In 2015, Brazil will become the main knowledge producer in dentistry in the world

Economic analysts, World Bank staff and academics in this area agree that Brazil will assume the position of the fifth largest economy in the world in a relatively short time. Those into science may even be surprised by economic growth, but not with the way of investigating and projecting the country's position. Regression statistical models, which in the research area language is synonymous with "forecast", are used for this purpose. The historical series are analyzed and future scenarios are estimated.

In fact, this is a recurring tool in different studies published in the pages of DPJO. In science, in some cases it is crucial to analyze data to develop predictive models. These models are used as parameters to predict outcomes, to classify cases and understand the difficulty of certain treatments.

The statistics are also used to evaluate the quantity and quality of scientific production of countries and specialties. One of the databases available for consultation to this end is the SCOPUS[1], and, recently I did an analysis of the information provided by it. This exercise included evaluating descriptive statistics of scientific production from major country producers of knowledge in dentistry. I evaluated two aspects: the production of all areas and orthodontics alone.

In 1996, the first year in this database, Brazil was in 17th place in ranking of number of articles produced in dentistry. However, when we evaluate the total production between 1996 and 2009, Brazil jumped to fourth place. The year of 2009 is the last with a SCOPUS list. However, the most interesting is what happens when we detail this research a little more. If only the year 2009 is submitted for consideration, our country is in second place in number of produced articles, being only behind of the USA.

When evaluating the specialty of orthodontics in isolation, the data are even more motivating. Throughout all the period of 1996-2009, our country is in second place in the ranking of publications in the area. But when only the years 2008 and 2009 are analyzed, we are—shocker—1st in the number of articles, and a factor H higher than the U.S. (the H factor measures the amount weighted by the quality of work and that is being measured by the number of citations).

The fact of being the first country in the world in publications on orthodontics is not everything. The data matrix does not incorporate the Dental Press Journal of Orthodontics published in English. It means that our number of citations will increase exponentially in the near future. The journal, published with the name "Revista Dental Press de Ortodontia e Ortopedia Facial", had a rapid growth in recent years, as can be witnessed

at the SCOPUS site. In certain configurations of search, our journal is in 3rd place in the international arena. But this is just the beginning.

Impressed with the growth of Brazilian publication in dentistry, I was puzzled over the future scene. Maintaining current growth rates of the publishing countries how will we be in 5 years? To understand the future scenario, I searched the number of articles published by the major nations over a decade, and performed linear regression models—read "prediction"—to foresee their ranking in 2016. Figure 1 includes all the countries reviewed and have, in the yellow area, the future. Brazil will become in 2015 the main producer of knowledge in dentistry in the world, overtaking the USA. Note our rising curve.

The change of scientific polarity will have a strong impact in our country. Our schools will have to adapt to receive foreign students speaking English. Do not be dismayed. Americans and Europeans will become regulars in our universities, reversing the migration route established in the twentieth century. Such cooperation will be very beneficial for everyone.

Course coordinators in Brazil, get ready for this scenario. You will get these students and play often the role of leading international research groups.

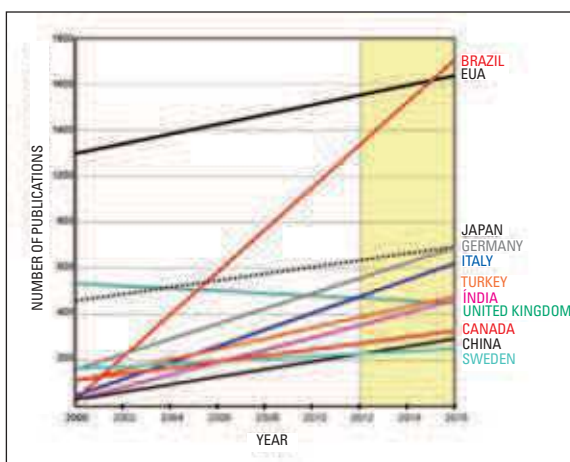Jorge Faber
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FIGURE 1 - The scientific production in dentistry was analyzed by regression predictive models. Notice in the chart the growth pattern of various countries. Brazil stands out and becomes, in 2015, the main producer of knowledge in dentistry in the world, overtaking the USA.

REFERENCES

1. SCImago. (2007). SJR — SCImago Journal & Country Rank. Retrieved March 23, 2011, from http://www.scimagojr.com.