

A REVIEW STUDY ON ETHICAL RESEARCH PUBLICATIONS IN AYURVED

Madhulika D Tiwari¹, Sanjivani A Jadhao²

¹Asst. Prof., ²Prof. & Head

Dept of Rachana Sharir, DMAMCH & RC, Wanadongri, Nagpur (MUHS), Maharashtra, India

Email: tiwarimadhulika8@gmail.com

ABSTRACT

Ayurveda is one of the oldest extant health systems in the world, but for various reasons scientific research on *Ayurveda* has been much debated issue. Scientific publication is the process by which any research outcome enters public domain. It is essential that the results of a research work are published so that the information related to a specific system of knowledge is kept update. A lack of awareness about important guidelines and methods of reporting while planning and publishing the research is a major issue. A comprehensive literature study was undertaken and relevant online & offline sources were consulted. In this paper a literary review of writing ethically structured research papers of different types is discussed along with the authorship and editorial challenges. It will offer further scope to research scholars to better understand research publications and the lacunas to overcome. Although the pressure to publish is great, integrity and ethics in publication are paramount. Diligence to detail and vigilance are required. Accomplishing this will uphold the public's trust in *Ayurveda*.

Keywords: Research, Publications, Challenges

INTRODUCTION

Research publications are valid reports of the research work going on in any scientific field. They are the documents which add new knowledge, proof, observations, aspects and methodologies of the ongoing research. The overall spectrum of contemporary research activities in *Ayurveda* includes literary & conceptual study, clinical & therapeutic research, and drug standardization and new drug development.¹ Research in *Ayurveda* has to be coordinated and directed in order to reveal the underpinning principles and values. The nature of this kind of research activity has to be Epistemology-sensitive and structured according to the conceptual premises of *ayurveda*²

Need of research publication:

Publication of a scientific manuscript is the ultimate affirmation of scholastic achievement. It affords the investigator an opportunity to put forth the result(s) of hard work and time investment into a journal to advance knowledge in given field.³ Physicians often face major pressures to publish for a number of reasons. Whether this is for career advancement, intellectual curiosity, practice enhancement, or pecuniary interests, there is an impetus to publish. Such pressures may even lead to corner cutting.⁴

There are various forms of unethical practices that authors resort to, sometimes intentionally & occasion-

ally by accident. Being aware of publication ethics will help readers to consciously avoid such misconduct and perform honest ethical research and pursue publications.

Scenario of scholarly publication in Ayurveda:

It is to be noted that when compared with other streams such as acupressure, acupuncture, traditional Chinese medicine and osteopathy, the number of research articles published in the field of AYUSH is far too low. The major reason for this scenario is limited awareness regarding the importance of publishing. It is also to be noted that no training is given in scientific writing during formal *Ayurveda* education which further adds to the problem. Differences between magazines, newsletters, journals, and books are not clearly known to Ayurveda researcher.¹

A lack of awareness about the important guidelines and methods of reporting while planning & publishing the research adds further to the problem.

In this paper we have discussed a structured format for ethical research publication. Also we discuss some of the ethical dilemmas physician, as well as editors, may face in publishing.

AIM:

The aim of this paper is to present a structured ethically correct format for research publications and also to overcome the challenges faced while publishing them.

OBJECTIVES:

1. To study the ethical aspects in publishing a research article.
2. To present a structured format of research articles.
3. To overcome the challenges faced while publishing them.

MATERIALS AND METHODS:

A comprehensive literature study was undertaken and relevant online & offline sources were consulted.

DISCUSSION

In academic publishing, the goal of peer review is to assess the quality of articles submitted for publication in a scholarly journal.

Broadly the scientific publication may be of two varieties. a.) Popular. b.) Scholarly.

In popular literature shorter article furnishing broader overview are published. Author often are not the specialist in the subject and credentials of the author are often not provided. Such articles are written in non technical style and do not follow a specific format.

Articles falling under scholarly category are usually longer, providing deeper insight of a topic; author is an expert in the field, whose credentials are always provided. These articles are written in a technical scientific language. They are assessed and critically evaluated by a panel of experts. These experts are known as peer reviewers. Peer reviewers ensure that the science entering the public domain is sound, interesting, and relevant. It also assists authors and editors in publishing quality research.²

Structure of a research paper:-

The universally accepted format of a research paper is IMARD (INTRODUCTION, METHODS, RESULTS, & DISCUSSION). Many journals use the format as a standard for writing the papers of original research. The best structure of a research paper can be expressed by an hour glass model- (title, abstract, introduction, methods, results & discussion- TAIMRaD)⁵

Following types of research article may be published: Original research article, Short reports/letters, Review articles, Case studies, Methodologies

- **Original research article:** It is commonest type of journal document & used to publish complete data reports of original research. It has complete information of hypothesis, introduction, methods, results & discussion.

Average limit of words is 5000-7000.

Structured format:- title, abstract, introduction, material & methods, results, discussion, acknowledgements, competing interests, authors contribution, symbols & abbreviations, appendix, funding, references, figure legends ,tables , figures.

- **Short reports/letters:** It consists of brief data from original research. Editors extract the data from original research which will be interesting to many researchers & can stimulate further research. Quickly changing inferences are published as short reports. These types of articles have stringent length limits.

These articles follow same organizational structure like research article. Word limit is less than 2500.

- **Review Article:** It describes existing status of the knowledge related to the problem. The word limit is of 10000. These articles are popularly read and highly cited. The author gathers all available information about the topic from primary data collection and concludes by giving a valid opinion or perspective which can increase the current knowledge of the topic.

Following are the types of review articles:

1. **Literature review-** It includes historical approach of the problem, development of knowledge regarding the topic and its current status. Main benefit is identification of the gaps in knowledge on the topic.
 2. **Synthesis review-** Authors from various disciplines come together and consult the peer reviewed published previous work and organizes a synthesis review. Most journals give preference to these articles over literature review.
 3. **Meta-analysis review-** It is a statically analysis which combines the results of multiple scientific studies. The main advantage of this type of review is generalization of results to a larger population.
 4. **Perspective review-** Authors provoke thoughts of the readers by adding active thoughts in the review. They are often shorter and usually requested by the editors.
- **Case studies:** They are the reports of particular instance of interesting phenomenon. They are often used in medicine to report pathological unknown and emerging phenomenon. They are shorter in length and have no specific structure.
 - **Methodologies/Methods:** These articles bring out new methods of experiment, tests or procedure. Article describes the advancement on what is currently available.

Following points must be kept note of while writing a research paper.

1. **Topic selection:** An arguable topic should be selected so that there could be arrival of new thought or idea. For ex. In Ayurveda, the strotas, kala, klom must be selected and discussed.

2. **Journal selection:** Go for multiple of most cited indexed national, and international, peer reviewed, UGC approved journals. Check for the latest impact factor of the journal with its ISSN (international, standard serial number) for authenticity. Check standards used or result analysis of the journal

3. **Information gathering/collection:** From samhitas, textbooks, journals (hardcopy), magazines, dissertations, written records etc. From internet- various search engines are available like Google, yahoo etc. form where relevant information on the topic may be collected. You may register on social sites like academia.edu, Shodhganga, Researchgate, Elsevier and Scopus to get an access to a number of articles.

4. **Write a research question:** It is the broad basic question on which your research work is based. Follow FINERS (Feasible, Interesting, Novelty, Ethical, Relevant socially) criteria.

5. **State the Hypothesis:** It states the main theme of research work. It is a statement declaring the relationship between variables in terms of expected outcome.

Following must be selected as the heads of article:

- a.) **Title:** A smarter title must be designed to arouse the interest of the reader. Following characters can be considered- it should be i.) Brief and clear, ii.) Mention important variables, iii.) Participants-targeted population i.e. plants, animals, patients or any other population, iv.) Intervention-i.e. drug, therapy, protocol or any other thing, v.) Comparator, vi.) Outcome, vii.) Reflects study design- the study type viz. observational, randomized controlled trial, cohort etc. viii.) Reflects primary objectives, ix.) Includes target population, x.) Avoid repetition of title.
- b.) **Abstract:** It is an organization of important statements from introduction, methods results and discussion. It is written after completion of the article, just before the submission in any journal. Word limit is 200-250.
- c.) **Introduction:** It includes background information, study question, biological rationale, hy-

pothesis and general approach. Word limit is about 500-600 words. The epidemiological data is included If the study type requires it. The solution is your hypothesis positively proved at the end of the study.

- d.) **Materials and methods:** It is the most important section of the article in which the information regarding the techniques, procedures and methods is explained. It is important to check the validity of data.

The section should have following information:

Type of study design, Duration of study, Method of selection of comparison/control group, Specification of instruments and related measurements, Sample size, Sampling technique, Methods for data collection relevant to objectives, Data management and analysis, Plan for statistical analysis

- e.) **Results:** The result section is the valid report of the findings from relevant and proper statistical analysis and its interpretation which is aimed to answer research question.

Research article smartly can be supported with the help of diagrams and photographs

- f.) **Discussion:** It is mainly aimed to include the interpretations of the study, stating the opinions about the study, effectiveness of the results, giving the directions for further scope and future of the presented work. Following points must be included in discussion- make observations more general by designing simple but meaningful sentences, maintain same flow of language, consider research question at the start, explain the applicability of the results, include all the results, explain the relation, pattern or any other observations, consider the previous work to defend the answers, identify and discuss the conflicting issues, include unexpected results, summarize, further scope, end discussion with strong recommendation.

- g.) **Conclusion:** It should be brief, easy to understand, and convey the end point of research satisfactorily.

- h.) **Reference:** Referencing is the process of giving the credit or fact which you have used in your writing. It is acknowledgement of an original

source or author from where the original texts are referred.

There are a number of reference styles, still following styles are well known-

1. Harvard style
2. Vancouver style
3. APA style
4. CSE Style
5. AMS Style
6. Chicago style
7. Oxford style

A well structured article can be written by following the standard procedure of research publications. But for the paper to be ethically correct should it should avoid certain factors related to writing as well as publishing research. Ethical violations in conducting medical research always promote unethical scientific publications. Published research influences other researchers and establishes credibility for individual or journal. Honest scientific reports build trust among peers and within scientific community. Following are some of unethical practices which must be avoided while writing a research publication.⁷

1. Carelessness- e.g. citation bias, understatement, negligence
2. Redundant Publication-e.g. same tables or literature review reported without noting prior source
3. Undeclared conflict of interest- e.g. failure to site funding source.
4. Unfair authorship- e.g. failure to include eligible author, honorary authors
5. Human/Animal subjects violations - e.g. No approval from review board or ethics committee
6. Plagiarism- e.g. reproducing others work or ideas without citing it as one's own.
7. Other fraudulences- Fabrication or falsification of data, misappropriation of others ideas or plans given in confidence.

Editorial challenges in form of:-

1. Management of peer-review bias, promptness, expertise, and professionalism,
2. Management of authors who fragment their work into multiple publications to enhance their curriculum vitae ("salami factor")

3. Management of financial benefits of advertising and conflicts of interest of the journal, Conflicts of interest.³

Though there is a huge no. of biomedical journals publishing research on *Ayurveda*, it appears that particularly *Ayurveda* journals are still in the stage of infancy. There is an urgent need to create awareness among *Ayurveda* researchers regarding their problems. We need to develop a mechanism to screen and rate these problems so as to help the scientific community to communicate their work only to the standard journals. The editors of AYUSH journals must come up with some standard and uniform guidelines to report various kinds of research. Then CONSORTIA is one such recent promising initiative¹

A Scholarly publishing sector is facing following challenges in the field of *Ayurveda*;

1. Scarce govt. funding
2. No incentive for good work - there is routinely no provision for rewarding the good publications.
3. Lack of training in scientific writing

Further there is a need for developing a system to conduct frequent training program n research methodology and scientific writing skills to post graduate and doctoral scholars. *Ayurveda* researchers have immense role in streamlining the journals & uplifting the reputation of *Ayurveda* globally through quality research papers.

CONCLUSION

Science evolved through a rigorous and continuous research, *Ayurveda* the ancient Indian system of health care and longevity needs to be validated on modern scientific research methodology taking care not to compromise with its basic tenets and philosophy. A full system validation would be the right approach in this direction. *Ayurveda* researchers, Academicians, government must come together to make efforts for bringing international recognition to researches in *Ayurveda* through standard ethical publications. *Ayurveda* will only progress with publications of research findings, which must welcome and withstand the scrutiny of peers.

REFERENCES

1. Ayurveda scientific research and publications, Bhushan K Patwardhan, Ashok D B Vaidya, current science, oct 2009, 1117-1121
2. The Challenges of a new path of Research in Ayurveda; Morandi Antonio; Annals of Ayurvedic Medicine vol-7 issue-1-2 jan-june 2018
3. Anderson PA, Boden SD. Ethical Considerations of authorship. SAS Journal 2008;2:155-158
4. Self-plagiarism:unintentional,harmless, or fraud? Lancet 2009; 374:664
5. Dr M R Sayyad, Dr Ashwini R Patil, A stepwise approach on writing a research paper in ayurveda, educreation publishing,2017,pg-
6. Research Methodology and Medical Statistics, Dr Sachin Sarpotdar, Prof Dr Santosh Bhor, Manikarnika publications Ed 4, 2017, pg-
7. Kusak K. Das and Mallanagoud S. Biradar; Ethical Publications in Medical Research;http:dx.doi.org//10.5772/64947
8. Olubukola Babalola, BS , Jane M.Grant Kels, Ethical dilemmas in journal publication.Elsevier 2012,30,231-236
9. Kishor Patwardhan, R Galib et all, Peer Reviewed journals of Ayurveda- An Appraisal. J Res Educ Indian Med, july -dec XX (3-4);141-152
10. Vaibhav Dadu, Research in Ayurveda: Need, Scope & utility, Journal of diseases and medicinal plants, 2017;3(2-1): 6-9
11. Dua pradeep, Dua Pamila, Research in Ayurveda and way forward, IJRAP3(1), Jan-Feb 2012, 23-26
12. Souvenir, National workshop on scientific writing and reviewing process of research in Ayurveda 2013, IGPT & RA, Gujarat Ayurveda University, Jamnagar.
13. Ram H Singh, Exploring issues in the development of ayurvedic research methodology, J-AIM 2010 Apr-jun;1(2):91-95

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