

Scientific production of the Brazilian Society of Pulmonology and Phthysiology: 1979–2006*

ANA MARIA BAPTISTA MENEZES

In a survey carried out in 1969, research in the area of "biology and medical sciences" corresponded to one-third of all the ongoing projects and occupied the leading position with 926 projects. It was followed by agriculture (674 projects), social sciences (349 projects), technology (234 projects), earth sciences (190 projects) and chemistry (152 projects). However, concerning the financial aid granted for the development of these research projects, the portion allotted to the area of health was considerably more modest than was that allotted to the other areas.⁽¹⁾

According to the Conselho Nacional de Pesquisa e Desenvolvimento (CNPq, National Council on Research and Development), after three decades, biological and health sciences still account for the greatest number of lines of research (21,371), corresponding to 30% of the lines of research pursued in all of the broad areas of knowledge. Since 1969, the proportion of CNPq funding directed toward research in biological and health sciences has increased significantly, reaching 30% in 2004.⁽²⁾

Lines of research and research grants are the foundation of scientific production, which appears in the form of publications, books, conference presentations or technical reports. These, in turn, reveal advances in scientific knowledge, constituting a phenomenon that has been demonstrated in diverse areas of knowledge. In the area of health, pulmonology has accompanied that growth and increasingly contributes to the "state of the art". The number of conference presentations and publications has increased progressively, which is a topic dealt with in this volume of the *Jornal Brasileiro de Pneumologia* (JBP, Brazilian Journal of Pulmonology) in the article entitled "Profile of research published in the annals of the Brazilian Pulmonology and Phthysiology conferences held over the last twenty years", by Fabro, Yoo and

Queluz.⁽³⁾ However, it is known that magazine and journal publications are currently the principal means of propagating, on a worldwide basis, awareness and recognition of a given science.

The inclusion of pulmonologists in scientific research is that which ensures the possibility of their participation on the global science stage by testing new hypotheses, identifying health priorities or recommending techniques of diagnosis and treatment.

With the purpose of evaluating the tendency of the research in the area of Pulmonology in the country over time, a bibliographical search by author name, using the names of pulmonologists who are members of the Sociedade Brasileira de Pneumologia e Tisiologia (SBPT, Brazilian Society of Pulmonology and Phthysiology), was carried out for the period 1979 to 2006. Two of the largest databases of international and Latin American publications, Medline and *Literatura Latinoamericana y del Caribe en Ciencias de la Salud* (LILACS, Latin American and Caribbean Health Sciences Literature), were used. It was not the objective of this study to encompass all of Brazilian Pulmonology, for it is known that there are pulmonologists who are not members of the SBPT and that there are publications in the area of pulmonology by authors who are not members of the SBPT. It is believed, however, that a survey of approximately 2400 authors belonging to the SBPT reflects the overall national and international scientific production in the area. In order to avoid duplication in the survey and to restrict it only to the area of Pulmunology, certain strategies were adopted: publications found in the two databases surveyed were included only in Medline, since the journals indexed for Medline have higher impact factors than do those indexed for LILACS; articles authored by multiple SBPT members counted as only one publication in the name of the first author listed; articles authored by SBPT members that did not

pertain to the area of pulmonology were excluded from the results; the institutions of origin considered were those of the first author of the article.

Only articles were included in the survey. Therefore, theses, book chapters, books and technical texts were excluded. A total of 1502 publications were identified: 752 from Medline; and 750 from LILACS. The number of publications per year (Figure 1) reveals an approximate 80-fold increase in the number of publications from 1979 to 2005, compared with a two-fold increase in the number of abstracts published in the Annals of the Brazilian Pulmonology and Phthisiology conferences for the 1986 to 2004 period, as cited in the article by Yoo, Fabro and Queluz.⁽³⁾

With respect to the most frequently used journals for these publications, one finds the JBP (formerly the *Jornal de Pneumologia Brasileira*, *Journal of Brazilian Pulmonology*) with the highest percentage of publications (23.2%), followed by percentages ranging from 3.3% to 1.2% for the other journals of the area (Figure 2). The higher impact international journals, such as Chest, European Respiratory Journal (ERJ) and the American Journal of Respiratory and Critical Care Medicine (AJRCCM) occupied the third, fourth and sixth places, respectively. In the same position as the ERJ is the *Journal of Pediatrics and the Lung (Rio de Janeiro)*, and the *Brazilian Journal of Medical and Biological Research (Braz J Med Biol Res)* is ranked the same as the AJRCCM.

As was observed by Fabro, Yoo and Queluz, with respect to conference abstracts, the southeastern

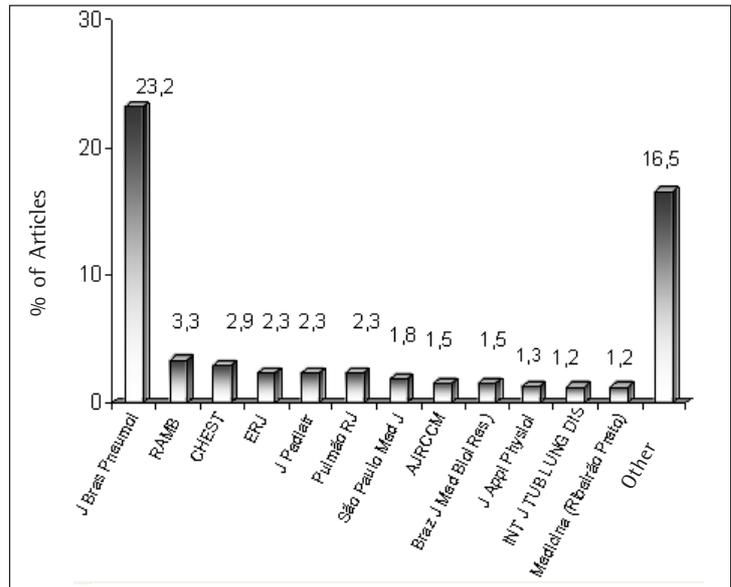


Figure 2 - SBPT publications by journal: 1979-2006

region stood out for its greater number of scientific publications in the area of pulmonology. It is worthy of note that the first four states in the ranking of the production of scientific articles were Sao Paulo (38.5%), Rio de Janeiro (16.7%), Rio Grande do Sul (13.2%) and Minas Gerais (4.2%). They also have the highest percentages of SBPT members. We observe, however, that the percentages of SBPT members in the states of Minas Gerais and Rio Grande do Sul are nearly identical: 10% and 9.6%, respectively (Figure 3).

In a developing country such as Brazil, with government policies that put little importance on

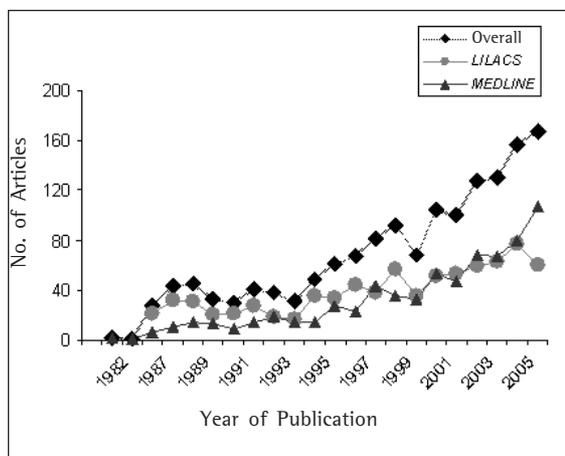


Figure 1 - Temporal trends in SBPT publications: 1979-2005

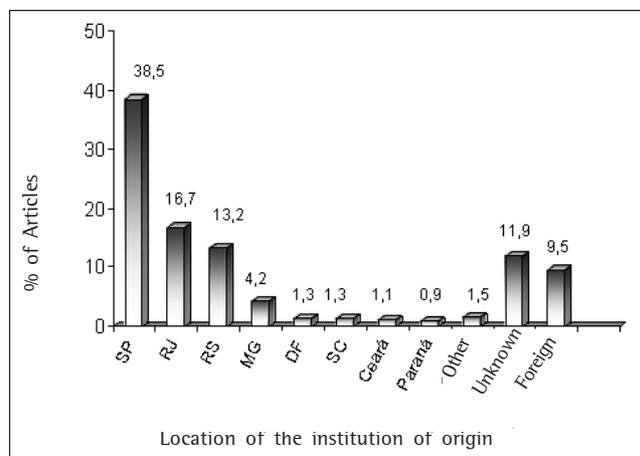


Figure 3 - SBPT publications by location of the institution of origin: 1979-2006

education, science or research, much determination, spirit of innovation and scientific ambition are needed, often to the detriment of financial concerns, in order to keep pace with the advances in knowledge in the rest of the scientific community, which has become globalized. The scientific production of the SBPT, without a doubt, has increased significantly over the past 26 years. It is imperative that this increase be not only in quantity but in quality. We still publish little in high impact international journals, with the JBP being the place where one-fourth of the research carried out by the SBPT is published. It must be a priority of the SBPT to lead the JBP to the highest scientific level within the medical literature. Currently, the indexing of a journal for Medline is still the dominant factor in determining its impact factor.

As pulmonologists of the SBPT, we have the responsibility of disseminating, to the scientific and lay communities, knowledge free from any influences other than the ethical principles of research in health.

ANA MARIA BAPTISTA MENEZES
Professora Titular de Pneumologia da Universidade
Federal de Pelotas - UFPEL; Coordenadora do Programa
de Pós-Graduação em Epidemiologia da UFPEL -
Pelotas (RS) Brasil.

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