özet bildiri yer aldı.

Bulgular: Toplam 7112 özet bildiri 2009-2021 yılları arasında TKDUK bilimsel programlarında kabul edildi. Yayınlanma oranı (%43,2'ye karşı %23,9, $P < 0,001$), yazar sayısı [7(5-9)'a karşı 4(3-6), $P < 0,001$] ve orijinal araştırma oranı (%72,3'e karşı %56,5, $P < 0,001$) Grup 2'de Grup 1'e göre anlamlı olarak daha düşüktü. Özetlerin yayınlandığı dergilerin kalite parametrelerinden etki faktörü ($0,59 \pm 1,71$ 'e karşı $0,26 \pm 1,09$, $P < 0,001$), science citation index veya science citation index-expanded indeksleri (%70,4'e karşı %57,9, $P < 0,001$) ve ikinci veya üçüncü çeyreklik sınıfının oranı (%24,2'ye karşı %16,1, $P < 0,001$) Grup 2'de Grup 1'e göre anlamlı olarak daha düşüktü. Grup 1'de olmak, sözlü sunum, orijinal araştırma ve kardiyak görüntüleme, bilimsel dergilerde yayınlanmak için bağımsız belirleyicilerdi.

Sonuç: Bu çalışma, 2016 yeni akademik kriterlerinin, TKDUK'larda kabul edilen özetlerin yayınlanma süreçlerini olumsuz etkilediğini göstermiştir.

Anahtar Kelimeler: Özet, akademik dergi, etki faktörü, yayın, Türk Kardiyoloji Derneği

ORIGINAL ARTICLE

KLİNİK ÇALIŞMA

Ahmet Güner¹

Ezgi Gültekin Güner¹

Macit Kalçık²

Cemalettin Akman¹

Serkan Kahraman¹

Emrah Bayam³

Semih Kalkan³

Mahmut Yesin⁴

Koray Çiloğlu¹

Kaan Gökçe¹

Fatih Uzun¹

Abdullah Doğan¹

Mustafa Ozan Gürsoy⁵

Mehmet Ertürk¹

Sabahattin Gündüz⁶

Mehmet Özkan⁷

¹Department of Cardiology, University of Health Sciences, Istanbul Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, Istanbul, Türkiye

²Department of Cardiology, Faculty of Medicine, Hitit University, Corum, Türkiye

³Department of Cardiology, Koşuyolu Kartal Heart Training and Research Hospital, Istanbul, Türkiye

⁴Department of Cardiology, Faculty of Medicine, Kafkas University, Kars, Türkiye

⁵Department of Cardiology, University of Health Sciences, Bozyaka Training and Research Hospital, Izmir, Türkiye

⁶Department of Cardiology, Faculty of Medicine, Bahçeşehir University, Istanbul, Türkiye

⁷Faculty of Health Sciences, Ardahan University, Ardahan, Türkiye

Corresponding author:

Ahmet Güner

✉ ahmetguner488@gmail.com

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"Science and art abandon societies in which they are not respected." – Ibn Sina (c. 980-1037)

National annual scientific congresses serve as significant platform where participants share their knowledge, skills, and experiences with colleagues on a national level. The networking among researchers provides opportunities to contribute to major scientific journals. The rate at which congress papers are published in peer-reviewed journals reflects the quality of the scientific studies and the academic stature of the congress itself. Therefore, a primary goal for most researchers is to publish their research as full-text articles in leading scientific journals.¹⁻⁶

In 2016, the Head of the Inter-University Council introduced new academic criteria that encompassed the medicine-health fields.⁷ Among the newly defined criteria was a detailed assessment of research presented at the National Congress of the Turkish Society of Cardiology (NCTSC). These new criteria ushered in major changes, especially in the scoring of authors on abstracts and the publication of abstracts in academic journals. To date, no study has examined the impact of these new criteria on abstracts at the NCTSC. This study aims to assess the qualitative and quantitative effects of the 2016 academic criteria on the accepted scientific abstracts at the NCTSC and on the publishing of accepted abstracts in national and international academic journals.

Materials and Methods

Given that only publicly available data were used in this study, Institutional Review Board approval was not sought. Abstracts from 13 consecutive annual national cardiology congresses conducted between 2009 and 2021 were sourced from the online supplements of the Archives of the Turkish Society of Cardiology and the Anatolian Journal of Cardiology. Notably, the 2013 NCTSC abstracts were retrieved from the online supplement of the Journal of the American College of Cardiology (<http://www.onlinejacc.org/>). This source was used because these specific abstracts, from the 29th NCTSC, were not available in the online supplements of the Anatolian Journal of Cardiology or the Archives of the Turkish Society of Cardiology. For the purpose of this study, the abstracts were divided into two groups based on the 2016 academic criteria: Group 1 comprised abstracts accepted by the NCTSC between 2009 and 2016, and Group 2 consisted of abstracts accepted by the NCTSC between 2017 and 2021.

All abstracts, including case reports, underwent thorough evaluation. Several parameters including the information contained in each abstract, title, number of authors, gender of the first author, type of presentation, sub-specialization, year, discipline of the abstract, and research design, were meticulously tabulated and entered into Microsoft Excel. Additionally, the extracted information for each abstract, including changes in the research, was tabulated in Microsoft Excel. The academic institutional affiliation of the first author was also recorded. In 2007, Scherer et

al.⁸ reported that approximately 24 months should elapse between abstract submission and the publication date for the publication of congress papers; therefore, the 37th national cardiology congress (2021) was the last to be included in this study.

The Novel Academic Criteria in 2016

The two new criteria determined in 2016⁷ are as follows: I) For single-author studies, the author receives full points. If the research has two authors and the main author is specified, the first author receives 80% of the full score, and the second author gets half. If there are three or more authors, the first author receives half the total score, while the remaining authors equally divide the other half. For papers with two or more authors where the first author is not specified, the total score for each author is divided equally among the authors. II) Only one paper presented at the same meeting is scored. The score for the paper is equally divided among the authors. If the paper is subsequently published in an academic journal, only one version can be used to apply for an academic title. These criteria were maintained in subsequent years.

Evaluation of Publications

To determine if an abstract was later published as a full-text article in a scientific journal, we conducted literature searches using three major databases: PubMed (National Library of Medicine, Maryland, USA),⁹ Google Scholar (Google Inc., California, USA),¹⁰ and Web of Science (Clarivate Analytics, Philadelphia, USA).¹¹ We initially searched Google Scholar to assess the abstracts because of its extensive coverage of publication channels.¹² Once a published abstract was identified in the initial review, the full title of the article was verified in both PubMed and Web of Science to confirm its publication as a full-text article. If the article could not be verified after a detailed evaluation in the PubMed and Web of Science databases, we checked it the journal was indexed in the Master Journal List (Thomson Reuters, New York, USA)¹³ or TUBITAK ULAKBIM (Cahit Arf Bilgi Merkezi, Türkiye) databases.¹⁴ Furthermore, the impact factor and quartile classification of the journals were determined according to the Journal Citation Reports (Thomson Reuters).¹⁵ The journals were then ranked by quartile classification and impact factor based on the year of publication.

Data were collected between December 1, 2022, and March 10, 2023. The research parameters were identified as all authors (starting with the first and corresponding authors), title, short title, author institution, research topic, keywords, and combinations of these parameters, respectively. For the research algorithm, combination of these parameters were searched separately in both Turkish and English. Details on the type and topic of the presentation, the time elapsed between presentation and publication, type of institution (e.g., university, training and research, state, and private hospitals), and the name and impact factor of the journals were recorded. We noted the names of the journals in which the articles were published. The publication timeline was categorized in months, representing the interval between the NCTSCs and the final article publication. If research was published prior to the congress, "0 months" were recorded in the data. The presented abstract was compared with the final published article to identify discrepancies. Changes in parameters, such as the study title, number of authors, name of the first author and others, study methodology, and

ABBREVIATION

NCTSC	National Congress of the Turkish Society of Cardiology
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clinical results, were evaluated in detail and recorded. An article was deemed published only if it shared at least one common hypothesis, study design, or conclusion and had at least one co-author in common. If corresponding articles were identified, the time to the online publication date and the actual journal publication date were each recorded in months.

Statistical Analysis

Statistical analysis was performed using IBM Statistical Package for the Social Sciences (SPSS) version 21.0 software (IBM Corp., New York, USA). The Kolmogorov-Smirnov test was used for normality testing. Normally distributed data are presented as mean ± standard deviation, while non-normally distributed data are presented as the median and 25th-75th percentiles. Normally distributed groups were compared using the Student's t-test, whereas the Mann-Whitney U test was utilized for non-normally distributed variables. Categorical data were presented as percentages and compared using the Chi-square test. A p-value of less than 0.05 was considered statistically significant for univariate analyses. For multivariate analysis, potential factors identified through univariate analyses were further subjected to logistic regression analysis to identify independent predictors of the abstract's publication in an academic journal.

Results

A total of 7,112 abstracts were accepted at the NCTSC between 2009 and 2021. Group 1 comprised 4,828 abstracts accepted at the NCTSC between 2009 and 2016, while Group 2 consisted of 2,284 abstracts accepted at the NCTSC between 2017 and 2021. The distribution of abstracts by years is illustrated in Figures 1 and 2. The comparison of the baseline characteristics of the study groups is provided in Table 1.

The study included 2,811 (39.5%) oral and 4,301 (60.5%) poster presentations. Out of these presentations, 2,633 (37%) were published in national or international peer-reviewed journals. The rates of oral (34.6% vs. 49.9%, *P* < 0.001), case

(27.7% vs. 43.5%, *P* < 0.001) presentations, national abstracts (95.3% vs. 96.9%, *P* = 0.001), country of origin of the abstracts including Türkiye (95.4% vs. 98.1%, *P* < 0.001), the United States of America (0.1% vs. 0.5%, *P* = 0.016), and the Turkish Republic of Northern Cyprus (0.1% vs. 1.1%, *P* < 0.001) were significantly higher in Group 2 compared to Group 1. In addition, among the parameters in the cardiovascular medicine field, the prevalence of structural and congenital heart disease (4.6% vs. 7.6%, *P* < 0.001), peripheral artery disease (3.4% vs. 7.5%, *P* < 0.001), pulmonary vascular disease (2.2% vs. 4.9%, *P* < 0.001), and dyslipidemia (1.9% vs. 3.2%, *P* = 0.001) was significantly higher in Group 2 compared to others. Regarding the type of research, the rates of meta-analysis (0.0% vs. 0.3%, *P* = 0.002) and retrospective studies (9.3% vs. 15.2%, *P* < 0.001) were also significantly higher in Group 2 compared to others. Notably, publication rates (43.2% vs. 23.9%, *P* < 0.001), the number of authors [7 (5-9) vs. 4 (3-6), *P* < 0.001], and the rates of original investigation (72.3% vs. 56.5%, *P* < 0.001) were significantly lower in Group 2 compared to Group 1 (Table 1).

Table 2 presents a comparison of the publication success of the abstracts presented at the NCTSC by study group. The time to publication was shorter for Group 2 than for Group 1 (6.1 ± 13.2 vs. 1.4 ± 3.8 months, *P* < 0.001) (Table 2). Regarding the quality parameters of the journals in which the abstracts were published, the impact factor (0.593 ± 1.71 vs. 0.269 ± 1.09, *P* < 0.001), the rate of Science Citation or Science Citation Index-Expanded indices (70.4% vs. 57.9%, *P* < 0.001), the second and third-quartile (Q2/Q3) class (24.2% vs. 16.1%, *P* < 0.001), and the rate of international journals (68.9% vs. 61%, *P* < 0.001) were significantly lower in Group 2 compared to Group 1 (Table 2). Moreover, while the rate of the first quartile (Q1) class was not statistically significant, it was numerically lower in Group 2 than in Group 1 (4.0% vs. 2.4%, *P* = 0.069). Conversely, the

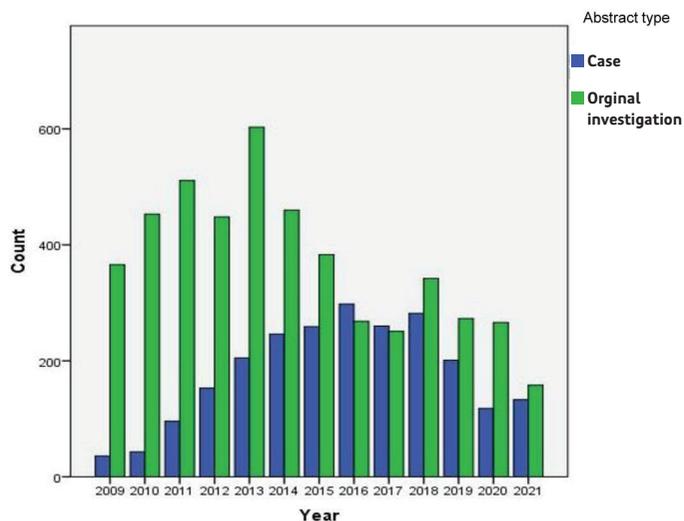


Figure 1. Numerical distribution of case and original investigation abstracts accepted at the National Congress of the Turkish Society of Cardiology from 2009 to 2021.

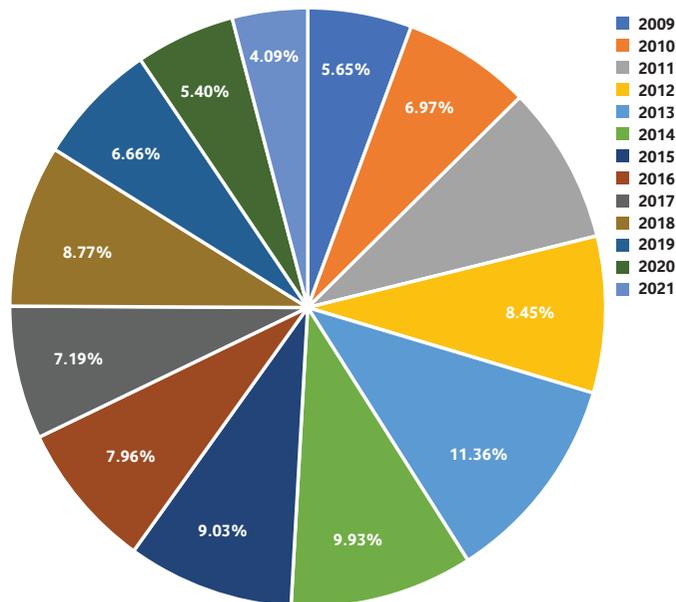


Figure 2. Percentage distribution of the 7,112 abstracts presented at each National Congress of the Turkish Society of Cardiology from 2009 to 2021.

Table 1. Baseline findings of the abstracts presented at the Turkish Cardiology National Congress

Parameters	All Abstracts (n = 7112)	Group 1 (2009-2016) (n = 4828)	Group 2 (2017-2021) (n = 2284)	P
Presentation type, n (%)				
Oral	2811 (39.5)	1671 (34.6)	1140 (49.9)	<0.001
Poster	4301 (60.5)	3157 (65.4)	1144 (50.1)	
Number of authors	6 (4-8)	7 (5-9)	4 (3-6)	<0.001
Abstract type, n (%)				
Case	2330 (32.8)	1336 (27.7)	994 (43.5)	<0.001
Original investigation	4782 (67.2)	3492 (72.3)	1290 (56.5)	
First author gender, male, n (%)	5869 (82.5)	4055 (84.0)	1814 (79.4)	<0.001
Institution of the authors, n(%)				
University hospital	4769 (67.1)	3388 (70.2)	1381 (60.5)	<0.001
Training and research hospital	3098 (43.6)	2150 (44.5)	948 (41.5)	0.016
State hospital	1281 (18.0)	978 (20.3)	303 (13.3)	<0.001
Private hospital	644 (9.1)	456 (9.4)	188 (8.2)	0.096
Multicenter	1783 (25.1)	1434 (29.7)	349 (15.3)	<0.001
Disciplines, n (%)				
Cardiology	6919 (97.3)	4666 (96.6)	2253 (98.6)	<0.001
Cardiovascular surgery	430 (6.0)	342 (7.1)	88 (3.9)	<0.001
Chest diseases	104 (1.5)	64 (1.3)	40 (1.8)	0.163
Internal medicine	271 (3.8)	200 (4.1)	71 (3.1)	0.033
Nephrology	55 (0.8)	33 (0.7)	22 (1.0)	0.209
Anesthesia	40 (0.6)	32 (0.7)	8 (0.4)	0.100
Pediatric cardiology	46 (0.6)	32 (0.7)	14 (0.6)	0.807
Nuclear medicine	22 (0.3)	18 (0.4)	4 (0.2)	0.161
Public health	46 (0.6)	34 (0.7)	12 (0.5)	0.380
Genetic	64 (0.9)	45 (0.9)	19 (0.8)	0.676
Radiology	182 (2.6)	108 (2.2)	74 (3.2)	0.012
Pathology	24 (0.3)	10 (0.2)	14 (0.6)	0.006
Other	375 (5.3)	297 (6.2)	78 (3.4)	<0.001
Biochemistry	245 (3.4)	181 (3.7)	64 (2.8)	0.041
Localization, n (%)				
National	6816 (95.8)	4602 (95.3)	2214 (96.9)	0.001
International	296 (4.2)	226 (4.7)	70 (3.1)	
Country of origin, n (%)				
Türkiye	6845 (96.2)	4604 (95.4)	2241 (98.1)	<0.001
European Union	108 (1.5)	93 (1.9)	15 (0.7)	<0.001
United State of America	19 (0.3)	8 (0.1)	11 (0.5)	0.016
Turkish Republic of Northern Cyprus	31 (0.4)	5 (0.1)	26 (1.1)	<0.001
Middle East	54 (0.8)	47 (1.0)	7 (0.3)	0.002
Turkic Republics	21 (0.3)	16 (0.3)	5 (0.2)	0.414
Other	59 (0.8)	56 (1.2)	3 (0.1)	<0.001
Cardiovascular medicine field, n (%)				
Structural and congenital heart disease	394 (5.5)	20 (4.6)	174 (7.6)	<0.001
Coronary artery disease	1996 (28.1)	1356 (28.1)	640 (28.0)	0.954
Arrhythmia	868 (12.2)	588 (12.2)	280 (12.3)	0.923
Peripheral artery disease	334 (4.7)	162 (3.4)	172 (7.5)	<0.001
Hypertension	249 (3.5)	186 (3.9)	63 (2.8)	0.019
Heart valve disease	565 (7.9)	404 (8.4)	161 (7.0)	0.055
Heart failure	462 (6.5)	306 (6.3)	156 (6.8)	0.432
Cardiac imaging	1084 (15.2)	731 (15.1)	353 (15.5)	0.730
Pulmonary vascular disease	217 (3.1)	105 (2.2)	1123 (4.9)	<0.001
Dyslipidemia	167 (2.3)	93 (1.9)	74 (3.2)	0.001
Epidemiology	201 (2.8)	150 (3.1)	51 (2.2)	0.038
Other	848 (11.9)	617 (12.8)	231 (10.1)	0.001
Original investigation type, n (%)				
Meta-analysis	8 (0.1)	1 (0.0)	7 (0.3)	0.002
Retrospective	798 (11.2)	451 (9.3)	347 (15.2)	<0.001
Prospective	1081 (15.2)	772 (16.0)	309 (13.5)	0.007
Case-control	2000 (28.1)	1651 (34.2)	349 (15.3)	<0.001
Cross-sectional	760 (10.7)	517 (10.7)	243 (10.6)	0.930
Questionnaire	56 (0.8)	38 (0.8)	18 (0.8)	0.996
Publication rate, %	2633 (37.0)	2087 (43.2)	546 (23.9)	<0.001

Table 2. Comparison of the Publication Success of the Abstracts Presented at the Turkish Cardiology National Congress Per Study Groups

Parameters	All Abstracts (n = 2633)	Group 1 (2009-2016) (n = 2087)	Group 2 (2017-2021) (n = 546)	P
Publication time, month	4.5±11.3	6.1±13.2	1.4±3.8	<0.001
Publication language, n (%)				
Turkish	85 (3.2)	57 (2.7)	28 (5.1)	0.005
English	2548 (96.8)	2030 (97.3)	518 (94.9)	
Academic Journal, n (%)				
National	862 (32.7)	649 (31.1)	213 (39.0)	<0.001
International	1771 (67.3)	1438 (68.9)	333 (61.0)	
Journal Index, n (%)				
SCI/SCIE	1785 (67.8)	1469 (70.4)	316 (57.9)	<0.001
ESCI	335 (12.7)	268 (12.8)	67 (12.3)	0.722
IPRJ	205 (7.8)	146 (7.0)	59 (10.8)	0.003
ULAKBİM	270 (10.3)	186 (7.1)	84 (15.4)	<0.001
Impact factor of the Journal	0.489±1.55	0.593±1.719	0.269±1.099	<0.001
Quartiles class of the Journal, n (%)				
Q1	97 (3.7)	84 (4.0)	13 (2.4)	0.069
Q2/3	593 (22.5)	505 (24.2)	88 (16.1)	<0.001
Q4	1077 (40.9)	867 (41.5)	210 (38.5)	0.192
Changed component, n (%)				
Title	978 (37.1)	824 (39.5)	154 (28.2)	<0.001
Number of authors	1364 (51.8)	1116 (53.5)	248 (45.4)	0.001
First author	405 (15.4)	333 (16.0)	72 (13.2)	0.110
Order of authorship	1468 (55.8)	1238 (59.3)	230 (42.1)	<0.001
Author removal	914 (34.7)	797 (38.2)	117 (21.4)	<0.001
Author adding	876 (33.3)	680 (32.6)	196 (35.9)	0.143
Quantitative results	478 (18.2)	414 (19.8)	64 (11.7)	<0.001
Conclusion	35 (1.3)	17 (0.8)	18 (3.3)	<0.001

SCI, Emerging Sources Citation Index; IPRJ, International Peer Review Journal; Q, Quartile; SCI, Science Citation Index; SCI-E, Science Citation Index-Expanded; ULAKBİM, Turkish Academic Network and Information Centre.

Table 3. Regression Analysis of the Abstract Potential Predictors for Publication in an Academic Journal

Parameters	OR	95% CI (Lower-Upper)	P
Oral presentation	1.212	1.092-1.346	<0.001
Original investigation	2.022	1.795-2.278	<0.001
Being in Group 1	2.199	1.946-2.484	<0.001
Multicenter study	1.045	0.931-1.173	0.457
>1 disciplines	1.123	0.997-1.265	0.057
Structural and congenital heart disease	0.989	0.786-1.243	0.923
Peripheral artery disease	0.987	0.763-1.276	0.919
Cardiac imaging	1.317	1.147-1.514	<0.001
Number of authors	1.016	0.999-1.034	0.072

OR, Odds Ratio; CI, Confidence Interval.

rates of ULAKBİM (7.1% vs. 15.4%, $P < 0.001$), international peer-reviewed journals (excluding those with Science Citation or Science Citation Index-Expanded indices) (7.0% vs. 10.8%, $P = 0.003$), and studies in Turkish (2.7% vs. 5.1%, $P = 0.005$) were significantly higher in Group 2 compared to others (Table 2). Significant differences were also observed in terms of changed components, such as the title, number of authors, order of authorship, removal of an author, and quantitative results.

The variables deemed significant for publication in univariate analyses were included in multiple logistic regression analyses to determine independent correlates of publication. Being in Group 1 (odds ratio=2.199; 95% CI: 1.946-2.484; $P < 0.001$), oral presentation (odds ratio=1.212; 95% CI = 1.092-1.346; $P < 0.001$), original investigation (odds ratio = 2.022; 95% CI = 1.795-2.278; $P < 0.001$), and cardiac imaging (odds ratio = 1.317; 95% CI = 1.147-1.514; $P < 0.001$) were identified as independent predictors for publication in academic journals (Table 3).

Table 4. Distribution of Investigations Published in the Most Prestigious Journals from the Abstracts Presented at Turkish National Cardiology Congresses by Years

	Authors	Topic	Journal	IF(2021)/ Quartile	Year
2009	Onat et al. ¹⁶	Serum complement and metabolic syndrome	Metabolism	13.934/Q1	2010
2010	Ardic et al. ¹⁷	Heart rate recovery index and sarcoidosis	<i>Chest</i>	10.23/Q1	2011
2011	Biteker et al. ¹⁸	Peripartum cardiomyopathy	European Journal of Heart Failure	18.17/Q1	2012
2012	Özkan et al. ¹⁹	Prosthetic valve thrombosis and pregnancy	Circulation	39.91/Q1	2013
2013	Akpek et al. ²⁰	Anthracycline cardiotoxicity	European Journal of Heart Failure	18.17/Q1	2015
2014	İzgi et al. ²¹	Marfan syndrome and thoracic aorta	Journal of the American College of Cardiology	27.203/Q1	2018
2015	Råmunddal et al. ²²	Chronic total occlusion	JACC: Cardiovascular interventions	11.075/Q1	2016
2016	Biteker et al. ²³	Atrial fibrillation	Journal of the American Geriatrics Society	7.538/Q1	2017
2017	Bayam et al. ²⁴	Heparanase and prosthetic valve thrombosis	Thrombosis Research	10.409/Q1	2018
2018	Uğuz et al. ²⁵	Contrast agents and P2Y12 inhibitors	Thrombosis Research	10.409/Q1	2019
2019	Kundi et al. ²⁶	Frailty and transcatheter valve therapies	European Heart Journal	35.855/Q1	2019
2020	Güner et al. ²⁷	Left atrial appendage ligation	The Journal of Thrombosis and Thrombolysis	5.22/Q2	2020
2021	Özkan et al. ²⁸	Management of prosthetic valve thrombosis	Journal of the American College of Cardiology	27.203/Q1	2022

The distribution of studies published in the most prestigious journals, based on the abstracts presented at the NCTSC by years, is illustrated in Table 4.¹⁶⁻²⁸

Discussion

The two major findings of the current study are as follows: I) the publication rate of abstracts accepted at the NCTSC decreased after the academic criteria were defined in 2016, and II) a decrease was observed in the quality indicators of the academic journals in which the abstracts presented at the NCTSCs from 2017 to 2021 were published.

Although extensive and varied analyses of scientific publications in the cardiovascular field have been conducted over the past two decades,^{2-5,29-36} this study stands as the most qualitative and quantitative assessment of the impact of the 2016 academic criteria on abstracts presented at NCTSCs thus far. Evaluating the performance of NCTSC abstracts objectively and promptly is essential, especially when considering scientific publications.⁵ Just like other scientific meetings, the acceptance of abstracts submitted to NCTSC is determined by a rigorous evaluation and scoring method. The highest-scoring reports are chosen for oral presentations, while abstracts with lower scores are accepted as poster presentations, and the ones with the lowest scores are rejected. Consequently, it is expected that oral presentations will have a higher publication rate than posters.

The publication of abstracts presented at scientific conferences is a crucial aspect of information dissemination. However, it is well-known that many of the studies presented at national or international scientific conferences do not get published. Publication rates of conference presentations in various medical fields range between 5.7% and 41.3% in Türkiye.^{5,6,37-41} In 2019, Aksüt et al.⁶ reported that the publication rate of abstracts from the last three congresses of the Turkish Society of Cardiovascular Surgery was 41.3%. A previous analysis by Oktay et al.⁵ revealed that between 2011 and 2015, the publication rate of abstracts presented at NCTSC in academic journals was 23.1%. For disciplines outside the cardiovascular realm, the lowest publication rate was observed in general surgery at 5.7%. This figure rises slightly (up to 50%) for international conferences.⁸ The subsequent publication rate of accepted abstracts stands at 38% for the European Society of Cardiology Congress.⁴² Considering the two years following the congress, in 2012, Fosbol et al.⁴³ demonstrated that 34.5% of the abstracts presented at the American Heart Association, 29.5% of those at the American College of Cardiology, and 27% of the papers at the European Society of Cardiology Congress were published in prestigious academic journals. Given those findings, the publication rate of the NCTSC aligns with other national congresses but is somewhat lower than those held on international platforms. In our study, we conducted a thorough evaluation of the oral presentations presented at NCTSCs from 2009 to 2021. We looked into both the publication rate by year and the influence

of the 2016 academic criteria. In this study, the publication rate of abstracts was found to be 37%. However, the publication rate for abstracts accepted at the five national cardiology congresses following the introduction of the 2016 academic criteria decreased significantly (43.2% vs. 23.9%, $P < 0.001$). Although the publication rate of abstracts attests to the scientific committee's ability to select high-quality reports, the influence of the new academic criteria on several parameters, such as the publication rate of papers and the quality of the journals in which they are published, has been evident since 2017.

It should not be disregarded that the new academic criteria may be one of the major determinants of the publication rate of abstracts and the quality of journals. In 2016, the Head of the Inter-University Council implemented major changes in both the academic examination process and the application criteria for obtaining an academic title.⁷ These criteria took into account the high number of authors in studies and whether the research was presented as an abstract at a scientific congress when scoring the authors. Notably, publishing papers in academic journals had a negative impact on the scoring of authors who presented abstracts at scientific congresses, and vice versa. In other words, if an abstract was published as an article in an academic journal, only one of the contributions – either the paper or the abstract – could be used for the academic scoring. While these criteria seemed to make obtaining academic titles more challenging and promote higher-quality publications, they forced researchers to sacrifice on quality to meet specific future criteria.

Beyond the new academic criteria, several other factors could explain the failure to publish presentations. These include a lack of time for academic research, the absence of required assignments for fellows, the existence of prior publications with similar designs and results, the research's lack of originality, challenges in writing in a foreign language, and inaccuracies in statistical methodologies.^{2,5,29-36} Moreover, physicians' demanding work schedules may have hindered their ability to allocate sufficient time for scientific research. It is essential to recognize that science cannot thrive without establishing an environment enriched with tools, materials, scientific perspectives, qualified experts, and competent academicians driven by scientific objectives.

Limitations of the Study

It is important to highlight the limitations associated with this study's methodology. First, the presentations were searched across only three major databases. Given that articles published and indexed in other databases were not accessed, there is a possibility that the calculated percentages are underestimated. Second, the different time frames of abstracts at national congresses from 2009 to 2021 may have influenced the publication rate of abstracts.

Conclusion

The findings indicate that the 2016 academic criteria had both qualitative and quantitative negative impacts on the publication of abstracts accepted at NCTSCs. Encouraging researchers, removing barriers, and improving the academic criteria for publication not only propel scientific advancements in cardiology but can also significantly elevate the publication rate of abstracts presented at NCTSCs.

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References

1. Von Elm E, Costanza MC, Walder B, Tramèr MR. More insight into the fate of biomedical meeting abstracts: a systematic review. *BMC Med Res Methodol.* 2003;3:12. [CrossRef]
2. Onat A. Concerning recent decline in cardiovascular medical publications in Turkey. *Anatol J Cardiol.* 2013;13(6):592-593. [CrossRef]
3. Onat A. Turkey's top publications in cardiovascular medicine in the past 25 years: evaluation of its impact. *Anatol J Cardiol.* 2017;18(6):417-424. [CrossRef]
4. Onat A. Turkey's contribution to medicine: Main institutions, fields and publications. *Ulus Cerrahi Derg.* 2013;29(3):105-114. [CrossRef]
5. Oktay V, Çalpar Çıralı İ, Serin E, Sansoy V. A descriptive analysis of abstracts presented at the Turkish National Cardiology Congresses between 2011 and 2015. *Anatol J Cardiol.* 2018;20(1):16-20. [CrossRef]
6. Aksüt M, Çekmecelioğlu D, Günay D, et al. The publication rate of oral presentations presented in national congresses of Turkish Society of Cardiovascular Surgery. *Turk Gogus Kalp Dama.* 2019;27(3):329-335. [CrossRef]
7. T.C. Üniversitelerarası Kurul Başkanlığı. Accessed Oct 20, 2023. <http://www.uak.gov.tr>
8. Scherer RW, Langenberg P, von Elm E. Full publication of results initially presented in abstracts. *Cochrane Database Syst Rev.* 2007;(2):MR000005. [CrossRef]
9. National Library of Medicine (US). Accessed March 1, 2023. <http://www.ncbi.nlm.nih.gov/>
10. Google Scholar. Accessed March 1, 2023. <http://www.scholar.google.com>
11. Web of Science. Accessed March 1, 2023. <https://www.webofscience.com/wos/author/search>
12. Winter JCFD, Zadpoor AA, Dodou D. The expansion of Google Scholar versus Web of Science: a longitudinal study. *Scientometrics.* 2013;98:1547-1565. [CrossRef]
13. Thomson Reuters. Master Journal List. Accessed March 1, 2023. <http://ip-science.thomsonreuters.com/mjl/>
14. Cahit Arf Bilgi Merkezi TUBITAK ULAKBİM. Tıp Veri Tabanı Dergi Listesi. Accessed March 1, 2023 <http://cabim.ulakbim.gov.tr/tr-dizin/tr-dizinde-dizinenendergi-listesi/>
15. Thomson Reuters. Journal Citation Reports. Accessed March 1, 2023. <http://apps.webofknowledge.com/>
16. Onat A, Hergenç G, Can G, Kaya Z, Yüksel H. Serum complement C3: a determinant of cardiometabolic risk, additive to the metabolic syndrome, in middle-aged population. *Metabolism.* 2010;59(5):628-634. [CrossRef]
17. Ardic I, Kaya MG, Yarlioglu M, et al. Impaired heart rate recovery index in patients with sarcoidosis. *Chest.* 2011;139(1):60-68. [CrossRef]

18. Biteker M, Ilhan E, Biteker G, Duman D, Bozkurt B. Delayed recovery in peripartum cardiomyopathy: an indication for long-term follow-up and sustained therapy. *Eur J Heart Fail.* 2012;14(8):895-901. [CrossRef]
19. Özkan M, Çakal B, Karakoyun S, et al. Thrombolytic therapy for the treatment of prosthetic heart valve thrombosis in pregnancy with low-dose, slow infusion of tissue-type plasminogen activator. *Circulation.* 2013;128(5):532-540. [CrossRef]
20. Akpek M, Ozdogru I, Sahin O, et al. Protective effects of spironolactone against anthracycline-induced cardiomyopathy. *Eur J Heart Fail.* 2015;17(1):81-89. [CrossRef]
21. Izgi C, Newsome S, Alpendurada F, et al. External aortic root support to prevent aortic dilatation in patients with marfan syndrome. *J Am Coll Cardiol.* 2018;72(10):1095-1105. [CrossRef]
22. Råmunddal T, Hoebels LP, Henriques JP, et al. Prognostic impact of chronic total occlusions: A report from SCAAR (Swedish Coronary Angiography and Angioplasty Registry). *JACC Cardiovasc Interv.* 2016;9(15):1535-1544.
23. Biteker M, Başaran Ö, Doğan V, et al. Real-world clinical characteristics and treatment patterns of individuals aged 80 and older with nonvalvular atrial fibrillation: Results from the real-life multicenter survey evaluating stroke study. *J Am Geriatr Soc.* 2017;65(8):1684-1690. [CrossRef]
24. Bayam E, Kalçık M, Gürbüz AS, et al. The relationship between heparanase levels, thrombus burden and thromboembolism in patients receiving unfractionated heparin treatment for prosthetic valve thrombosis. *Thromb Res.* 2018;171:103-110. [CrossRef]
25. Uğuz B, Ari S, Çamci S, Ari H. In vitro analysis of the effect of contrast agents on the antiaggregant effects of P2Y12 inhibitors. *Thromb Res.* 2019;183:91-97. [CrossRef]
26. Kundi H, Popma JJ, Reynolds MR, et al. Frailty and related outcomes in patients undergoing transcatheter valve therapies in a nationwide cohort. *Eur Heart J.* 2019;40(27):2231-2239. [CrossRef]
27. Güner A, Kalçık M, Gündüz S, et al. The relationship between incomplete surgical obliteration of the left atrial appendage and thromboembolic events after mitral valve surgery (from the ISOLATE Registry). *J Thromb Thrombolysis.* 2021;51(4):1078-1089. [CrossRef]
28. Özkan M, Gündüz S, Güner A, et al. Thrombolysis or surgery in patients with obstructive mechanical valve thrombosis: the multicenter HATTUSHA Study. *J Am Coll Cardiol.* 2022;79(10):977-989. [CrossRef]
29. Onat A. Turkish international medical publication output rose by 15% in 1998. *Turk Kardiyol Dern Ars.* 1999;27(8):582-590. Turkish.
30. Onat A. Stability in 2003 in Turkey's cardiovascular publications covered by Science Citation Index. *Turk Kardiyol Dern Ars.* 2004;32(2):125-135. Turkish.
31. Onat A. Turkey's publications in cardiovascular medicine declined in 2004. *Turk Kardiyol Dern Ars.* 2005;33(1):17-27. Turkish.
32. Onat A. Turkey's articles in cardiovascular medicine were stagnant in 2007. *Turk Kardiyol Dern Ars.* 2008;36(1):51-65. Turkish.
33. Onat A. Turkey's articles in cardiovascular medicine displayed quantitative and qualitative improvements in 2008. *Turk Kardiyol Dern Ars.* 2009;37(1):61-75. Turkish.
34. Onat A. Turkey's 2009 output of cardiovascular publications shows a four-year regression. *Turk Kardiyol Dern Ars.* 2010;38(1):57-68.
35. Onat A. Turkey's publication output in cardiovascular medicine declined in 2010 both in quantity and quality. *Turk Kardiyol Dern Ars.* 2011;39(1):72-84. [CrossRef]
36. Onat A. Status of Turkey's top publications in cardiovascular medicine, revisited after 4 years. *Turk Kardiyol Dern Ars.* 2016;44(4):320-328. [CrossRef]
37. Kabay B, Teke Z, Erbiş H, Koçgil G, Tekin K, Erdem E. The rate of conversion of national surgical congress presentations into international medical publications. *Turk J Surg.* 2005;21(3):130-134.
38. Yalçınkaya M, Bagatur E. Fate of abstracts presented at a National Turkish Orthopedics and Traumatology Congress: publication rates and consistency of abstracts compared with their subsequent full-text publications. *Acta Orthop Traumatol Turc.* 2013;47(4):223-230. [CrossRef]
39. Kaya Mutlu E, Çelik D, Mutlu C, Razak Özdiñçler A. Publication rates of oral presentations accepted at advances in physiotherapy symposiums. *Turk J Physiother Rehabil.* 2013;24(2):145-149.
40. Beker-Acay M, Fidan N, Unlu E, et al. The fate of abstracts presented at Turkish national radiology congresses in 2010-2012. *Diagn Interv Radiol.* 2015;21(4):322-326. [CrossRef]
41. Şahin Ersoy G, Eken M, Öztekin D, Çögendez E, Eroğlu M. The rate of conversion of national gynecology and obstetrics congress reports on reproductive endocrinology and infertility into international publications. *Zeynep Kamil Med J.* 2015;46(2):63-68.
42. Winnik S, Raptis DA, Walker JH, et al. From abstract to impact in cardiovascular research: factors predicting publication and citation. *Eur Heart J.* 2012;33(24):3034-3045. [CrossRef]
43. Fosbol EL, Fosbol PL, Harrington RA, Eapen ZJ, Peterson ED. Conversion of cardiovascular conference abstracts to publications. *Circulation.* 2012;126(24):2819-2825. [CrossRef]