

Importance of the correct use of descriptors in scientific articles

Importância do uso correto dos descritores nos artigos científicos

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An important item that authors should observe when submitting a work for publication is the definition of descriptors or key words. These terms are of great value in indexation, because many researchers in the health area just to delimit a field in science, utilize them to search for information about diseases, surgical techniques or to write a scientific paper. If descriptors do not follow the nomenclature of databases the article runs the risk of not being found and so, not being cited. Thus, the information is lost.

This is very harmful, as the greater the number of citations the more value is placed on the journal and consequently, on the authors who published in the journal. This is what is called the 'impact factor', that is, the relationship between the number of times that articles of a magazine are cited and the total number of published articles each year. Thus, the higher the impact factor, the greater is the importance of the journal for reviewers, research agencies and the governmental organs such as CAPES. The author also loses, as the

greater number of citations the greater is the recognition of the value of his research and its results.

This article has the aim of calling the attention of cardiovascular surgeons who send their works, not just to the Brazilian Journal of Cardiovascular Surgery (BJCVS), but to international journals as well, of the importance of the descriptors and to help them to make the correct choices. Effort has been made so that the BJCVS constantly improves, maintaining a standard compatible to the best journals of its kind, in respect to both its content and its strict observance to the norms.

The most important scientific publications usually specify in their norms for authors, the necessity of providing descriptors (or key words) and which databases must be consulted to identify them.

The BJCVS, for example, determines in its norms for publication that the manuscript should have from three to five descriptors in the Portuguese and in English versions. A check should be made at the following electronic addresses: <http://decs.bvs.br/>, for

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terms in Portuguese, Spanish or English, or www.nlm.nih.gov/mesh for terms just in English.

DeCS (Descriptors in Health Sciences) was created in 1986 by Bireme from the Mesh (Medical Subject Headings) database – which exists since 1963 and is produced by *US National Library of Medicine* [1].

The site of DeCS stresses the importance of structured vocabulary: “Structured Vocabularies are necessary to describe, organize and provide access to information. The use of a structured vocabulary allows the researcher to recover information with the exact term utilized to describe the content of that scientific document. Structured vocabularies also work as maps that guide the users to the information. With the expansion of Internet and the number of potential access points of information exponentially increasing, vocabularies can be useful by providing consistent terms that permit the user to select the necessary information from of a vast quantity of data” [2].

Descriptor x key word

It is important to stress the difference between key words and descriptors. The first does not obey any structure, it is random and removed from free language texts. For a key word to become a descriptor, it must pass through a rigid control of synonyms, meaning and importance in the structural hierarchy of a determined subject.

Descriptors are already organized in hierarchical structures, facilitating the research and the later recovery of the article. For this, it is of fundamental importance that the authors consult DeCS and/or MeSH and use the terms that best reflect the focus of their articles.

Even if the author writes a paper about a determined theme about which he has previously published, it is necessary to consult again, because the databases are updated periodically. Just for you to have an idea, in the 2004 version, DeCS added 664 new terms, altered 109 and excluded 20. As well as this, 3266 synonyms were added, with 484 as MeSH descriptors and 710 as qualifiers. In total, there are 159,958 descriptors with synonymous and definitions in the three languages [2]. In the case of MeSH, there are 22,568 descriptors used to index about 4600 biomedical publications in the database of MedLine/PubMed [3].

With this great variety of descriptors available, the author has all the conditions to choose the most adequate terms for his work to be indexed in a manner that it can be easily localized. If there is doubt about which descriptors to use, the assistance of a librarian can be extremely useful.

Search

To search DeCS, the author must access the site (<http://decs.bvs.br/>) and on clicking “Consultation at DeCS” a screen will appear in which there is a field with the heading “Consultation by word” and a blank space. The term to be researched should be input in this blank space. When the researched term is Portuguese, ‘Portuguese’ as the “Descriptors Language” must be chosen. When it is English, the language option must be altered too. For “Consultation by Index”, the best option is ‘Alphabetic’. On inputting the word, if it is indexed, the descriptor in Portuguese, Spanish and English will appear as well as their qualifiers.

In the case of MeSH (www.nlm.nih.gov/mesh), click on ‘Online searching of MeSH vocabulary’. After, input the term (in English) in the space under item ‘Enter term or the beginning of any root fragments’. On the same page for the item ‘Search for these record types’ choose ‘All of Above’. Click on ‘Find Exact Term’ and the descriptor will appear. The qualifiers must be searched for using the field ‘Allowable Qualifiers’, in which only the letters A to Z appear.

Risks

Unfortunately, the practice of researching the available databases has not reached the desired standard yet. Many authors prefer to consult other articles and sometimes, not even this. The result in this case is, if peer-reviewers and editors do not rigorously check the articles, a risk of using misleading terms with the aforementioned consequences.

A work published in 2003 by OLIVEIRA et al. assessed the use of DeCS in two national periodicals in angiology and vascular surgery between 1995 and 2000 and showed that most of terms employed (56.3%) were not included in DeCS 2001 or in MeSH 1994. The authors concluded that new terms must be added to DeCS to accompany the development of specialties and that medical societies must encourage the search for terms in DeCS, as well as promoting a dialogue between BIREME and these societies and post graduation courses [4].

The same problem must occur in the other areas. Maybe, there is still little awareness on the part of societies responsible for the publication of scientific journals and indifference by authors.

This awareness will only come with much work and patience, together with the authors, peer-reviewers and editors of journals, to clarify the necessity and the importance of always rigorous searching, that must begin with the definition of research and only finish with the observance of all adopted norms of the journal in which the article will be published.

By making this a habit, both authors and publications will benefit.

The role of descriptors in the search of the best scientific evidence available

The search for available scientific information in the literature can become unproductive or confused without a basic comprehension of how the knowledge is organized and indexed [5]. To index in databases, there are specialized teams formed of librarians and health professionals including doctors, which read each article and mark the most specific and appropriate descriptors.

When defining the theme, the specificity of subject and the correct choice of descriptors are decisive for an adequate search of the literature [6]. Thus, an excessive number of uninteresting articles is avoided.

The application of these descriptors is not summarized only in the search of articles that can be the basis of scientific articles or be used to support opinions. On the contrary, they have a much broader application and should be incorporated in the daily clinical practice. The process of finding appropriated answers to doubts that arise during patient consultations depends on how questions are structured. Some groups have adopted a methodology proposed by Oxford University [7], where every question is structured based on descriptors. This methodology can be synthesized to the acronym P.I.C.O., where the P corresponds to patient or population, I to intervention, C to comparison or control and O to outcome. From the structured question, the descriptors that constitute the basis of evidence on the different databases are identified, describing each one of the four aspects in question [8]. Without a well-structured question and with an inadequate choice of descriptors, the search of databases frequently results in the absence of information or in too much information not related directly with the question [9].

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