

# Ethical and scientific aspects of research publications

Readers' responses strongly resonated with the last Journal of Ayurveda and Integrative Medicine (J-AIM) editorial's 'clarion call for action'. Experts from Ayurveda as well as the biomedical fraternity appreciated J-AIM's consistent efforts to redefine and encourage evidence-based approaches.<sup>[1]</sup> In response to requests from physicians and professionals, J-AIM is now planning to hold meetings and workshops on scientific writing, especially case series and observational studies.

In every sector, scientific publications reflect the extent and quality of research, and energize the cycle of knowledge generation. In Ayurveda increasing awareness of publications should fuel more research. A recent Roundtable of Ayurveda Journal Editors (RAJE) at Gujarat Ayurved University (GAU) Jamnagar in July 2013 initiated coordinated efforts for awareness, training, and standards for transparent reporting, emphasizing the need for organized efforts to promote quality in papers on Ayurveda. In recent syllabus restructure effort, the Central Council of Indian Medicine incorporated modules on research methodology, to promote awareness of the importance of scientific publication. Maharashtra University of Health Sciences, GAU, and several other institutions have initiated scientific communication workshops and training programs for teachers and postgraduate students. As a result, the quality of research and papers published is slowly improving. However, still we have a very long way to go.

## DESPERATION TO PUBLISH

In recent years, like in other sectors, publications related to Ayurveda have witnessed a steep rise. In the past 5 years, over 2400 Ayurveda papers have been published in Pubmed indexed journals, 50% of Ayurveda publications over the past 40 years. J-AIM has also witnessed increased numbers of submissions. We have, however, also noticed a combination of desperation and casual attitudes among some new authors. Many submissions are made without

following instructions to authors. As a result too much time is spent in the technical modification stage. Plagiarism and other unethical practices are also sadly noticeable. Nevertheless, as a policy J-AIM continues to give authors the opportunity to improve the quality of their submissions.

## NEED TO REPORT NEGATIVE RESULTS

Ayurveda is a time tested experiential science where many basic concepts still remain valid and valuable. However, as for any branch of science dynamic experimentation is needed. We should conceptualize and conceive new ideas, and hypothesize new experiments. We may or may not obtain expected results, or our hypotheses may be wrong. As honest researchers, we should be unbiased in reporting facts and seeking interpretations. In this process, reporting negative results remains very important, even more so in clinical research where conflict of interest between investigators and sponsors may influence decisions on publication of results. On one hand, publishing negative findings may save patients from potential risks, and on the other may lead to new therapeutic approaches. Clinical trials registries may address problems of biased or selective publication. Researchers should not be shy of publishing negative results. J-AIM's policy is to publish such unexpected findings. It will continue to encourage authors to do so.

## AWARENESS OF PUBLICATION ETHICS

The noticeable desperation to publish and sudden growth in number of publications has another interesting side. Many universities and academic institutions have imposed new criteria of eligibility for promotions, nominations, and academic performance based on number of scientific publications. To meet the growing demand, many publishers and dubious new journals have mushroomed as opportunistic business models. New agencies have emerged to offer impact factors and indexing services adding further confusion. Similar trends are seen in so-called 'international' conferences as well. Increase in new journals has been so intense that keeping track of numbers is difficult. Much confusion exists about the terms 'national', 'international', 'peer reviewed', 'listed', which are often used without proper clarity.<sup>[2]</sup> Experts now advise due diligence of journals and publishers before

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10.4103/0975-9476.118672

manuscript submission.<sup>[3]</sup> Many research institutions are grappling with the problem of identifying authentic journals and genuine conferences. Due diligence is also needed in any *curriculum vitae* to scrutinize source and quality of publications carefully. The present situation has undoubtedly become more susceptible to predatory attempts, intentional and unintentional unethical practices, plagiarism, duplicate submissions, salami slicing, and redundant publications in most sectors including biomedical and pharmaceutical sciences. Recent studies have indicated lack of awareness, misconceptions and knowledge gaps about publication ethics among researchers.<sup>[4]</sup> As a result, publication ethics has emerged as a serious issue across the globe cutting across all disciplines. The Ayurveda sector with its relatively small number of publications stands at extreme risk.

As an editorial policy, J-AIM follows norms and guidance of professional bodies like the Committee for Publication Ethics (COPE), World Association of Medical Editors (WAME), and Consolidated Standards for Reporting Trials (CONSORT). COPE offers valuable guidelines to editors on publication ethics.<sup>[5]</sup> It provides advice on how to handle cases of publication misconduct. J-AIM is a member of COPE and finds its guidance very helpful. J-AIM has recently faced issues related to duplicate submission and salami slicing where authors tried to carve three papers out of the same experiment. Cautious reviewers and editorial team members timely identified these issues. Such incidences indicate the need for meticulous reviewing, careful editing, and increased concern for ethical and transparent reporting.

## REPORTING STANDARDS

In this situation responsibilities of reviewers and editors have significantly increased. Every researcher is expected to be ethical and reporting should be transparent. Research, reporting, and publications should be honest, critical, and transparent, and should convey the factual analysis without diverting or hiding inconvenient truths. Continuous discussion, information sharing, experiences, and guidance to all stakeholders has become of great importance. WAME's discussion forum of medical editors, for example, has more than 1915 members representing more than 1000 journals from 92 countries. The Equator network is an online platform dedicated to better reporting, reviewing and editing. The standards and methodological backup for clinical trials have evolved due to systematic efforts like CONSORT and the Cochrane collaboration. The recently published SPIRIT statement is useful to improve quality of interventional trial protocols.<sup>[6]</sup>

## VOLUNTARY YET ACCOUNTABLE

It is important to remember that editorial, reviewing, networking, and advisory services are demanding and time intensive. Although, most of these may be purely voluntary and nonremunerative services, they bring lot of responsibility and accountability on individuals and organizations. In contrast, with some exceptions, analytics data about citations, impact factors, *h* index, and such has been monopolized by commercial agencies, which is available only with hefty subscription fees. Therefore, it is important to appreciate and thank all the editors, reviewers, and professional organizations who volunteer their time and expertise in the interest of science and sector.

## QUANTITY WITH QUALITY

Scientific publications in Ayurveda are still in their infancy. Agreeably, available reporting standards may not be directly relevant; however, the core principles of precision, quality, transparency, and ethics in scientific publication should gradually evolve. J-AIM has already taken its own initiative to develop standards for reporting clinical trials and case studies in Ayurveda. It is important to remember the message in the *Ashtanga Hridaya* प्रदीपभूतं शास्त्रं हि दर्शनं विपुलामति ताभ्यां अतिसुयुक्ताभ्यां चिकित्सन्नापराध्यति। meaning “knowledge in books is like light and understanding is like seeking through eyes. Books will be meaningful with powerful intellect to understand. Successful health care will become possible when knowledge, intellect and understanding are well aligned”. Clearly, quality of publications can only improve based on higher emphasis on quality research and ethical reporting. There is no short cut to excellence.

“Quality is not an act, it is a habit” – *Aristotle*. Its inculcation is important, particularly in capacity building where development of information, knowledge, attitudes, skills, and practices is needed to empower stakeholders. This is a slow process and change will not occur overnight, but move in the right direction on the path of quality, we must. Mahatma Gandhi considered that ‘the quality of our work will please God and not the quantity’. Quality of research and quantity of publications will gradually improve with effort. J-AIM is committed to facilitate this process. Ayurveda undoubtedly needs more experimentation and introspection. Pride-based recitation and prejudiced commentaries are not enough. “Pride and prejudice are hurdles on the path towards the real goal” – *Patanjali*. Let us avoid biases and adopt best ethical practices in scientific experiments and publications.

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**How to cite this article:** Patwardhan B. Ethical and scientific aspects of research publications. *J Ayurveda Integr Med* 2013;4:129-31.

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