

EVOLUTION OF RESEARCH IN PHYSIOTHERAPY IN SPAIN

Luz González Doniz¹, Sonia Souto Camba², Jamile Vivas Costa³

¹Corresponding author. Physiotherapist, PhD in Physiotherapy. Professor at the Coruña University. A Coruña, Galicia, Spain. luz.doniz@udc.es

²Physiotherapist, PhD in Physiotherapy. Professor at the Coruña University. A Coruña, Galicia, Spain. sonsoc@udc.es

³Physiotherapist, PhD in Neuroscience. Professor at the Coruña University. A Coruña, Galicia, Spain. jvivas@udc.es

Physiotherapy in Spain was regulated, academically and professionally, in the 1950s. Since then, it has been trailing a long way to consolidate itself in the field of clinical practice, teaching, research and management. In the clinical scenario, whose activity initially occurred only at the level of hospital care, it was gradually introduced at the primary health care level, at the socio-sanitary centers, educational, sports, etc., substantially expanding its role as a profession of the Health Sciences. This development was reinforced by several educational programs implemented over time that have enabled and obliged Spanish physiotherapists to join the academe on an equal level, like any other health professional, and also to assume the same responsibilities.

As national and international organizations advocate, Physical Therapy is a health profession based on the interaction of three fundamental pillars: academic training, scientific research and professional responsibility, with the objective of developing, conserving, restoring and improving health and preventing diseases.

The World Confederation of Physiotherapy (WCPT) argues that the most effective way to achieve these goals is through evidence-based practice (EBP), understood as a synthesis of research, clinical practice and patient preferences⁷.

This approach has forced Spanish physiotherapists as well as physiotherapists of other nationalities to base their clinical practice upon evidence and to also generate that evidence. If EBP is defined as a process in which health professionals use the best available

evidence from research, along with clinical experience itself, to make decisions about patients and proposes the need to take into account the characteristics, beliefs, values and preferences defined by the patient^{4,7}; the commitment and active role of physiotherapists in practice becomes indispensable.

The evidence is the result of the research, and therefore, indicators - such as scientific production published and registered in databases, scientific journals and their indexation, number of theses read and number of research groups - express the current research situation in Physiotherapy.

Information statistics recorded in the PEDro database show how the world scientific production in Physiotherapy began to gradually develop since the 1980s, increasing substantially from 2000s. The predominant theme of the documents registered in this database is related to osteoarticular physiotherapy, followed by the cardiothoracic, neurological and gerontological areas.

SCImago and the Country Ranking place Spain in the category of "Physical Therapy, Sports Therapy and Rehabilitation", during the period from 1996 to 2015, in the seventh position in produced and quoted documents. If the comparison is to be made between the countries of the European environment (Western Europe) it is noted that the tops of scientific production are occupied by the United Kingdom and Germany, followed by Spain for both published and quoted documents.

Studying the evolution from 2000 to 2015, at the world level, one can observe how Spain has moved up

from 11th place in 2000 to 7th, 5th and 8th places in 2005, 2010 and 2015, respectively. The interruption of 2015 may be due to several factors. On the one hand, the arrival of emerging countries such as Brazil and South Korea, and the severe economic crisis in Europe on the other hand, that has led to a gradual decline in the budgets dedicated to RD&I, from 2008 onwards.

If the focus is on doctoral theses in the period between 2001 and 2017, the evolution is progressive and upward, with two peaks highlighted in the academic years 2011/2012 and 2015/2016. The osteoarticular (41%), neurological (15%) and cardiorespiratory (6,7%) physiotherapy occupy the first three places of interest in the last three years (2015, 2016 and 2017) of Spanish researchers, which is in line with what is happening around the world, reflected in the statistics of the PEDro database.

Another important indicator of the state of research in Physiotherapy in Spain is the number of existing research groups. Although there is no data on their development, a recent study analyzes the groups linked to university departments among which the Physiotherapy area stands out³. In the total of 64 universities (42 public and 22 private) analyzed, 39 groups were found (those in which, or in their names or descriptors, the term Physiotherapy appeared) and 53 groups in related areas (groups with research lines in Physiotherapy to which physiotherapists may or may not be linked).

Regarding publications, according to SCImago, the Spanish journals are placed in quartiles Q3 and Q4. The journal Physiotherapy is the most important support for the scientific dissemination in Physiotherapy in Spain. Indexed in Scopus, published articles are subject to peer review and the criteria established by international regulations. Meroño-Gallut et al. in the period between 1979 and 2008, found a gradual improvement in the methodological design of the articles published in the journal Physiotherapy⁵. This tendency began in the period 1993 to 1999, associating it with the development and consolidation of university research that, in the latter periods, is related to the establishment of specific doctoral programs in Physiotherapy.

It can be concluded that the level of research in Spain is good, ranking worldwide among the 10 countries with the highest production and at European level among the top three. The increase in the quantity and quality of scientific production places Spain in 2015 as second in the category of "Physical Therapy, Sports Therapy and Rehabilitation" in the European environment. This production seems to coincide with the increase of doctoral theses and research groups. However, there is no correspondence between these indicators and the position of journals in the area. This fact can be attributed to legislative changes in the evaluation of research activity by Spanish official bodies that push researchers to select international journals over nationals by publishing the results of their searches for greater visibility.

The challenge of research in physical therapy in the future will be to achieve higher levels of evidence through better training in research, greater attention to chronic processes

and deterioration of the quality of life (of high prevalence in contemporary world societies) and reproducible research designs, which reflect the complexity of clinical practice in Physiotherapy.

REFERENCES

1. Ministerio de Educación, cultura y deporte. Base de datos de Tesis Doctorales [Internet]. 2017 [cited: 2017 jun 18]. Available from: <https://www.educacion.gob.es/teseo/irGestionarConsulta.do;jsessionid=00AD75B7FFF5FA45D8B67B04045C82BA>
2. Thonson Reuters. InCites Journal Citation Reports. 2015 [cited in: 2017 jun 18]. Available from: <https://jcr.incites.thomsonreuters.com/>
3. Doniz LG, Camba SS, Conesa AG, Serrano CS, Cabanach RG. Características, tipificación y análisis de la producción de tesis doctorales en el área de fisioterapia. In: Libro de Resúmenes de los trabajos aceptados en el XIV Foro Internacional sobre la Evaluación de la Calidad de la Investigación y de la Educación Superior, 2017; Granada. Granada: Asociación Española de Psicología Conductual; 2017. p.242.
4. Maher CG, Sherrington C, Elkins M, Herbert RD, Moseley AM. Challenges for evidence-based physical therapy: Accessing and interpreting high-quality evidence on therapy. *Phys Ther.* 2004;84(7):644-54. doi: [10.1093/ptj/84.7.644](https://doi.org/10.1093/ptj/84.7.644)
5. Meroño-Gallut AJ, Roldán JR, Martínez RC, Ríos-Díaz J, Martínez-Fuentes J. Evolución de la estructura y la objetividad científica de los artículos publicados en la revista Fisioterapia (1979-2008). *Fisioterapia.* 2017;36(6):255-265. doi: [10.1016/j.ft.2013.10.004](https://doi.org/10.1016/j.ft.2013.10.004)
6. Centre for Evidence-Based Physiotherapy. Physiotherapy Evidence Database [Internet]. 2017 [cited 2017 oct 31]. Available from: <http://www.pedro.org.au/spanish/downloads/pedro-statistics/>
7. World Confederation of Physical Therapy. Policy statement: Evidence Based Practice [Internet]. 2011. Available from: <http://www.wcpt.org/policy/ps-EBP>