

Spanish Optometry: Demanding its Place in the International Scientific Publication Scene

Scientific publication in Optometry and Visual Science has steadily increased for the last decades, mainly since the mid eighties and particularly after the mid nineties and the beginning of the present century, remaining at a higher rate of 400 to 600 new citations each year thereafter. This can be easily assessed by a simple search in one of the most used database by clinicians and scientists in biomedical areas, Pubmed-Medline (see *figure 1*, obtained using “optometry” as search keyword). Many times this publication rate has been preceded by new breakthroughs in vision care, and new discoveries leading to clinical studies to assess the ocular response to treatments and devices (i.e. silicone hydrogel contact lenses).

As expected, the main contributors to the scientific publication rate are those countries where optometry has achieved an earlier full academic development and a scientific independency, such as the United States of America (USA), United Kingdom (UK), and Australia among others (*Figure 2*). Apart from the higher rate of citations from the USA, we observe the high publication rate coming from Australia, even more significant if we compare the Australian population and the number of Schools of Optometry with those of the UK, for example. Moreover, Canada, with only a few Schools of Optometry shows a similar or even higher publication rate compared again with the UK, with a significantly higher number of Institutions conducting research in Optometry and related areas.

The motivations for research in Optometry and visual science are diverse but the most common include academic goals and industrial innovation, these been intensively evaluated in previous reports.¹

With the recent launch of the Journal of Optometry, the peer-reviewed journal of the Spanish Council of Optometrists, the issue of scientific publication in the field of Optometry and visual science has attracted our attention with regards to the Spanish optometric professional and academic environment. A closer analysis to the impact factors and publication rates for several optometric and ophthalmological journals has shown that optometric journals followed the average behavior of the remaining journals included in the same group within the Journal Citation Report (JCR) from the Institute for Science Information (ISI) Web of Science.² In the same document, we pointed out that changes in current academic structure of the optometry degrees, in addition with the more frequent incorporation of the optometrist to multidisciplinary clinical and research teams, anticipates an increase in the scientific publication rate from the Spanish optometric community.

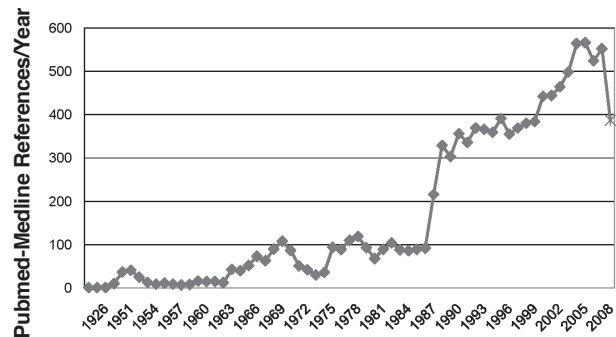


FIGURE 1
Scientific publications listed in Pubmed-Medline since 1926 (search criteria “optometry” by 16th September 2008).

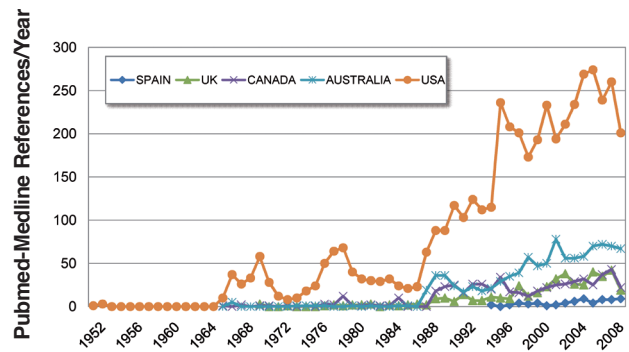


FIGURE 2
Scientific publications listed in Pubmed-Medline since 1952 (search criteria “optometry” by 16th September 2008) for different countries including Australia, Canada, Spain, United Kingdom and United States of America.

However, a quick overview of *figure 2* shows that the contribution by Spanish optometrists to scientific publication worldwide, despite a modest increase in recent years, is meaningless. This was surprising for us because we actually know that the publication carried out by Spanish optometrists in indexed scientific journals largely exceed the numbers reflected by such search using “Spain + optometry” as keywords. In order to test this hypothesis, we made another search using different keywords (i.e. “refractive surgery”, “eye”, “contact lens”,...) in addition to “Spain”. The outcomes of this search are listed in *table 1*, showing clearly a higher rate of publication in visual science related areas as those having more contribution coming from Spain. Many of these citations do not have direct participation of optometrists, of course, but many others actually do.

The reason for the few number of citations specifically related to Optometry and Spain is partly found in the current Department scheme at Spanish universities and the lack of specific Departments of Optometry. In fact, most of Spanish optometrists involved in research activities are integrated in Departments of Optics, Physics and Ophthalmology.

TABLE 1

Number of citations in Pubmed-Medline for different search criteria (by 16th September 2008)

Search Keywords	Number of Citations
Eye + Spain	3039
Vision + Spain	1170
Refractive Surgery + Spain	625
Contact Lens + Spain	130
Ocular Aberrations + Spain	88
Optometry + Spain	67

Considering the above, and the need for the optometric community in Spain to claim for its role in the production of scientific knowledge, it is important that Optometry demands its place within the international community. This can be accomplished without going against the laws and current departmental structure. Some examples are included in this second issue of Journal of Optometry from an "Optometric Research" center in the United Kingdom³ and from two "Optometry Research Groups" in Spain and Portugal in collaboration with an ophthalmology clinic.⁴ Other suggestions to Spanish optometrists involved in manuscript submission to peer-reviewed journals, in order to make clearer their role in research, is to include in their affiliation items such as "Optometry Research Unit", "School of Optometry", "Department of Optometry", "Area of Optometry", "Department of Physics (Optometry)",... This is also useful for those publishing from ophthalmology clinics and hospitals where Departments of Optometry are usually present. In this case, the word "Department" can be used without any academic connotation. Perhaps in the next few years, Departments of Optometry or scientific Areas of Optometry will be a "legal" reality in a more contemporary academic structure of Spanish Optometry Schools.

Another important milestone recently achieved by Spanish optometrists is the creation of the first Cooperative Optometric Research Network, approved and funded by the

Spanish Ministry of Science and Innovation. This project, involving 5 institutions from Spain, is now in the establishment phase and for the next 3 years will represent a huge step towards the affirmation of the scientific role of optometric activity, and will certainly represent a stimulus for strengthening the publication in this field in the next few years.

In summary, we strongly encourage Spanish optometrists to claim for their place in the scene of international optometry research activity. Along with the recent launch of the Journal of Optometry, this will be a remarkable landmark in the way to elevate optometric activity to the place it deserves following the realities of other countries mentioned earlier. Apart from the obvious example of Australia and Canada there are other examples where a limited number of researchers in an even more limited number of institutions have achieved during the last years a high rate of publications related to the "optometry" field. Spain can be the following one.

Optometrists are strongly involved in research activity in visual sciences, and the Journal of Optometry will witness that for the next years and decades to come. We have the responsibility to face the challenge of raising Spanish Optometry to the scientific place it deserves, and the path seems to be clear on the light of data presented in this editorial.

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