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Scientific Trends in Infectious Diseases and Clinical Microbiology: A Bibliometric Analysis of Five Turkish National Journals (2005-2023)

Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Alanında Bilimsel Yönelimler: Türkiye'den Beş Ulusal Derginin Bibliyometrik Analizi (2005-2023)

Semiha Çelik Ekinci[1], Işıl Deniz Alıravcı[2]

[1]*University of Health Sciences Türkiye, Fatih Sultan Mehmet Training and Research Hospital, Clinic of Infectious Diseases and Clinical Microbiology, İstanbul, Türkiye*

[2]*Çanakkale 18 Mart University Faculty of Medicine, Department of Diseases and Clinical Microbiology, Çanakkale, Türkiye*

ABSTRACT

Background: Bibliometric analysis is a quantitative method used to evaluate scientific research, authors, journals, and institutions compared to their peers. This study aimed to analyze five Turkish journals publishing in the field of "Infectious Diseases" and "Clinical Microbiology" and to examine the thematic evolution over time.

Materials and Methods: Data from five journals published between January 1, 2005, and January 27, 2024, were obtained from the Web of Science database and analyzed.

Results: The dataset included 2,418 original articles authored by 5,825 individuals, with 73 sole authors. International co-authorship accounted for 1.73%. Among the articles, 1,137 were open access, 1,331 were indexed in the Emerging Sources Citation Index, and 1,087 were indexed in the Science Citation Index Expanded. A total of 1,872 articles were published in Turkish and 543 in English. Journal-1 and Journal-2 contributed the most, with 1,087 and 625 articles, respectively. After excluding 5,527 self-citations, the articles received 7,087 citations, averaging 2.93 per article. Journal-2 was the first journal indexed in Web of Science (h-index: 11, g-index: 16, m-index: 0.55). Institution-3 was the top contributor with 134 documents and a total link strength of 14,303. The most prolific author was affiliated with Institution-1. Thematic analysis from 2007 to 2021 showed early focus on "serodiagnosis," "gram-negative bacteria," "field gel electrophoresis," and "culture." From 2016 onwards, the focus of attention shifted to "infection," "epidemiology," and "susceptibility." Recently, clinical management and disease-related terms such as "diagnosis," "risk," "mortality," and "severity" became prominent. The keyword "infection" appeared 210 times, and "antibiotics and antimicrobials" were the most common thematic categories with 687 occurrences.

Conclusion: While microbiology-centered topics were more prominent in the early 2000s, the findings suggest a growing shift toward clinically oriented subjects in recent years.

Keywords: Bibliometrics, infectious diseases, publications, Türkiye

ÖZ

Amaç: Bibliyometrik analiz, bilimsel araştırmaların, yazarların, dergilerin ve kurumların akranlarıyla karşılaştırmalı olarak değerlendirilebildiği matematiksel ve istatistiksel bir yöntemdir. Bu çalışmada, Türkiye'de "Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji" alanında yayın yapan beş derginin bibliyometrik analizini sunarak, bu alandaki konuların yıllar içindeki dağılımını incelemeyi amaçladık.

Gereç ve Yöntemler: Beş dergiye ait 01.01.2005-27.01.2024 tarihleri arasındaki veriler "Web of Science" veri tabanından incelenmiştir.

Bulgular: Veri setinde beş kaynaktan 2.418 orijinal makale saptanmıştır. Bu makalelerde, 73'ü tek yazarlı olmak üzere toplam 5.825

Address for Correspondence: Semiha Çelik Ekinci, University of Health Sciences Türkiye, Fatih Sultan Mehmet Training and Research Hospital, Clinic of Infectious Diseases and Clinical Microbiology, İstanbul, Türkiye

E-mail: dr_semiha@hotmail.com **ORCID ID:** orcid.org/0000-0002-6264-1685

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ÖZ

yazar yer almakta ve uluslararası ortak yazarlık oranı %1,73'tür. Makalelerin 1.137'si açık erişim kategorisindedir. Bin üç yüz otuz biri Emerging Sources Citation Index, 1.087'si Science Citation Index Expanded kapsamında yayımlanmıştır. Makalelerin 1.872'si Türkçe, 543'ü İngilizce dilindedir. En çok katkıyı sağlayan dergiler sırasıyla Dergi-1 (1.087 makale) ve Dergi-2'dir (625 makale). Dergilerin kendi kendilerine yapılan 5.527 atıf hariç tutulduğunda, toplam 7.087 atıf alınmış ve makale başına ortalama 2,93 atıf düşmektedir. Web of Science'de ilk indekslenen dergi Dergi-2 olup bu derginin h-indeksi 11, g-indeksi 16 ve m-indeksi 0,55'tir. En çok katkı sağlayan kurum, 134 belge ve 14.303 toplam bağlantı gücü ile Kurum-3'tür. En çok yayın yapan yazar, Kurum-1'e bağlı olarak kaydedilmiştir. 2007-2021 dönemine ait konu başlıklarının dağılımı incelendiğinde, ilk yıllarda "serodiagnoz", "gram negatif bakteriler", "alan jel elektroforezi" ve "kültür" gibi konuların öne çıktığı; 2016 itibarıyla ise "enfeksiyon", "epidemiyoloji" ve "duyarlılık" gibi temalara doğru bir kayma olduğu görülmüştür. Son yıllarda ise "tanı", "risk", 'yönetim', "mortalite" ve "şiddet" gibi klinik yönetim ve hastalık odaklı başlıklara belirgin bir yönelim gözlemlenmiştir. Anahtar kelimeler arasında en sık geçen terim 210 kez ile "enfeksiyon" olurken, en yaygın konu başlığı 687 kez ile "antibiyotikler ve antimikrobiyaller" olmuştur.

Sonuç: 2000'li yılların başlarında mikrobiyoloji ağırlıklı konuların öne çıktığı görülürken, ilerleyen yıllarda klinik odaklı başlıklara eğilimin arttığı sonucuna varılmıştır.

Anahtar Kelimeler: Bibliyometri, enfeksiyon hastalıkları, yayınlar, Türkiye

Introduction

Bibliometric analysis is a statistical and mathematical method used to investigate and evaluate extensive bodies of scientific literature. As a relatively recent technique, it offers insights into the developmental dynamics of a given field while identifying emerging trends. By mapping the research activities of institutions, authors, or publishing organizations on a global scale, this method enables the positioning of the evaluated work within the broader scientific landscape and helps assess its contribution to knowledge advancement (1-3). In essence, bibliometric analysis provides a comprehensive overview of the current status of scientific studies within the international research context.

In recent years, significant progress has been observed in the fields of infectious diseases and clinical microbiology in Türkiye. This study compares five Turkish microbiology journals specializing in infectious diseases and clinical microbiology. The primary objective is to evaluate their contributions to the fields of Infectious Diseases and Clinical Microbiology, particularly regarding author distribution and citation impact. Furthermore, this study aims to deliver an overarching perspective for researchers, academics, and readers, while identifying key national research trends over time, as reflected in the Web of Science database.

A review of the existing literature indicates a lack of studies specifically addressing bibliometric trends in this field. Existing publications primarily focus on journal comparisons or topic-specific analyses. This study represents original research intended to address this gap. Accordingly, a bibliometric analysis was conducted on journals publishing in the field of Infectious Diseases and Clinical Microbiology in Türkiye, with a focus on the evolution and distribution of subject areas over time.

Materials and Methods

Search Method

Bibliometrics is an interdisciplinary field that applies statistical and mathematical methods to quantitatively analyze information sources. It enables a comprehensive and objective evaluation of a body of literature, covering aspects such as contributions, collaborations, publication patterns, and the knowledge base.

In this study, standard bibliometric indicators were used to assess publication trends in selected journals. All core Türkiye-based journals exclusively focused on infectious diseases and clinical microbiology were included. Selection criteria were based on continuous publication history, official affiliation with national professional societies, and recognized contributions to the field.

Journal-1 is a nationally recognized publication specializing in clinical and microbiological research. Journal-2 serves as the official organ of a specialty society in the field and is internationally indexed, contributing to growing global visibility. Journal-3 represents a professional association in Türkiye and functions as a central platform for scientific exchange among its members. Journal-4 has a regional focus on infectious diseases, microbes, and antimicrobials. Journal-5 is the longest-standing continuously published journal in this field in Türkiye and is considered a foundational source for microbiology research.

The purpose of selecting these five journals was to identify the most representative and influential national scientific contributions in the field of infectious diseases and clinical microbiology. This selection provides a methodologically coherent and comprehensive overview of the national research landscape.

Data for the study were retrieved from the Web of Science database (https://www.webofscience.com/), which is updated daily. Data transfer was performed on January 27, 2024.

The study focused on five Turkish journals indexed in the Emerging Sources Citation Index (ESCI) and Science Citation Index Expanded (SCI-E) under the subject categories "Infectious Diseases" and "Clinical Microbiology." Journal names were used as the basis for pooled analysis in the Web of Science search engine. Only articles were selected as the document type, and the analysis was conducted solely based on journal titles.

Data Extraction

All retrieved records were saved in plain text format and exported as full records with cited references under the file name "download.txt"

Statistical Analysis

To facilitate data visualization, Microsoft Excel, VOSviewer (version 1.6.18), and Biblioshiny, were utilized in conjunction with the built-in features of the Web of Science database (4,5).

The study presents a comprehensive bibliometric analysis, including annual publication and citation counts, keyword mapping, detailed examination of institutions and authors with the highest output, and topic-based citation analysis. These analyses were conducted to assess the publication profiles, collaboration networks, and academic influence of the five selected journals. The bibliometric approach enabled the evaluation of national contributions in the field of infectious diseases and clinical microbiology.

The analysis focused exclusively on five core journals published in Türkiye, each dedicated to infectious diseases and/or clinical microbiology. Selection criteria included a defined subject focus within the field, indexing in Web of Science (ESCI or SCI-E), consistent publication records, and official affiliation with professional societies.

Other Türkiye-based journals with broader or general medical scopes that occasionally publish content related to infectious diseases or microbiology were deliberately excluded. The aim was to analyze specialized journals representing the core of national scientific activity, rather than providing a general survey across a wide range of publications.

Bibliometric Indices

Several bibliometric indices were applied to assess journal impact. The h-index, g-index, and m-index were used to evaluate research productivity and influence, particularly at the author and journal levels.

The h-index, proposed by physicist Hirsch (6) in 2005, measures both the productivity and impact of a researcher's publications. A scholar has an h-index of h if h of their papers have each been cited at least h times.

The g-index, introduced by Egghe (7), builds on the h-index by considering citation distribution. It is defined as the largest number g such that the top g publications received together at least g squared citations.

The m-index adjusts the h-index based on career length. It is calculated by dividing the h-index by the number of years since the author's first publication, offering a normalized measure of research impact (8).

Another metric used is the Average Total Citations per Article, calculated by dividing the total number of citations by the number of articles. A higher average reflects a stronger citation impact.

Publication Characteristics and Open Access Categories

The journals were also examined in terms of publication characteristics, including counts in categories such as "Open Access," ESCI, and SCI-E.

The Web of Science database includes articles available without copyright or licensing restrictions, categorized as Open Access. In some cases, research is accessible via alternative platforms other than the publisher's site. These are referred to as Green Open Access articles. Accepted but unpublished manuscripts fall under Accepted Green Open Access, whereas published versions are labeled Published Green Open Access.

Under the Gold Open Access model, authors cover publication costs through article processing charges, thus allowing readers free access and authors to retain copyright. The Hybrid Open Access model allows authors to make individual articles openly accessible by paying a fee. Bronze Open Access or Free to Read categories refer to content that is accessible at no cost via publisher websites, though often without a clear reuse license (9,10).

Results

General Information

The dataset spans the period from 2005 to 2023 and includes 2,418 documents sourced from five journals. It demonstrates an annual growth rate of 10% and an average document age of 8.02 years. A total of 5,825 authors contributed to the dataset, with an average of 5.25 co-authors per article. International co-authorship accounted for 1.73% of all collaborations.

A review of publication characteristics revealed that 1,137 articles were classified as open access: 951 under the "Gold" category, 73 as "Gold-Hybrid", 112 as "Free to Read", 3

as "Green Published", and 48 as "Green Submitted". Notably, journals may provide multiple open access options.

Among the indexed articles, 1,331 were published in ESCI and 1,087 in SCI-E. In terms of language, the majority of articles were published in Turkish (1,872), followed by English (543). French, Italian, and Spanish were the least common, each represented by a single article.

Journal Metrics, Article and Citation Counts by Year

Among the five journals analyzed, Journal-1 had the highest output, contributing 1,087 articles. Journal-2 followed with 625 articles, Journal-3 with 363 articles, Journal-4 with 243 articles, and Journal-5 with 100 articles. Collectively, the articles received 7,087 citations, of which 5,527 were self-citations. The average number of citations per article was 2.93 (Table 1).

Table 1 presents key journal metrics. Journal-1 recorded the highest values with an h-index of 23, a g-index of 28, an m-index of 1.278, and 5,641 citations across 1,087 articles.

Figure 1 shows a fluctuating trend in annual publication output between 2005 and 2023. A general upward trend is observed, peaking in 2022, followed by a slight decline in 2023.

Figure 2 presents the annual distribution of articles across journals. Journal-1 demonstrates a consistent increase in publication volume, reaching 1,087 articles by 2023, followed by Journal-2 (625 articles), and Journal-3 (363 articles).

Figure 3 depicts the mean total citations and mean citations per article between 2005 and 2023. While mean citations initially increase, a notable decline is observed from 2015 onwards, reflecting a downward trend in citation frequency in recent years.

Contributing Countries, Most Profilic Institutions, and Authors

As shown in Table 2, Türkiye is the leading contributor with 6,275 articles. Other contributing countries include

Table 1. Journal metrics and number of articles

Journal	h-index	g-index	m-index	Total citations	Number of articles	First indexing year in Web of Science
Journal-1	23	28	1.278	5641	1087	2007
Journal-2	11	16	0.55	1163	625	2005
Journal-3	5	6	0.625	87	363	2017
Journal-4	4	5	0.308	134	243	2012
Journal-5	3	4	0.6	42	100	2020

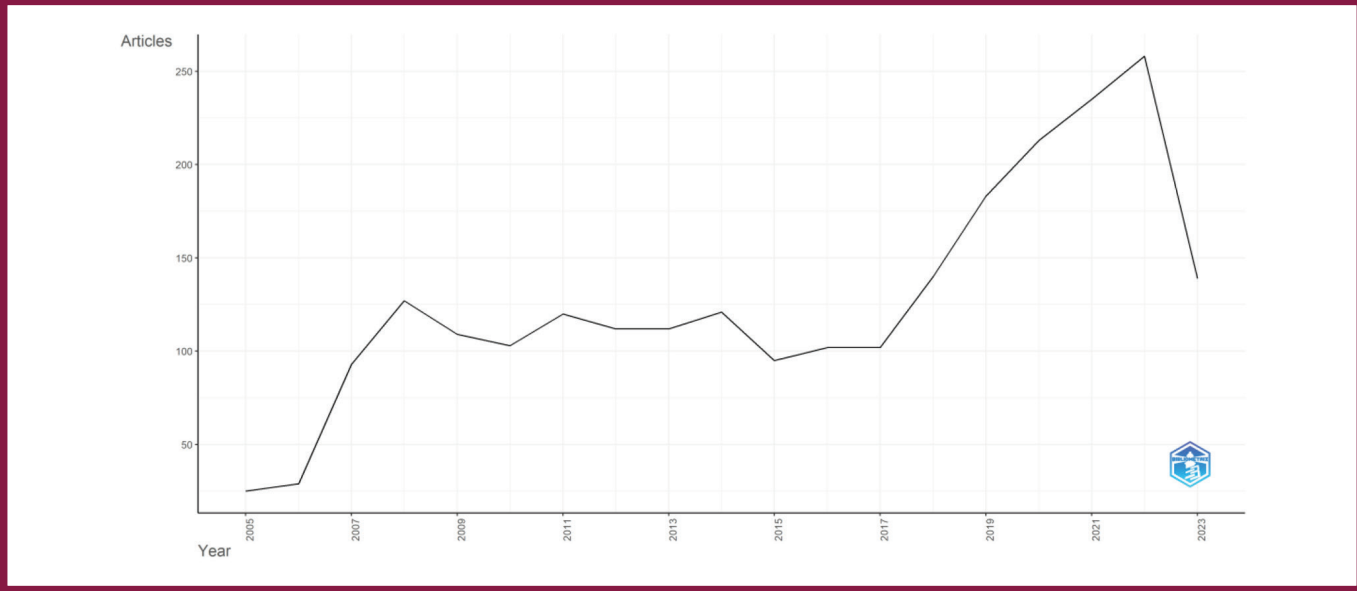

Figure 1. Annual scientific production

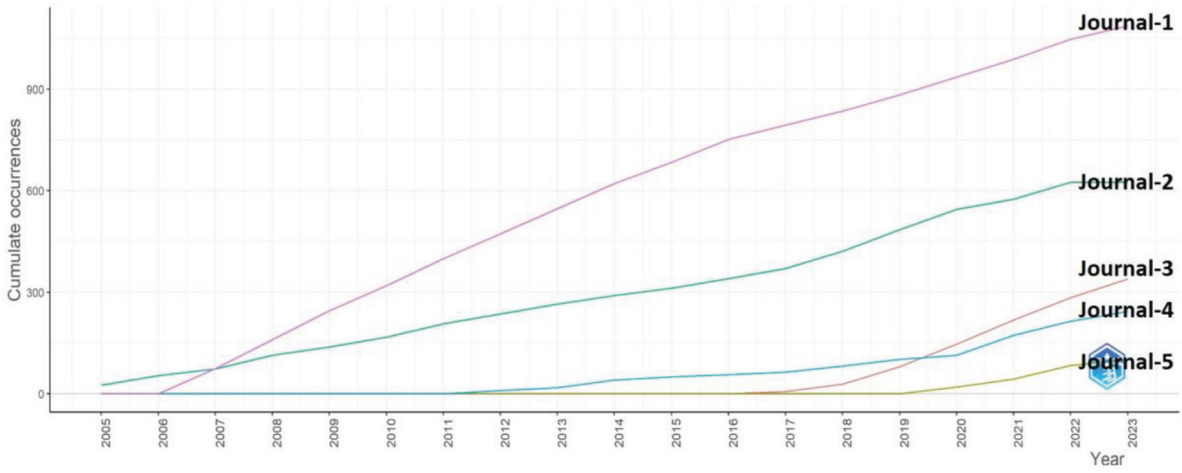

Figure 2. Sources' production over time

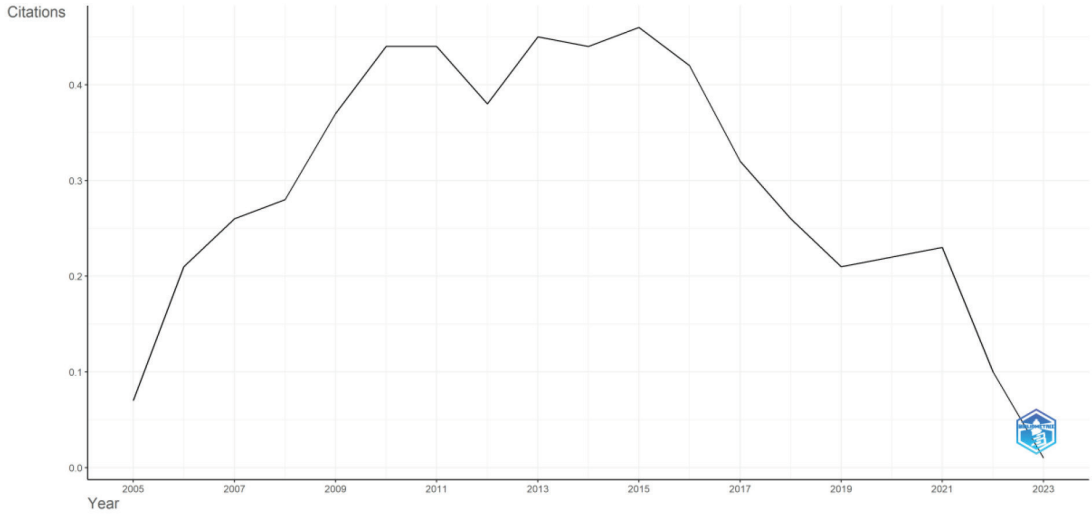

Figure 3. Average citations per year

Iran (77), the Turkish Republic of Northern Cyprus (31), India (15), Switzerland (14), and the United States (11).

Figure 4 illustrates the temporal evolution of article output by the top ten institutions, based on first author affiliation. Institution-1, Institution-2, and Institution-3 show consistently high research output. In 2023, Institution-1 led with 283 articles, followed by Institution-2 (223 articles) and Institution-3 (196 articles).

The author affiliated with Institution-1 had the highest publication count. Authors with the second-highest number of publications are depicted in Figure 5. Figure 6 presents a three-field plot that illustrates the relationship between authors, institutions, and topics, with a maximum occurrence of 10 for each field.

Keyword Analysis and Trend Topics

Figures 7a and 7b, generated using VOSviewer, depict the thematic structure and temporal evolution of keyword significance. Figure 7a shows a network visualization where bubble size represents keyword frequency, and connecting lines indicate thematic relationships. Figure 7b provides an overlay visualization for the period 2000-2023, highlighting the relative importance of topics over time. Notably, post-2020 data show that the novel Coronavirus Disease 2019 (COVID-19) became the most prominent theme.

As presented in Table 3, "infection" was the most frequently occurring keyword (210 occurrences), followed by "diagnosis" (177 occurrences).

Table 4 provides citation data by subject area. The most frequently cited subject headings include "Antibiotics and Antimicrobials," "General Virology," and "Medical Mycology."

Figure 7c presents a comprehensive timeline of keyword trends, indicating the frequency, year of first appearance,

Table 2. The countries of origin of the authors of the articles

Country	Number of articles
Türkiye	6,275
Iran	77
Turkish Republic of Northern Cyprus	31
India	15
Switzerland	14
USA	11
Morocco	8
Germany	7
Jordan	5
Nigeria	5
Israel	4
Japan	4
Malaysia	4
Cuba	3
Netherlands	3
UK	3
Argentina	2
Czech Republic	2
France	2
Iraq	2
Italy	2
Portugal	2
Azerbaijan	1
Belgium	1
China	1
For all authors	

Table 3. Frequency of terms in the journals between 2005 and 2024 - Word Cloud

Keyword	Frequency
Infection	210
Diagnosis	177
Epidemiology	170
Prevalence	149
Infections	143
Türkiye	97
Risk-factors	95
Management	92
Resistance	83
Susceptibility	70
Identification	68
Children	65
Strains	63
Risk	61
Outbreak	60
Polymerase chain reaction	58
Therapy	56
Disease	55
Surveillance	53
Virus	46
Bacteremia	41
Impact	40
Antibodies	39
Enterobacteriaceae	37
Seroprevalence	37
Mortality	36
Assay	35
Genes	35
Antimicrobial resistance	34
Emergence	34
DNA	33
Escherichia coli	33
Antibiotic-resistance	32
Adults	30
Transmission	30
United-States	28
Region	27
Efficacy	26
Patient	26
Polymerase-chain-reaction	26
Association	25
Outcomes	24
Prevention	24
Bacteria	23
Colonization	23
Pathogens	23
Specimens	22
Blood-stream infections	21
Combination	21
Guidelines	21

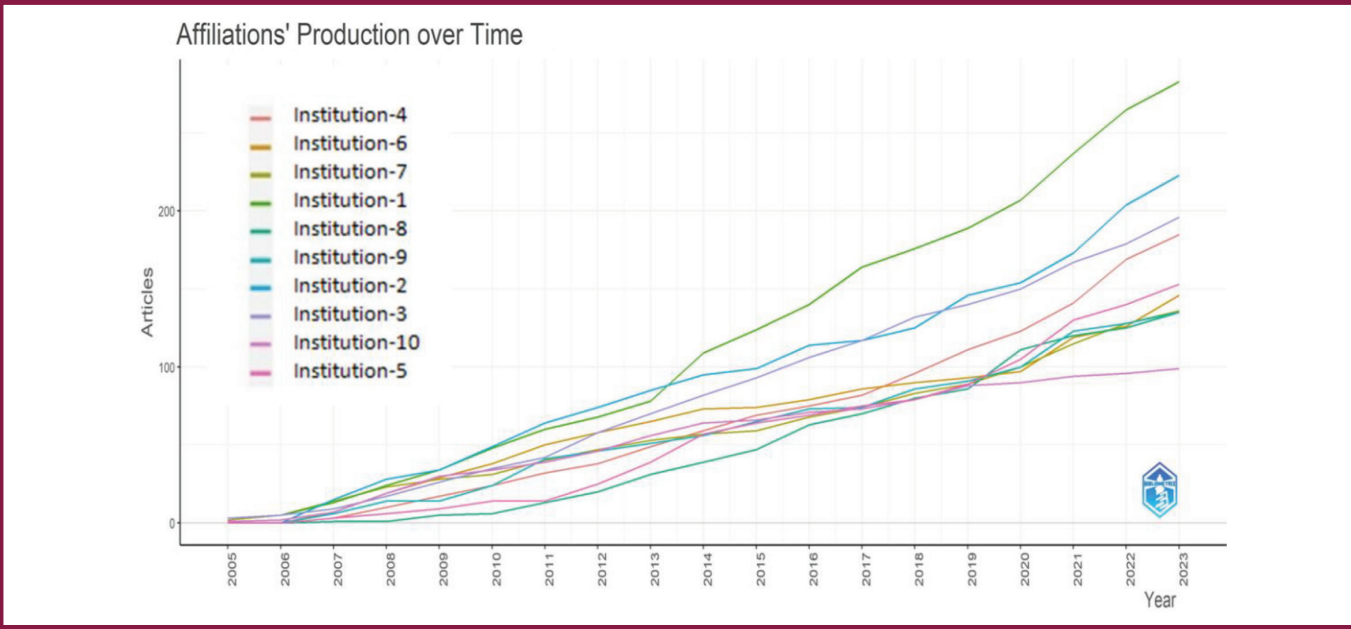

Figure 4. The number of articles over time for the top 10 institutions with the highest number of publications

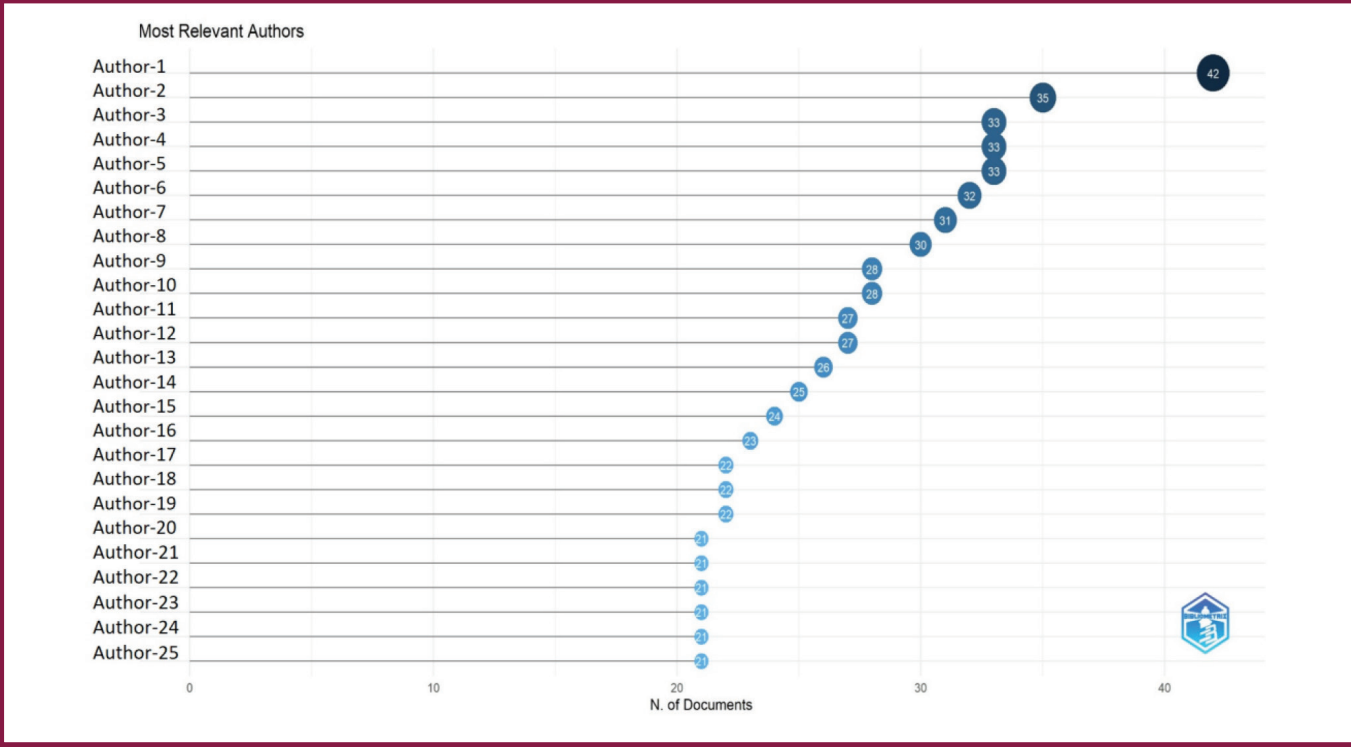

Figure 5. Most profilic authors

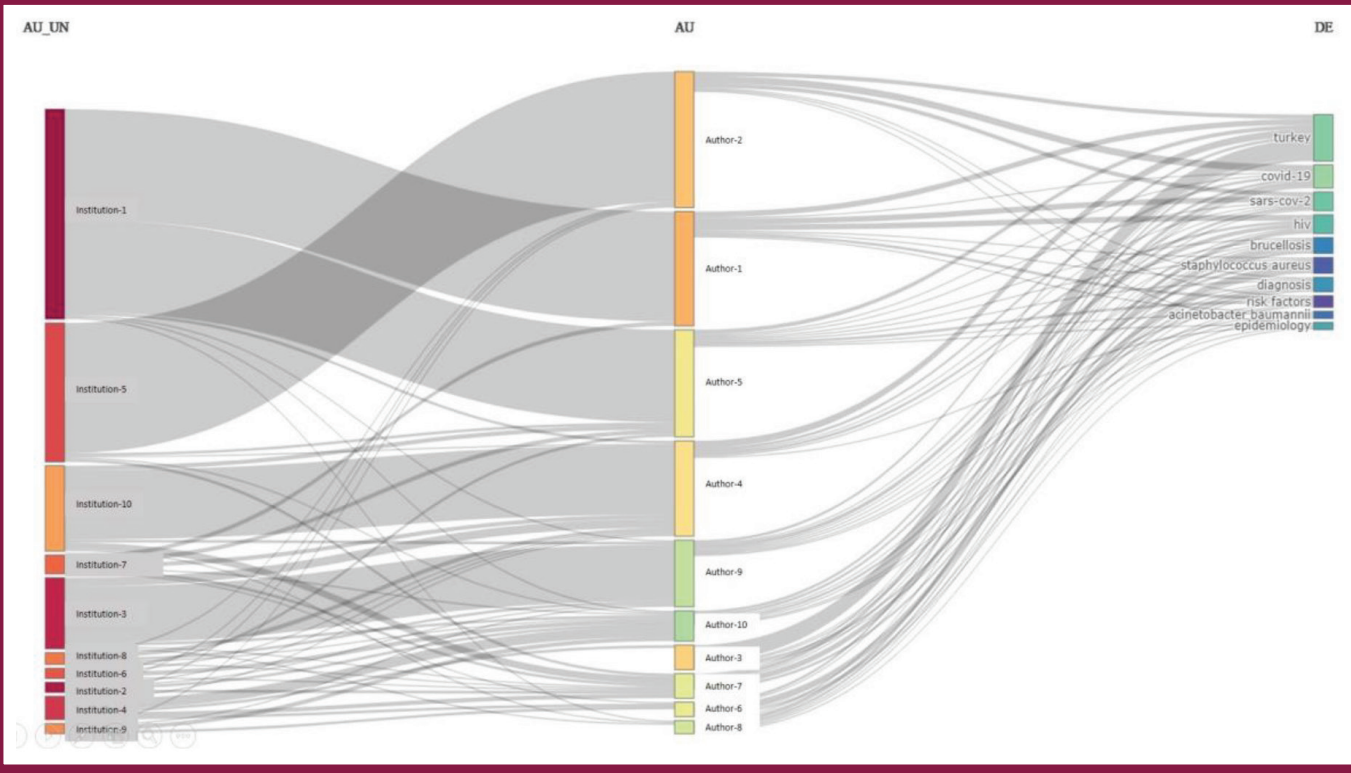

Figure 6. Three-field plot

peak occurrence, and most recent observation. Among these, "epidemiology," "diagnosis," and "infection" were the most frequently used keywords in 2020.

Institutional Research Collaborations and Citation Metrics

Table 5 provides an overview of inter-institutional research collaborations, including article counts, citation numbers, and collaboration strength. Among 1,361 institutions involved in collaborative efforts, 133 had published at least five articles.

Institution-3, Institution-1, and Institution-2 were the most prolific contributors, with 134, 132, and 130 publications, respectively. These institutions also recorded the highest total link strength: 14,303, 7,739, and 9,325, respectively. The table presents a detailed view of collaboration patterns among universities and research centers in Türkiye. The "Total Link Strength" column reflects the intensity of collaborative relationships between institutions.

Discussion

Figure 2 demonstrates the annual distribution of articles across the analyzed journals, with the majority of publications originating from Journal-1.

Several prior bibliometric studies have explored keyword distributions in the field of infectious diseases. For instance, Amusa et al. (11) conducted a bibliometric analysis on the epidemiology of infectious diseases, identifying 3,054 articles. The most productive sources in their study were the Journal of Medical Internet Research and PLOS One, each with an h-index of 18. In comparison, the most productive sources in the present analysis were Journal-1 (h-index=23) and Journal-2 (h-index=11). Additionally, a Web of Science-based analysis on "Big Data" within the field of "Infectious Diseases" revealed that Harvard Medical School was the top contributing institution, accounting for 7.9% of publications (137 articles). In Türkiye, Institution-1 emerged as the leading contributor with 283 articles (11).

The current study identified the most frequently cited national journals in the fields of clinical microbiology and infectious diseases. Journal-1, indexed since 2007, had received 5,641 citations, followed by Journal-2 (indexed since 2005) with 1,163 citations, and Journal-3 (indexed since 2017) with 363 citations. A comparative analysis by Yilmaz Hanci (12) of the 100 most cited articles in the Web of Science database (1975-2023) reported Clinical Infectious Diseases as the most cited journal globally, with 21,289 citations from a dataset of 552,828 publications.

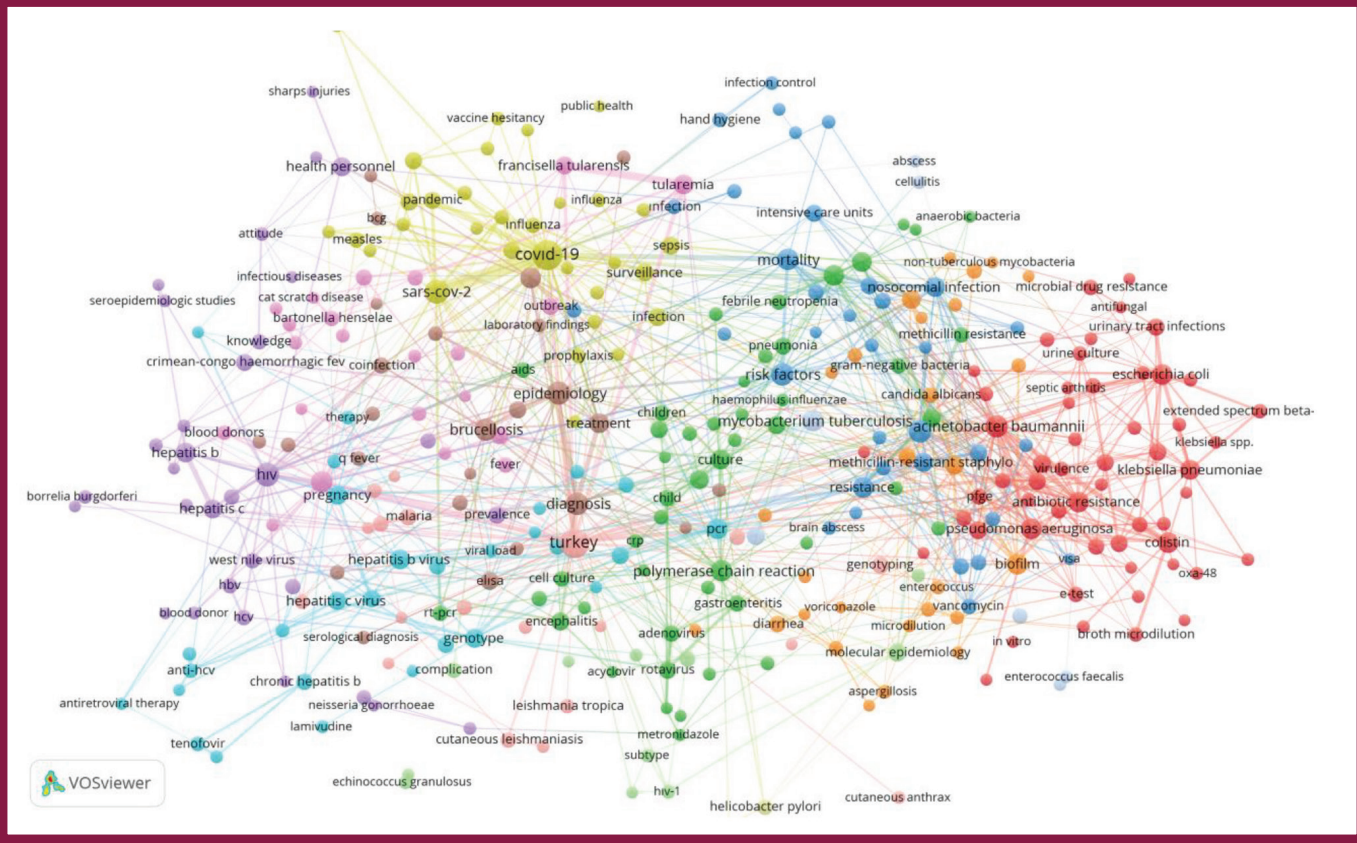

Figure 7a. Network vizualisation

The citation data in the current study reveals a high proportion of self-citations. A study by Diekhoff et al. (13) demonstrated that as the proportion of English-language articles increases in multilingual journals, self-citation rates decrease and impact factors improve. Authors are also more likely to cite their own work when writing in their native language, potentially explaining the high self-citation rates in Turkish-language publications. Similarly, Moskaleva and Akoev (14) reported that non-English publications indexed in Scopus and Web of Science are generally associated with lower visibility and citation counts compared to English-language articles, largely due to language barriers.

Self-citation is often used as a strategy to increase visibility and journal impact factor, particularly in national-language journals. This trend has also been associated with the limited citation pool available in such contexts (15,16).

As of 2022, Clinical Infectious Diseases had an h-index of 372, with 995 articles published in that year alone. Over the past three years, it recorded 4,107 citations and a total citation count of 29,673, with a two-year citation rate of 7.79 per article. In comparison, Journal-1 had an h-index of 24, 175 publications in 2023, 167 citations in the last three years, and a two-year citation rate of 0.96. Journal-2 followed, recording an h-index of 10, 44 publications in 2023, 55 citations in the past three years, and a two-year citation rate of 0.38 (17).

An examination of historical records showed that Journal-2 has been indexed since 2005 with 625 articles, and Journal-1 has been indexed since 2007. Journal-3 began indexing in 2017 with seven articles; Journal-4 in 2012 with nine articles; and Journal-5 in 2018 with 82 articles. Missing data from earlier years do not necessarily indicate a lack of publication activity, as such gaps may result from indexing errors or delays (Table 1). Citation counts across all journals peaked around 2015, followed by a significant decline, reflecting variations in article impact and citation models. These trends are consistent with the broader global pattern, where the volume of publications in infectious diseases and clinical microbiology increased rapidly until 2019-2020, after which a noticeable decline occurred (11,18,19).

Table 2 illustrates the countries of origin of the authors who contribute to the journals in question. These data demonstrate that the journals accept international articles and have a global reach and a collaborative network.

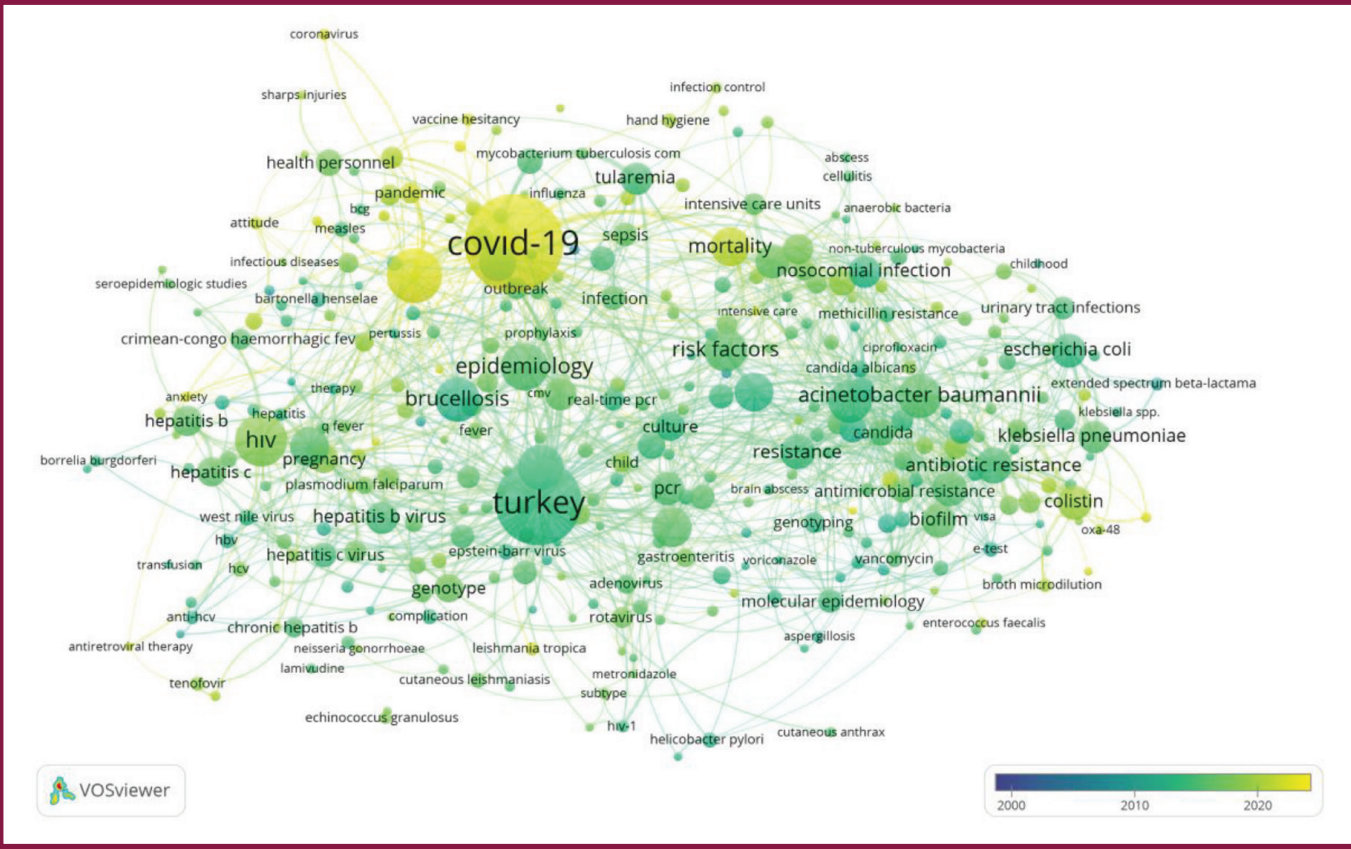

Figure 7b. Overlay vizualisation between 2000-2023

Table 2 shows the countries of origin of authors contributing to the analyzed journals. The inclusion of international articles suggests some degree of global engagement and collaboration. However, the overall level of international collaboration remains limited. This finding aligns with prior research indicating that scientific output in countries with constrained research funding tends to be nationally concentrated (20,21). Barriers such as language, limited access to international research networks, and insufficient funding mechanisms for joint projects likely contribute to this trend (22,23).

Moreover, although incentive programs such as those implemented by the Scientific and Technological Research Council of Türkiye (TÜBİTAK) and the Council of Higher Education (YÖK) in Türkiye aim to stimulate research productivity, they often fail to encourage international collaborations and may inadvertently disincentivize co-authorship with foreign researchers (24).

A key strength of this study lies in its comprehensive coverage of five nationally published journals over a defined timeframe. The integration of quantitative bibliometric methods—such as citation and co-authorship analysis—with interpretive comparisons allows for a multifaceted understanding of national trends in infectious diseases and clinical microbiology (2,25). Comparison with international benchmarks further contextualizes national publication dynamics.

However, several limitations should be acknowledged. First, the analysis is confined to journals indexed in Web of Science, which may exclude relevant literature published in other databases (26,27). Second, language and indexing biases may influence both visibility and citation patterns of Turkish-language publications (28). Third, while citation and co-authorship data provide valuable insights, they do not fully capture the scientific quality or societal impact of the research.

Future research could broaden the scope by incorporating additional national and international journals, including alternative metrics (altmetrics), and conducting comparative analyses with neighboring or economically similar countries (29,30). Qualitative methods, such as interviews with journal editors and researchers, may also yield deeper insights into publication practices, collaboration patterns, and perceived challenges (31).

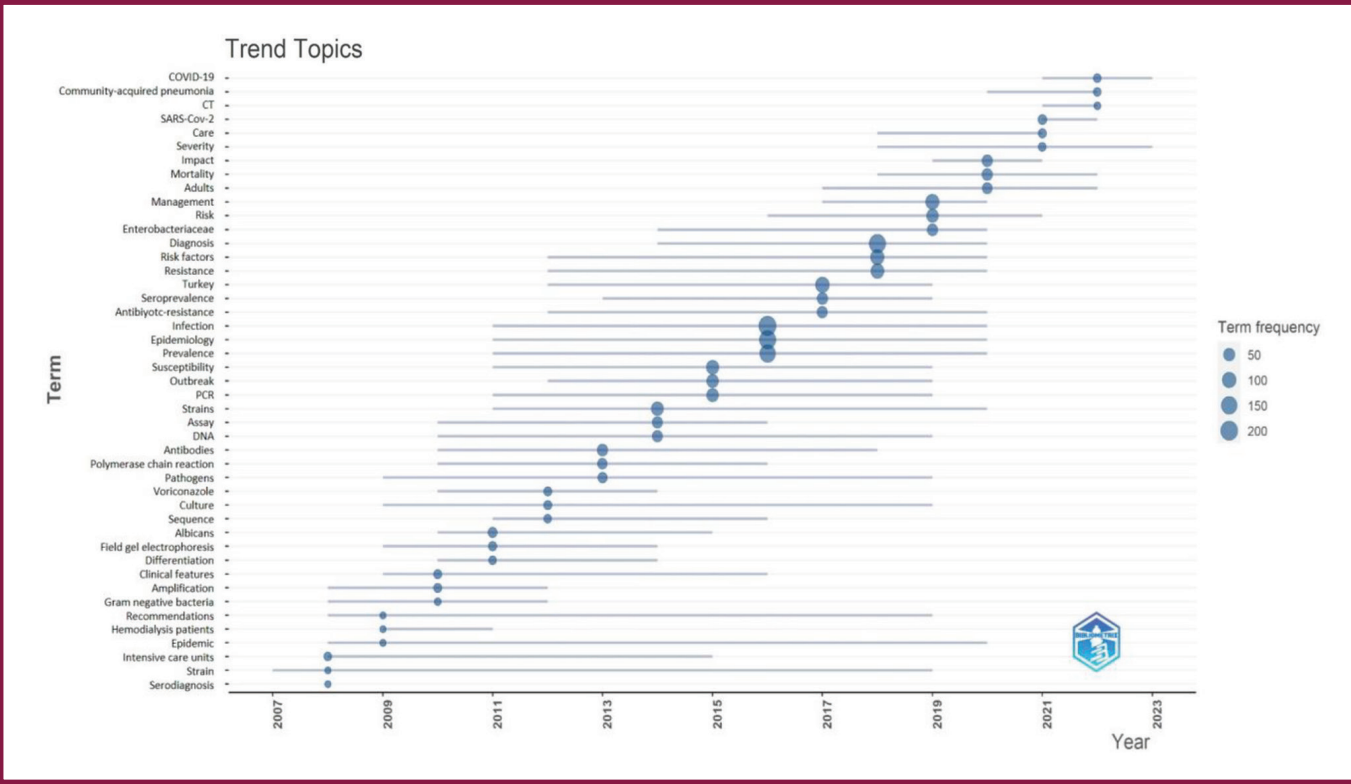

Figure 7c. Trend topics

Temporal trends in publication activity, as illustrated in Figure 4, reveal fluctuating levels of output across institutions, with some universities showing limited or no activity in certain years.

Keywords such as prevalence, epidemiology, and infections emphasize the importance of understanding the dynamics of disease emergence and spread. Terms such as management, risk factors, and resistance reflect a multidisciplinary approach that integrates clinical, epidemiological, and public health perspectives. The thematic diversity of keywords—e.g., children, antibiotic resistance, transmission—underscores the complex nature of research in this field (Table 3).

Between 2005 and 2023, the frequency of keywords such as infection, diagnosis, epidemiology, prevalence, risk factors, and resistance showed a steady increase, indicating heightened research interest in public health and infectious diseases. Infection remained the most frequently used term in 2023 (210 occurrences), followed by diagnosis and epidemiology (Table 4).

Trend topics visualized in Figure 7c reveal that terms such as epidemiology, diagnosis, and infection have consistently dominated discussions. The frequent appearance of the term Türkiye between 2012 and 2019 suggests a persistent national focus. Terms such as risk factors, management, and resistance peaked in 2020, while susceptibility was most frequent between 2011 and 2015. Terms like risk and strains showed consistent usage, with risk peaking in 2021. The terms 'PCR' and 'outbreak' reached their highest frequency of use in 2019.

The emergence of computed tomography as a keyword in 2021, and its increased frequency alongside COVID-19 and community-acquired pneumonia in 2022, point to the significant influence of the COVID-19 pandemic on research themes in infectious diseases and clinical microbiology.

Study Limitations

The study is subject to several limitations, including its reliance on data drawn exclusively from the Web of Science database, the imposition of language restrictions to English and Turkish, and the potential for bias resulting from the narrow scope of the citation analysis confined to this database. This may restrict the range of perspectives not fully reflect the entirety of the microbiological research landscape in Türkiye. Furthermore, the temporal scope of the study and the exclusion of articles published outside this

Table 4. Frequency of citation topics in the journals between 2005-2024

	n
Antibiotics & Antimicrobials	687
Virology - General	256
Medical Mycology	200
Hepatitis	198
Bacteriology	156
Zoonotic Diseases	125
Tuberculosis & Leprosy	122
HIV	107
Virology - Tropical Diseases	89
Virology - Identification & Sequencing	60
Diarrheal Diseases	54
Parasitology - Malaria, Toxoplasmosis & Coccidiosis	52
Parasitology - General	39
Sexually Transmitted Infections	34
Bacterial Toxins & Diseases	32
Parasitology - Trypanosoma & Leishmania	31
Lymphomas	24
Inflammatory Bowel Diseases & Infections	22
Oncology	22
Vascular, Cardiac & Thoracic Surgery	22
Bioengineering	15
Immunology	12
Gastrointestinal & Esophageal Diseases	11
Assisted Ventilation	11
Rheumatology	10
Vasculitis & Autoimmune Disorders	10
Allergy	9
Entomology	7
Statistical Methods	4
Dermatology- Skin Allergies	4
Ophthalmology	4
Liver Disease	3
Migraine and Headaches	3
Phytochemicals	3
Prostate Cancer	2
Strokes	2

period may not provide a comprehensive view of ongoing academic activities. The selected bibliometric indicators may not encompass all pertinent aspects, and alternative methodologies may contribute to a more comprehensive analysis.

Table 5. Research collaborations and publication citation numbers of institutions of top profilic institutions

Institutions	Number of documents	Number of citations	Total link strength
Institution-1	132	490	7739
Institution-2	130	567	9325
Institution-3	134	517	14303
Institution-4	117	396	9617
Institution-5	88	415	10382
Institution-6	77	306	7517
Institution-7	76	238	5900
Institution-8	67	258	4388
Institution-9	67	294	11200
Institution-10	65	263	3582
Institution-11	63	273	5359
Institution-12	54	222	3464
Institution-13	53	256	4596
Institution-14	51	126	3470
Institution-15	48	195	6772

The study has another limitation because it relies solely on Web of Science as a data source. This may limit the scope of the data set. It is possible that the exclusion of databases such as Scopus or PubMed may limit the generalisability of the findings.

It should be noted that our study analysed the data available in the Web of Science database from 2005. As some journals were first published after the study start date, the classification of the journals that contributed most to the study in terms of the number of articles could cause misunderstandings and errors in the reader's interpretation of this information.

The selected journals were from among infectious disease and/or microbiology specialty society journals available in Türkiye. Other journals were not considered for evaluation. The limited inclusion of only five journals restricts the generalizability and representativeness of the findings and may not fully reflect the scientific publishing landscape in Türkiye in this field.

Conclusion

This study provides a comprehensive comparative analysis of five national journals in the field of infectious diseases and clinical microbiology, focusing on their scientific contributions, authorship patterns, and citation impact. While microbiology-oriented topics such as serological diagnosis, bacterial strains, and outbreaks were more prominent in the early 2000s, there has been

a noticeable shift towards clinical topics in recent years. These include diagnosis and treatment methods, antibiotic resistance, disease management, and mortality. This thematic evolution reflects a growing clinical orientation in the field, in line with changing healthcare priorities. The selected journals have played a critical role in shaping the national research landscape by offering rich content and diverse perspectives, thereby enhancing our understanding of key subjects such as antibiotics, virology, and infectious diseases.

Ethics

Ethics Committee Approval: This study was carried out using an open-access database. Moreover, since it is a literature review that does not include any human or animal subjects, ethics committee approval was not required.

Informed Consent: Not required.

Footnotes

Authorship Contributions

Surgical and Medical Practices: S.Ç.E., Concept: S.Ç.E., Design: S.Ç.E., Data Collection or Processing: S.Ç.E., I.D.A., Analysis or Interpretation: S.Ç.E., I.D.A., Literature Search: S.Ç.E., I.D.A., Writing: S.Ç.E., I.D.A.

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