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Comparison of Quartile Scores of Mycology Journals Covered by Web of Science and SCImago SCOPUS Databases

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Abstract: Millions of papers are published in scientific journals every year. For example, 3,194,821 papers were published only in the Clarivate Analytics Web of Science Core Collection Database in 2020. However, the citation rates, h index and Q scores of journals are different from each other. While important scientific results are published in some journals, which are the basis of the literature, other journals may be weak and their citation rates may low. The data used in this study are taken from Clarivate Analytics Web of Science and SCImago SCOPUS databases. In this study, we tried to take attention some data about Q scores of scientific journals. The Q scores of scientific journals have become important in academic appointments in Turkey and also become one of the quality indicators of journals. For this purpose, some data of 30 mycology journals were taken from Clarivate Analytics Web of Science and SCImago SCOPUS databases. Q scores, h index, impact factor scores and some other data of these mycology journals were given in table and analyzed. While there are 8 journals in the Q1 category covered by Web of Science, there are 20 journals in the Q1 category covered SCImago SCOPUS. This is due to the different number of journals and subject categories in both databases. Among 30 mycology journals, Fungal Diversity was the journal with the highest impact factor and Q1 category with 15.39 in the year of 2019. The journal with the highest h index score is Mycologia with a score of 128. In addition, number of papers with Turkey addressed published in 30 mycology journals are given (790 publications, 638 full article) in this study.

Key words: Journal, Quartile Scores, Web of Science, Mycology, SCImago SCOPUS.

Web of Science ve SCOPUS Veritabanları Kapsamında olan Mikoloji Dergilerinin Q Değerleri Analizi

Öz: Her yıl bilimsel dergilerde milyonlarca yayın çıkmaktadır. Örneğin 2020'de Sadece Clarivate Analytics Web of Science Core Collection Veritabanında 3,194,821 yayın çıkmıştır. Ancak dergilerin atıf alma oranları, h indeks ve Q değerleri birbirinden farklıdır. Önemli bilimsel sonuçlar literatürün temeli olan bazı dergilerde yayınlanırken, diğer dergiler daha zayıf kalabilmekte ve atıf oranları da düşük olmaktadır. Bu çalışmada kullanılan veriler, Clarivate Analytics Web of Science ve SCImago SCOPUS veritabanlarından alınmıştır. Bu çalışmada, bilimsel dergilerin Q değerleriyle ilgili bazı verilere dikkat çekilmeye çalışılmıştır. Bilimsel dergilerin Q değerleri, Türkiye'de akademik atamalarda önemli hale gelmiş ve ayrıca dergilerin kalite göstergelerinden biri olmuştur. Bu amaçla 30 mikoloji dergisinin bazı verileri, Clarivate Analytics Web of Science ve SCImago SCOPUS veritabanlarından alınmıştır. Bu mikoloji dergilerinin Q, h indeks, etki faktörü değerleri ve diğer bazı veriler tablo halinde verilip analiz edilmiştir. Web of Science kapsamında Q1 kategorisinde 8 dergi varken, SCImago SCOPUS kapsamında Q1 kategorisinde 20 dergi vardır. Bu durum, her iki veritabanındaki dergi sayısının ve konu kategorilerinin farklı olmasından kaynaklanmaktadır. 30 mikoloji dergisi içinde Q1 kategorisinde olan ve impact factor değeri en yüksek dergi, 2019 yılında 15.39 ile Fungal Diversity olmuştur. h indeks değeri en yüksek olan dergi ise 128 değeri ile Mycologia'dır. Ayrıca, bu çalışmada 30 mikoloji dergisinde çıkan Türkiye adresli yayın sayıları da verilmiştir (790 yayın, 638 tam makale).

Anahtar kelimeler: Dergi, Çeyreklik Değer, Web of Science, Mikoloji, SCImago SCOPUS.



Introduction

Millions of scientific studies are published annually in periodicals and scientific books (including proceeding books). 3,194,821 papers were published only in Clarivate Analytics Web of Science (WOS) (https://ssl.trakya.edu.tr:10443/proxy/12a10750/http/apps.webofknowledge.com/WOS_GeneralSearch_input.do?product=WOS&search_mode=GeneralSearch&SID=D3hEE9ZziRqTKwBKfzP&preferencesSaved). Core Collection Database in 2020. When only journals covered by Science Sication Expanded (SCI-Expanded), Social Science Citation Index (SSCI), Arts and Citation Citation Index (AH&CI) and Emerging Science Citation Index (ESCI) are taken into account, the number of papers for the same year were 3,070,825. There are 21,470 journals (April 4, 2021) (<https://mjl.clarivate.com/search-results>) within the scope of these four indexes (in reality this number be less because of sometimes a journal can be in two different databases) and the number of journals is increasing day by day. However, some questions may be asked on the subject: Are all of these journals of the same value? What does it mean to be of the same value or not? Can this be measured? It is difficult to give clear answers to these questions. Some analytical sources such as impact factor (IF), h index, immediacy index, etc. were evaluated for measure of journal's quality. However, mentioned analytical sources are controversial among researchers. It was determined by Bradford in 1935 that not all scientific journals are of the same quality. Bradford examined around 1000 scientific journals in 1935 and saw that important scientific results appeared only in a small number of journals that form the basis of the literature (Bradford Law) (Asan et al., 2020). Also Garfield (1972) argued that Gross and Gross's work in 1927 contributed to Bradford's work. At the end of the 1950s, the founder of Institute for Scientific Information (ISI) (now Clarivate Analytics), Dr. Eugene Garfield mentioned the concept of citation indexing and since 1963 SCI content has become commercially available (<https://clarivate.com/webofsciencegroup/essays/history-of-citation-indexing/>).

The concept of impact factor was first introduced in 1955 by Eugene Garfield. Garfield published an analysis in 1972 that mentioned the importance of citation analysis in the development of a journal. Web of Science-Journal Citation Reports (WOS-JCR) has been published since 1975 (<https://clarivate.com/webofsciencegroup/essays/journal-self-citation-jcr/>). Then some analytical indexes have been further developed such as immediacy index, cited half-life, eigenfactor score, etc

(https://goums.ac.ir/files/sci/files/Citation_Analysis.pdf).

In 2005, the concept of h index was introduced by Hirsch and it has been widely used. The purpose of the analytical sources is to measure scientific productivity. The concept of Quartile Score (Q Score) of scientific journals (see Asan & Aslan, 2020 for detailed information) is also used by WOS and SCOPUS databases. In fact, even when data on Q scores of scientific journals were not yet used, citation analyzes were conducted for scientific journal rankings; for example, Vishwanatham (1998) mentioned citation analysis in journal rankings. Garfield indicated that about the use of journal citation reports and journal performance indicators in the measurement of journal impact in the short and long term in 2000 and he explained the subject by giving examples of journals such as The Review of Scientific Instruments, Cell, Nature, Science and J. Biol. Chem.

The Q values of the journals are related to the IF score (Figure 1). If a journal's impact factor score is not calculated (for example, the impact factor scores of journals covered by AH&CI and ESCI within WOS are not published), there is also no Q value. Because journals are ranked according to their impact factor scores, while the first 25% slice is Q1, while the last 25% slice is Q4 (Figure 1).

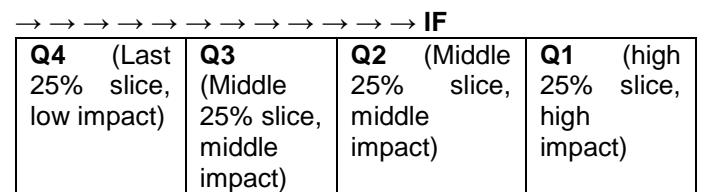
WOS-JCR and SCImago SCOPUS databases use the Q scores of scientific journals, but since the journals covered by these databases are different, the same journal in both databases can receive different Q or h index scores (Table 1). The use of the WOS database requires subscription, while the SCImago SCOPUS database is open access. Discussions on the subject are also ongoing. Are the distributions of papers published in journals in WOS and SCOPUS databases homogeneous or heterogeneous according to Q categories? Studies have shown that the distribution is not homogeneous. For example Liu et al. (2016), when they examined the JCR 2015 data, they saw that 33% of the papers for this year were published in Q1 journals and 16.5% in Q4 journals. Miranda and Garcia-Carpintero (2019) stated that 45.7% of the papers in the WOS database were published in journals in the Q1 category, although this rate varied between 25.4% and 85.6% according to the subject category, and that the citations received by Q1 journals were 2.07 times higher to Q2 journals and according to the subject category, they stated that this ratio varies between the 0.9-6.1. Orbay et al. (2020) indicated that the 14.32% of papers in Q1 Journals published in an university in Turkey, while 36.49% in Q4 journals are published and citations in Q1 journals approximately 6 times more than Q4 journals.



There are 30 mycology journals in the WOS database (<https://mjl.clarivate.com>). However, since there is no mycology subject category in the SCImago SCOPUS database, so the number of journals in this database could not be given. As a matter of fact, Abrizah et al. (2013) stated that it is not correct to categorize the subject of journals in both databases. In our study, after determining the mycology journals within the WOS database, it was seen that all of these journals were also found in the SCImago SCOPUS database, and the data of the journals were obtained using both databases. The most recent data retrieved is for the year of 2019 because of 2020 data will be released at the end of June 2021.

The purpose of this study is to inform for researchers about mycology journals covered by WOS-SCI-Expanded, ESCI, Clarivate Analytics Biological Abstracts-BIOSIS Previews and SCImago SCOPUS databases and to make a comparative analysis of Q values of mycology journals under SCI-Expanded, ESCI and SCImago SCOPUS databases. In addition, to raise awareness among researchers that there are mycology journals within the covered in indexes other than SCI-Expanded and ESCI. In addition, in Table 1, impact factor scores are given in each 2 database of journals, from 1900 in the journal covered by WOS until April 8, 2021 are given information about Turkey addressed publications numbers (it can be see about WOS mycology journals with addressed of Turkey in Asan, 2016).

Number of papers published in mycology journals for August 5, 2015 are 529 (473 full articles), but this number was 790 for April 8, 2021 (638 full articles). During this period, there was an increase of 49.34% in the total number of papers and 34.88% in the number of full articles. However, the distribution of these publications to journals is not homogeneous. For example, There is no any paper in a journal and only one for each publication was published in four journals. 52.02% of the papers (411 papers) were published in only 2 journals (Mycoses and Mycotaxon). The data used in this study were taken from Clarivate Analytics Web of Science (<https://mjl.clarivate.com> and WOS databases needs subscription) and SCImago SCOPUS (SCImago Journal Rank-SJR) (<https://www.scimagojr.com/>) databases.



IF ← ← ← ← ← ← ← ← ← ← ← ← ←

Figure 1. As the IF value of a journal increases, the journal approaches to Q1 category, and as its IF value decreases, it approaches to Q4 category (Drawn by changing from the website: <<http://eng.unn.ru/images/files/pages/Research/research/Quartile-corr.pdf>> Access: April 8, 2021).

Table 1. List of mycology journals covered by Clarivate Analytics Web of Science (WOS) SCI-Expanded and SCImago SCOPUS, Q, IF and h index scores of journals and the number of papers with Turkey addressed (<https://mjl.clarivate.com>, <https://www.scimagojr.com/>).

Title of Journal (In alphabetical order)	WOS 2019 Q score and subject category	WOS 2019 impact factor score-IF	SCImago SCOPUS 2019 Q score	SCImago SCOPUS 2019 impact factor score	WOS and SJR h index scores (The first number is for WOS and the second number is for SJR)	Number of papers with Turkey addressed between the January 1, 1900 – April 8, 2021 in the 30 mycology journals
Cryptogamie Mycologie	Q3: Mycology (19 of 29)	2.245	Q1 (Ecology, Evolution, Behavior and systematics)	1.20	28 24	9 (9 full papers)
Fems Yeast Research	Q2: Biotechnology & Applied Microbiology (61 of 156), Q2: Microbiology (58 of 136), Q2: Mycology (8 of 29)	3.193	Q1 (Applied Microbiology and Biotechnology; Medicine), Q2 (Microbiology)	1.28	88 86	8 (6 full papers)
Fungal Biology	Q2: Mycology (14 of 29)	2.789	Q1 (Ecology, Evolution, Behavior)	0.94	49 98	2 (2 full papers)



			and systematics; Plant Science), Q2 (Genetics; Infectious Diseases)			
Fungal Biology Reviews	Q1: Mycology (4 of 29)	4.806	Q1 (Plant Sciences; Microbiology)	1.43	28 48	1 (0 full paper)
Fungal Diversity	Q1: Mycology (1 of 29)	15.386	Q1 (Ecology, Evolution, Behavior and systematics; Ecology; Plant Science)	6.95	96 88	5 (4 full papers)
Fungal Ecology	Q2: Ecology (57 of 169), Q3: Mycology (15 of 29)	2.656	Q1 (Ecology, Evolution, Behavior and systematics; Ecology; Plant Science; Ecological modeling)	1.40	54 48	1 (1 full paper)
Fungal Genetics and Biology	Q2: Genetics & Heredity (80 of 178), Q2: Mycology (11 of 29)	3.071	Q1 (Microbiology), Q2 (Genetics)	1.30	106 104	5 (4 full papers)
İma Fungus	Q1: Mycology (6 of 29)	3.636	Q1 (Agricultural and Biological Sciences; Ecology, Evolution, Behavior and systematics; Ecology; Plant Science)	1.42	37 29	4 (3 full papers)
International Journal of Medicinal Mushrooms	Q4: Mycology (25 of 29), Q4: Pharmacology & Pharmacy (223 of 267)	1.423 (2018)	Q3 (Applied Microbiology and Biotechnology; Drug Discovery, Pharmacology)	0.41	28 27	32 (32 full papers)
Journal de Mycologie Medicale	Q4: Mycology (24 of 29)	1.56	Q3 (Infectious Diseases)	0.45	28 29	31 (29 full papers)
Journal of Fungi	Q1: Mycology (5 of 29), Q1: Microbiology (31 of 136)	4.621	Q1 (Ecology, Evolution, Behavior and systematics; Microbiology, Plant Science)	1.42	29 17	13 (9 full papers)
Lichenologist	Q4: Mycology (26 of 29), Q3: Plant Sciences (133 of 234)	1.36	Q2 (Ecology, Evolution, Behavior and systematics)	0.56	56 47	11 (11 full papers)
Medical Mycology	Q3: Infectious Diseases (47 of 92), Q2: Mycology (13 of 29), Q1: Veterinary Sciences (8 of 141)	2.822	Q1 (Medicine; Veterinary) Q2 (Infectious Diseases)	1.03	85 83	74 (59 full papers)
Mycobiology	Q2: Agronomy (42 of 91), Q4: Mycology (25 of 29)	1.416	Q2 (Plant Science)	0.38	20 21	1 (1 full paper)



			Q3 (Infectious Diseases) Q4 (Microbiology)			
Mycocokeys	Q3: Mycology (16 of 29)	2.525	Q1 (Plant Science; Ecology, Evolution, Behavior and systematics)	1.00	21 11	3 (3 full papers)
Mycologia	Q3: Mycology (20 of 29)	2.149	Q1 (Plant Science; Ecology, Evolution, Behavior and systematics; Medicine) Q2 (Genetics, Molecular Biology, Physiology) Q3 (Cell Biology)	1.06	128 104	9 (9 full papers)
Mycological Progress	Q3: Mycology (20 of 29)	2.149	Q1 (Plant Science; Ecology, Evolution, Behavior and systematics; Agricultural and Plant Sciences)	1.20	37 33	5 (5 full papers)
Mycopathologia	Q3: Mycology (17 of 29)	2.452	Q1 (Agronomy and Crop Science; Plant Science; Veterinary) Q2 (Applied Microbiology and Biotechnology) Q3 (Microbiology)	0.76	80 68	91 (84 full papers) (Eski ismiyle: Mycopathol. Mycol. Appl.: 3 (2 full papers))
Mycorrhiza	Q2: Mycology (12 of 29)	3.069	Q1 (Plant Science; Ecology, Evolution, Behavior and systematics; Medicine) Q2 (Genetics; Molecular Biology)	0.99	85 85	3 (3 full papers)
Mycoscience	Q4: Mycology (27 of 29)	1.172	Q2 (Ecology, Evolution, Behavior and systematics)	0.66	28 41	1 (1 full paper)
Mycoses	Q1: Mycology (7 of 29), Q1: Dermatology (14 of 68)	3.575	Q1 (Dermatology; Medicine) Q2 (Infectious Diseases)	1.18	70 65	254 (148 full papers)
Mycosphere	Q4: Mycology (22 of 29)	2.092	Q1 (Ecology, Evolution, Behavior and systematics; Plant Science)	1.15	27 17	9 (9 full papers)
Mycotaxon	Q4: Mycology (29 of 29)	0.538	Q2 (Plant Science) Q3 (Ecology, Evolution, Behavior and systematics)	0.42	60 40	157 (156 full papers)



Mycotoxin Research	Q2: Mycology (9 of 29), Q2: Toxicology (35 of 92)	3.164	Q2 (Biotechnology; Toxicology) Q3 (Microbiology)	0.72	23 34	6 (6 full papers)
Persoonia	Q1: Mycology (3 of 29)	8.227	Q1 (Ecology, Evolution, Behavior and systematics; Plant Science)	4.26	61 52	0
Revista Iberoamericana de Micología	Q4: Mycology (23 of 29)	1.627	Q3 (Infectious Diseases; Microbiology)	0.44	27 42	5 (4 full papers)
Studies In Mycology	Q1: Mycology (2 of 29)	9.027	Q1 (Agricultural and Biological Sciences; Plant Science)	3.41	92 88	2 (2 full papers)
Sydowia	Q4: Mycology (28 of 29)	0.80	Q2 (Ecology, Evolution, Behavior and systematics; Plant Science)	0.69	28 27	5 (5 full papers)
World Mycotoxin Journal	Q3: Mycology (18 of 29), Q3: Toxicology (61 of 92), Q2: Food Science & Technology (62 of 139)	2.306	Q2 (Food Science; Public Health, Environmental and Occupational Health) Q3 (Toxicology)	0.52	40 32	11 (11 full papers)
Yeast	Q2: Mycology (10 of 29), Q2: Microbiology (59 of 136), Q2: Biotechnology & Applied Microbiology (62 of 156), Q3: Biochemistry & Molecular Biology (150 of 297)	3.143	Q1 (Medicine; Biotechnology; Bioengineering; Biochemistry; Applied Microbiology and Biotechnology) Q2 (Genetics)	1.38	125 99	32 (20 full papers)
The average Impact Factor of mycology journals and number of total papers with Turkey addressed	-	3.41	-	1.38	-	790 (638 full papers) [5.8.2015: 529 (473 full papers)]

A Mycology Journal Covered by Clarivate Analytics Web of Science ESCI Database (<https://mjl.clarivate.com>)

Medical Mycology Journal (SCImago Journal Rank-SJR) 2019 impact factor and Q score: 0.41, Q3)

Mycology Journals Covered by Clarivate Analytics Biological Abstracts-BIOSIS Previews

(Some mycology journals covered by SCI-Expanded are not included here because they are included in Table 1)
(<https://mjl.clarivate.com>).

Acta Mycologica*

Asian Journal of Mycology*

Bulletin de La Societe Mycologique de France*

Current Research In Environmental & Applied Mycology-Journal of Fungal Biology*

Czech Mycology (SJR 2019 impact factor and Q scores: 0.33, Q3)

Field Mycology (SJR 2019 impact factor and Q scores: 0.15, Q4)



Fungal Systematics and Evolution*
 Italian Journal of Mycology*
 Journal of Fungal Research*
 Journal of Mycology and Plant Pathology*
 Karstenia (SJR 2019 impact factor and Q scores: 0.46, Q2 and Q3)
 Microbial Biosystems Journal-MBJ*
 Mikologiya I Fitopatologiya (SJR 2019 impact factor and Q scores: 0.25, Q3 and Q4)
 Muellera (SJR 2019 impact factor and Q scores: 0.18, Q4)
 Mycology-An International Journal on Fungal Biology*
 Mycopath*
 Nippon Kingakukai Kaiho*
 Scientia Fungorum*
 Studies In Fungi*
 Zeitschrift Fuer Mykologie*

*(Means no covered by SCOPUS).

Data Analysis

While the number of mycology journals in the WOS database was 27 in 2015 (Asan, 2016), this number was 30 in April 8, 2021. It is seen that the number of journals in the area of mycology did not change more in this period (i.e. 2015-2021). There is no any mycology journal originated from Turkey in WOS database. While Studies In Mycology Journal ranked first in 2016 in terms of impact factor (IF) score (2016 IF score was 13.25; 2019 IF score was 9.025), it left its place to Fungal Diversity (2019 IF score: 15.386) and ranked second (Asan, 2016), (Table 1). The average of 2019 impact factor scores of journals in both databases was 3.41 for WOS IF and 1.38 for SCOPUS. The 2019 scores of Fungal Diversity and Studies In Mycology journals, which rank first and second, are well above these averages. While 8 journals in the field of mycology in the WOS are in the Q1 category, the number of mycology journals in Q1 in SCOPUS is 20. The two most important reasons for this difference are that the subject categories in which the journals are included and therefore the number of journals are different [WOS has 21470 (<https://mjl.clarivate.com>) and SCOPUS has approximately 25000 journals (April 8, 2021) (https://www.elsevier.com/solutions/scopus?dgcid=RN_AGCM_Sourced_300005030)]. These differences show that care should be taken in using journals Q scores in academic appointment. Because the Q values of scientific journals may differ in WOS and SCImago SCOPUS databases, it is more useful to clearly specify which database score will be taken into account when making an academic appointment. For a more discussion of this situation, it can be see Asan and Aslan (2020).

There are two databases regularly publish the Q scores of journals in the world by WOS and SCOPUS. However, since the number of journals and subject categories in these databases are different, IF, Q, h index, etc. scores of the journals may be different as well. A journal can be covered WOS and SCOPUS, as well as journals in one but not in the other. However, all 30

journals covered by WOS are also included in the SCOPUS database. 15 journals covered by Clarivate Analytics Biological Abstracts-BIOSIS Previews are not available in SCOPUS.

There are also studies comparing SJR with WOS IF; for example Falagas et al. (2008) published a study on this comparison by examining 100 journals. The researchers provided detailed information about both databases. The researchers stated that while WOS is updated weekly, SJR is updated daily; they provided the country and language numbers of the journals; While self-references are taken into account in WOS, it is not taken into account in SJR; While there are 224 subject categories in WOS, there are 295 subject categories in SJR; they pointed out that some analytical sources used were also different. In our study, due to the difference between the two databases, the impact factor score of the same journal may be different in two databases, for example, Ca-A Cancer Journal of Clinicians is ranked first in WOS and 19th in SJR in terms of impact factor score. Also Jacso (2010) indicated that the comparison of two databases in his study. Jacso (2010) stated the effects of databases on the ranking of journals. There are other studies on comparison of these two databases; for example, Chirici (2012) studied the scientific efficiency of Italian forest researchers using the two databases but stated that they could not find any significant difference. Delgado-López-Cózar and Cabezas-Clavijo (2013) made a comparison of the journal rankings of Google Scholar starting in 2012, Journal Citation Reports (JCR) starting in 1975 and SJR databases starting in 2007. Google Scholar is open access, there is no any limitation in terms of its coverage, does not choose to include resources such as journals, books and proceeding books, and covers whatever document is available on the internet. Google Scholar is quite different from JCR and SJR in this respect alone. Cantín et al. (2015) made a comparison of the status of anatomy and morphology journals in terms



of IF, eigenfactor score and SJR and suggested that all 3 indexes be used for anatomy and morphology journals.

One of the striking data is that the IF scores of mycology journals within the scope of WOS are higher than the SCOPUS scores (Table 1). Journals' impact factor and h index scores may be different in both databases. For example, *Mycologia* has highest h index score among mycology journals covered by WOS and SCOPUS. While *Mycologia* ranks 20th among 29 mycology journals with in terms of IF score of 2.149, but it is first in terms of h index score because of analytical sources such as impact factor and h index measure different situations. *Mycologia* is a fairly old journal (published since 1909: <https://www.tandfonline.com/loi/umyc20>). The 2019 h index score of *Mycologia* is 128. (h index 128 means that each of the 128 articles published in this journal has been cited at least 128 times separately). If an article takes more citations, it can not increase h index score but it contribution to the IF score of journal. As the number of articles in a journal increases and time passes, the h index value has the potential to increase, but this depends on the articles being cited.

Also there are mycology journals in other indexes not covered by SCI-Expanded but within Clarivate Analytics. While there is one journal (*Medical Mycology Journal*) covered by ESCI, there are 20 mycology journals covered by Biological Abstracts-BIOSIS Previews.

However, as far as it can be reached, the impact factor and h index scores of these journals are lower than the journals covered by SCI-Expanded. López-Illescas et al. (2008) also take attention to this situation and, by comparing the oncology journals covered by WOS and SCOPUS, stated that the impact factor scores of WOS oncology journals were higher than the oncology journals covered by SCOPUS. They indicated the 94% of journals in the first 25% (Q1) of SCOPUS are included in WOS, but only 6% of journals in the last 25% (Q4) are in WOS.

Journals with improved performance over time have the potential to be included in the more specific index, SCI-Expanded, and vice versa. Namely, If the performance of a mycology journal covered by SCI-Expanded decreases (the number of citations decreases over time), the journal can be transferred to other indexes.

Although Q scores are useful in measuring the quality of journals, there are also controversial situations. For example, Garcia et al. (2012) argued that journals in the Q1 category do not always have a high impact score in terms of citation. Asan and Aslan (2020) also takes attention to the controversial issues regarding Q scores in their studies. Viu and Păunescu (2021) argued that there are no significant limit values in the Q grouping (for example, the journal with an IF score of 2.057 may be Q1, whereas the another journal with an IF score of 2.029 may be Q2; see also Asan and Aslan, 2020) and even that the Q grouping system should be abandoned.

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