

Bibliometric Analysis of Turkish Endodontic Journal

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Abstract

Background: Turkish Endodontic Journal (TEJ) is a journal that aims to provide the highest standard of data to the literature in order to promote education, research, and practice in the field of endodontics worldwide. The aim of this study was to present the bibliometric profile of all articles published by the TEJ in order to contribute to the presentation of the national publication profile in the field of dentistry.

Materials and Methods: All studies published in the TEJ were listed. The name of the publications, publication year, number of authors, principal author institutions, principal author country, article type, article topic, number of citations, submission and acceptance dates of the article were classified and saved in the Excel software package (Microsoft). Frequency analysis and descriptive statistics were performed with Jamovi Software.

Results: A total of 92 studies were reached and 85 studies were included in the study. While the majority of the published studies were research articles (n=56, 65.9%), the minority were review articles (n=3, 3.5%). The most citation per article was found in 2017, with 2.5±2.42. Most topics were related to endodontic treatment and complications (n=20, 25%), and a minority to pain diagnosis and management (n=3, 1%). The average time from submission to acceptance was 64.43 ± 53.33.

Conclusion: Despite being a novel journal, TEJ has been published regularly every year. Interest in the journal has increased in recent years, probably due to new indexes and shorter submission-acceptance time periods.

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Keywords: Bibliometric analysis, endodontics, Turkish endodontic journal.

Introduction

Turkish Endodontic Journal (TEJ) is a Turkish peer-reviewed journal owned by the Turkish Endodontics Association (TED). The journal's first issue was published in 2016 and is published three times a year (May, August, and December). The purpose of the journal is to provide the highest standard of data in the literature to promote education, research and practice in endodontic dentistry worldwide.

Authors are invited to submit original research articles, case reports, reviews, and editorial letters on all aspects of endodontics, including education, dental practice, and research. The journal provides up-to-date information in the field of endodontics as well as information on materials and instruments released. General dentists, endodontists, and other specialists can

follow the latest updates regarding the field of endodontics. TEJ has the following indices: TrDizin, Scilit, Open Ukrainian Citation Index (OUCI), Google Scholar, and Scope Database.

Various statistical methods can be used to examine the activities of journals. One of these methods is bibliometric analysis. Bibliometric methods provide an in-depth analysis of the trends and impact of their publications through a comprehensive review of a journal (1). Bibliometrics is the quantitative analysis of publications on a specific subject at specific time intervals, in terms of author, publication, topic, number of citations, and cited sources (1). Publication-based data work is widely applied in assessment. Analysis of research results is the most common form of use.

However, it also offers utility as a partial indicator of overall research outcomes and the productivity and impact of research teams and centers. With the increasing importance of bibliometric analyzes at the international level, the importance of bibliometric analyzes in the national academic field has also increased(2). Several studies have performed bibliometric analyzes in dental journals (3, 4). In order to contribute to the presentation of the national publication profile in the field of dentistry, this article aims to disclose the bibliometric profile of all articles published by the TEJ.

Material and Methods

All studies published in the TEJ archive have been listed. The main language of all publications published between 2016-2022 was English. Using the Excel software package (Microsoft), the publication name, year of publication, number of authors, lead author's institution and country, article type, article field, number of citations, and submission/acceptance dates of articles were classified. After excluding "letters from the editor," all studies published in the journal were included in this study. Frequencies and descriptive analysis were performed with Jamovi Software (Version: 2.3.21)

Results

After excluding the "letters from the editor," 85 studies were included in the study (Fig. 1). While the majority of the published studies were research articles (n=56, 66%), case reports (n=26, 31%) the minority were review articles (n=3, 3%) (Fig 2).

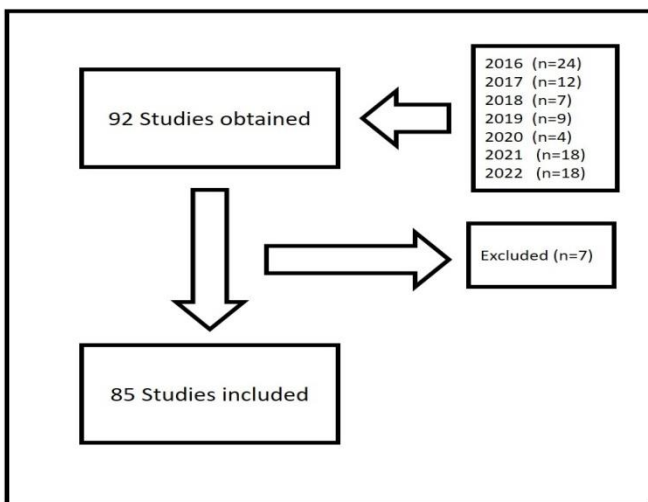


Figure 1. Flow diagram of the included studies.

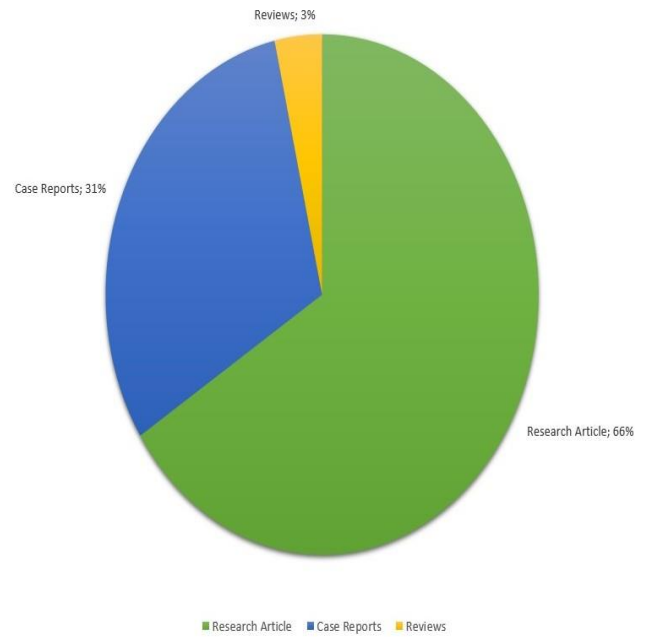


Figure 2. Frequencies of article types published in TEJ.

While 49 publications were found to have never been cited (58%), it was found that there were fifteen publications with 1 citation (18%), eight with 2 citations (9%), two with 3 citations (2%), six with 4 citations (7%), two with 5 citations (2%), one with 7 citation (1%), and two with 8 citations (2%) (Fig 3). The most citation per article was found in 2017, with 2.5 ± 2.42 . The number of citations by year is shown in Fig 4.

3 articles in the journal were prepared by a single author, 20 articles by two authors, 20 articles by three authors, 15 articles by 4 authors, 18 articles by 5 authors, 6 articles by 6 authors, 2 articles by 7 authors, and 1 article by 9 authors. The median (min-max) values of the number of authors were 3 (1-9), 4 (1-5), and 3 (1-4) for research article, case report, and reviews, respectively. The box plot of the average number of authors regarding article type is shown in Fig 5.

The number of keywords per article was three in 35 articles (41%), four in 26 articles (31%), five in 23 articles (27%), and six in 1 article (1%) (Fig 6).

When the articles are examined by topic, most of them related to endodontic treatment and complications (n=20, 31%), a minority to pain diagnosis and management (n=2, 3%). The percentage of topics is presented in Fig. 7.

The average time from submission to acceptance was 64.43 ± 53.33 .

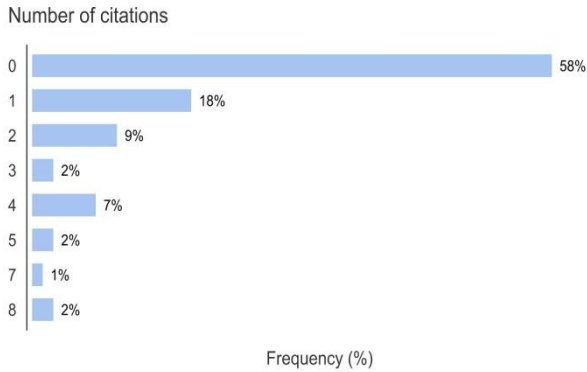


Figure 3. Frequencies of number of citations per article.

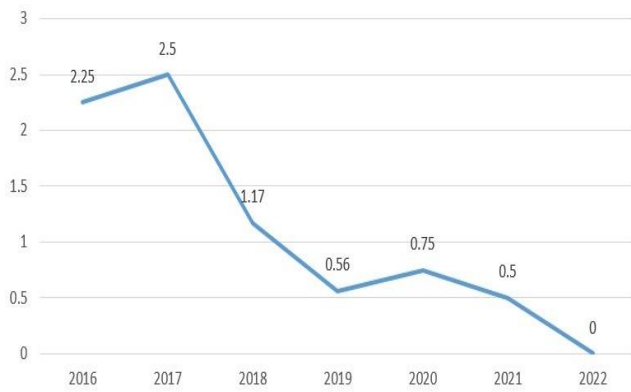


Figure 4. The average of the number of citations per article by year.

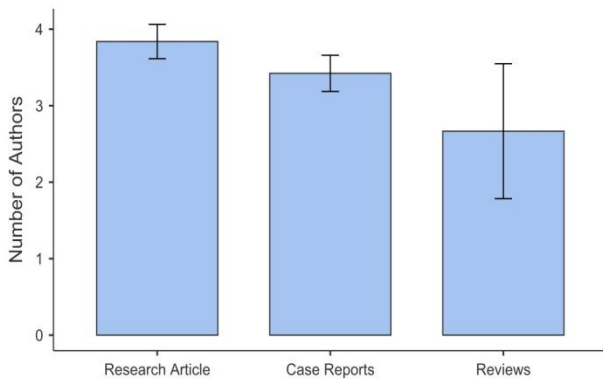


Figure 5. The box plot of the average number of authors regarding article type.

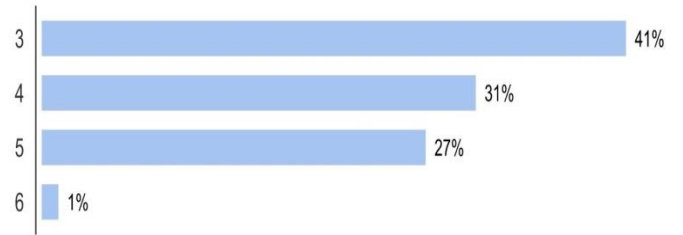


Figure 6. The number of keywords per article.

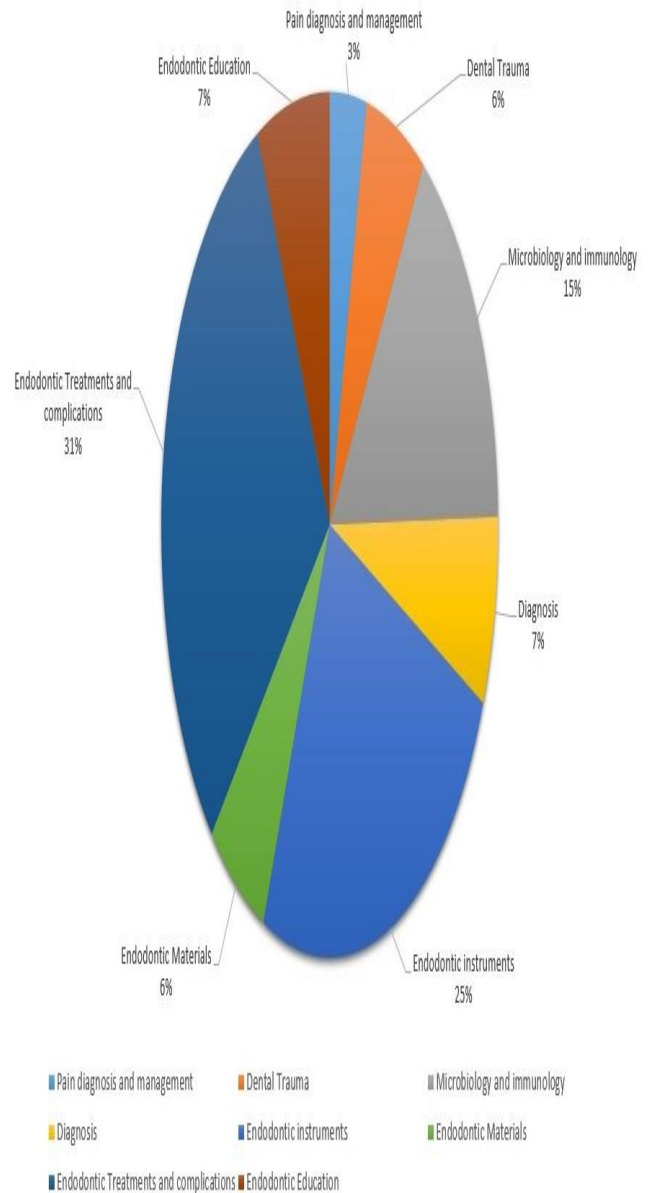


Figure 7. The percentage of topics of the articles published in TEJ.

Discussion

Thanks to bibliometric research, it is possible to obtain scientific data that shed light on the performance and characteristics of journals(5). Bibliometric analysis summarizes large amounts of data to present the academic activity structure and emerging trends of a research topic or field (6). In this study, TEJ, which has published regularly in the field of endodontics for seven years, was examined bibliometrically.

Generally, the high acceptance rate of research articles may prevent researchers from preparing reviews or case reports (7). Only three reviews were published in a seven-year period; However, numerous case reports have been published. Case reports are studies at the bottom of the evidence pyramid that describe interesting findings, evaluate the diagnosis and treatment of disease, and provide information about treatment protocols(8). The topic of case reports was generally endodontic treatments and complications; while most research articles dealt with endodontic instruments. The development of nickel-titanium (NiTi) rotary instruments is revolutionary for the science of endodontics. NiTi instruments not only raise the canal preparation in endodontics to another level, but also make it possible to carry out complicated canal systems faster and with a lower risk of complication(9). It is to be expected that many new products in the field of endodontics will be presented and developed in parallel with technological developments. Therefore, the topic of endodontic instruments will likely continue to get the attention of researchers in the future.

Most of the articles in TEJ were found to have multiple authors. The average number of authors per article was higher for research articles than for reviews. Research articles commonly require a multi-disciplinary approach, but this is only sometimes true for reviews. The average author count for research articles was around 4, and most studies avoided the higher author count. Most quality journals do not recommend using more than six co-authors (10). This has never been a policy of TEJ. And recently, most journals have demanded author contributions from studies to prevent this issue. However, some authorities indicated that a large number of authors per publication could improve the quality of research thanks to multidisciplinary collaboration (11).

It is assumed that the number of citations reflects the quality of an article. It is generally accepted that a high-quality article will receive more citations;

however, it is difficult to assess the quality. The maximum average number of citations per publication was observed in TEJ in 2017. Obviously, regardless of impact, older publications inevitably receive more citations than newer articles (12). In addition, it was previously reported that review articles were cited more frequently than other studies (13). The number of reviews published in TEJ was very small. This may be a reason for the low number of average citations. The result of this study revealed that, as expected, the average number of citations in new publications is low; however, it should be observed whether these publications are cited more frequently over time.

Keywords are important when searching literature, and words are more useful than sentences. In fact, keywords should contain information that best describes the research (14). Therefore, it is important to use and select keywords that can more effectively identify relevant articles. The variety and number of keywords in an article can increase the citation count of the article (15). In this study, three keywords were used most frequently. In order to increase the number of citations of the journal, it may be suggested that the TEJ request an increase in the number of keywords for the articles.

Online resources are very effective to collect large broadcast data. However, care should be taken when selecting the source. For example, Google Scholar seems like an easy tool for grading as it offers a comprehensive database. In this study, Google Scholar was used to determine the number of citations of the articles. However, the author information is constantly updated, regardless of the Google Scholar institutional affiliation. Therefore, correct data may not be obtained in the information of the Google Scholar authors (16). Therefore, in our study, a search was done in TEJ's database for the authors' data, and the information on the articles was evaluated.

One of the most critical decisions when publishing a scientific study is which journal to submit the article to. Since articles that are not evaluated and published in a timely manner can lose their value, authors consider the time from submission to acceptance when selecting the journal (17). When checking the acceptance period of the articles published in TEJ; It was observed that the publications were accepted mainly between 2 and 4 months.

SİPAHİ (17) stated that the acceptance period of publications may extend up to 4-6 months. In accordance with this information, it is seen that the publication acceptance period of the TEJ journal is shown to be at a very good level.

Conclusion

TEJ has been found to publish a large number of research article and case reports and is open to various types of studies. However, it is noteworthy that there are few review articles published. Despite being a new journal, it has been noted that it is published regularly every year. Besides, many researchers in Turkey have contributed to the development of the journal. Interest in the journal has increased in recent years, probably due to new indexes and shorter submission-acceptance time periods.

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