

Good Medical Research

Doing good medical research is not that difficult. However, it does require some planning and a little bit hard work. You may need a team of dedicated colleagues to work with you.

The research must be carefully planned. It must answer some specific scientific question and should add something new to the already existent body of scientific knowledge and better understanding of the subject matter. It should not be mere replica of some old research. The aim should be well thought of. The research ought to bring some benefits in terms of improvement in medical care and management! The research must be repeatable and replicable with methods described in sufficient details! Mere data collection from registers do not constitute genuine research; such research could be carried out by even an 8 grader!

Topic of the research should be carefully chosen. If you do not have any idea, going through abstracts of various conferences published in the journals may be a good idea; this may provide or guide you to some "hot" topics. If some things are ambiguous and you are not satisfied with the scientific explanations; these may constitute a good topic to explore!

Before you embark on a research project, first thoroughly go through literature on at least 10 years' work on that topic. This, you will require not only for the references but also for discussion part of your paper. Preferably references over 10 years old are not acceptable as usually there had been a lot of progress on a particular topic in preceding 10 years. However, some old references may still be allowed if you feel they are essential for your arguments for and against! You must acknowledge all original substantial work in your area of research. Going through previous work will not only provide substantial material for discussion but it may give you some new ideas. It's not a bad idea to run a pilot project i.e. running the research on small number of samples to see and appreciate the difficulties and problems. Comprehending these may help you to modify your research methodology to circumvent potential problems.

The research must be feasible and doable in a well determined time period. If you do not have enough resources or sufficient patients of a particular disease,

then there is no point in doing research on that particular disease. You may consider carrying out research on animal models of the disease if facilities are available. Approval of research ethical committee to make sure that research is ethical and there is no violation of human or animal rights is a must.

All intending authors must define their exact role in research which should be documented in the paper. The order of the authors must be decided. Those who have not significantly contributed in the research must not be included among the authors. Unfortunately, this unethical practice is common with serious deleterious effects on institutions and research environment. All authors must sign and fill out the undertaking form stating that the research is genuine and original conducted by them and that there is no conflict of interest. Financial supports if any must be declared. Copying and plagiarism is absolutely not allowed! This includes text, tables and figures.

The title of the paper should be concise, precise and comprehensive. It must attract the attention of the readers. The abstract should be structured on a standard format giving the summary of the introduction, aims, setting of the research, time period, methods, results and conclusion. It should be followed by standard useful key words under which article can be documented, classified and easily searchable.

The first paragraph of the main article should adequately explain the research question and how your research aims to address the question. The introduction should present the current state of the affair and you should explain the importance of your research and how will it contribute to better understanding and or implementation of better management.

The single most important part of research is sound scientific methodology. Subjective biases are not allowed. Generally, survey type "research" based on personal opinions or feelings are not permitted! It's much better to focus on one or two parameters rather than including too many variables! The beauty of the research lies in its sharpness and avoiding effects of various variables. If a finding is affected significantly by variables other than what's the prime testing object, then such research becomes futile! The sample size must be adequate. The collection of samples must be

regular and in proper order. Collection, storing, processing of the samples must be scientific and clearly explained in the article. Only relevant, valid and pertinent statistical tests are applied. Results must be presented in clear, understandable format. Unnecessary tables and figures must be avoided. The collected data must undergo critical analysis. We must not also manipulate statistical gimmicks to prove validity of our results. Only sound and appropriate statistical methods need be applied! At times one look at data will tell you that the statistical tests are deceptive and incorrectly chosen and inappropriately interpreted and wrongly applied!

The results and discussion section of the paper should be unambiguous and coherent. Results should begin with simple straightforward description of the data. Reference may be provided to the statistical tests' results whether results are significant or not. The significance of the results in reference to other studies should also be highlighted.

Discussion must bring out a clear narration in terms of results, their correlation with previously published research, lessons and conclusions derived. Limitation of the study and suggestions for future studies may be presented.

All figures and tables must be original from your cases and must not be copied from Google etc. or books or journals. Pictures of similar cases are also not allowed. If you want to insert a picture or table etc. from an article or a book, written permission from publisher and author would be required.

Aims of the study and conclusion must not contradict each other. Conclusion should be short, valid and should not extend beyond your findings. References must be balanced giving due credit to those who did substantial work in your field whether you agree or disagree with their findings and conclusions. Self-

citations should be avoided as much as possible. References should be helpful for the reader and potential researchers in that particular area. References should be written in internationally accepted format. Most journals use Vanocur style. Instead of writing the full title of the journals in the references, write only internationally accepted standard abbreviations.

The research articles are first internally reviewed and then sent to at least two external reviewers to determine suitability for publications. The reviewers' comments are forwarded. If the article is accepted without much change required or rejected, then there is not much issue. However, you must go through the comments as these comments may help you in doing better research and writing better articles in future. If the reviewers recommend changes before article may be accepted for publication, then you must do the required changes and highlight these changes so that reviewers can verify and satisfied.

Almost all journals provide "instructions for authors". Please follow these instructions carefully and adopt the usual way of printed articles in that particular journal where you want to submit your article

References

1. <https://authorservices.wiley.com/Reviewers/journal-reviewers/how-to-perform-a-peer-review/step-by-step-guide-to-reviewing-a-manuscript.html>
2. <https://support.jmir.org/hc/en-us/articles/115001310127-How-to-fast-track-expedite-a-paper-and-what-are-the-benefits>
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