



Science Reporter

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RATIONALISING THE IMPACT OF IMPACT FACTORS

More than 150 leading scientists and 75 scientific groups from around the world recently voiced their strong resentment against using Impact Factors to evaluate the quality of a researcher's work. They say the "magic number" is doing more harm than good by skewing decisions on hiring, funding and promotion.

The Impact Factor is a number calculated every year based on the average number of times a journal's articles have been cited in other articles. While a high Impact Factor gives a "high" to journal editors, a low Impact Factor for a journal is often a stumbling block to good quality articles reaching its inbox.

Essentially, journal Impact Factors were first developed in the 1950s to guide the libraries in deciding which journals to order, not to measure the scientific quality of research in a paper. The group of scientists now up in arms are peeved at the increasing misuse of Impact Factors. The Impact Factor of the journal where a paper has been published is often being conveniently used as a metric to gauge the quality of the researcher's work rather than the actual content of the paper. The Impact Factor alone is not a true indicator of the significance of a research paper.

Over the years, numerous discussions have ranged around the flaws in the Impact Factor. For instance, in a journal, just a few highly cited articles can drive up the journal's Impact Factor, yet all articles published in that journal, despite never being cited, are presumed to have the same Impact Factor. The Impact Factor can even be manipulated by following certain editorial policies, such as, by publishing more review articles, which are generally more highly cited. In a recent editorial, Science Editor-in-Chief Bruce Alberts called the misuse of journal impact factors as "highly destructive".

Yet, funding agencies and recruitment and assessment committees often see in the Impact Factor a shortcut approach to screen applicants. Any evaluation system that gives too much weightage merely to the number of papers published serves as a disincentive for pursuing research in risky areas where turning out a paper is going to take long. The lure of Impact Factors also dissuades journals from publishing papers in areas such as social sciences and ecology that are cited less often.

The group of scientists organized by the American Society for Cell Biology (ASCB) have put online what they call the San Francisco Declaration on Research Assessment (DORA). The document emphasises that "there is a pressing need to improve the ways in which the output of scientific research is evaluated by funding agencies, academic institutions, and other parties." The signatories include Science Editor-in-Chief Bruce Alberts, several editors, journals, and societies, as well as the Howard Hughes Medical Institute and the Wellcome Trust.

Among the 18 recommendations of the DORA is a call to "not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions." The document emphasises that "the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published."

Perhaps it is time that in India too some serious thought is given by funding agencies and organisations hiring scientists to ensure that the true worth of a research work is gauged not just on the basis of it getting published in a journal with high Impact Factor but on the basis of an in-depth appraisal and future potential of the work. It is also imperative that research in significant and critically important areas is not crippled due to the penchant for pursuing Impact Factor values.

Hasan Jawaid Khan



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