

WRITING RESEARCH PAPERS: A SKILL THAT WE ALL CAN LEARN?

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In the academic world, there are supposed to be no secrets such as the Coca-cola recipe. Researchers are obliged to tell each other in great detail what they did, how they did it, and what the results are. As a result, in medical research, the primary output of hard-working researchers is to publish research papers. The goal of this open communication is to maximize the development of knowledge anywhere in the world, resulting in, for example, improved treatment, better diagnostic tests and more valid measurements instruments.

To optimize the communication of research findings, it is essential that researchers can write papers that are readable and that present data in a clear and concise manner. From the perspective of the researchers (full-time researcher but also clinicians doing research at night and during the weekends), it is therefore essential to be able to write good research reports, since this 'output' is nowadays mandatory to work and stay in academics.

In my experience, there is something special about the perception of the skill of writing researcher papers for peer-reviewed journals. While almost everything that we do as professionals is considered a skill that we have learned from books or teachers, being able to write a good paper is by many people considered to be a talent that you may have, or, unfortunately, may not have.

In my opinion, this is a misconception. Learning to write may not be very different from learning to perform, for example, a physical examination. To perform a good physical examination, you first learn the basic anatomy and physiology in medical school. After this, there is a long period of training aimed at integrating this knowledge in daily practice. As a result, when physicians perform a physical examination, they have a systematic approach to this. This approach is not just based on basic knowledge such as anatomy, but also on a theoretical and practical training on how to go about answering a question about the physical status of a patient.

For writing, of course, we also receive a long and extensive basic training. We spend a large part of our youth learning grammar and spelling. Later, non-native speaker will learn English reading and writing. At high school, we have to write essays and at university, we may write a thesis. Based on this, one would expect that we all can write a research paper. However, most people know it is not that easy. It is not only just a hard job to get to the point where you can submit something to a journal, very often an editor of a journal will tell you that your effort is not good enough.

Although there are different ways to write a research paper, just as there are different ways to perform a good physical examination, there are a number of rules and principles that we can learn and apply

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when writing a paper. In my experience, not many people have a clear idea of these rules and how to use them. We know that the "Methods" should not precede the "Introduction", since we see this in every paper. But most of the knowledge on writing seems to be present on a subconscious level, both in the 'teachers' as well as in the 'students'. Having a more explicit knowledge would improve the ease of writing as well as the ease of helping someone with their first manuscript by saying more than just: "I feel that your Introduction is not very well organized. You should look at this again!"

While in recent years, rules and principles on good academic writing have been much better defined, knowledge on this does not seem to have reached enough people in the academic society. For example, how many people know that there are suggested outlines[1] for designing your Discussion section? Or that there is such a thing as a Consort statement for reporting on randomized controlled clinical trials[2]? We have an anatomy atlas for looking up structures in the body, but how many people have a list somewhere that tells them which tense to use in which part of their paper? Or have a clear-cut concept of a good topic sentence[3] building up a paragraph in your manuscript?

In my opinion, writing research papers is something that we should learn to have a more systematic approach to. This will not only improve our quality of writing but also the change of getting your paper accepted, since it has been often stated (e.g, [4]) or even shown (e.g, [5]) that papers with good science often get rejected because of poor presentation. And it is something that each of us will benefit from most themselves. Spending some dedicated time to this will make writing more easy, more fun and, most importantly, more successful.

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