

ORIGINAL RESEARCH

DOI: <http://dx.doi.org/10.15446/revfacmed.v66n3.63395>

Scope of Occupational Therapy postgraduate degrees around the world

Alcance de los programas de postgrado en terapia ocupacional en el mundo

Received: 20/03/2017. Accepted: 02/09/2017.

Ana Paula Serrata-Malfitano¹ • Gustavo Artur Monzeli² • Giovanna Bardi² • Roseli Esquerdo-Lopes¹¹ Universidade Federal de São Carlos - Campus São Carlos - Occupational Therapy Department - Sao Paulo - Brazil.² Universidade Federal do Espírito Santo - Campus de Maruipe - Occupational Therapy Department - Vitoria - Brazil.Corresponding author: Ana Paula Serrata-Malfitano. Occupational Therapy Department, Universidade Federal de São Carlos. Rodovia Washington Luís, KM235 - SP-310, CEP 13565-905. Telephone number: +55 16 3306-6623. São Carlos. Brazil. Email: anamalfitano@ufscar.br.

| Abstract |

Introduction: The production of knowledge in Occupational Therapy has been making progress worldwide.**Objective:** To understand how Occupational Therapy has developed as an academic discipline, particularly with respect to its areas of research at different universities.**Methods:** The Occupational Therapy postgraduate programs around the world (such as master's degrees and doctoral programs), registered at World Federation of Occupational Therapists (WFOT) until 2015, were mapped and the websites of each program were visited to complete the information.**Results:** Data from 266 institutions that offered postgraduate programs were collected and analyzed. As of 2015, there were 348 programs in 11 countries; 225 professional master's degrees, 69 academic master's degrees, 30 post-professional doctorates in Occupational Therapy (PPOTD), and 24 academic doctorates (PhD). Such programs have existed since 1918 and had two major growth periods in 1940 and 1990.**Conclusions:** The number of postgraduate programs in occupational therapy is fairly limited. Only 16% of the countries that offer undergraduate courses also have master's or doctoral programs. There are few postgraduate programs, especially at the doctoral level, which has limited the academic scope of this field.**Keywords:** Education; Research; Knowledge; Occupational Therapy (MeSH).

| Resumen |

Introducción. La producción de conocimiento en el área de terapia ocupacional ha avanzado en todo el mundo.**Objetivo.** Comprender cómo se ha desarrollado el campo de la terapia ocupacional como disciplina académica, en particular en lo que se refiere a sus áreas de investigación en las universidades.**Materiales y métodos.** Se mapearon los programas de postgrado en terapia ocupacional (maestrías y doctorados, académicos y profesionales) que fueron registrados en la Federación Mundial de Terapeutas Ocupacionales (WFOT) hasta 2015. También se consultaron los sitios web de cada programa para completar las informaciones.**Resultados.** Se recogieron y analizaron datos de 266 instituciones que ofrecían programas de postgrado en terapia ocupacional. Hasta 2015, había 348 programas en 11 países: 225 maestrías profesionales, 69 maestrías académicas, 30 doctorados profesionales (OTD) y 24 doctorados académicos (PhD). Este tipo de especializaciones existen desde 1918 y han tenido dos grandes períodos de crecimiento: uno en 1940 y otro 1990.**Conclusiones.** El número de programas de posgrado en terapia ocupacional, especialmente a nivel doctoral, es bastante limitado. Solo el 16% de los países que ofrecen cursos de pregrado también incluyen programas de maestría o doctorado.**Palabras clave:** Educación; Investigación; Conocimiento; Terapia Ocupacional (DeCS).Malfitano APS, Monzeli GA, Bardi G, Lopes RE. Scope of Occupational Therapy postgraduate degrees around the world. Rev. Fac. Med. 2018;66(3):335-41. English. doi: <http://dx.doi.org/10.15446/revfacmed.v66n3.63695>.Malfitano APS, Monzeli GA, Bardi G, Lopes RE. [Alcance de los programas de postgrado en terapia ocupacional en el mundo]. Rev. Fac. Med. 2018;66(3):335-41. English. doi: <http://dx.doi.org/10.15446/revfacmed.v66n3.63695>.

Introduction

Knowledge is produced in different scenarios. It is understood as a social and historical process, which offers the bases to develop different fields. According to some authors, the university is socially recognized as a

place of inquiry and critical reflection to achieve a better academic and scientific understanding of a particular discipline. (1-3) Santos (2) stated that research at universities should be regarded as the social practice of knowledge, if it is carried out to produce information that can contribute to our understanding of the functioning and problems of society.

Latour (1) points out that the scientific community should carefully consider its own practices and values, as they may influence the kind of knowledge that will be produced. Knowledge production takes place through a complex relationship between individuals, information, institutions and the machinery used in the process of developing technologies and science.

In the study of the Sociology of Sciences, Santos (3) inquires about the role of the contemporary university and states that the university is key for the development of a nation-state, as it is a place for the legitimate discussion on the subject matter and is permeated by forces of economic interest. Additionally, Santos (3) reaffirms the importance of research at the university in order to foster a culture of critical thinking and pursue exemplary, scientific and humanistic knowledge.

Based on this discussion, Occupational Therapy is considered as a university discipline. In this context, questions arise regarding knowledge production in this field and its application to solve relevant real-life problems, especially those related to intervention processes with the concerned populations.

This is a discipline characterized by the specificity of its presentation, the production of distinctive results through determined methods, the identification of relevant theory, its recognition within the academic system, the presence of funding for its development, and by having appropriate places for information dissemination. According to Good, "scientists assemble disciplines using many elements: phenomena, methods, instruments, theories, analytical techniques, and institutional tools such as journals, government bureaus, and university positions". (4, p259)

Thus, this study intends to understand how Occupational Therapy has developed as an academic discipline, particularly with respect to its areas of research at different universities. For this, the postgraduate education system at master's and doctoral level was examined as these kind of programs promote knowledge production and offer a place for experimentation, study, research, and reflection in the field. Therefore, it is important to map the current state of academic programs on Occupational Therapy and their research interests.

This manuscript presents the study results to collect and share relevant information for occupational therapists and researchers and have a comprehensive picture of knowledge production at a postgraduate level in occupational therapy worldwide. Additionally, it intends to expose the lack of knowledge on this discussion, particularly on Occupational Therapy postgraduate programs.

Materials and methods

A survey was designed to map the current status of Occupational Therapy academic programs registered in WFOT by 2015 worldwide, as well as related research areas. This project was developed in five phases.

For this, it was necessary to list the countries that offer Occupational Therapy programs, define their lines of research, the amount of staff in each program, and for how long the programs have been active.

The World Federation of Occupational Therapists (WFOT) website was consulted to access this data in September 2011, as it is recognized in the field as the "official representative of occupational therapy and occupational therapists worldwide" and has been in operation since 1952. (5) The WFOT compiles and publicizes information on courses and programs that meet the quality standards established by the association. (5) Although the website does not offer very accurate information, because the programs are not obliged to publish it on their website, it is possible to obtain a brief account of the occupational therapy field.

During the first stage, a list of 178 universities with courses accredited by the WFOT was created (6), including the name of the program and contact details. A standard email was sent to the universities explaining the nature and purpose of the study and requesting the following information: name of the program, main line of study (i.e. central topic/s of research in the program), number of academic staff involved in the master's and doctoral courses, year of creation of the programs, number of students currently enrolled and number of graduates (master's and/or PhD students). After sending five email reminders from September to November 2011, 33 responses (18.54%) from the universities were received.

During the second phase, this mapping process was expanded by gathering relevant information from the institution websites and searching for the same data previously requested by email. As a result, the data from 100% of the institutions on the list were retrieved. However, no data about the number of students that had already graduated was obtained. Hence, this particular information was excluded from the mapping process.

During the third phase, conducted in April 2012, the information previously collected was updated, as new information was available on the WFOT website that included 199 registered institutions. (6) It was found that many institutions with postgraduate programs were not listed in the previous phases. In consequence, to improve the database, a fourth phase was developed in January 2015 by visiting the websites of professional associations of occupational therapists of countries where postgraduate programs were found in earlier stages. In this way, the information available on the WFOT website was completed. A total of 266 institutions with postgraduate programs were included in the survey.

Descriptive statistics were used to examine the distribution of occupational therapy programs across the different countries, their year of creation, and the number and educational qualified professors involved in these courses. Thematic grouping, along with descriptive statistics, was used to identify the central research topics addressed in these occupational therapy programs. The thematic grouping was analyzed by critical approach (7) during the fifth phase of the study.

Since the study used public information available on the WFOT website and institutional websites, all with free access, the project was not submitted to an Ethics Approval Committee.

Results

Distribution of Occupational Therapy Postgraduate Programs

The 266 analyzed institutions were distributed geographically across 11 countries: 4 European countries, 3 in North America, 2 in Asia, 1 in Africa, and 1 in Oceania. Among these countries, 205 institutions were located in the United States, 19 in United Kingdom, 14 in Canada, 8 in Australia, 7 in South Africa, 3 in Israel and Sweden, 2 in Taiwan and Austria, and 1 institution in Mexico and Ireland.

The institutions offered 348 programs (master's and doctoral degrees), as universities usually offer more than one graduate course. In the master's degree category, 294 Occupational Therapy courses were found, of which 225 were professional courses and 69 were academic courses. In the doctoral category, 54 courses were found, of which 30 were professional and 24 academic courses.

In Australia and Taiwan, all the master's degree courses fell into the professional category. The United States, Canada and the United Kingdom offered professional master's mostly. In other countries, such as Austria, Israel, Mexico, South Africa and Sweden, all master's programs were academic. The United Kingdom is the only country

with a similar number of professional and academic master's. Professional master's degrees, as a course type, were conceived differently in the countries where they are offered because they are done after obtaining a bachelor's degree and enable professionals to practice Occupational Therapy.

The distribution of the courses per country is shown in Table 1.

Table 1. Total of postgraduate courses.

Country	Professional Master's	Academic Master's	Professional Doctorate	Academic Doctorate (PhD)	Total
Australia	11 *	-	-	-	11
Austria	-	2	-	-	2
Canada	11 †	7	-	2	20
Ireland	1	-	-	-	1
Israel	-	4	-	2	6
Mexico	-	1	-	-	1
South Africa	-	9	-	5	14
Sweden	-	3	-	2	5
Taiwan	2	-	1	-	3
United Kingdom	16	14	2	2	34
USA	184 ‡	29	27	07	247
Total	225	69	30	20	344

* From this total, 2 are a combination of bachelor's and master's degrees.

† From this total, 1 is a combination of bachelor's and master's degrees.

‡ From this total, 43 are a combination of bachelor's and master's degrees. Source: Own elaboration based on (6).

Distribution of doctoral programs

Two categories were found in this regard: professional doctoral programs and academic doctoral programs. The difference between them is a topic often discussed in the international context. Originally, the doctoral programs focused on the production of knowledge in a particular area and training in research, which is true for academic doctoral programs today, eventually granting the degree of Doctor of Philosophy (PhD). (8) On the other hand, professional doctoral programs (PPOTD) focus mainly on professional practice. According to Morley and Petty (9), professional doctoral programs seek to develop professional practice and to support individuals to contribute to (professional) knowledge. (9, p186)

According to the database, professional doctoral programs were offered in three countries: Taiwan (1 program), the United Kingdom (2 programs), and the United States (29 programs). The 20 academic doctoral programs found in this study are distributed as follows: 7 in United States, 5 in South Africa, and 2 in Israel, Sweden, Canada and United Kingdom. Table 2 presents the list of the institutions and the distribution of academic doctoral programs in these institutions.

Table 2. Academic doctoral programs.

Country	Institution	Name of the Program	Start date
Canada	Dalhousie University	PhD in Occupational Therapy	Not found
Canada	University of Western Ontario	Combination - Professional Master's and PhD in Occupational Therapy	Not found
United Kingdom	University of Brighton	PhD in Occupational Therapy	Not found
United Kingdom	Brunel University London	PhD in Occupational Therapy	Not found
Israel	Hadassah and the Hebrew University of Jerusalem	PhD in Occupational Therapy	1996
Israel	Tel Aviv University	PhD in Occupational Therapy	1997
South Africa	University of Limpopo MEDUNSA Campus	PhD in Occupational Therapy	Not found
South Africa	University of Cape Town	PhD in Occupational Therapy	Not found
South Africa	University of Stellenbosch	PhD in Occupational Therapy	2012
South Africa	University of Pretoria	PhD in Occupational Therapy	Not found
South Africa	University of the Free State	PhD in Occupational Therapy	Not found
Sweden	Jonkoping University	PhD in Occupational Therapy	Not found
Sweden	Karolinska Institutet	PhD in Occupational Therapy	Not found
USA	New York University	PhD in Occupational Therapy	1973, first PhD in Occupational Therapy
USA	Nova Southeastern University	PhD in Occupational Therapy	Not found
USA	Texas Woman's University	PhD in Occupational Therapy	1993
USA	University of Illinois at Chicago	PhD in Occupational Therapy	Not found
USA	University of Kentucky	PhD in Occupational Therapy	Not found
USA	University at Buffalo	PhD in Occupational Therapy	Not found
USA	Virginia Commonwealth University	PhD in Occupational Therapy	Not found

Source: Own elaboration based on (6,10).

Research topics in graduate programs related to Occupational Therapy

The main topics included in the various postgraduate programs were analyzed to create a list of areas of interest and production of knowledge in Occupational Therapy in the sample surveyed. The topics were thematically grouped according to the similarities described by the programs, and the greatest incidence of nomenclature was used.

This classification process identified 16 main topics that are listed in order of frequency: a) professional practice, b) occupation,

c) evidence-based practice, d) occupational science, e) research, f) rehabilitation sciences, g) pediatrics, h) neurology, i) ageing, j) assistive technology, k) work, l) social occupational therapy and social issues, m) organizations and leadership, n) psychiatry, o) physical dysfunction, and p) community-based rehabilitation. These findings are presented in detail in Table 3.

Table 3. Classification of topics per postgraduate program.

Main topic	Related topics	Incidence
Professional practice	- Development of practical skills - Improving practice of occupational therapy - Professional training for practicing - Practice	265 master's 49 doctoral programs
Occupation	- Occupation - Occupational Performance - Human Occupation - Therapeutic Occupation	150 master's 19 doctoral programs
Evidence-based practice	- Evidence-based practice	110 master's 16 doctoral programs
Occupational science	- Occupational science - Science of the occupation	19 master's 5 doctoral programs
Research	- Research in Occupational Therapy	9 master's 15 doctoral programs
Rehabilitation Sciences	- Rehabilitation Sciences - Work-related injuries (based on Public Health) - Orthopedics - Hand Therapy	10 master's 3 doctoral programs
Pediatrics	- Pediatrics - Infancy	9 master's 4 doctoral programs
Neurology	- Neurology - Neurorehabilitation - Neuroscience	6 master's 2 doctorate
Ageing	- Ageing - Senior citizens - Dementia - Gerontology	4 master's 3 doctoral programs
Assistive Technology	- Technology for assistance - Virtual reality - Advanced technologies	6 master's 1 doctoral program
Work	- Adaptation / evaluation of job - Professional Rehabilitation - Ergonomics - Social Security	5 master's 1 doctoral programs
Social occupational therapy/Social issues	- Social Occupational Therapy - Racial Issues - Employment/unemployment, underemployment - Homeless people - Prisons	4 master's programs
Organizations and leadership	- Organizational Field - Quality management - Leadership	1 master's 3 doctoral programs
Psychiatry	- Psychiatry	3 master's
Physical dysfunctions	- Coordination Disorders - Sensory impairment - Cognitive Disabilities	2 master's 3 doctoral programs
Community-based rehabilitation	- Community-based rehabilitation	1 master's program

Source: Own elaboration.

One master's program did not have information available about the central topic of the course because the topic was established

according to the interests of each student. It was not possible to identify the main topics in five master's and five doctoral programs, since this information was not found in the university websites and the institutions did not reply to the request for information via email.

In Australia, Taiwan and Ireland, where only professional master's programs are available, research was primarily about the practice of occupational therapy and included topics such as 'occupation', 'occupational performance', 'human/therapeutic occupation', 'occupational science', 'assistive technology', 'pediatrics', 'rehabilitation sciences' and 'evidence-based practice'.

In the United States, nine master's programs dealt with topics on 'occupational science', followed by topics such as 'pediatrics and infancy', 'ageing', 'organizations and leadership', 'rehabilitation sciences', 'assistive technology', 'community-based rehabilitation', and 'social issues', specifically 'racial issues'.

Similarly, in Canada, emphasis was on 'occupational science' in the four master's programs. In Australia, the following topics appeared only once: 'orthopedics', 'neurology', and 'psychiatry'. The only master's program offered in Ireland addressed topics such as 'occupational science' and 'social occupational therapy'.

In the academic programs offered in Austria, Mexico, and Sweden, the focus was on the topic of 'occupational science'. In Austria, the main topic was 'leadership and management', and in Sweden, the main topics were 'disabilities', 'welfare', 'gerontology', and 'leadership'. In Taiwan, the only topic identified was 'practice of occupational therapy'.

In Israel, the professional programs addressed topics such as 'occupational science', 'pediatrics', 'disability', 'virtual reality', and 'research', whereas the academic courses dealt with topics on 'assistive technology', 'rehabilitation', and 'ergonomics'.

The nine academic programs offered in South Africa addressed a variety of topics such as: 'human occupation', 'disability', 'rehabilitation', 'practice', 'hand therapy', 'neurology', 'pediatrics', 'psychiatry', 'occupational science', 'professional practice', 'professional rehabilitation', 'adapted work environment', 'unemployment', and 'underemployment'.

Regarding doctoral programs, the focus areas were linked to the contents developed during the master's programs and, therefore, they addressed similar topics. In Canada, topics on 'occupational science' and 'ageing' were predominant at this level of training. Similarly, in Sweden and Taiwan, the topics studied were equivalent to those studied in the master's programs.

Finally, in the United States, topics related to 'occupational therapy practice', 'occupation', and 'evidence-based practice' were more common in professional doctoral programs. In addition, topics such as 'ageing', 'neurology', 'leadership', 'assistive technology', 'occupational science', 'community-based rehabilitation', 'disability', and 'labor and industry' were addressed.

Distribution over time: growth of Occupational Therapy postgraduate programs worldwide

To understand the distribution of occupational therapy courses over time, the year of creation of the occupational therapy postgraduate programs (master's and doctoral programs) was considered. The first two master's programs in Occupational Therapy were opened in the United States in 1918 at Tufts University and Washington University. Thereafter, another master's degree program was opened in the 1920s and three more in the 1930s in the same country. However, it was only until the 1940s when Occupational Therapy made great progress and, consequently, 26 new programs were opened.

During 1950s, only six new programs were created, while eight more programs were opened in 1960. During the 1970s and 1980s, the amount of courses increased with 20 new programs being added in each decade. In the 1990s, a second breakthrough occurred when 77 additional master's programs were established. After opening 10 additional master's programs after the year 2000, a significant drop in the growth of new programs has been observed, leading to the consolidation of the existing courses. It is important to remember that master's programs are the entry level to the profession in the United States. Currently, there are three master's programs and 11 doctoral programs in candidate entry-level status and 13 master's programs and 9 doctoral programs in applicant entry-level status according to the American Occupational Therapy Association (AOTA).

In turn, in the United Kingdom, the first master's program in Occupational Therapy was created in the 1980s. In the following decade, this number increased to two and in the decade after the year 2000, a significant increase in the number of courses was observed after the creation of 28 new master's programs.

In Canada, the first master's program in Occupational Therapy was created in the 1990s. In the following decade, this number raised to 18 due to the increased preference for entering the profession after completing a master's degree than with a bachelor's degree.

In Israel, two master's programs were created in the 1990s. In Australia, a total of 10 master's programs have been established since 2000. In Austria, the first master's program was offered in 2009 and the second in 2012. A similar pattern was observed in Ireland and Mexico, with one master's program each, which were established in the 2000s.

The first doctoral program in Occupational Therapy was opened in 1973 in the United States at New York University. Consequently, another doctoral program was established in 1980 and four more in 1990. In Sweden, a doctoral program was created in the 1990s and another a decade later. Similarly, in Israel, a doctoral program was created in the 1990s.

Academic staff involved in the production of knowledge on Occupational Therapy

A substantial amount of the production of knowledge and research begins in doctoral courses. Therefore, this study focused on identifying the number of researchers and professors that were involved in the listed doctoral programs. The educational qualifications of the academic faculties (PhD, professional doctorate, master's or bachelor's degree) were considered to investigate how the institutions that offer doctoral programs are structured with respect to the preparation and amount of faculty members. A compilation of this data is shown in Table 4.

Discussion

Global distribution of master's and doctoral programs in Occupational Therapy: field configuration

Current postgraduate education programs in Occupational Therapy are limited and distributed across very few countries. The WFOT lists 77 countries with accredited entry-level educational programs in Occupational Therapy (10), and of these, only 11 countries (less than 16%) have master's and doctoral programs registered in the same institution.

Esdaile & Roth (11) point out that the educational background of professionals in Occupational Therapy needs to be bolstered by encouraging further education and not relying only on practical training. It is necessary to demonstrate that the scope of Occupational Therapy goes beyond the mere application and reproduction of

techniques. Understanding Occupational Therapy as a discipline in the university context implies portraying it as a field of education that requires reflection, analytical study, focus on real life issues, and the production of knowledge specific to real-world problems. (2,4)

Table 4. Number of institutions that offer doctoral programs and the preparation of the faculty.

Country	Number of institutions that offer doctoral programs	Preparation of the faculty
USA	34	137 PhD 126 OTD 25 MsC 1 OT
South Africa	5	12 PhD 14 MsC 12 unidentified
Sweden	2	32 PhD 12 MsC
Canada	2	8 PhD 5 MsC 13 unidentified
United Kingdom	2	Unavailable Information
Israel	2	15 PhD 7 MsC 4 unidentified
Taiwan	1	8 PhD 4 OTD

Source: Own elaboration.

Since 1982, Judith Farrell has stressed how necessary it is to develop research on Occupational Therapy. (12) She states, "I believe our immediate job is to study the results we have achieved with the methods we have used [...] we must study the results we achieved with them" (12, p51). Farrell believes that research is the only possible way to develop Occupational Therapy, and this aspect has been neglected in many countries:

In some cases, studies will prove to us that what we predicted has not been happening at all. In fact we are not making any difference to the patient. We need then the courage to recognize that, and to cease to provide that treatment. It is my firm belief that clinicians should formally study the effectiveness of their everyday treatment. It is unacceptable to continue to provide treatment which is ineffective just as it is unacceptable to withhold treatment which will make a significant contribution (12, p52).

In 2001, in an editorial published in The British Journal of Occupational Therapy about the various paths of research, Bannigan (13) noted that there are few occupational therapists who engage in research and this represented a gap in the profession. In another editorial of the same journal, Barnitt (14) complemented this view and highlighted the need for funding and debating on the limited investment in Occupational Therapy research in the United Kingdom. With this, it is possible to conclude that this is the current situation in many countries around the world.

In 2003, Henderson and Maciver were PhD students concerned about their future and the space they would have for the development of occupational therapy research. They raised an important question: "What are the first steps that would allow us to develop careers as occupational therapy researchers rather than as generic applied social

scientists?” The authors pointed out a ‘risk’ for those practicing occupational therapy when they execute their functions in the university in a ‘generic’ way, as they may deal with real life issues in a generic manner, as they have not researched any specific topics in Occupational Therapy. (15)

In the twenty-first century, significant changes in the development of research in Occupational Therapy field have been achieved, especially in some northern countries. Nevertheless, for the profession as a whole, the production of knowledge and its academic legitimacy is a matter yet to be explored. There is a clear need for greater investment and guidance of researchers during their postgraduate studies and while conducting research, as well as for relating this research to current practice in Occupational Therapy. (12)

Do we need more PhD scholars worldwide?

According to the current context, entry in occupational therapy practice through a professional master’s program is a requirement in some places. This leads to the discussion of postgraduate education in the field and, in particular, the development of research and knowledge production at the doctorate level.

Regardless of the debate on the possibilities and limitations of professional doctoral programs in all fields of knowledge (8,9), occupational therapists should advocate to become researchers and contribute to the understanding and implementation of interventions based on the challenges experienced by different population groups in the world. This was explained by Whiteford (16) in her paper on occupational issues of refugees. So, it is necessary to discuss issues surrounding research, university programs, and academic doctoral programs.

The tabular depiction of the 24 academic doctoral programs registered in the WFOT that are distributed across six different countries highlights how small the occupational therapy research circle is. Therefore, this article exposes the urgent need for growth in occupational therapy research and the simultaneous development and enhancement of academic doctoral programs. The legitimization of knowledge production in Occupational Therapy in universities depends on the development of research and critical reflections about the realities of the practice.

It is worth mentioning that the need for academic doctorates refers to the production of critical knowledge applied to occupational therapy practice. (15) This work proposes Occupational Therapy as an academic discipline that should develop specific knowledge, focused on the contemporary reality of clinical and social contexts. (17) According to Freire (18), it is necessary to understand knowledge as an extension of the subject matter and not only as the dissemination of uncritical information on the subject. Therefore, the necessity for occupational therapy to make progress in academic research is emphasized, which has been echoed by Judith Farrell since the 1980s.

Conclusion

This study has mapped postgraduate programs registered with the WFOT until 2015, which provides some insight into the situation of occupational therapy courses and research worldwide.

The results of this study should be generalized with caution as registration of postgraduate programs with the WFOT is not mandatory; hence, it was not possible to access postgraduate programs that were not included in their list. In consequence, this study did not evaluate all the existing occupational therapy programs and presents a partial picture of the current situation. However, as the

WFOT is a legitimate and credible organization in the field, this study allows taking the first steps needed to map the current situation of occupational therapy programs and research.

Moreover, only doctoral programs with the name “occupational therapy” or “occupational science” were considered and PhD programs under names such as “rehabilitation science”, “health sciences” or “interdisciplinary” were not included, although there are occupational therapists researchers in some programs with this kind of nomenclature. These data allow concluding that there are few graduate programs currently, especially doctoral programs, which limit the institutional academic progress of Occupational Therapy.

Further research on this situation is necessary to achieve better accuracy. With such information, strategies for enhancing the growth of postgraduate, master’s and doctoral programs and for conducting research in the field of Occupational Therapy can be planned on a global scale.

Conflict of interest

None stated by the authors.

Funding

None stated by the authors.

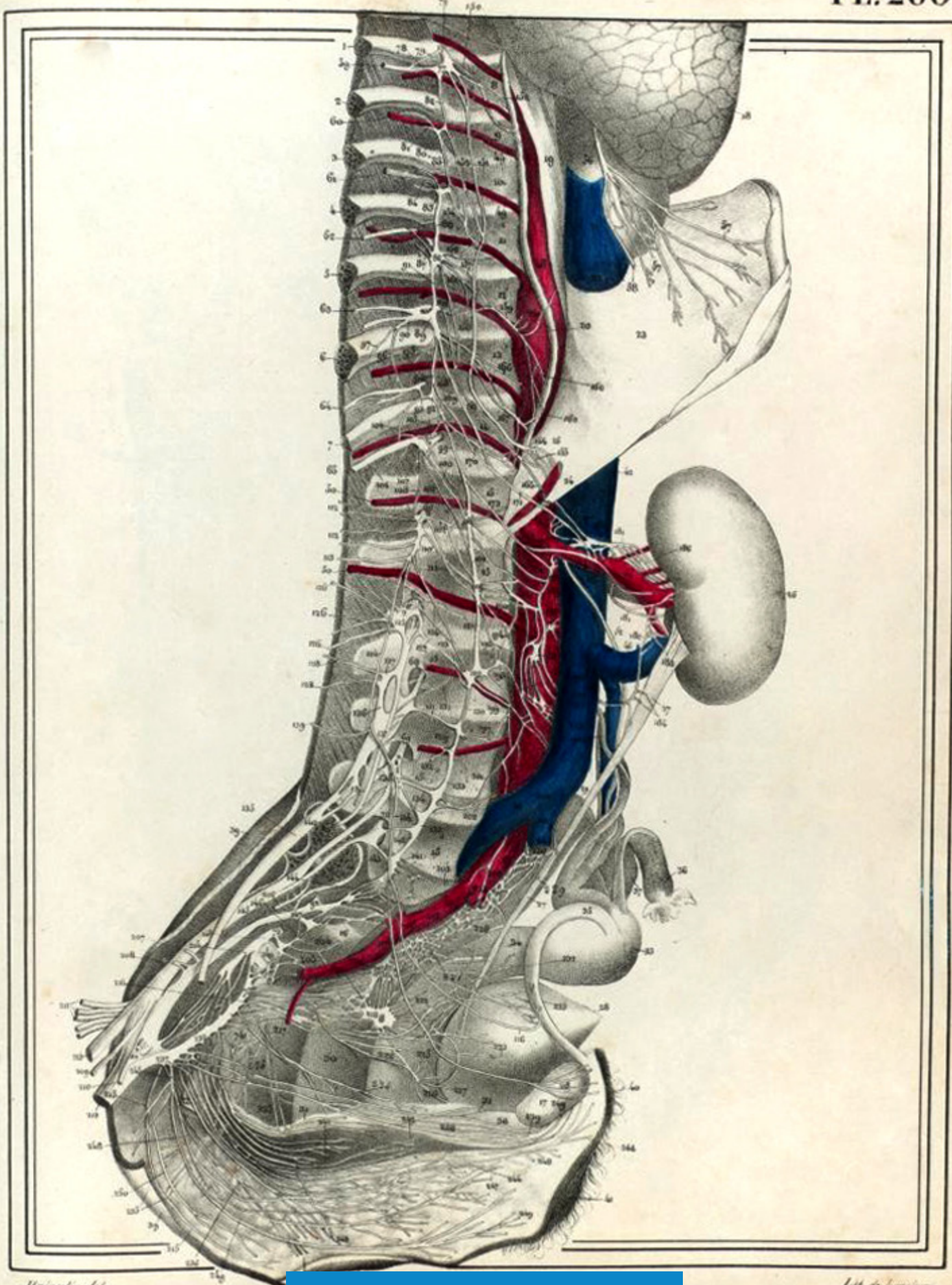
Acknowledgement

None stated by the authors.

References

1. **Latour B.** Science in action: how to follow scientists and engineers through society. *Cambridge*: Harvard University Press; 1987.
2. **Santos BS.** A discourse on the sciences. *Review*. 1992;15(1):9-47; 1992.
3. **Santos BS.** The university in the twenty-first century: toward a democratic and emancipatory university reform. In: Apple MW, Ball SJ, Gandin LA, editors. *The Routledge International Handbook of the Sociology of Education*. Abingdon: Routledge; 2010. p. 274-282.
4. **Good GA.** The assembly of geophysics: scientific disciplines as frameworks of consensus. *Studies in History and Philosophy of Modern Physics*. 2000;31(3):259-292. <http://doi.org/bckzxf>.
5. World Federation of Occupational Therapists. History. WFOT; 2012 [cited 2014 Aug 4]. Available from: <https://goo.gl/Vz9NRt>.
6. World Federation of Occupational Therapists. Courses. WFOT; 2011 [cited 2011 Aug 8]. Available from: <https://goo.gl/r1LqYp>.
7. **Crotty M.** Critical inquiry: contemporary critics & contemporary critique. In: *The foundations of social research*. 3rd ed. London: SAGE Publication; 2013. p.138-159.
8. **Neuman R.** Doctoral differences: professional doctorates and PhDs compared. *Journal of Higher Education Policy and Management*. 2005;27(2):173-88. <http://doi.org/dhb558>.
9. **Morley M, Petty NJ.** Professional doctorate: combining professional practice with scholarly inquiry. *British Journal of Occupational Therapy*. 2010;73(4):186-88. <http://doi.org/b3jzt9>.
10. World Federation of Occupational Therapists. Entry level Educational Programmes WFOT Approved. WFOT; 2014 [cited 2014 Aug 4]. Available from: <https://goo.gl/kDcGx8>.
11. **Esdaile SA, Roth LM.** Education not training: the challenge of developing professional autonomy. *Occupational Therapy International*. 2000;7(3):147-52. <http://doi.org/bskbkp>.

12. **Farrell J.** Two imperatives for occupational therapy – occupation and research. *British Journal of Occupational Therapy*. 2004;67(Suppl 1):51-5. <http://doi.org/cmn3>.
13. **Bannigan K.** Is research valued as a legitimate career pathway in occupational therapy? *British Journal of Occupational Therapy*. 2001;64(9):425. <http://doi.org/cmn5>.
14. **Barnitt R.** Research assessment could benefit the client. *British Journal of Occupational Therapy*. 2002;65(6):255. <http://doi.org/cmn4>.
15. **Henderson SL, Maciver D.** To PhD or not to PhD: the question is, where do we work? *British Journal of Occupational Therapy*. 2003; 66(10):482-4. <http://doi.org/cmn6>.
16. **Whiteford G.** Occupational issues of refugees. In: Molineux M, editor. *Occupation for occupational therapists*. Oxford: Blackwell; 2004. p. 183-199.
17. **Sakellariou D, Pollard N.** A commentary on the social responsibility of occupational therapy education. *Journal of Further and Higher Education*. 2012;37(3):416-30. <http://doi.org/fz38vp>.
18. **Freire P.** *Extension or communication*. New York: The Seabury Press; 1973.



Mainard del.

Lith. de la Couronne