

## “Review: Writing good research paper: Advice for beginners.”

<sup>1</sup>Dr.Motilal C.Tayade , <sup>2</sup>Dr. Sunil M. Bhamare , <sup>3</sup>Dr. Prathamesh Kamble , <sup>4</sup>Dr. Kirankumar Jadhav

<sup>1</sup> Department of Physiology, PIMS, Loni  
Maharashtra, India -413736.

<sup>2</sup>Department of Microbiology, B.J.Medical College , Pune -411001

<sup>3</sup>Department of Physiology & <sup>4</sup>Surgery , B.J.Medical College, Pune -411001

**Corresponding author:** Dr.Motilal C.Tayade; **E mail:** drmctayade@gmail.com

.....  
**Abstract:**

Medical research writing is mostly similar as writing in other specialties. Some research workers make it so easily while many of these fails to do. This may happen due to lack of proper knowledge concerned with research methodology. The present review article will definitely be helpful to new research workers, postgraduate students etc. in the process of writing a new task or project. It is a very hectic and tedious job of proper selection of journal suitable for article publication. Most of the publication house or organizations provide option of online submission & processing of manuscript. Be careful during searching online portals & their authenticity. Writing manuscript becomes considerably easier once author clearly defines his research question. Make time frame for every work & step over the paper like study design, reference collection, data collection, writing etc. Start writing from first day of your data collection. It is very important step of research writing. This provides plenty of time for revision – referencing & boost your confidence. This makes your discussion part stronger & improves accuracy in references selection.

**Keywords:** Journal selection, manuscript preparation guidelines  
.....

**Background:**

It is skill to write concise and scientifically accurate well structured manuscript in the field of research publication. Medical research writing is mostly similar as writing in other specialties.<sup>1</sup> Writing good research paper is job cannot be done satisfactory by everyone.<sup>2</sup> Some research workers make it so easily while many of these fails to do. This may happen due to lack of proper knowledge concerned with research methodology. The present review article will definitely helpful mainly to new research workers, postgraduate students etc. in the process of writing a new task or project.

**Criteria of Journal selection for manuscript publication:**

It is very hectic and tedious job of proper selection of journal suitable for article publication.<sup>2</sup> There are number

of journals available as online version as well as in print version. Preferably select journal with Good Indexing & abstracting. The policies of the journal should be with regular update for Indexing purposes. There are majority of journals from lacking with Indexing & Abstracting updates. Check updating policies of concerned journal. Check for list of editorial members & their daily activities attached with the journal as well as in the field of research. Most of the publication house or organizations provide option with online submission & processing of manuscript. Be careful during searching online portals & their authenticity. You may proceed forward only after confirmation of their details provided on portal. If you rule out following features & match them with your research work, you will definitely saves time & avoid confusion of journal selection.<sup>1</sup>

1. Scope of the journal: Check scope & availability of journal .You may check it from the available previous issues, open access policy, central library, citations record etc.
2. IC Value or Impact factor of the Journal
3. Indexing & abstracting policies of the journal
4. Cost of publication
5. Circulation of the journal
6. Manuscript submission system
7. Average duration of review process: This duration is varying from journals to journals. Most of the reputed journals have duration from three to six months or even up to one year. Be aware, if the duration of review process is less than one week.

#### **Structure of the Manuscript:**

Writing manuscript becomes considerably easier once author clearly defines his research question. The key to successful research writing is understanding, basic structure of the manuscript. You may easily understand the sequence of writing if goes reading & reading articles from the beginning. The following information will definitely guide you in the structure formatting of manuscript.

**Abstract:** Abstract should be very refined explaining your manuscript in limited words. Hence always design abstract at the end of project. Your abstract should never be like study proposal. Abstract should be written in such a way that the reader should get encouraged for reading further article. Make a habit to write structured abstract. Abstract should not be exceeding word limit provided by concerned journal or as per International norms.

**Introduction:** The author should explain the importance of addressing research hypothesis along with its concerned background & recent trends. The author should be able to explain the need of present work. It is

not necessary to narrate full historical aspects and theory like review of literature. Review of literature is a special part of research work require for large size study like PhD work, Degree dissertation work etc.

**Study design:** The study design framing is comparatively easier but this section should be specific, technical and fairly detailed. Commonly it should include following features.

1. Study type , duration & place
2. Sample size with inclusion – exclusion criteria.
3. Study methodology including instruments, procedure etc.
4. Data collection methods & analysis strategies

**Observations & Results:** This section is somewhat straight forward. Because in this section author directly mentions his observations and results. You may explain this part with the help of charts, tables, graphs etc.

**Discussion:** Many authors think this is the free part of writing & part of increment of their script. But frankly speaking, it is the most skilled and difficult part of the manuscript. Specify the strength of your work. Always discuss study limitations. Make a habit to write specific & structured discussion. Now-a-days some journals asking for structured discussion.

#### **References:**

1. References should be used wisely.
2. Follow suggested standard method for quoting.
3. Arrange as per author guidelines.

#### **Keywords & Keynotes:**

Your keywords and keynotes selection should be reflecting concerned topic.

## Ten steps in the preparation of good research manuscript:

1. **Time frame:** Make time frame for every work like study design, reference collection, data collection, writing etc. This assures your team regarding speed of your work. You may plan this depending upon strength & weakness of team co-authors or contributors or available time, facilities etc.
2. **Specify your research question?** A good research paper addresses a specific research question. The specific research question determines the strength of your manuscript or work. What will be your probable outcome? What will be the benefits of your study? Specify this in your objectives. It is commonly seen that a paper prepared with single research question is more precise & easily acceptable by specialty journals. Papers written with more than one research questions are difficult to summarize & conclude. If your research question has specificity of subject, relevance with broad scientific community & originality, it will be considered more authentic & reliable.<sup>2</sup>
3. **Specify Prime variable.** Specify **secondary variables**, if any? : Keep your prime variable centrally throughout your study & especially during writing. Enumerate or explain secondary variables along with reference to prime variable. Variables mean factors included in your study. Example – If you want to study effect of smoking on cardiovascular autonomic functions, then smokers will be prime variable in your study. But now you want to include other factors like their age, sex, BM Index, socioeconomic status etc. these will be considered as secondary variables.
4. **Arrange your study design:** Study design should include place & time duration of study. The study sample, instruments etc. should be checked.
5. **Specify sample size.** Specify your study sample size either by using previous references of same work or after pilot study.
6. **Study approval from concerned committee** from your Institute, university or college etc. This will eliminate risk factors, unethical matter if any. This is especially useful in studies directly concerned with patients, clinical trials & animal studies etc.
7. **Start data collection.**
8. **Start writing from first day of your data collection.** It is a very important step of research writing. This provides plenty of time for revision – referencing & boosts your confidence. This makes your discussion part stronger & improves accuracy in references selection.
9. **Data analysis:** At the end of data collection start data analysis. Honestly correlate your findings with previous workers. If there is noted any negative finding, note same in manuscript. Frame your result & conclusion.
10. **Finalized title, keywords, keynotes, acknowledgement, study limitations & abstract.** It is a good idea to finalize title, keywords, keynotes, acknowledgement, study limitations & abstract at the end of your study.

### Common mistakes seen in manuscripts prepared by beginners:<sup>3</sup>

1. The research question is not specified or it may be vague resulting in vague formatting of objectives of study & study design.
2. Manuscript is not designed as per author guidelines provided by concerned journal.
3. Extension of suggested words limit.
4. Extensive introduction including part of review of literature. (Sometimes authors may confuse between Introduction format & review of literature specially during writing research paper manuscript.)
5. Insufficient information of selection criteria. (Selection criteria should include inclusion & exclusion criteria of study very clearly.)
6. Insufficient statistical explanation.
7. Repetition of material in tables, graph & text etc.
8. Unnecessary increase in table content.
9. Discussion does not including sufficient explanation of your research question.
10. References are not cited as per standard guidelines.
11. Poor language and grammar.
12. Poor manuscript design
13. Statistical errors.

### Tips for improvement of Research script:<sup>4</sup>

The following are tips for beginners that will really help to improve manuscript validity & make it more concise & impressive.

- Prefer structured abstract. ( The abstract including study Background, aim & objectives, Study design ,results & conclusion ,keywords & keynotes etc)
- Correlate your objectives with results in conclusion.

- Check & recheck – recheck your manuscript before submission.
- Check grammar carefully. You may take help either of your colleagues as well as online support. Try this: [www.grammarly.com/Grammer\\_check](http://www.grammarly.com/Grammer_check)
- Complete research writing along with reading relevant research papers, reference books & online information. Add updated references from published literature. This will makes your work more valid & updated.
- Add proper supporting material like Photographs, tables, chart etc.

### References:

1. Pierce LL. Writing for publication: you can do it! Rehabil Nurs. 2009 Jan-Feb;34(1):3-8.
2. Happell B. Writing for publication: a Practical guide. Nurs Stand. 2008 Mar 19-25;22(28):35-40.
3. Lundberg GD.How to write a medical paper to get it published in a good journal. MedGenMed. 2005 Nov 4;7(4):36.
4. Thomas V. Perneger , Patricia M. Hudelson , Writing a research article: advice to beginners, International Journal for Quality in Health Care, 2004 , vol. 16 no. 3 Page : 191-

Date of submission: 02 January 2013

Date of provisional acceptance: 24 January 2013

Date of final acceptance: 28 February 2013

Date of publication: 05 March 2013

Source of support: Nil

Conflict of Interest: Nil