JBACHS
Journal of Basic and Clinical Health Sciences

J Basic Clin Health Sci 2022; 6: 247-259
https://doi.org/10.30621/jbachs.1018824
RESEARCH ARTICLE

EVALUATION OF THE 100 MOST CITED ARTICLES ON BEHCET'S DISEASE: A BIBLIOMETRIC ANALYSIS

Erkan Ozduran[1], Volkan Hanci[2]

[1] Dokuz Eylul University, Physical Medicine and Rehabilitation, Algology, Izmir, Turkey
[2] Dokuz Eylul University, Anesthesiology and Reanimation, Izmir, Turkey

Corresponding Author: Erkan Ozduran, MD, **E-mail:** erkanozduran@gmail.com
Received: 03.10.2021; **Accepted:** 11.01.2022; **Available Online Date:** 27.01.2022

Cite this article as: Ozduran E, Hanci V. Evaluation of the 100 Most Cited Articles on Behcet's Disease: A Bibliometric Analysis. J Basic Clin Health Sci 2022; 6: 247-259.

ABSTRACT

Purpose: Bibliometric studies examine the accumulated scientific data on a specific subject and evaluate its scientific performance. Our study aimed to evaluate the 100 most cited publications related to Behcet's Disease regarding their bibliometric properties.
Methods: Our study was conducted using the "Web of Science (WOS) "search engine. The search was done on 01.06.2021, and the top 100 most cited publications were determined. In addition, the total number of citations of each publication, the annual number of citations, the authors and the information of the study were determined.
Results: In the literature analysis between 1975 and 2021, it was determined that there were a total of 13280 publications related to Behcet's Disease. The total citation average of the 100 most cited articles was 256.35±311.53, annual citation average of 13.31±13.41 was detected. The first area that these studies focused on were treatment (26%). A significant relationship was found between the year of publication of the article, the Q index of the journal and the class of the journal, and the number of annual citations. In addition, a significant relationship was found between the subject of the study and the presence of a group of authors in the study and both the total number of citations and the average annual citation count ($p<0.05$).
Conclusion: Our study is the first to evaluate and analyse the top 100 most cited studies on Behcet's Disease in the literature. Today, the importance of rheumatological diseases in the clinic is increasing day by day; Behcet's disease, which is among these diseases, has a great place.

Keywords: Behcet syndrome, rheumatology, biblometric

INTRODUCTION

It is possible to find various publications in different clinical and surgical branches both at home and abroad to identify the most cited articles in various branches of medicine (1-4). When a scientific article cites another scientific article as a source, it is expressed as a reference to that article. The amount of citations of scientific articles indicates the effectiveness of that article. Therefore, scientific articles with more references and journals with higher impact value are considered more qualified (2).

Garfield published the first bibliographic study in 1987 in "The Journal of the American Medical Association (JAMA)" with the title "The 100 most cited articles published in JAMA"(3). Since then, numerous articles have been reviewed and presented as "most cited articles" not only in general journals but also in specific journals (4,5). Between 1990 and 2020, Bagcier et al. (6) investigated the 100 most cited articles in fibromyalgia syndrome, while Kreutzer et al. (7) investigated the 100 most cited articles in neurorehabilitation between 2005 and 2016.

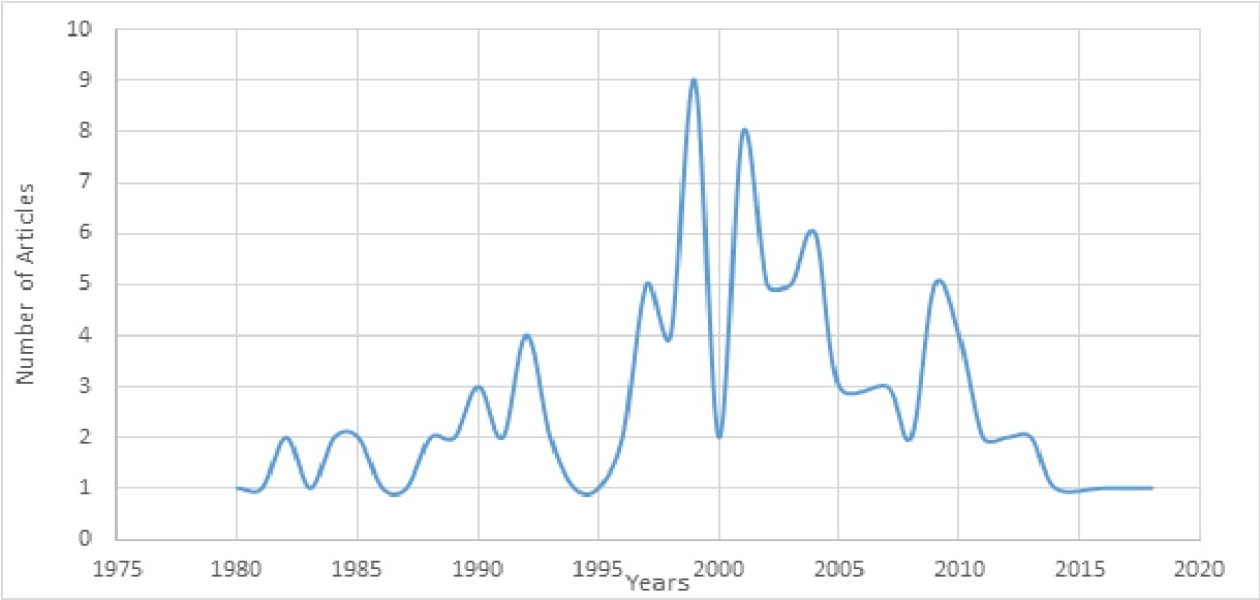

Figure 1. Distribution of the top 100 most cited articles on Behcet's Disease by years

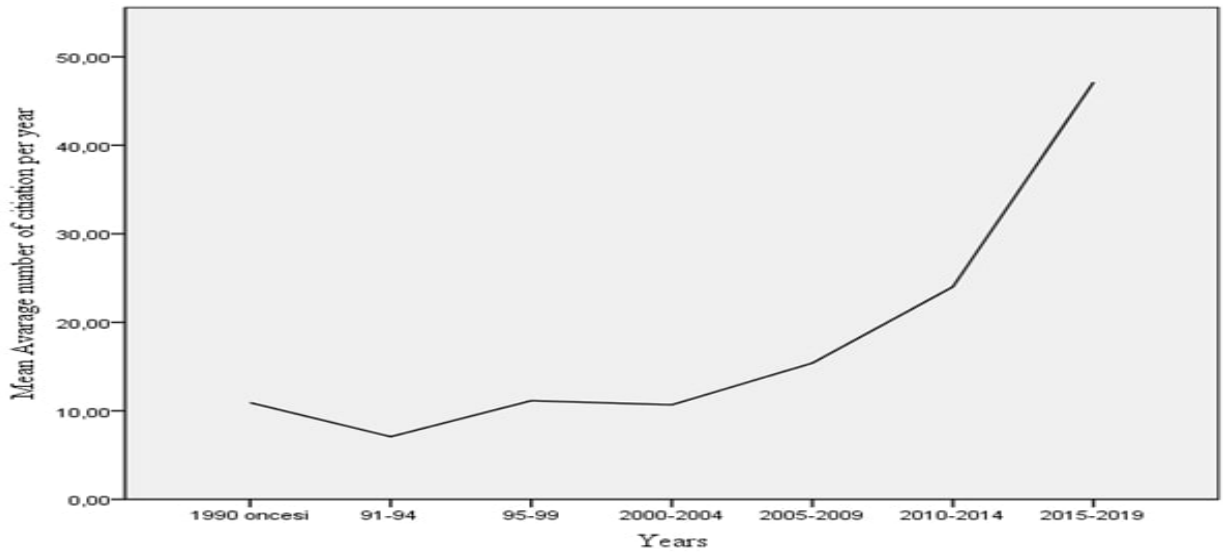

Figure 2. Change in the average number of annual citations by years

Behcet's Disease (BD) is a multisystem variable vascular vasculitis heterogeneous in terms of demographic characteristics, organ manifestations, severity of relapses, course of the disease, response to treatment, and prognosis among patients (8). Clinically, the disease presents in most patients with oral and genital ulcerations, papulopustular lesions, erythema nodosum-like lesions, and organ/system involvement, including uveitis, arterial and venous thrombosis, and aneurysms, nervous system involvement, and gastrointestinal tract involvement (8). The disease, seen in countries located on the Silk Road, is seen in 20-420/100,000 in Turkey, 80/100,000 in Iran, and 0.64/100,000 in the United Kingdom (9). Treatment often involves colchicine, topical steroids, azathioprine, systemic and topical steroids, and anti-TNF agents (10).

The importance and place of rheumatological diseases in the clinic are increasing day by day. The knowledge of BD, one of the rheumatic diseases, by subsequent clinicians is essential because of the pain of following future studies and developments. Many studies have been carried out on BD in recent years. However, there are no bibliometric studies in which all

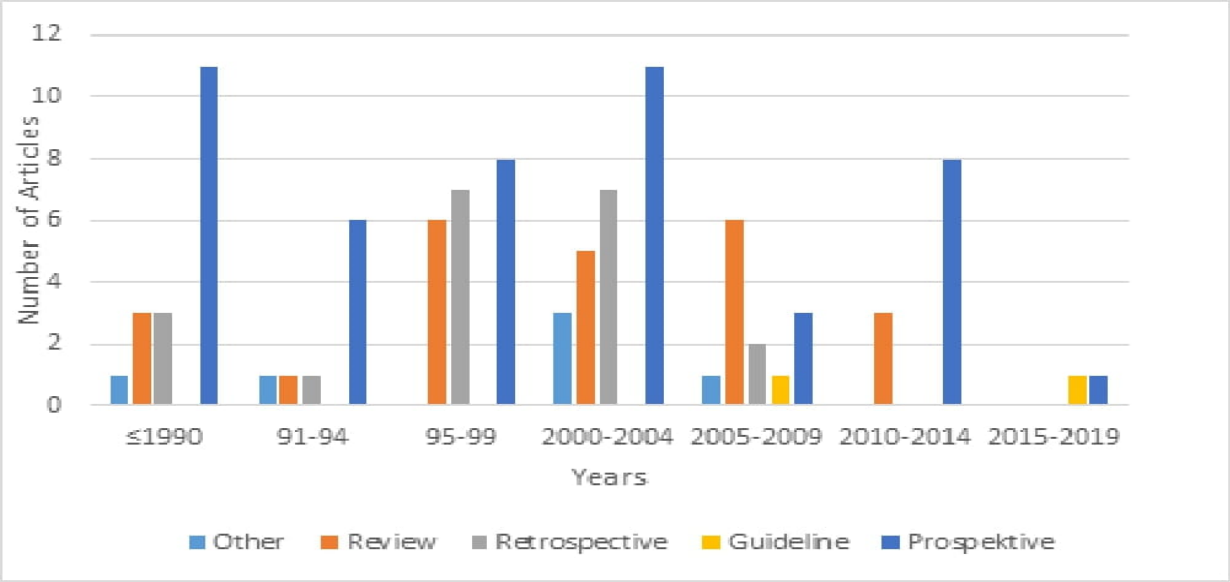

Figure 3. Distribution of the top 100 most cited article types on Behcet's Disease by years

of these studies are compiled. These efforts can be a guide in the BD area as well as in other areas. Our study aimed to examine the most cited internationally articles about BD by authors, countries, and institutions through the ISI and WOS search engine and to analyse bibliometrics in which journals they were published (11).

MATERIAL AND METHODS

In this study, which was planned as a cross-sectional study, the "advanced mode" feature of the ISI and WOS search engine was used after obtaining the consent of the ethics committee (Ethics Committee decision no: 6272-GOA 2021/16-31). Behcet Syndrome and its synonyms have been searched using MeSH (Medical Subject Headings 2021) Browser. As search key "TS=behc* AND TI=behc* OR TS=behç* AND TI=neuro-behc* OR TS=neuro-behc* AND TI=neuro-behc* OR TS=neuro-behc* AND TI=neuro-behç * OR TS=vasculo-behc* AND TI=vasculo-behc* OR TS=vasculo-behc* AND TI=vasculo-behc*" was used. Articles were included from 1975 to June 2021. The search was conducted on 01.06.2021, and the 100 most cited internationally sourced articles on the subject were determined. A list was drawn up for the first 100 articles. Individual authors listed as names were scanned and checked to see if they were included in other articles on the list. The total number of citations of each publication, the number of citations per year, the study authors, the study, and the information of the journal were determined using WOS. Articles found to be due to writing and fact-reporting to the editor were not included in the study.

Statistical Analysis

Statistical analysis of the data obtained in the research was performed using SPSS (Statistical Package For Social Sciences, Chicago, IL, USA) 20.0 program. Student t-test, Kruskal Wallis test, Mann Whitney U test, and square test were applied to compare the groups. The p value below 0.05 was considered a significant difference.

RESULTS

From January 1975 to June 2021, it was determined that there were a total of 13280 publications in the WOS search engine. The most cited study had 3010 citations, while the lowest number of citations in the top 100 most cited studies was 133. The distribution of the first-name authors of the 100 most cited articles in the BD field is stated in Table 1. The average number of citations of the 100 most cited studies was 256.35±311.53. The annual citation numbers of the studies ranged from 94.06 to 3.40 and were found to average 13.31±13.41.

The most cited study was "Criteria for diagnosis of Behcet's-Disease," published in the journal "Lancet" in 1990 by Silman AJ et al. The institution with the most articles on BD was Istanbul University with 32, followed by Mayo Clinic, St Marianna University with 4 articles (Table 2). Other features of the 100 most

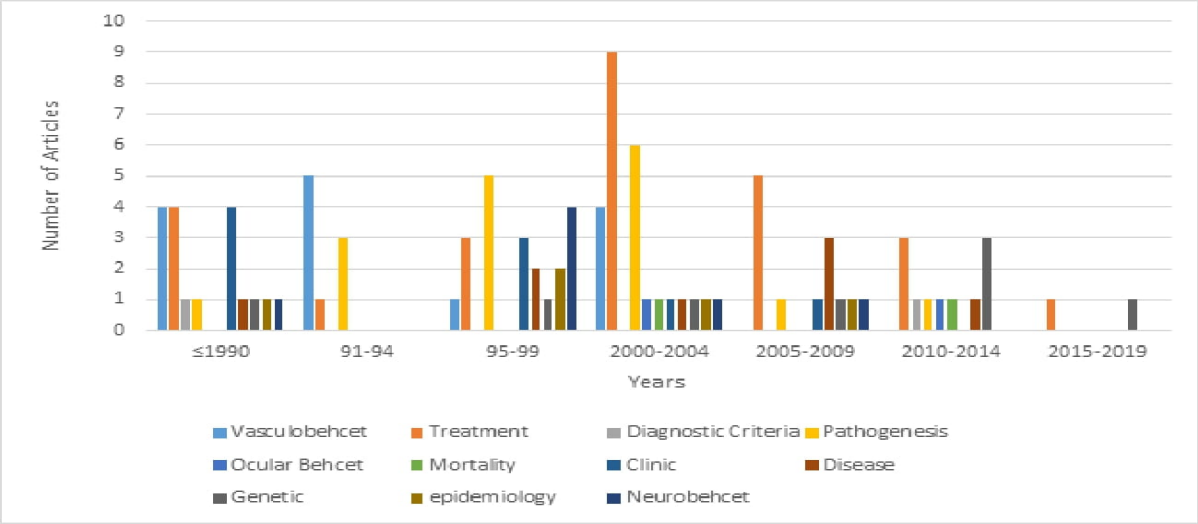

Figure 4. Distribution of the top 100 most cited article topics on Behcet's Disease by years

cited studies in the field of Behcet's Disease were reported in Table 3.

According to the results of our study, 26% of the BD articles were published between 2000 and 2004, followed by the studies between 1995-1999 with 21% (Fig. 1). Furthermore, a weak positive correlation was found between the year of publication and the average number of citations per year (Table 4, Fig. 2). When the top 100 most cited studies on BD were examined, the top three areas were treatment (26%), pathogenesis (17%), and Vasculobehcet (14%), respectively. (Table 3) It was determined that the average number of citations in both total and annual studies related to the diagnostic criteria was higher. Looking at the years, it was seen that studies on treatment and genetics were at the forefront with the 2010s, when studies in the field of disease pathogenesis attracted attention until the early 2010s (Fig. 3). The names, years, authors and average annual citation numbers, and total citation numbers of the first 100 studies were reported in Table 5.

The top three journals with the top 100 most cited publications are "Annals of the Rheumatıc Diseases" (9%), "Journal of Rheumatology"(8%), and "Arthritis and Rheumatism"(8%) respectively (Table 3). The distribution of articles in terms of Q indexes was Q1 69%, Q2 21%, Q3 8%, Q4 2% (Table 3). It was found that the total and average annual citation numbers of publications published in journals with Q1 indexes were higher. The impact factors of the journals had a moderate positive correlation relationship between

Table 1. The first authors of the 100 most cited articles about Behcet's Disease in the literature

First Authors Names	Number of cited articles
Hamuryudan V, Sfikakis PP	4
Gul Ahmet, Hatemi Gulen, Yazici H, Yurdakul S	3
Alpsoy E, Davatchi F, Evereklioglu C , Kotter I, Mizuki N, Ohno S, Tugal-Tutkun I, Serdaroglu, P	2
Akman-Demir G, Aktulga E, Al-Araji A, Arida A, Azizlerli G, BayraktarY, Benezra D, Bhakta BB ,Calamia Kenneth T., Chambers JC, Chi Wei, de Chambrun Marc Pineton, Dick Andrew D. ,Direskeneli H, Erkan F, Espinosa G, Frassanito MA ,Geri Guillaume,Ghate JV, Hamza M, Hamzaoui K Hasan A, Hassard PV, Kaklamani VG,Kashara Y,Kidd D ,Kirino Y, Koc Y ,Kocer N,Kone-Paut I, Kural-Seyahi E, Kurokawa MS,Lakhanpal S , Lee KH, Lehner T, Lie JT, Mahr A, Masuda K, Matsumoto T, Mege JL, Melikoglu M, Mendes D,Mizushima Y, Mogulkoc N, Niwa Y,Nussenblatt RB, Oduffy JD, Ozyazgan Y,Park JH, Pervin K, Remmers Elaine F, Saadoun D, Sakane T, Sayinalp N, Siva, A, Takeno M, Turan B, Tursen U, Tuzun H, Verity DH, Wwchsler B, Zhou Q, Zouboulis CC	1

Table 2. The first authors of the 100 most cited articles about Behcet's Disease in the literature

Institutions of the First Authors	Number of cited articles
Istanbul University	32
Mayo Clinic, St Marianna University	4
Hacettepe Unıv., National Institutes of Health, United Med & Dent Sch, Guys & St Thomas Hosp, Univ. Athens	3
Akdeniz Univ, Hokkaıdo Unıv, Pitié-Salpêtrière University Hospital, Tübingen Univ Hosp, Univ Tehran	2
Beth Israel Hosp ,Bristol Eye Hosp, Cedars Sinai Med Ctr, Epe Ctr Hosp Vila Nova Gaia Espinho, Erciyes Univ, Fac Med Tunıs, Free ,Univ Berlin, Gaziantep Univ, Grp Hosp Pıtıe Salpetrıere, Hop Nord Marseille, Hosp Clin Barcelona, Juntendo Unıv, Kınkı Unıv, Kochı Prefectual Hosp, Laikon Gen Hosp, Marmara Univ, Med Univ Tunis, National Eye Institute, Royal Free Hosp, St Thomas Hosp, Sun Yat Sen Univ, Tokaı Unıv, Unıv Manchester, Unıv Tokyo, Unıv Zurıch Hosp ,Univ Bari, Univ Hosp N Staffordshire, Univ Leeds, Univ London Imperial Coll, Univ Mersin, Univ Paris, Upmc Hop La Pitie Salpetriere, Wake Forest Univ, Wythenshawe Hosp ,Yokohama City Univ, Yonsei Univ	1

the total number of citations (r=0.506; p<0.01) (Table 4).

When the countries of the first authors were evaluated, 42% were determined to be Turkey, and 13% were Japan, 69% were European, and 31% were non-European. When the countries of the journals were evaluated, 56% were identified to be America, and 27% were identified to be England. When the journals were evaluated on a continental basis, they were determined as 35% European and 65% non-European journals (Table 2).

While there was no significant relationship between the author's continent, the continent of the journal and the type of study, and the total and the annual number of citations (p>0.05), a significant relationship was found between the year of publication of the article, the q index and class of the journal and the number of annual citations (p<0.001). In addition, a significant relationship was found between the topic of the study and the presence of an author group in the study and both the average number of citations and the annual number of citations. The specialties of the authors responsible for the articles were 35% Rheumatology, 15% Ophthalmology, 12% Internal Medicine, 7% Dermatology, 7% Immunology, 6% Neurology, and 18% other specialties. Of the 100 most cited studies on BD, 48% were prospective studies, 24% were reviews, 20% were retrospectives, 2% were guidelines, and 6% were other studies. It was found that both the total and average annual citation numbers of guideline-enabled study types were higher. When viewed by year, it is seen that retrospective studies and compilations decrease over time (Fig. 4).

According to the Web of Science journal classes, 39% of the studies were in the category of rheumatology, 15% in "Medicine, General & Internal, and 10% in immunology (Table 3). The total and average annual citations of publications published in journals in the Genetics & Heredity category were found to be higher.

DISCUSSION

BD is a chronic systemic inflammatory vasculitis that shows recurrent oral and genital ulcerations, cutaneous lesions, ophthalmic, neurological, and gastrointestinal involvement (10). Although environmental and genetic factors contribute to this disease, which is spreading globally worldwide but is more commonly detected in the silk road population, the mechanism of the disease remains unclear (10). The estimated prevelance in Turkey is between 20 and 420 per 100,000 and 13.5-30 per 100,000 in other Asian countries (12). Estimated prevelance was found to be lower in western countries, with 0.12 to 0.33 in 100,000 in the United States and 0.64 in 100,000 in the United Kingdom(12). These days when rheumatological diseases are important in the clinic, it is crucial to follow the developments related to BD, one of the crucial rheumatological diseases. Therefore, it is necessary for every clinician to know BD well and to follow the future of developments and

Table 3. The characteristics of the 100 articles about Behcet's Disease in the literature.

Parameters	Subgroups	n	**Total number of citations** mean ± SD	**Citiations per year(mean Citiations)** mean ± SD	**p (Total number of citations)**	**p (Citiations per year)**
Year	<1990	18	372,44±664,38	10,92±20,92	0,979	**<0,001**
	1991-1994	9	210,44±103,91	7,08±3,50		
	1995-1999	21	264,61±249,32	11,14±10,92		
	2000-2004	26	209,76±83,60	10,68±4,47		
	2005-2009	13	222,15±87,14	15,39±6,29		
	2010-2014	11	251±128,33	24,01±15,92		
	>2015	2	188,50±14,84	47,12±3,71		
Author's Continent	Europe	69	256,08±348,40	12,63±12,27	0,988	0,456
	Non-Europe	31	256,93±212,47	14,80±15,75		
Author's Country	Turkey	42	227,38±105,66	11,42±8,51	0,183	0,566
	Japan	13	329,76±294,88	15,61±15,40		
	Other	10	206,10±110,11	14,14±17,42		
	England	9	511,88±937,81	20,18± 28,19		
	USA	8	199,87 ±108,58	9,96±10,58		
	Greece	6	243±90,49	13,64±4,08		
	France	6	169,50±34,55	12±5,24		
	China	3	178,66±43	21,63±20,60		
	Germany	3	173,33±9,29	8,77±1,24		
Author's Branch	Rheumatology	35	231,02±105,50	13,40±12,29	0,062	0,284
	Other	18	331,61±671,71	14,98±22,65		
	Ophtalmology	15	256,06±81,42	13,13±6,94		
	Internal Diseases	12	206,16±96,50	10,05±5,55		
	Immunology	7	354,42±409,81	19,60±18,59		
	Dermatology	7	175,28±34,90	9,01±2,02		
	Neurology	6	259,50±127,68	12,32±6,76		
Group of authors	No	98	251,23±312,62	12,71±12,54	**0,004**	**0,015**
	Yes	2	507±11,31	42,38±28,27		
Journal Q Index	Q1	69	277,01±369,79	15,16±15,48	0,589	**0,038**
	Q2	21	201,09±78,90	8,0929 ±4,15457		
	Q3	8	103,26±103,26	12,28±5,84		
	Q4	2	211±94,75	8,16±5,55		
Journal's Country	USA	56	239,73±168,54	13,77±12,09	0,791	0,366
	England	27	326,40±545,64	15,21±18,57		
	Canada	9	218,22±105,21	8,58±4,47		
	Other	8	179,12±33,61	8,91±4,65		
Journal's Continent	Non Europe	65	236,75±160,78	13,05±11,46	0,508	0,820
	Europe	35	292,74±481,50	13,77±16,60		

Table 3. Continue

Name of the Journal	Ann Rheum Dis.	9	217,88±113,12	15,47±15,64	0,347	0,186
	J Rheumatol.	8	226,37±109,39	9,11±4,47		
	Arthritis Rheum.	8	175,62±30,91	8,47±2,82		
	Lancet	4	968,75±1364,81	31,94±41,70		
	Nat Genet.	4	321,50±105,90	36,40±5,87		
	Semin Arthritis Rheum.	3	235,66±95,71	13,79±4,25		
	Bmc Ophthalmology	3	166±22,33	6,39±2,84		
	Am J Med.	2	136,5±4,94	7,21±0,79		
	Ann Intern Med.	2	253,50±96,87	11,85±2,22		
	Brain	2	371±203,64	16,13±8,85		
	Hum Pathol.	2	240,50±95,45	6,95±1,93		
	J Neurol.	2	187,50±3,53	8,38±0,94		
	N Engl J Med.	2	849,50±596,09	34,32±29,61		
	Rheumatology	2	196,50±33,23	11,09±5,05		
	Am J Gastroenterol.	1	136	5,44		
	AJNR Am J Neuroradiol	1	183	7,96		
	Am J Ophthalmol.	1	360	20		
	AJR Am J Roentgenol.	1	143	3,76		
	Ann. Méd. Interne	1	169	7,35		
	Arch Dermatol.	1	186	9,3		
	Arch Neurol.	1	191	5,79		
	Arch Ophthal.	1	343	8,58		
	Arthritis Rheum.	1	135	10,38		
	AC&R Journal	1	229	17,62		
	Autoimmun Rev.	1	182	18,2		
	Br J Dermatol.	1	136	9,07		
	Br J Rheumatol.	1	206	7,36		
	Chest	1	145	6,59		
	Clin Exp Immunol.	1	189	4,73		
	Clin Exp Med	1	170	9,44		
	Clin Exp Rheumatol.	1	250	11,9		
	Clin Rheumatol.	1	168	14		
	Dis Colon Rectum.	1	209	5,1		
	Gastroenterology	1	138	6,57		
	Haematologica	1	143	3,4		
	Infect Immun.	1	188	6,06		
	Int J Dermatol.	1	219,5	11,55		
	Int J Tissue React.	1	144	4,24		
	Invest Ophthalmol Vis Sci	1	222	15,86		
	J Allergy Clin Immunol	1	136	12,36		

Table 3. Continue

	J Autoimmun.	1	198	15,23		
	J Immunol.	1	133	4,59		
	J Pediatr.	1	164±153	6,83±4,37		
	J Rheumatolog	1	153	4,37		
	J Am Acad Dermatol.	1	147	6,39		
	J Am Coll Cardiol.	1	164	7,81		
	J. Eur. Acad. Dermatol. Venereol.	1	499	62,38		
	Lancet Neurol.	1	249	19,15		
	Mediators Inflamm.	1	169	8,45		
	Medicine	1	475	25		
	Nat Clin Pract Rheumatol.	1	191	12,73		
	Neurology	1	170	5,67		
	Ophthalmology	1	177	19,67		
	Proc Natl Acad Sci U S A.	1	331	13,24		
	Rheum Dis Clin North Am.	1	138	4,31		
	Scand J Rheumatol Suppl	1	267	13,35		
	Surgery	1	154	6,16		
	Surv Ophthalmol		278	16,35		
	Thorax	1	147	7		
	Tissue Antigens	1	278	12,09		
Journal's Category	Rheumatology	39	205,48±80,68	11,27±8,36	0,099	**0,030**
	Medicine, General & Internal	15	510,86±747,40	19,82±23,95		
	Immunology	10	190,90±86,42	11,28±9,94		
	Ophthalmology	8	234,75±82,76	12,45±6,29		
	Clinical Neurology	7	246,71±121,37	11,37±6,66		
	Dermatology	6	234,50±134,45	21,64±18,37		
	Other	6	156±15,28	6,38±1,41		
	Genetics & Heredity	3	286,33±96,96	36,67±7,16		
	Pathology	3	253±70,88	8,66±3,26		
	Gastroenterology & Hepatology	3	161±41,58	5,70±0,76		
Article Type	Prospective	48	276,14±413,50	13,96±16,42	0,249	0,080
	Review	24	251,75±224	13,13±9,96		
	Retrospective	20	234,35±121,24	10,56±5,76		
	Other	6	163±37,01	8,35±5,08		
	Guideline	2	336,50±194,45	41,80±11,23		
Article Topic	Treatment	26	219±93,56	12,69±9,61	**0,022**	**<0,001**
	Pathogenesis	17	190,35±49,75	8,93±4,08		
	Vasculobehcet	14	174,85±83,19	6,35±2,82		
	Diagnostic Criteria	2	1754,50±1775,54	78,22±22,40		
	Mortality	2	305,50±239,70	18,16±9,66		
	Ocular Behcet	2	268,50±129,40	19,83±0,23		

studies. Bibliometric studies can be a guide in BD, as in other areas where they are carried out. Using the Web of Science search engine, valuable information such as database, academic personal citation statistics, average citation indexes can be accessed (1,13).

Bibliometric studies have been carried out in various disciplines around the world and our country. In the 100 most cited studies in Rheumatoid Arthritis conducted by Yin et al. (13), it is seen that the studies were mostly conducted between 2000-2004, and the studies were mostly conducted between 2001 and 2007 when they examined the 100 most cited articles in Psoriatic arthritis by Berlinberg et al. (14). Like the literature, the most studied years in our study were between 2000 and 2004, with 26 studies. While a significant relationship was found between the increasing years and the average number of citations per year, no significant correlation was found with the total number of citations. In this respect, our study is similar to the studies of Büyükçoban et al. (15) The relevant situation indicates that the information is up-to-date, new information rapidly replaces old information, and is frequently used.

In the bibliometric study of Akyol et al. (16), including publications on rehabilitation in Ankylosing Spondylitis, the authors were mostly from Germany, followed by Turkey and the USA, Bagcier et al. (17) In his study of the most cited articles in ankylosing spondylitis, it was determined that the authors were mostly nationals of Germany, the Netherlands and then the United Kingdom, respectively. Turkey, Japan, and then the United Kingdom were the countries that contributed the most to the BD-related studies in our study. This can be explained by the interest of Turkish authors in the disease since Behcet's disease was more common in Turkey, and the person who identified the disease was a Turkish dermatologist.

Our study was mostly written by rheumatologists and then by ophthalmologists and internal medicine specialists, as in the study of Berlinberg et al. (14), in which 100 most cited articles on psoriatic arthritis were evaluated. Uveitis, a common complication of BD, is under the attention of ophthalmologists. Again, a significant relationship was found between the presence of Group Authors in the studies and both the total number of citations ($p<0.004$) and the average annual number of citations (p0.015). This indicates that the studies, which are multi-centered and include many experts in their fields, are of higher quality and value.

In the study of Kwan et al. (18), which included the 100 most cited articles in the field of Rheumatology, the journal with the most articles was found to be "Arthritis and Rheumatism" and then the "New England Journal of Medicine." In the study of Bagcier et al. (17), the largest number of studies were published in the journal "Arthritis and Rheumatism" and then in the "Annals of the Rheumatic Diseases" journal. In our study, the most cited studies on BD were "Annals of the Rheumatic Diseases" (9%), "Journal of Rheumatology" (8%), and "Arthritis and Rheumatism"(8%), respectively. Our study shows similarities compared with the journals in which the most cited other rheumatic diseases were published. In the studies of Yin et al. (13) on Rheumatoid Arthritis and Buyukcoban et al. (15) on the 100 most cited articles on geriatric anesthesia, most studies were published in journals from the USA, followed by journals from the UK. Our study is similar to the literature in this aspect.

In our study, we found that more publications were made in developed countries, as in the study of Şenel et al. (19). On the other hand, it is known that the

Table 4. Correlation relationships and correlation coefficients between the number of citations, publication year and journal impact of the 100 most cited studies on Behçet's disease (r)

	Number of Citiation	Average Number of Citations per Year	Journal Impact factor	Year of Publication
Number of Citiation	1	0,781**	0,506**	-0,076
Average Number of Citations per Year	0,781**	1	0,462**	0,382**
Journal Impact factor	0,506**	0,462**	1	0,012
Year of Publication	-0,076	0,382**	0,012	1

* p<0.05, Pearson correlation analysis; ** p<0,001 Pearson correlation analysis

Table 5. Overall and mean annular citation numbers and PubMed reference number (PMID) of the 100 articles about Behcet's Disease in the literature.

Number	The names of the authors and years	PMID	Number of Citation	Mean Annular Citation number
1	Silman AJ, 1990	1970380	3010	94,06
2	Sakane T et al, 1999	10528040	1271	55,26
3	Akman-Demir G et al, 1999	10545401	515	22,39
4	Davatchi F et al, 2014	23441863	499	62,38
5	Kural-Seyahi E et al, 2003	12544711	475	25
6	Hatemi G et al, 2008	18245110	474	33,86
7	Koc Y et al, 1992	1578454	455	15,17
8	Yazici H et al, 1990	2404204	428	13,38
9	Remmers EF et al, 2010	20622878	427	35,58
10	Sfikakis PP et al, 2001	11498218	366	17,43
11	Mizuki, N. et al, 2010	20622879	365	30,42
12	Tugal-Tutkun I et al, 2004	15364218	360	20
13	Masuda K et al, 1989	2566048	358	10,85
14	Kaklamani VG et al, 1998	9514126	345	14,38
15	Ohno S et al, 1982	6956266	343	8,58
16	Mizuki N et al, 1997	9037047	331	13,24
17	Hamuryudan V et al, 1998	9499327	322	13,42
18	Kirino, Y et al, 2013	23291587	316	35,11
19	Lakhanpal S et al, 1985	4018777	308	8,32
20	Yazici H et al, 1984	6524980	306	8,05
21	Mege JL et al, 1993	8164212	292	10,07
22	Evereklioglu C, 2005	15967189	278	16,35
23	Verity DH et al, 1999	10519357	278	12,09
24	Ohno S et al, 2004	15229958	268	14,89
25	Hamzaoui K et al, 2002	12369651	267	13,35
26	Direskeneli H, 2001	11602462	258	12,29
27	Gül A, 2001	11760403	250	11,9
28	Al-Araji A et al, 2009	19161910	249	19,15
29	Azizlerli G et al, 2003	14521694	231	12,16
30	de Menthon M et al, 2009	19790126	229	17,62
31	Kidd D et al, 1999	10545402	227	9,87
32	Chi, W et al ,2008	18579762	222	15,86
33	Sfikakis PP et al, 2007	17403712	220	14,67
34	Yurdakul S et al, 2001	11710724	219	10,43
35	Tugal-Tutkun I et al, 2005	16052571	215	12,65
36	Kasahara Y et al, 1981	7215071	209	5,1
37	Tursen U et al, 2003	12755969	208	10,95
38	Hamuryudan V et al, 1994	8162457	206	7,36
39	Melikoglu M et al, 2005	15630733	201	11,82
40	Hatemi G et al, 2018	29625968	199	49,75
41	Mendes D et al, 2009	19324519	198	15,23
42	Arida A et al, 2011	21168186	195	17,73
44	Serdaroglu P et al, 1989	2919979	191	5,79
43	Yazici H et al, 2007	17334337	191	12,73
45	Siva A et al, 2001	11284141	190	9,05
46	Niwa Y et al, 1982	7127901	189	4,73
47	Lehner T et al, 1991	2004821	188	6,06
48	Frassanito MA et al, 1999	10513814	187	8,13
49	Alpsoy E et al, 2002	11939808	186	9,3
50	Hamuryudan V et al, 1997	9125262	185	7,4
51	Serdaroglu P et al, 1998	9591220	185	7,71
52	Sfikakis PP et al, 2004	14996689	185	10,28
53	Kotter I et al, 2003	12642304	184	9,68
54	Kocer N et al, 1999	10445437	183	7,96
55	de Chambrun MP et al, 2012	22197900	182	18,2
56	Zhou Q et al, 2016	26642243	178	44,5
57	Dick AD et al, 2013	23290985	177	19,67
58	Benezra D et al, 1986	3741823	173	4,81
59	Bhakta BB et al, 1999	10501420	173	7,52
60	Matsumoto T et al, 1991	1985077	173	5,58
61	Kurokawa MS et al, 2004	16088499	170	9,44
62	Wechsler B et al, 1992	1549224	170	5,67
63	Evereklioglu, C et al, 2002	12061429	169	8,45
64	Zouboulis CC et al, 1999	10615535	169	7,35
65	Davatchi F et al, 2010	20354748	168	14
66	Kotter I et al, 2004	15079763	167	9,28
67	Yurdakul S et al, 1998	3172095	165	4,85
68	Chambers JC et al, 2001	11216972	164	7,81

Table 5. Continue

Table 5. Continue

69	Koné-Paut I et al, 2001	9580778	164	6,83
70	Nussenblat RB et al, 1985	4004976	163	4,41
71	Gul A et al, 2012	22084392	160	7,41
72	Turan B et al, 1997	9002023	159	6,36
73	Tuzun H et al, 1997	9037226	154	6,16
74	Hamza M, 1987	3625635	153	4,37
75	Lee KH et al, 2003	12847697	150	7,89
76	Takeno M et al, 1995	7880197	150	5,56
77	Erkan F et al, 2001	11413359	147	7
78	Ghate JV et al, 1999	9922007	147	6,39
79	Sfikakis PP et al, 2002	12379622	147	7,35
80	Mogulkoc N et al, 2000	10936144	145	6,59
81	Mizushima Y, 1988	3053482	144	4,24
83	Aktulga E et al, 1980	6778795	143	3,4
82	Park JH et al, 1984	6332492	143	3,76
84	Hasan A et al, 1996	8622334	141	5,42
85	Ozyazgan Y et al, 1992	1390495	141	4,7
86	Hamuryudan V et al, 2004	15589493	140	7,78
87	Hatemi G et al, 2009	18420940	140	10,77
88	Yurdakul S et al, 1983	6625699	140	3,59
89	Hassard PV et al, 2001	11231954	138	6,57
90	Oduffy JD et al, 1990	2189158	138	4,31
91	Gul A et al, 2000	10913059	137	6,23
92	Alpsoy E et al, 2007	17711526	136	9,07
93	Bayraktar Y et al, 1997	9149201	136	5,44
94	Geri G et al, 2011	21724243	136	12,36
95	Lie JT, 1992	1578445	136	4,53
96	Saadoun D et al, 2010	20496419	136	11,33
97	Calamia KT et al, 2009	19405011	135	10,38
98	Sayinalp N et al, 1996	8882039	135	5,19
99	Espinosa G et al, 2002	11812405	133	6,65
100	Pervin K et al, 1993	7688396	133	4,59

PMID: PubMed reference number

prevalence of the disease is higher in undeveloped or developing countries.

In the study conducted by Berlinberg et al. (14), in which the 100 most cited articles in psoriatic arthritis were evaluated, the journals in which the studies were included were mostly in the field of Dermatology after Rheumatology, while in our study, Medicine, General & Internal was the field after Rheumatology the most. Although our study is similar to the literature in this aspect, a significant relationship was found between the journal class and the annual average number of citations ($p<0.030$). The relevant situation indicates that the authors submitted their studies to the journals they selected by looking at the journal categories, and therefore, more citations occurred in the specific journal categories. Berlinberg et al. (14) stated that the researchers sent their studies to journals with high impact factors and that the number of citations in these journals was high. Similarly, there is a significant relationship between the high journal impact factor and the total and annual citation count in our study. It was observed that the total number of citations was higher in journals with high impact factors.

In the study conducted by Yin et al. (13), when the study types were examined, it was reported that the reviews came after the randomized controlled, prospective clinical study types. Similarly, in the study of Bagcier et al. (17), randomized controlled, prospective clinical study types are in the first place. Similar to the literature, randomized controlled, prospective clinical study is in the first place in our study, followed by reviews. In our study, when we look at the years, compilation and observational retrospective studies have left their place to guideline and prospective studies.

In the study conducted by Bagcier et al. (17), in which the most cited articles on Ankylosing Spondylitis were evaluated, the first line of treatment was treatment, followed by disease activity and pathogenesis. In the study of Yin et al. (13), treatment is the first line, followed by pathogenesis and risk factors. In our study, treatment (n=26) was the first line, followed by pathogenesis (n=17). Our study is similar to the literature in this respect. In addition, in our study, there is a significant relationship between the study subject and the total number of citations ($p=0.022$) and the annual average number of citations ($p<0.001$). We can explain this situation by making more references to current popular topics related to the disease by the researchers. Considering the years, research on pathogenesis has decreased and left its place in treatment and genetics. Thanks to

bibliometric analyses, future study topics will change according to need (20).

The most important limitation of our study is that the search keys used when searching the Web of Science database and enabling the algorithm to find and list the relevant publications are given by the Web of Science itself, and some studies on the subject cannot be included in the list resulting from the search. However, although this rate is very low, it is not a limitation specific to this study, and all studies on this subject have the same limitation.

As a result, our study examining the citation numbers of international articles on BD is a valuable study in this respect. In this study, the Institute for Scientific Information and Web of Science search engine (11) made an evaluation of the most cited internationally sourced articles about BD, examining these articles according to authors, countries, and institutions, and evaluating which journals they were published in. As a result of our study, it was found that the annual number of citations increased for newer studies, both total and average annual citations were higher for studies with a group of authors, annual citation numbers were higher in Q1 journals, journals in the Genetics & Heredity category received more average annual citations, articles dealing with diagnostic criteria had more citations, and finally, guideline-specific study types were found to have more citations. The bibliographic articles created by using scientific search engines are guiding on which subject to focus on researches. It is also recommended that such studies be updated and rewritten at certain time intervals to carry out healthy data analysis.

Acknowledgment: The Authors thank University Hospital for their valuable technical assistance.

Author contributions: Concept – E.O, V.H.; Design - E.O, V.H.; Supervision - V.H.; Data Collection and/or Processing – E.O.; Analysis and/or Interpretation –V.H.; Literature Search - E.O.; Writing Manuscript – E.O.,V.H.; Critical Review – V.H.

Conflict of Interest: The authors declare no conficts of interest.

Ethical Approval: No human participants/animals were evaluted. The study was approved by Non-Interventional Clinical Research Ethics Committee (protocol number6272-GOA 2021/16-31,27.05.2021).

Funding: The authors received no financial support for the research, authorship, and/or publication of this article.

Peer-review: Externally peer-reviewed.

REFERENCES

1. Terajima K, Aneman A. Citation classics in anaesthesia and pain journals: a literature review in the era of the internet. Acta Anaesthesiol Scand. 2003;47:655-63.
2. Ang HM, Kwan YH. Bibliometric analysis of journals in the field of geriatrics and gerontology. Geriatr Gerontol Int. 2017;17:357-360.
3. Garfield E. 100 citation classics from the journal of the American Medical Association, JAMA 1987;257:52-9.
4. Ohba N, Nakao K, Isashiki Y. The 101 most frequently cited articles in ophthalmology journals from1850 to 1950. Arch Ophthalmol 2010;128:1610-7.
5. Paladugu R, Schein M, Gardezi S, Wise L. One hundred citation classics in general surgical journals. World J Surg. 2002;26(9):1099-1105.
6. Bağcıer F, Inal Yorulmaz E, Çağlar Yağcı H. Top 100 cited articles on fibromyalgia syndrome: A bibliometric and altmetric analyses study. Agri. 2021;33:53-63
7. Kreutzer JS, Agyemang AA, Weedon D, et al. The top 100 cited neurorehabilitation papers. NeuroRehabilitation. 2017;40(2):163-174.
8. Hatemi G, Seyahi E, Fresko I, Talarico R, Hamuryudan V. One year in review 2020: Behçet's syndrome. Clin Exp Rheumatol. 2020;38 Suppl 127(5):3-10.
9. Davatchi F, Chams-Davatchi C, Shams H, et al. Behcet's disease: epidemiology, clinical manifestations, and diagnosis. Expert Rev Clin Immunol. 2017 Jan;13(1):57-65.
10. Chen J, Yao X. A Contemporary Review of Behcet's Syndrome Clin Rev Allergy Immunol. 2021;10.1007/s12016-021-08864-3.
11. Thomson Scientific ISI Web of Knowledge: http://scientific.thomson.com/webofknowledge.
12. Jabs DA, Dick AD, Dunn JP, et al. Classification criteria for Behçet Disease Uveitis Am J Ophthalmol. 2021;S0002-9394(21)00183-5
13. Yin X, Cheng F, Wang X, et al. Top 100 cited articles on rheumatoid arthritis: A bibliometric analysis. Medicine (Baltimore). 2019 Feb;98(8):e14523.
14. Berlinberg A, Bilal J, Riaz IB, Kurtzman DJB. The 100 top-cited publications in psoriatic arthritis: a bibliometric analysis. Int J Dermatol. 2019;58:1023-34
15. Buyukcoban S, Oner O, Hanci V. A bibliometric analysis of the most cited articles in Geriatric Anesthesia. Turkish Journal of Geriatrics 2020; 23: 410-8.
16. Akyol A, Kocyigit BF. Ankylosing spondylitis rehabilitation publications and the global productivity: a Web of Science-based bibliometric

analysis (2000-2019) Rheumatol Int. 2021;10.1007/s00296-021-04836-0.
17. Bagcier F, Yurdakul OV, Ozduran E. Top 100 cited articles on ankylosing spondylitis. Reumatismo. 2021;72:218-27.
18. Kwan YH, Chua CJ, Kian JXL, Fong W. Top 100 cited articles in the field of rheumatology. Eur J Rheumatol. 2017 Dec;4(4):294-304.
19. Şenel E, Demir E, Alkan RM. Bibliometric analysis on global Behçet disease publications during 1980-2014: is there a Silk Road in the literature? J Eur Acad Dermatol Venereol. 2017 Mar;31(3):518-522.
20. Oner O, Hanci V. Bibliometric Analysis of the 100 Most Cited Articles on Covid-19 in the Intensive Care Field. J Basic Clin Health Sci 2021; 3: 51-65.