

Pakistani Journals and the Impact Factor: Where are we standing right now

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ABSTRACT

Objective: To summarize the performance of Pakistani journals in terms of their Impact Factor.

Methodology: Pakistani journals were analyzed for their impact factor (IF), citations and publications from 2000-2009. Journal Citation Reports (JCR) published by Thomson Reuter was used to retrieve the data electronically. All tables and graphical presentations were generated by using either Minitab version-10 or MS-Excel for Macintosh.

Results: Total seven journals have their IF in the year 2009. Only two Pakistani Bio-medical journals have an international impact factor listed by JCR. The highest impact factor of any Pakistani journal is 0.825 in 2009 of Pakistan Journal of Pharmaceutical Sciences. In the year 2009, Journal of College of Physicians and Surgeons Pakistan (JCPSP) and Pakistan Journal of Medical Sciences (PJMS) were included in the list of IF journals for the very first time after 13 and 26 years of their first publication respectively. The IF of JCPSP is 0.554 and PJMS is 0.203 for the year of 2009.

Conclusion: There is a very small contribution by Pakistani journals in terms of ISI indexation. Basic sciences journal continues to overshadow in term of ISI indexation with highest impact factor of 0.825 by Pakistan Journal of Pharmaceutical Sciences.

KEY WORDS: Pakistani journals, Impact Factor.

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INTRODUCTION

Measuring the scientific quality of a publication is an extremely difficult task. The traditional method of evaluation has been peer review. However, peer review is time consuming and experts with available time are a scarce commodity.¹ Often, some

quantitative measurement of bibliometric analysis is used by decision-makers to ascertain the quality of research.² The Thomson Scientific Journal Impact Factor (JIF) which is published yearly as part of the Journal Citation Reports (JCR) is a widely used tool.³ The impact factor is defined as: the number of times articles from a journal are cited within 2 years divided by the total number of articles published in the same journal during the 2-year period. The impact factor of a journal is intended to measure how often, on average, authors cite moderately recent articles from that particular journal.

Eugene Garfield, the pioneer of IF idea, launched Journal Citation Reports (JCR) in 1975.³ The JIF is now commonly used to measure the impact of journals, the impact of the articles they have published, and the impact of authors of these articles. However, the JIF has a number of undesirable properties which have been extensively discussed in the literature⁴⁻⁹, which led to a situation in which most

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experts agree that the JIF is a far from perfect measure of scientific impact but it is still widely used. Despite this fact, many organizations continue to pay attention to the impact factor based rankings and base their decisions on these, one of them being Higher Education Commission of Pakistan. According to them the highest rating of Pakistani Medical Journals is their inclusion in ISI database or having an impact factor.¹⁰ The debate about Journal Impact Factor is not the intent of this paper, we only want to evaluate Pakistani journal in the light of their impact factor only.

Several editorials have been written regarding the need and importance of IF for Pakistani medical journals,^{11,12} no reference is retrieved by literature search by the authors to characterize journal on the basis of IF. One possible reason for this could be the fact that Pakistani medical journals achieved an IF for the first time in 2009. In 2008, Midrar Ullah¹³ quantified national impact factor according to citation analysis and provided national guidelines for IF calculations, their study did not provide any insights towards the international ranking of Pakistani medical journals.

In this study we have evaluated ten-year performance of Pakistani journals to evaluate their international performance in regard to IF.

METHODOLOGY

In present study, performance of Pakistani medical and basic science journals have been analyzed. Data was retrieved through registration at Thomson Scientific. JCR data lists various parameters including total cites, IF, total articles for last ten years. The fore-mentioned variables were tabulated and analyzed for Pakistani journals. All analysis was

performed either using Minitab version 11 or MS Excel for Macintosh.

RESULTS

JCR currently lists 7387 journals from various countries and fields of research. Only 7 (2 biomedical and 5 basic sciences) of these listed journals are published from Pakistan, which is a negligible (0.094%) contribution in JCR (Table-I).

Only two Pakistani medical journals are listed by JCR. It means that only 3.33% of Pakistani medical journals have an IF. Year 2009 was the first time when two of Pakistani medical journals were assigned an IF by JCR. These journals include JCPSP and PJMS with an impact factor of 0.554 and 0.203 respectively (Table-I). Total number of articles published by JCPSP and PJMS during 2008-2009 were 190 and 176 respectively. During 2009, total citations of JCPSP and PJMS articles were 624 and 198 respectively.

There are five Pakistani basic sciences journals listed in JCR as that of year 2009 with only three journals consistently being present in JCR list since the year 2000 (Table-I). Journal of Chemical Society of Pakistan, Pakistan Journal of Botany and Pakistan Journal of Zoology are the journals with a consistent performance as regards their listing by JCR. Pakistan Journal of Botany was not able to maintain its listing in the year 2003 (Table-I). Pakistan Journal of Zoology, although first listed by JCR in 2007, has consistently been maintaining its presence in the citation list. Average of yearly-published articles by Journal of Chemical Society of Pakistan, Pakistan Journal of Botany and Pakistan Journal of Zoology is 73.1, 135.5 and 72 respectively, while average citations for these journals are 185.7, 238.9 and 126.6

Table-I: 10-year IF analysis of Pakistani medical and basic science journals.

| Year | Medical Journals | | | Basic Sciences Journals | | | |
|------|-------------------------------|--------------------------|--------|-------------------------|------------|--------------------|-------------------|
| | J Coll Physicians Surg Pak | Pak J Med Sci Soc Pak | J Chem | Pak J Bot | Pak J Zool | Pak J Pharm Sci | J Anim Vet Adv |
| 2000 | - | - | 0.109 | 0.093 | - | - | - |
| 2001 | - | - | 0.063 | 0.092 | - | - | - |
| 2002 | - | - | 0.18 | 0.132 | - | - | - |
| 2003 | - | - | 0.173 | - | - | - | - |
| 2004 | - | - | 0.172 | 0.186 | - | - | - |
| 2005 | - | - | 0.194 | 0.153 | - | - | - |
| 2006 | - | - | 0.152 | 0.106 | - | - | - |
| 2007 | - | - | 0.095 | 0.29 | 0.105 | - | - |
| 2008 | - | - | 0.221 | 0.47 | 0.189 | - | - |
| 2009 | 0.554 | 0.203 | 0.19 | 0.52 | 0.2 | 0.825 | 0.176 |

Note: The data was obtained from JCR-Thomson Reuter website during September 2010.

respectively. The largest impact factor of any Pakistani journal is 0.825 in 2009 of Pakistani Journal of Pharmaceutical Sciences.

DISCUSSION

This is just a base line study about performance of Pakistan journal in Thomson Scientific Journal Impact Factor's Journal Citation Reports (JCR). Although it showed overall good performance with consistent increase in Pakistani journals in the database but still the impact factor of journals are very low. Total number of articles and citation for JCPSP and PJMS are higher than averages of any basic science journal, it should be noted that statistics for these journals are just one point figures of year 2009 only. It is therefore important to have a long term prospective plan to continuously improve the rating of journal in regard to IF. It must be noted that this manuscript describes the performance of Pakistani Journals based on the data obtained from 2000 - 2009. Follow up of this study by looking at the future JCR reports will provide further insight.

Impact factor, originally a measure of reputability of a journal for librarians, seems to have assumed so much authority that it has started to play a critical role in hiring, tenure decisions and awarding of grants. This is another indication of the misuse of this tool being applied as a measure of efficiency of individual researcher.⁸ The impact factor itself is affected by a wide range of sociological and statistical factors like type of discipline, number of authors, publication type, journal size, time lag in publication, journal title, language, etc.¹⁴ Despite all this, it's still a yardstick for many stakeholder organizations, one of them being HEC of Pakistan.¹⁰ In Pakistan, scientists can receive between US\$ 1,000 and US\$ 20,000 on the basis of their annual cumulative IFs.¹⁵ In many institutions, a professor's cumulative IF is the most important criterion for promotion along with experience in particular field and the highest obtained qualification.

Considering the increasingly controversial status of IF, other measures of the impact are now under active consideration including PageRank algorithm (a combination of IF and pagerank), H-index (gives IF of individual researcher rather than a journal), G-index (based on distribution of citations) and F1000 factor (based on the comments of faculty members of 1000 medicine) amongst others.⁹

Limitation: There is enough data in the literature available to believe the fact that the quality of a journal should not be judged by just the impact

factor. It is one of the metric of quality but surely not the absolute one. There is need of further studies of quality of journal in term of other bibliometrics.

CONCLUSION

Amongst all Pakistani IF journals, the largest IF is of Pakistan Journal of Pharmaceutical Sciences. In 2009 first time two biomedical Pakistani journal got their IF. Although IF should not be only quality measure for journal but few organizations in Pakistan, still judge the sole quality parameter to the IF.

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Conflict of interest: In accordance with WAME policy of COI declaration, we declare that Dr. Masood Jawaid is Assistant Editor of PJMS (a Pakistani impact factor journal)