# HEALTH AND SOCIETY



## Letter to the editor

### The process of scientific writing and the consolidation of critical attitude in the academic and professional fields

O processo de escrita científica e a consolidação da atitude crítica no âmbito acadêmico e profissional da medicina

El proceso de redacción científica y la consolidación de uma actitud crítica em el ámbito académico y professional de la medicina

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Dear editor,

The process called the accumulation of knowledge has been shown as essential to the human species survival and provides us unique characteristics that allow the human species to build a solid base of knowledge (1). Faced with this, scientific writing is shown as a cornerstone of the development of accurate and critical thinking, which is required to a good clinical approach in a way that encourages experimentation, research and understanding of statistical procedures behind the new treatments and diagnoses are crucial for the medical profession to be exercised in its fullness (2).

Furthermore, encourage an approach based on pieces of evidence is also an important attribute that induces to scientific contact of the undergraduate students, particularly the medical students, to whom does this work describes. The practices of professionals armed with academic training concerns balancing scientific and procedural practices are based on concrete facts and evidence instead of taking into account knowledge that, with a statistical treatment, is likely to be reported wrongly (3).

We must acknowledge that the common wisdom could also be a science holder, as soon as that can be a booster to a scientific investigation and, then, might be confirmed or not. Although this investigation only can be properly conducted by trained professionals who have the expertise to analyze the data (4).

Health sciences, for instance epidemiology, have intrinsic requirements for experimental knowledge, guided by statistical procedures(5), which would be fulfilled with more expansive inclusion of undergraduate students, since the beginning of the graduation, in scientific initiation or extension programs and also in scientific methodology subjects, which could encourage the student to research and write the results and then submit it to scientific journals, that would challenge the student to write accordingly the norms and categories requested by the chosen journals(6).

Moreover, another important point to be considered is the confidence built by the student when they get in touch with methodological and scientific thinking through graduation. The self-efficacy, related to the confidence of the student to perform any activity, grows when the student is involved in active teaching methods, such as PBL (Problem Based Learning) or TBL (Team Based Learning), all that leads us to conclude that offer scientific problems and dare the students to solve them shapes more proactive and secure graduates (7).

Besides being a natural Science, as medicine is well known, it's important to keep in mind that Medicine also has a deep connection with the humanities and that scientific documentation goes beyond quantitative data analyzed through a more advanced mathematical treatment. Case report and medical histories are also a source of development of the practitioners of the medical profession, in such a way that takes place a wider understanding of their socio-political role as an agent transforming of their community (8).

To conclude with, it is noticed that an understanding of what Science is and its process would lead the students on a path of seeking for the improvement of the ability to develop a critical sense based on scientific knowledge and, to ensure that, it's crucial that the student gets in touch with the different possibilities at the University.

That is why this essay strongly recommends that students who are at the beginning of the medical course seek programs as Scientific Initiation, and also suggest the adherence of the Universities to syllabus focused on scientific methodology, which is essential to a professional performance as future doctors. A student who is fully aware of the scientific process is more likely to provide a more accurate diagnosis and more suitable treatment to their patient (2, 3, 6).

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