

Türk Üroloji Dergisinde Mart 2007 ve Aralık 2013 Tarihleri arasında Yayımlanan Makalelerin Atıf Analizlerinin Değerlendirilmesi

Citation Analysis of the Articles Published in the Turkish Journal of Urology Between March 2007 and December 2013

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Özet

Amaç: Türk Üroloji Dergisinin (TÜD) son yıllardaki bilimsel atıf analizinin yapılması, makale özelliklerinin atıf karakteristikleri üzerine olan etkileri ve dergi impekt faktörünün ortaya çıkarılması amaçlandı.

Gereç ve Yöntemler: Mart 2007 ve Aralık 2013 tarihleri arasında TÜD' de yayımlanan makaleler çalışmaya dahil edildi. Makele tipleri, makale alt bilim dalları ve makalelerin yayımlandığı kurumların coğrafi bölgeleri kaydedildi. Atıf analizleri Google Scholar veri tabanı kullanılarak gerçekleştirildi. Atıflar ulusal ve uluslararası olarak iki gruba ayrıldı. Makalelerin tipi, alt bilim dalı ve coğrafi bölgelerine göre ayrı ayrı atıf oranları hesaplanarak, TÜD' nin 2009, 2010, 2011, 2012 ve 2013 yıllarındaki impekt faktörleri belirlendi.

Bulgular: Çalışmaya dahil edilen 495 makalenin atıf analizi sonrasında 250' si (%74.2) ulusal olmak üzere toplam 292 atıf alındığı belirlendi. En yüksek atıf oranları orijinal araştırma, endüroloji alt bilim dalı ve Ege bölgesi kaynaklı makalelerde izlendi (Sırasıyla, 0.768, 0.936 ve 0.823). En yüksek impekt faktör 2011 yılında 0.147, en düşüğü ise 2012 yılında 0.027 olarak saptandı.

Sonuç: Üroloji alanında uluslararası bir tıp dergisi olan TÜD' nin, henüz kısıtlı atıf oranlarına sahip olduğu saptandı. İlerleyen yıllarda olası daha yüksek atıf analizi sonuçları için Derginin PubMed Central and PubMed veritabanlarında indekslenmesinden sonra yapılacak çalışmalar gerekmektedir.

Anahtar Kelimeler: Analiz, Bibliometri, Türk Üroloji Dergisi

Abstract

Objective: To evaluate the citation rates and impact factor of Turkish Journal of Urology (TJU) in the recent years with assessing the impact of some differences on citation characteristics, such as article type, urological subspecialty of the article and article region.

Material and Methods: All of the articles published in the TJU between March 2007 and December 2013 were included into the study. Types of articles, related urological subspecialty of articles and institutional regions of the authors were recorded. The citation counts of all articles were analyzed by using Google Scholar. Citations were also categorized as national and international. Citation rates were separately calculated according to article types (such as original research, review, etc.), related urological subspecialty of articles and institutional regions of the authors. Impact factors of the TJU were also determined in 2009, 2010, 2011, 2012 and 2013.

Results: A total of 495 articles were included into the study. Total citation counts were detected as 292, 250 of which (74.2%) were national. Highest citation rates were in original research articles, articles about endourology and articles submitted from the Aegean Region of Turkey (0.768, 0.936 and 0.823, respectively). The highest IF was determined in 2011 as 0.147 whereas the lowest was 0.027 in 2012.

Conclusions: TJU is an international journal of urology and it has relatively limited citation rates up to now. Further studies must be carried on to assess the citation rates of the journal after indexing in PubMed Central and PubMed.

Keywords: Analysis, Bibliometrics, Turkish, Journal, Urology

Geliş tarihi (Submitted): 14.05.2018

Kabul tarihi (Accepted): 04.08.2018

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INTRODUCTION

Printing and distributing journals is an expensive and time consuming process. Therefore, attempts are made to limit the volume of published material to only high quality manuscripts (1). High-quality journals that are likely to publish high-quality manuscripts. Quality evaluation of the academic manuscripts is an important milestone for journals before publication and the traditional method of it is peer review (2). As to assessment of the journals' quality, it is widely performed with bibliometric analysis methods (citation analysis and rates, impact factors, manuscript acceptance rates etc.). (3).

Citation analysis and impact factor are widely used bibliometric methods by analyzing the citations of the journals' manuscripts in different Web-Based databases. Web of Science (WOS), Scopus (SC) from Elsevier and Google Scholar (GS) are widely used and well known of them, at the present time (4-5). References of a manuscript are called citation and the citation data is an evidence of whether a manuscript is read and used by other researchers (3).

The Turkish Journal of Urology (TJU) is the scientific, open access and official Turkish-English language publication of the Turkish Association of Urology, which is being published 4 issues per year since 1976. It is a peer-reviewed international journal, clinical and basic science information relevant to physicians and researchers in the field of urology. It was included in PubMed Central and PubMed in 2014, so that all papers from March 2013 will become freely accessible through the internet. It has been indexed in Scopus, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Gale learning, EBSCO, Directory of Open Access Journals (DOAJ), ProQuest, Index Copernicus and Turkish Citation Index.

In this study, we aimed to evaluate the citation rates of articles published in the TJU in the last 7 years in order to determine the regional and urological subspecialty differences of citation rates. We also determined the Impact factors of the TJU in 2009, 2010, 2011, 2012 and 2013.

MATERIAL AND METHODS

All of the articles published in the TJU between March 2007 and December 2013 have been recorded. Types (original research, review, case report, letter to the editor), related urological subspecialty (andrology, uro-oncology,

pediatric urology, functional urology and urogynecology, endourology, general urology) and the geographical origin of the articles were collected from the journal database (<http://www.turkishjournalofurology.com/eng/arsiv/archive>). Afterwards, the number of citations was analyzed by using Google Scholar (<https://scholar.google.com.tr>), which is a meta-database of scholarly journals and books. Citations were categorized as national and international, also. Citation rates were calculated by dividing the total number of citations received by all papers by the total number of papers according to article types (such as original research, review, etc.), related urological subspecialty of articles and intuitional regions of the authors, during the period of 2007-2013. Annual IF were also determined between 2009 and 2013 by dividing the number of citations in each year by the total number of articles published in the two previous years.

RESULTS

A total of 495 articles were included into the study. The types of the published articles are presented in Table 1. The majority of the papers were original research articles (61.2 %). Most of the articles were about general urology (28.7%) whereas only a few of them were about functional urology and urogynecology (3.2%). While the most of the articles were published from Marmara Region, Eastern Anatolia Region had the least number of articles (31.2% vs. 4%, respectively). Of the articles, 34 (6.6%) were international papers submitted from 13 different countries.

Overall number of citations was 292 and 250 (74.2%) of them were made in national papers. The original research articles had the most citation rate (0.768) and articles in endourology and articles submitted from the Aegean region received the highest citation rates (0.936 and 0.823, respectively). The citation rates about article types, subspecialty and region were shown in Table 1, 2 and 3, respectively.

The highest IF was determined in 2011 as 0.147 whereas the lowest was 0.027 in 2012 (Table 4).

DISCUSSION

Citation analysis is widely used bibliometric tool in the assessment of research performance in the medical sciences. Especially the Impact Factor (IF) is extremely

Table 1. The types of the articles published in the TJU.

| Article Type | Citation Count | Article Count | Citation rate |
|---------------------------|----------------|---------------|---------------|
| Original Research Article | 233 | 303 | 0.768 |
| Review | 23 | 55 | 0.418 |
| Case Report | 36 | 135 | 0.266 |
| Letter to Editor | 0 | 2 | 0 |
| Total | 292 | 495 | 0.589 |

Table 2. Citation counts and rates according to the subspecialties of urology.

| Subspecialty | Citation Count | Article Count | Citation rate |
|--------------------------------------|----------------|---------------|---------------|
| Andrology | 32 | 58 | 0.551 |
| Uro-oncology | 60 | 127 | 0.472 |
| Pediatric Urology | 15 | 41 | 0.365 |
| Functional Urology and Urogynecology | 8 | 16 | 0.5 |
| Endourology | 104 | 111 | 0.936 |
| General Urology | 73 | 142 | 0.514 |
| Total | 292 | 495 | 0.589 |

Table 3. Regional citation counts and rates of the articles.

| Article Region | Citation Count | Article Count | Citation rate |
|-----------------------|----------------|---------------|---------------|
| Marmara | 100 | 154 | 0.649 |
| Aegean | 42 | 51 | 0.823 |
| Central Anatolian | 67 | 142 | 0.471 |
| Black sea | 5 | 26 | 0.192 |
| Mediterranean | 19 | 39 | 0.487 |
| Eastern Anatolia | 4 | 20 | 0.2 |
| Southeastern Anatolia | 14 | 29 | 0.482 |
| International | 41 | 34 | 1.205 |
| Total | 292 | 495 | 0.589 |

Table 4. Annual Impact Factor of the TJU.

| Year | Impact Factor |
|------|---------------|
| 2009 | 0.122 |
| 2010 | 0.116 |
| 2011 | 0.147 |
| 2012 | 0.027 |
| 2013 | 0.072 |

popular bibliometric indicators (6). The journal IF is introduced by Eugene Garfield and calculated by dividing the number of citations in any year by the total number of articles published in the two previous years (7, 8). Hereunder, the impact factor is an advanced citation analysis method that reflecting the average number of citations per published item. Nowadays, the prestige of a publica-

Table 5. Top cited articles of the TJU.

| Ranking | Article Title | Year | Article Type | No. of Cited |
|---------|--|------|------------------|--------------|
| 1 | The Role of Prophylactic Tamsulosin (FLOMAX®) ± Dexamethasone in Patients Undergoing Prostate I125 Seed Implants for Prostate Carcinoma: A Randomized Double-blind Study | 2008 | Original article | 36 |
| 2 | A Comparison of Shock Wave Lithotripsy, Semirigid and Flexible Ureteroscopy in the Management of Proximal Ureteral Calculi | 2009 | Original article | 10 |
| 3 | Current Situation of Antibiotic Resistance Against Common Pathogens in Urology Clinics | 2008 | Original article | 10 |
| 4 | The Complication Rates and Results of Upper Pole Access in Percutaneous Nephrolithotomy Cases | 2007 | Original article | 9 |

tion is determined largely by its IF (9) and several studies have addressed IF's validity as a quality measure for clinical journals. Foster reported the correlation between IF and journal prestige (10). Similarly, Tsay concluded that IF is a significant measure of importance that could be used for journal selection (11). The importance of IF was also reported by Saha et al. and they concluded that IF may be a reasonable indicator of quality for general medical journals (12).

A journal's impact factor is based on 2 elements: the numerator, which is the number of citations in the current year to any items published in a journal in the previous 2 years; and the denominator, which is the number of substantive articles (source items) published in the same 2 years (7). The citation characteristics of a publication can be influenced by many factors. In the medical sciences, previous studies have for instance analyzed the effect of study design (e.g., case report, randomized controlled trial, or meta-analysis), article type (i.e., brief report or full-size article), and article length (6). In our study, the differences in article type, article region and urologic subspecialty of article for citation characteristics has been investigated. A journal can adopt editorial policies to increase its impact factor (9, 13). One of them is to publish a larger percentage of review articles, which generally are cited more than research reports (14). Thus, review articles can raise the IF of the journal (15). Another one is to publish a large portion of its articles, or at least the articles expected to be highly cited, early in the calendar year. This gives those articles more time to gather citations. Some editors may force an author to add spurious self-citations to an article before the journal will agree to publish it in order to inflate the journal's IF and this called as coercive citation (7). All of these issues are

negation of IF. Seglen (16) expressed that journal IFs are not statistically representative of individual journal articles, and the IF of journals should not be used for evaluating research.

Considering the aforementioned limitations of using the IF, several authors stated that IF cannot be considered as the sole determinant of a journal's quality (17, 18). The European Association of Science Editors indicated that the IF is not always a reliable instrument and recommended that journal IFs are used only and cautiously for measuring and comparing the influence of entire journals, but not for the assessment of single papers, and certainly not for the assessment of researchers or research programmes (19). Hoeffel stated that although IF is not a perfect tool to measure the quality of articles, there is no better technique for scientific evaluation which has the advantage of already being in existence (20). According to Hoeffel, the use of IF as a measure of quality is widespread because it fits well with the opinion we have in each field of the best journals in their specialty (20).

In the present study, we performed a comprehensive evaluation of the articles published in the TJU and we calculated the number of citations accumulated after publication. These citation counts can be considered mature because previous analyses demonstrated that citation rate is gradually increasing in the first years after publication (21, 22), and highly cited articles reach its citation peak in the first several years after publication. Our analyzed articles were 2-7 years old after their publications. There are several citation analysis tools such as WOS, SC and GC (4, 5). It should be noticed that searches of citations in different databases will result in more or less variable citation counts and that the present results therefore provide only a snapshot. We also determined the IF of TJU

in years 2009, 2010, 2011, 2012 and 2013 after analyzing the citation counts of the articles via Google Scholar.

Our study revealed that original research articles have more citation rates and most cited subspecialties of articles were endourology, andrology and uro-oncology. Hennessey et al. (23) reported the top 100 cited urologic articles in 2009 and they showed that the most cited article subspecialties were uro-oncology (51%), transplantation (20%) and andrology (13%), respectively. Similarly, Nason et al (24) reported an update about the top 100 cited urologic articles in 2013 and same sorting was revealed: uro-oncology (54%), transplantation (22%) and andrology (13 %). Our findings partially coherent with these results, as we found that articles published in the field of endourology and andrology had higher citation rates compared to other subspecialties. Another study about citation analyses of Korean Journal of Urology conducted by Huh (25) showed that the top cited article title from Google Scholar were about uro-oncology with 55 citations and andrology with 42 citations respectively. Uro-oncology and andrology are the most cited subspecialties according to Huh's results. In the present study we found the similar results with Huh, so our citation analyses showed the top cited article title about uro-oncology with 36 citations. We found also, the outland based articles exhibited 100% citations in our study. We think that their nature English language may play a role as a reason of it.

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